ORIGINAL RESEARCH PAPER
Volume - 13 | Issue - 03 | March - 2024 | PRINT ISSN No. 2277 - 8179 | DOI : 10.36106/ijsr
INTERNATIONAL JOURNAL OF SCIENTIFIC RESEARCH

DEVELOPMENT AND VALIDATION OF SCHOOL READINESS INVENTORY FOR PRESCHOOLERS WITH AUTISM SPECTRUM DISORDER

Occupational Therapy

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ABSTRACT

Background: Tools to assess school readiness skills targeting pre-schoolers with autism spectrum disorder (ASD) has been found to be sparse. **Objective:** To develop and validate a school readiness inventory and manual for assessing school readiness in pre-schoolers with ASD. **Methods:** Based on literature review, interview of experts and parents of children with ASD, study of previous school readiness scales, the inventory and manual to assess school readiness was developed and reviewed by independent experts regarding the utility of the contents. Lawshe's content validity ratio was used to assess the appropriateness of each item for inclusion in the inventory and manual. **Results:** A panel of 8 experts conducted content validation of the instrument and manual. The item content validity index (I-CVI) of instrument ranged from 0.75to 1.00. There was good agreement in most of the 98 items except for 14 items (with < 0.78 I-CVI), which were modified based on the changes recommended by experts (n =8). **Conclusion:** A school readiness inventory and manual to assess school readiness was developed and validated. Further studies are needed to assess the utility of the scale in children with ASD.

KEYWORDS

Autism spectrum disorder; Preschoolers; School readiness; Validation.

1.INTRODUCTION

Autism Spectrum Disorder (ASD) refers to a neurodevelopment disorder that is characterized by difficulties with social communication and social interaction and restricted and repetitive patterns in behaviours, interests, and activities. Children with Autism Spectrum disorder are often diagnosed once the child is 3years. The initial diagnosis is made after the parent's report difficulty in communication, presence of restricted interest and performance of repeated activity or action and impaired age-related learning. Children with ASD have a lot of difficulties in occupational performance leading to learning difficulty early on in the school, peer interaction and later on in the work place or family. Education is essential in a child's life, and attending school is an important developmental milestone. It represents the child's first transition from the home to an environment of more complex situations (Mukkiri et al., 2018). For children with special needs, this transition can be challenging and it is especially important for children with autistic spectrum disorder (ASD) (Marsh et al., 2017). (Children with ASD have a wide range of occupational and performance issues that interfere with their active participation in home, school, and community activities. Limited social interaction, delay or deficit in communication, adaptive behavioral issues, sensory-processing issues, and learning and developmental needs are some of the predominant difficulties these children will experience with educational transitions (Case-Smith, Arbesman., 2008).

School readiness is a comprehensive and holistic term encompassing physical, social, emotional, and cognitive skills of children (Chandra., 2017). Over time, the concept of school readiness has evolved. UNICEF's School Readiness Conceptual Framework defines it through the characteristics of transition and gaining competencies across three dimensions: children's readiness for school, schools' readiness for children, and families' and communities' readiness for school. According to the EFA Global Monitoring Report (2007) "the consensus from research is that school readiness encompasses development in five distinct but interconnected domains–Physical well being and motor development; social and emotional development; approach to learning; language development; cognitive development and general knowledge." The Indian National Curriculum Framework (NCERT, 2005) aligns with this approach (World bank India).

Children with ASD often experience poor school outcomes, including emotional and behavioral problems, difficulties in recognizing and responding to others' emotions and nonverbal cues, and challenges in understanding and adhering to social norms. They may also face bullying, leading to school exclusion or peer rejection. Some struggle with task completion and planning, while others find it challenging to approach problems in new ways due to difficulties in executive functioning. Academic achievement in children with ASD is influenced by social impairment levels and performance in areas such as intellectual ability, working memory, processing speed, and motor skills (Miller et al., 2017). These factors may put children with ASD at a disadvantage in developing certain school readiness skills naturally.

