

DEVELOPMENT OF THE SOCIO-EMOTIONAL BEHAVIOUR FACTOR OF THE TOOL FOR MEASURING ACQUIRED SKILLS (ToMAS)

Ms. Marichou T. Beltran
University of Santo Tomas-College of Education

Ms. Marie Antonette J. Sunga-Vargas (marieann_sunga_vargas@yahoo.com)
University of Santo Tomas – College of Science

Abstract

The present study attempted to develop the socio-emotional behaviour factor of the Tool for Measuring Acquired Skills (ToMAS). Conducted in its initial phase, items for the socio-emotional behaviour factor were formulated based on existing literature, focus group discussions with peers and actual experiences with children of various types. These items were then pilot tested with 89 children (33 regular and 56 children with disabilities) from Bulacan, Caloocan and Obando. Regardless of regional classification, mean scores and standard deviation values obtained from both regular children (M: 10.18; SD 10.07) and children with disabilities (M: 12.45; SD 9.98) reveal more homogeneity in the composition of both groups. This may account for the good validity indices obtained using the contrasted group method (t – test: 2.48; 3.24). To determine the reliability of ToMAS, specifically the socio-emotional behaviour factor, 2 special education teachers and one psychologist were asked to rate the children with disabilities using the ToMAS. Using chi square, results reveal poor reliability indices which may actually be due to the limited number of items and the small number of participants. Nonetheless, index of item discrimination was computed to identify items that can still be included in the preliminary form. Out of the 27 items for the socio-emotional behaviour factor, 7 good and 12 very good items were identified. Overall, it can be surmised that the Tool for Measuring Acquired Skills (ToMAS), specifically the socio-emotional behaviour factor, in its initial phase, is a valid instrument. The researchers, likewise, were able to identify a total 19 items that can be used for the preliminary form with the hope that it will produce improved psychometric indices.

Keywords: children with disabilities, socio-emotional behaviour, psychometric properties

Introduction

Children are gifts from God. Oftentimes, newly wed couples dream of having a child or two. This child brings joy to each and every member of the family. It brightens the morning of every parent who is just about to leave for work. It keeps the grandparents entertained. And at the end of the day, when parents come home, simply joys of hearing the baby's voice, of seeing the baby's smile upon approaching --- all these drive away the tiredness of the day! All these motivate the parents to work hard for the future.

Equally important is the education that each and every child gets. Parents work hard to make sure that their child receives the best education that he/she can get. But, what happens if the child is not equipped with the necessary skills to cope with the challenges of academic life? What happens now if the child has some disabilities that definitely makes him/her different from his/her peers? From this perspective, the researchers thought of developing a tool that will assess the basic skills of the child in an attempt to determine if he/she shall need further assistance in learning.

The present paper attempts to develop a screening tool for children with disabilities called the Tool for Measuring Acquired Skills (ToMAS). This tool is made up of eight(8) factors namely: Cognitive, Gross motor skills, Fine motor skills, Self help, Speech and language, Receptive language, Expressive language and **Socio-emotional behaviour**. The researchers will focus on the development of the **Socio-emotional behaviour** while other members of the team will focus on their respective specializations.

Anchored on the three dimensional model (social, emotional, behavioural functioning) of the Wisconsin Eligibility Criteria for Emotional Behavioural Disability (EBD) which dictates that for a child to be diagnosed as suffering from EBD, there must be clear interrelationships among the three criteria --- social, emotional and behavioural, the researchers attempted to respond to the following objectives:

1. Determine the composition of the Tool for Measuring Acquired Skills (ToMAS), specifically the socio-emotional behaviour factor;
2. Pilot test the preliminary form of the tool to establish its:
 - 2.1. Construct Validity using the contrasted group method; and
 - 2.2. Reliability using inter-rater reliability.
3. Develop the preliminary form of ToMAS, specifically the socio-emotional behaviour factor using item analysis.