ASD is associated with particular academic needs that differ from the needs of children who are typically developing (TD), the children with ASD exhibit lower-than-expected academic achievement rates when compared to their level of measured cognitive ability. The transition literature indicates that there are a number of skills that children with special needs should demonstrate such as to independent toileting, following instructions, and basic social and communication abilities to increase the likelihood of a successful school entry.

Though there are many scales to assess school readiness among typically developing children , very few are available for assessing these skills among preschoolers with ASD with appropriate guidelines to use the scale. For children with special needs, major challenges remain by way of early identification of disability, sensitization of teachers and students, provision of adequate resource support for inclusive education in schools, and, most important, incorporating the true spirit of inclusive education. Thus, considering the devastating consequences of lack of an appropriate tool to test school readiness among children with ASD it is important to develop an assessment tool with manual to identify the factors or skills necessary for inclusive education.

Therefore the purpose of the study was to develop and validate a school readiness scale for pre-schoolers with ASD

2.METHODS

2.1Instrument and manual construction

The current study consisted of three phases:

Phase 1 involved identification of items for construct of school readiness tool , through literature search of existing available tools in PsyInfo, SCOPUS, Web of Science, PubMed, Medline, EMBASE, and EBSCO using keywords (Stevinson & Lawlor, 2004; Wanyama et al., 2022). Senior experts in the field of pediatric occupational therapy, pediatric physicians, special educators, school teachers and parents of children with ASD were interviewed to extract important items and domains to be included based on their viewpoint.

In Phase 2, The SRIPA manual containing instructions, administration procedures, stimulus pictures, scoring of the items, and list of materials required to use the SRIPA inventory among ASD was developed.

Phase 3 included validation of SRIPA inventory through a panel of experts. The validity of initial items was assessed through the content

validity and face validity,.The study was approved by the Institutional Review Board of Maharaj Vinayak Global University, Jaipur (MVGU 21.03. 2017).

The informations concerned with items identification and construct for the development of SRIPA was complied, gathered, categorized, arranged, and organized under four domains, nine constructs with 98 items.Four domains are: Cognition (Sub domains: Attention and Memory, General Knowledge, Math's), Language Development (Sub domains: Receptive Skills, Expressive Skills), Social-Emotional Skills and Physical Health and Motor Development (Sub domains: Gross Motor Skills, Fine Motor Skills and School Self-Help skills).Demographic data of children with ASD and parent and information on sensory issues, stereotypic behaviors, challenging behaviors were also included in the inventory .

2.2Measurement format of the SRIPA

The items were scaled using six-point Likert scale: **5**- If the skill or behavior is present in all settings, situations, and generalizes, 4- If the skill or behavior is present in particular settings, situations, and with persons but does not generalize, 3- If the skill or behavior is inconsistent and without prompts, 2- Needs prompts for the skill or behavior, 1 - If the skill or behavior appears to be emerging, 0 - if the skill or behavior is not present.

2.3Development of the Inventory Manual for SRIPA

At this stage the first draft of SRIPA was formed and the investigator intended to prepare a guidance or user manual document that contains information like; how to assess each item in the inventory and how to choose an appropriate score/response for each items. Further, the manual also explains about the materials needed to administer this inventory to assess the school readiness among the children with ASD. The content of the manual was enriched with pictures/images to enable easy understanding, and constructs were based on the cultural context.

2.4Content and face validity of SRIPA

2.4.1SRIPA -Expert panel description:

A focus expert panel included 8 panel members with minimum 5years of experience in the field of ASD, excluding the investigator; occupational therapist (n = 5), special educator (n=1), speech therapist (n = 1), preschool teachers (n = 1), and parents of children with ASD (n = 2). The expert panel members were contacted to obtain verbal consent, the email id was secured, followed by sending of informed consent, participant information sheet, and research protocol.

The panel members except the two parents evaluated and validated the SRIPA tool and the manual document of SRIPA . The details of the panel members are mentioned in Table 1

2.4.2Items rating procedure:

The ninety eight items generated from the previous phase were rated for relevance, feasibility, and clarity using a 4 point Likert scale (0 – no, 1 – somewhat, 2 – quite, 3 – highly respectively all the 3 domains). The cognitive briefing, comments, suggestions, and remarks of the panel members were recorded. The need or necessity of each of the items (items n = 98) were rated in a scale of 1 to 3 (Essential = 2, Useful = 1, Not essential = 0). The investigator made sure that in all of the rating the higher scores indicated or are in favor of the items.

Content Validity Ratio (CVR) was calculated to determine the necessity of the items, while Scale-Content validity index (S-CVI) and Kappa statistic coefficient (k*) were computed to assess the content validity of SRIPA and manual.

3.Statistical Analyses

The data of the tool development (SRIPA-Ind) was coded and entered into the Epi info version 7 for the Windows by the investigator. The statistical analyses was conducted using the version 25, Statistical Package for Social Science software for windows (IBM SPSS Inc, California, USA). The responses and assessment of each items were expressed using descriptive analysis

3.1 Content validity and agreement between panel members

The SRIPA inventory tool CVI (Content Validity Index) was calculated using the recommendations of Walts and Baustle's method. The relevance, clarity, and simplicity of the SRIPA tool items were documented (Polit et al, 2007) (Polit et al., 2007b; Zeraati & Alavi, 2014). The experts rated each items as 4-point Likert scale rating for E.g.;

Relevancy was rated as 1 for 'not relevant', 2 for 'somewhat relevant', 3 for 'quite relevant', and 4 for very/highly relevant.

Formula used to compute the CVI was;

$$CVI \text{ or } \% \text{ agreement} = \frac{(\text{Number of experts agreeing on the items rated as 3/4})}{(\text{Total number of experts})}$$

The SRIPA CVI score for the complete inventory was determined using the average of all the CVI score of the items.

Formula for calculating CVR and interpretation: $CVR = (Ne - N/2)/(N/2)$

Ne is the number of panelists indicating "essential"

N is the total number of panel members involved in the SRIPA item development process.

CVI for items was calculated using the formula: Number of items with rating 2 to 3 (Likert scale) / total number of panel members. CVI for domain was calculated using the formula: Number of domains with rating 2 to 3 (Likert scale) / total number of panel members.

The Scale level content validity index of SRIPA inventory was computed by using averaging method (SCVI/average):

$$SCVI = \frac{(Total\ CVI - I\ score)}{(Total\ number\ of\ experts)}$$

A universal agreement method was used to accept an item to have expert panel agreement, if the item has 100 % agreement the item is assigned a score of '1' and if the score is < 100% then the item is assigned '0'.

Score interpretation: According to the Lawshe's (Wilson et al., 2012a) recommendation table, the acceptable CVR value for eight experts is '0.78'. The CVR for the SRIPA items reflected the percentage of panelists rating an item as "relevant." The CVR Critical value for the 8 experts is 0.78, which means that if an item's SRIPA CVR value is '0.78' or higher, it indicates the item's necessity, and those items will be retained, while items with a CVR value lower than '0.78' will be removed or modified according to the expert's suggestions.

4. RESULTS

Eight experts consented for analysing the contents of SRIPA and its manual. Similarly, there was good agreement for most of the components in the SRIPA(Table 1 and Table 2) with 31 out of 98 items showing a CVR of 1each and 53 of the 98 items with CVR ranging between .78 to .99.

The experts differed in their agreement on item number 2,5,8 under domain 1; item number 15, 22,27 under domain2 ; item number 35 under domain 3; item number 42,43,47 under domain 4 and item number 48,51,54,55 under domain 5, items 57,58,60,64,66,67,71,73 under domain 6; item number,75,76,81under domain 7; item number ,90,91 under domain 8 and item number 92,96 under domain 9.