Methodology

The researchers reviewed several existing literature on the socio-emotional behaviour of children including characteristics found in the Diagnostic & Statistic Manual – 5 (DSM-5). Focused group discussions were likewise conducted. From all these, including actual experiences with children of various types, 27 items were formulated for the initial phase of the socio-emotional tool. These items were then pilot tested with 89 children. Pilot testing was done by assessing each child using the ToMAS. Table 1 shows that out of the 89 participants, 33 (37%) were regular children coming from Bulacan (N = 25) and Caloocan (N = 8).

On the other hand, 56 (63%) were children with disabilities coming from Bulacan (N = 23), Caloocan(N – 19) and Obando (N=14). All participants came from the public schools.

Table 1 - Distribution of Participants in the Initial Use of the Tool for Measuring Acquired Skills (ToMAS)

Group Composition	Bulacan	Caloocan	Obando	GradTotal
Regular	25 (28%)	8 (10%)	0	33 (37%)
Children with Disabilities	23 (26%)	19 (21%)	14 (16%)	56 (63%)
Grand Total	48	27 (30%)	14 (16%)	89 (54%)

Data coming from the Bulacan, Caloocan and Obando participants were used to evaluate the construct validity of the test using the contrasted group method. Likewise, computing for the index of item discrimination, researchers were able to analyse each item. To establish the reliability of the tool, inter-rater reliability was used based on the evaluation of 2 Special Education (SPED) teachers and a psychologist.

Results

Based on the data obtained from 89 participants, mean scores and standard deviation values were computed. Regular children obtained a mean score of 10.18 with a standard deviation value of 10.07 while the children with disabilities obtained a mean score of 12.45 with a standard deviation value of 9.98 indicating homogeneity in the composition of the group.

Table 2 - Mean Scores and Standard Deviation Values of the Participants in the Socio-emotional factor of the ToMAS based on their Classification

	Bulacan	Caloocan	Obando	Overall
Regular	6.08 (4.24)	20.37 (6.16)	None	10.18 (10.07)
Children with Disabilities	5.91 (4.47)	23.0 (6.82)	8.12 (4.80)	12.45 (9.98)

Specifically, in Bulacan, regular children obtained higher mean scores than children with disabilities. On the other hand, in Caloocan, children with disabilities obtained higher mean scores than regular children.

If ToMas were to be used as a tool in measuring the socio-emotional behaviour of children, it must possess certain characteristics that will ensure the credibility of the results and ultimately, the research. ToMAS has to be objective, valid, reliable and standardized.

To ensure objectivity, set directions were made. These directions need to be followed by the assessor thereby making sure that results are free from the subjective influence of the researcher or assessor.

A tool is said to be valid if it measures what it intends to measure. The present tool must be valid and therefore, able to differentiate the regular child from a child with

disabilities in terms of their socio-emotional behaviour. In this particular study, construct validity of the socio-emotional behaviour factor was identified using the contrasted group method. To determine if sToMAS is valid, the socio-emotional behaviour mean scores obtained from the participants were subjected to t test for independent samples.

Table 3 - Validity Indices of the Socio-emotional Behaviour Factor of the ToMAS

	Regular	Children with disabilities	t – test	Interpretation
Bulacan	6.08	5.91	.28	Not significant
Caloooca	20.37	23.0	2.48*	significant
Grand Total	10.18	12.45	3.24**	significant

*.05 level of significance: 2.06

** .05 level of significance: 1.96

A look at table 3 shows that the obtained t – test value(.28) for the Bulacan group was not significant brought about by the very close mean scores obtained by regular children and children with disabilities. The t – test value (2.48) obtained by the Caloocan participants was significant at the .05level of significance (2.06) indicative of the ability of ToMAS to differentiate the socio-emotional behaviour of regular children and that of children with disabilities. Likewise, the obtained t-test value for the grand total of participants (combined regular children from Bulacan vs. combined children with disabilities from Bulacan, Caloocan and Obando) was significant at the .05 level of significance (1.96) indicative of the ability of the tool to identify children with disabilities. In totality, the obtained t – test values strongly support the validity of ToMAS, specifically the socio-emotional behaviour factor.