Table 1. A item level proportion of the expert panel (n = 8) members giving item score of 3 or 4 for the SRIPA tool with 9 domains and 98 items

Item no	Domains and items	Relevance	Clarity	Simplicity	Experts in agreement	I-CVI
Attention and Memory items 10						
1	Item Attention & Memory 1	0.92	0.76	0.9	7	0.88
2	Item Attention & Memory 2	0.89	0.75	0.91	6	0.75
3	Item Attention & Memory 3	0.9	0.78	0.97	8	1.00
4	Item Attention & Memory 4	0.91	0.91	1	7	0.88
5	Item Attention & Memory 5	0.89	0.93	1	6	0.75

PRINT ISSN No. 2277 - 8179 | DOI : 10.36106/ijsr

6	Item Attention & Memory 6	0.93	0.85	0.92	8	1.00
7	Item Attention & Memory 7	0.88	1	1	7	0.88
8	Item Attention & Memory 8	1	0.96	1	6	0.75
9	Item Attention & Memory 9	1	0.62	0.96	8	1.00
10	Item Attention & Memory 10	1	1	0.97	8	1.00
General knowledge items 20						
11	Item GK 1	0.94	0.8	0.95	7	0.88
12	Item GK 2	0.92	0.91	1	8	1.00
13	Item GK 3	0.92	0.95	1	8	1.00
14	Item GK 4	1	0.79	0.89	7	0.88
15	Item GK 5	0.88	0.85	0.9	6	0.75
16	Item GK 6	0.94	1	1	8	1.00
17	Item GK 7	1	0.96	0.9	7	0.88
18	Item GK 8	1	1	0.97	7	0.88
19	Item GK 9	0.95	1	1	8	1.00
20	Item GK 10	0.97	0.9	0.9	7	0.88
21	Item GK 11	1	1	1	8	1.00
22	Item GK 12	1	1	0.89	6	0.75
23	Item GK 13	0.97	0.86	1	7	0.88
24	Item GK 14	0.93	0.92	0.9	8	1.00
25	Item GK 15	0.87	1	0.88	7	0.88
26	Item GK 16	0.89	1	1	8	1.00
27	Item GK 17	0.95	0.9	0.9	6	0.75
28	Item GK 18	0.96	0.92	0.95	7	0.88
29	Item GK 19	0.92	0.86	1	7	0.88
30	Item GK 20	0.93	0.89	1	8	1.00
Math's items 10						
31	Item Math's 1	0.97	1	0.93	7	0.88
32	Item Math's 2	0.89	1	0.86	8	1.00
33	Item Math's 3	0.88	0.9	1	8	1.00
34	Item Math's 4	0.93	0.96	1	7	0.88
35	Item Math's 5	1	0.97	0.9	6	0.75
36	Item Math's 6	0.9	1	1	7	0.88
37	Item Math's 7	0.92	1	0.92	7	0.88
38	Item Math's 8	0.97	0.95	0.93	8	1.00
39	Item Math's 9	0.93	1	1	8	1.00
40	Item Math's 10	0.94	1	0.9	7	0.88
Receptive skills items 7						
41	Item Receptive Skills 1	0.97	0.96	0.89	8	1.00
42	Item Receptive Skills 2	1	1	0.81	6	0.75
43	Item Receptive Skills 3	1	1	1	6	0.75
44	Item Receptive Skills 4	0.95	0.9	1	7	0.88
45	Item Receptive Skills 5	0.96	1	0.96	8	1.00
46	Item Receptive Skills 6	1	1	0.9	6	0.75
47	Item Receptive Skills 7	0.97	0.87	0.97	8	1.00
Expressive skills items 8						
48	Item Expressive 1	1	0.96	1	6	0.75
49	item Expressive 2	1	1	0.97	8	1.00
50	Item Expressive 3	0.95	1	1	7	0.88
51	Item Expressive 4	0.93	0.98	1	6	0.75
52	Item Expressive 5	0.94	0.89	0.9	7	0.88
53	Item Expressive 6	1	1	0.92	8	1.00
54	Item Expressive 7	0.91	1	0.89	6	0.75
55	Item Expressive 8	1	0.89	0.93	6	0.75
Social emotional items 19						
56	Item Social Emotional 1	1	0.95	0.92	7	0.88
57	item Social Emotional 2	0.95	0.88	1	6	0.75
58	Item Social Emotional 3	1	1	0.9	6	0.75
59	Item Social Emotional 4	0.93	0.85	1	8	1.00
60	Item Social Emotional 5	0.95	0.79	0.91	6	0.75
61	Item Social Emotional 6	0.98	1	0.96	8	1.00
62	Item Social Emotional 7	0.98	0.93	1	7	0.88
63	Item Social Emotional 8	1	0.91	0.93	7	0.88
64	Item Social Emotional 9	0.89	0.9	0.93	6	0.75
65	Item Social Emotional 10	1	0.8	1	8	1.00
66	Item Social Emotional 11	0.92	1	0.89	6	0.75
67	Item Social Emotional 12	0.96	1	1	6	0.75
68	Item Social Emotional 13	1	0.85	0.79	7	0.88
69	Item Social Emotional 14	0.93	0.79	0.88	8	1.00
70	Item Social Emotional 15	0.97	0.86	1	7	0.88
71	Item Social Emotional 16	1	1	0.9	6	0.75
72	Item Social Emotional 17	1	0.95	0.94	7	0.88
73	Item Social Emotional 18	0.95	1	1	6	0.75
74	Item Social Emotional 19	0.9	0.97	0.9	7	0.88
Gross motor items 8						
75	Item Gross Motor 1	1	0.93	0.82	6	0.75
76	Item Gross Motor 2	0.95	1	0.89	6	0.75
77	Item Gross Motor 3	0.95	0.87	0.97	7	0.88
78	Item Gross Motor 4	0.89	0.79	0.84	8	1.00
79	Item Gross Motor 5	0.87	0.85	0.93	7	0.88
80	Item Gross Motor 6	0.89	1	1	8	1.00
81	Item Gross Motor 7	0.95	0.78	1	6	0.75
82	Item Gross Motor 8	1	0.86	0.9	8	1.00
Fine motor items 9						

83	Item Fine Motor 1	0.98	0.97	0.93	7	0.88
84	Item Fine Motor 2	0.77	0.75	1	6	0.75
85	Item Fine Motor 3	1	0.72	0.87	8	1.00
86	Item Fine Motor 4	0.95	1	1	7	0.88
87	Item Fine Motor 5	0.88	1	1	6	0.75
88	Item Fine Motor 6	0.91	0.86	0.9	8	1.00
89	Item Fine Motor 7	0.95	1	0.88	7	0.88
90	Item Fine Motor 8	0.98	1	1	6	0.75
91	Item Fine Motor 9	1	0.92	0.88	6	0.75
Self-help skills items 7						
92	Item Self help 1	1	0.8	1	6	0.75
93	Item Self help 2	0.95	0.86	0.9	7	0.88
94	Item Self help 3	1	0.83	0.81	8	1.00
95	Item Self help 4	1	1	1	7	0.88
96	Item Self help 5	0.9	0.94	0.92	6	0.75
97	Item Self help 6	0.93	0.88	0.89	7	0.88
98	Item Self help 7	1	0.95	0.91	8	1.00

The CVR for the SRIPA items reflected the percentage of panelists rating an item as “relevance” The CVR Critical value (recommended by Lawshe 1975) for the 8 experts is 0.78, which means that if an item's CVR value is 0.78 or higher, it indicates that the item's relevance to measure school readiness among children with ASD, and those items with ≥ 0.78 were retained, while items with < 0.78 were modified based on the changes recommended by experts (n =8).