The tool was further subjected to item analysis with the intention of identifying items that can be included in the preliminary form of ToMAS. As a component of item analysis, the index of item discrimination, identifies items that can powerfully differentiate regular children from children with disabilities in terms of their socio-emotional behaviour. Computing for the index of item discrimination, Table 4shows that out of the 27 items, 7 items with .30-.39 indices and 12 items with .40 and above turned out to be good and very good respectively in discriminating regular children from children with disabilities in terms of their socio-emotional behaviour.

Table 4 - Analysis of the Items using the Index of Item Discrimination for the Socio Emotional Factor

	Poor items (.19 & below)	Fair (.20 - .29)	Good (.30 - .39)	Very Good (.40 & above)
Items	8, 12, 19, 27	14, 15, 17, 25	7, 9, 10, 13, 18, 22, 26	1, 2, 3, 4, 5, 6, 11,16, 20, 21, 23, 24
No. of Items	4	4	7	12

A tool is said to be reliable if it is able to provide consistency in the scores of participants when assessed. The inter-rater or inter-judge reliability is one procedure

often used in establishing the reliability of an instrument. Ratings or assessments of raters or judges are correlated to determine if there are relationships among their assessments or ratings. Significant relationships indicate that the instrument is reliable. To establish the reliability of ToMAS in general, and the socio-emotional behaviour factor in particular, two (2) Special Education (SPED) teachers and one psychologist were instructed to assess a child using the tool in the initial phase. The inter-rater reliability of the tool was investigated using the chi-square. Table 5 shows that no significant relationships were found among the raters in the 8 factors except for Speech and Language indicative of the inability of the tool to provide consistent scores. Specifically, in relation to the socio-emotional behaviour of the participants, the ToMAS, in its initial phase, is unable to provide consistent scores. In effect, it has poor reliability indices suggesting the need for further reliability testing for the preliminary form.

Table 5 - Reliability indices of the Factors of ToMAS

Factors	Chi-square value	Decision
Cognitive skills	6.02	Not significant
Gross motor skills	2.03	Not significant
Fine motor skills	0	Not significant
Self help skills	1.26	Not significant
Speech and Language	9.51	Significant
Receptive language	3.55	Not significant
Expressive language	0.56	Not significant
Socio-emotional skills	2.06	Not significant

Discussion

Establishing the psychometric properties of a tool, ToMAS for that matter, plays a very important role in the evaluation of a child, whether a regular child or a child with disabilities. In the absence of any indigenous tool that can measure the socio-emotional behaviour of Filipino children, the researchers opted to develop one. The initial International Conference on Special Education 2015 form of the tool, ToMAS in general and the socio-emotional behaviour in particular, obtained good validity indices but poor reliability indices indicative of the need for further reliability testing. Understandable enough, the limited number of items for the socio-emotional screening tool and the small number of participants evaluated may account for the weak reliability indices of the tool.

Despite the poor reliability indices of the Socio-emotional behaviour factor but with the strong validity indices, a closer look at the items was conducted with the intention of determining if poor items can be eliminated and good to very good items retained for the preliminary form ToMAS. Using item analysis, specifically the index of item discrimination, data reveals that a handful of items (7 good and 12 very good items) can be added to the preliminary form of ToMAS. With the 19 items for the preliminary form of the socio-emotional behaviour factor of the Tool for Measuring Acquired Skills, the researchers believe that it has accomplished its goal for the initial phase: to develop the preliminary form of the ToMAS.

It is, however, imperative that the preliminary form with 19 items for the socio-emotional behaviour factor of ToMAS be pilot tested to a bigger group of participants to allow for better reliability indices.

References

- American Psychiatric Association: Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition, Arlington, VA, American Psychiatric Association, 2013.
- Hocutt, A.M. (1996), "Effectiveness of Special Education: Is Placement the Critical Factor?", *Special Education for Students with Disabilities*, Vol. 6, No. 1, pp. 77 – 102.
- Hussu, A. M., Strle, M. (2010), "The Assessment of Children with Special Needs", *Procedia Social and Behavioral Sciences*, Vol. 2, pp.5281-5284.
- UNESCO Conceptual Paper (2003), "Overcoming Exclusion through Inclusive Approaches in Education: A Challenge & A Vision", Section for Early Childhood and Inclusive Education, Basic Education Division.