Table 2 SRIPA Item distribution on various CVR values

Domain		No of items	CVR		
			1.00	> 0.78 – 0.99	< 0.78
1.	Attention and memory	10	03	05	02
2.	General knowledge	20	05	13	02
3.	Maths	10	01	07	02
4.	Receptive skills	07	03	04	0
5.	Expressive skills	08	04	03	01
6.	Social-Emotional	19	07	09	03
7.	Gross motor	08	02	05	01
8.	Fine motor	09	02	05	02
9.	Self-help skills	07	04	02	01
Total	9 Domains	98	31	53	14

5. DISCUSSION

This study resulted in the development of a multi-dimensional outcome measure with construct measuring school readiness related to logical, mathematical, self-help skills, expressive, receptive communication skills, and motor skills. The tool was constructed and the content validity of the SRIPA tool was done . This 98 items SRIPA tool has demonstrated acceptable validity, demonstrating scope of being a usable school readiness outcome measure**.**

Literature reports that the existing school readiness tools lack enough evidence for structural validity, convergent/divergent validity, known groups validity, criterion validity, and responsiveness (Cordier et al., 2015; Funabiki et al., 2011; Kasari et al., 2016; Magaña et al., 2013; Song et al., 2010). The quality of the evidence ranged from good to excellent for the existing instruments, however there is minimal evidence for internal consistency for tools such as ABLLS R, psycho educational Profile-third edition, PKBS 2 (Cordier et al., 2015; Missall et al., 2022). The available tools' content validity revealed that there is limited evidence, with the quality of the evidence varying from good to excellent. Except for the tool Psycho-educational Profile-third edition, for which the convergent/divergent validity showed fair quality of evidence-The school preparation resources in the current SR—aside from the Psycho-educational Profile, third edition— included domains for language and literacy development, cognition, and academic achievement. On a thorough literature search revealed that few tests (Dykstra et al., 2012; Funabiki et al., 2011; Kanne et al., 2014; Major & Seabra-Santos, 2014; Reid et al., 2013a) with norms of psychometric qualities were established for preschoolers and kindergarteners with ASD, also the majority of school readiness tools evaluated the skills of only typically developing children.

This study assessed the contextual needs of school readiness in terms of social, cultural, behavioural, emotional, and motor skill context, identified as significant construct gaps in the previous school readiness inventory tools, and attempted to develop an additional school readiness tool with good psychometric properties to suite the Indian children with ASD(Karanth et al., 2010; Manohar et al., 2019; Mukherjee et al., 2019). This tool could help identify deficits and improve the children's readiness for school with the context of Indian culture and schooling needs.

Through CVR, S-CVI/AVE, and S-ICVI/UA regarding item relevance and clarity, the study's findings demonstrates the instrument's and manual's content validity. The measure produced results for item relevance and clarity that were either extremely relevant or highly relevant. The CVR for each item showed what proportion of panel lists deemed it to be "essential." 75 of the SRIPA items, or 76% of the assessment's items, were assessed as "essential" by the majority of our expert panel. The remaining 25 items received "not essential" ratings from the experts, who also offered suggestions and comments for improving the items.

However, the results showed that some experts did not view the components in the attention and memory construct as crucial, though. The items for attention and memory like sings songs or performs action (30 words), 4 word sentences are repeated without prompts, recalls or illustrates through gestures one or two aspects of a recently read story. majority of the story's key components are remembered, repeats 5–6 sentences and words while preserving the grammatical framework, repeats a set of four integers or random words, Performing tasks for 30 minutes without interruption was evaluated as not crucial. According to one of the experts, "Many items look the same as they get more complicated and can be included as a part of every skill required for school readiness."

According to the advice of the experts, the researchers intend to retain some items even though the CVR was <.78,which includes the ability to complete tasks for 30 uninterrupted minutes of activity and the ability to demonstrate movement or sing songs for 30 words. For young children in preschool, the ability to pay attention and remember things is particularly important since it aids in the development of other skills like language and cognitive concept. There is also a strong link between early knowledge of nursery rhymes and the development of phonological skills and emergent reading (Walton, 2014).The forthcoming validation procedure needs to further improve this instrument's build (Amini et al., 2016; Rahimzadegan et al., 2018).

This method was deemed to be overly strict by Polit and Beck (Polit et al., 2007a) since expert panel agreements and disputes can happen by accident and disagreements can also be a sign of prejudice or misunderstanding. In order to eliminate any chance agreement, the Kappa statistic coefficient was calculated (Almanasreh et al., 2019; Wilson et al., 2012b). The instrument and manual exhibit outstanding content validityThe instrument and manual exhibit outstanding content validity, according to the value of the Kappa statistic co-efficient. Usry et al.'s study looked at the inter-rater reliability and content validity of the Assessment of Basic Language and Learning Skills-Revised (ABLLS-R) tool (Usry, 2015), which is used to evaluate the language and fundamental learning skills of children with ASD. With a CVR rating of 81% of the topics classified as "essential" by experts, the tool had strong content validity (Almanasreh et al., 2019; Cordier et al., 2015; Rahimzadegan et al., 2018). The existing SRIPA test evaluates preschoolers with ASD's preparation for school, whereas this tool concentrates on language and fundamental learning skills. Both of these research highlight how crucial content validation is when creating an evaluation instrument for children with ASD.

Previously a similar methodology was used to develop and validate a

school readiness scale for parent administration with a panel of six experts(Mukkiri et al., 2021, 2022). The kappa value was 0.76, which indicates that the material was valid. For K-READI Danielle Alonzi-Gold et al (Alonzi-Gold & Grajo, 2021) assessed content validity with a panel of 7 experts. With an I-CVI of 0.80 or higher, 15 out of the 19 elements are classified as "essential," suggesting strong content validity.

6. CONCLUSION

Findings from the current study suggest that the School Readiness Inventory for pre-schoolers with Autism Spectrum Disorder over all has adequate content validity. The scale can be used by therapists to assess school readiness on the basis of child's developmental skills. The strength of the present study is in the inclusion of multiple aspects of school readiness which can be assessed through sub-domains within the instrument.

The study has limitations as it represents the initial phase of the validation process. A convenient sample of experts and the target population was used, limiting generalizability. To address these limitations further research is recommended. Future studies should test instrument utility and assess psychometric properties using larger, diverse samples, enhancing reliability and generalizability.

7.Appendix

APPENDIX-A

School Readiness Assessment Inventory For Preschoolers with Autism Spectrum Disorder

Demographic Profile

Date of Assessment:
Name: Date of birth: Age:
Gender: Male child / Female child
Father's Qualification and Occupation:
Mother's Qualification and Occupation:
Type of family: Joint or Nuclear
Parent or caregivers concerns about the child:
Number of siblings:
Pre-schooling: Yes/No
Medium of Instruction at school: English or others
Language spoken at Home: Tamil/Malayalam/English/Others
Sensory issues:
Communication:
Stereotypic Behavior:
Socialization:
Any specific problem (challenging behaviors): Yes/ No
Provisional Diagnosis:

Scoring:

5- If the skill or behavior is present in all settings, situations, and generalizes.
4- If the skill or behavior is present in particular settings, situations, and with persons but does not generalize.
3- If the skill or behavior is inconsistent and without prompts
2- Needs prompts for the skill or behavior
1 - If the skill or behavior appears to be emerging.
0 - if the skill or behavior is not present, N/A If the item is not applicable or not appropriate to assess due to age or disability.
S. No DOMAINS

1 Attention and Memory

A Shows action or sings songs or says atleast 1 rhymes of at least 30 words (words may be repeated).
B Repeats 4-word sentences. (Eg My Name is ---------- or I like to play.)
C Recalls/shows through gestures one or two elements of a story just read without prompts
H Repeats sequence of 4 numbers or unrelated words. (Eg 3157/ Car, shoe, horse, tree)
I Can do activities for 15 minutes without distraction (with therapist doing educational activities, with one toy or 2 toys at a time placed in front of child)

2 General Knowledge

A Identifies round (circle) and square
B Identifies pictures of common fruits at least 6-8
C Identifies pictures of common vegetables at least 6-8
D Identifies pictures of common birds at least 6-8
E Identifies pictures of common animals at least 6-8
F Identifies pictures of common vehicles at least 6-8
G Recognizes 10 alphabets (may include those in own name) by pointing to requested letter
H Demonstrates the ability to correctly put in order or sequence up to three picture stories
I Does 3 or 4-piece interconnected puzzles
J Understands the concept of up and down
K Matches two like pictures in a set of five pictures
L Selects one that is different from a group of objects
M Groups by 2 characteristics (e.g., size and shape, colour and shape).).(Eg Big circle , or red circle)
N Understands backward and forward.
O Labels or points all of the letters of the alphabet
P Labels or points to all primary colors (e.g., red, yellow, blue, green, black, white).
Q Labels or points to triangle and rectangle
R Categorizes (Eg Tell or sort any 2 or 3 names of fruits, vegetables, birds, vechiles)
S Compares sizes of familiar objects not in view. (Eg Car and aero plane, or car /cycle which is bigger.)
T Book handling: holding book right side up; beginning/end

3 Math's

A Understands More/less
B Identifies 1-10 numbers
C Counts 1-5 object
D Understands size comparatives (Eg. Big/bigger, small/smaller
E Counts 6 objects in a row
F Counts 10 objects in a row.
G Identifies rupee and coin
H Counts correctly to 20.
I Counts and gives objects from numbers 4 -10
J Completes sequences of shapes

4 Expressive Skills:

A Names most pictures of familiar objects minimum 6-8 pictures
B Requests permission (says “please” and or points to the object)
C Speaks in complete sentences most of the time uses picture cards
D Starts using the word “Myself”
E Starts using the word “Because”
F Begins to describe own experiences (Verbalises or gestures)
G Defines 2 or more simple words (Eg; “what do we mean by___?”, “what is a _____?”)
H Defines 5 simple words.

5 Receptive Skills:

A Answers appropriately to why questions
B Answers appropriately to who and whose questions
C Understands and follows the command of two steps
D Names objects by functions (Eg. “What cuts the grass?”)
E Follows 3-step instructions in a sequence involving 2 – 3 different objects (Eg. “ put the doll on the shelf, put your shirt in the hamper, and bring me the ball”)
F Responds appropriately to “how far” questions.
G Responds to time concepts example today, tomorrow, tonight; before, after; how long.

6 Socio-Emotional Skills:

A Identifies self as a boy or girl (3yrs)
B Knows own name
C Knows the parent's name
D Plays simple circle games with other children with adult supervision.
E Interacts/talks with other children (3yrs)
F Take turns or share with other children when reminded (3yrs)
G Demonstrates imitative peer play
H Spontaneously shows affection to familiar playmates
I Demonstrates imaginative play
J Separates from parents by appearing comfortable and secure without the parent
K Makes needs known
L Asks permission to use other's belongings
M Shows awareness of other's feelings (Eg. “He is sad”)
N Uses such terms as “thank you”, “please” and “you are welcome” appropriately
O Recognizes another child's need for help and gives assistance
P Plays cooperatively with peers for extended periods without requiring adult supervision

Q Identifies special friends
R Spontaneously takes turns and shares
S Shows socially acceptable behavior in public

7 Fine Motor skills:

A Strings½"smallbeads
B Uses pencils or crayons
C Colors a shape with crayon but not within the outline
D Copies figures such as circle
E Traces on alphabets, numbers
F Copies figures such as across
G Uses child-sized scissors with control and cuts in a straightline
H Holds marker with fingers in a tripod position
I Copies a square

8 Gross Motor Skills

A Runs
B Jumps off the floor
C Walks up and down stairs without holding the railing
D Pedals tricycle
E Throws ball 4' to 12'
F Catches ball 4' to 12'
G Swings independently
H Walks on balance beam 4-5 steps up to the full length

9 Self Help Skills

A Eats dry food or snacks by self
B Cares for self at the toilet(may need assistance for cleaning after a bowel movement)
C Opening and closing the tiffin box
D Can remove and place things from school bag
E Opening and closing a bottle cap
F Demonstrates independence in personal care - washing hands
G Demonstrates independence in personal care – wipes nose

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