ORIGINAL ARTICLE

Translation and Validation of Autism Spectrum Screening Questionnaire in Urdu for Autistic Children

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ABSTRACT

Aim: The objective of this study is Translation and validation of autism spectrum screening questionnaires in Urdu.

Methods: This was a cross-cultural validation study conducted at the Rising Sun Institute in Lahore utilizing convenient sampling. Twenty pediatric rehabilitation experts and parents of children with autism spectrum disorders, ranging in age from 6 to 17, were included in the study. Two different translators translated the original English edition of ASSQ into Urdu (forward translation). One of the translators was a technological expert, while the other was a medical professional. These interpreters could communicate well in both English and Urdu. The Urdu version of the ASSQ was subsequently translated into English (backward translation). This was carried out by a healthcare expert who had been blinded to the original English version of the ASSQ. The final version was given to an expert panel for assessment after both scales were compared. Panel created the final translated Urdu version of the data. The guardian's approval was obtained in advance, and anonymity was guaranteed. The data was entered into and analyzed using the SPSS version 21 application. The variables in the study were represented using descriptive statistics such as tables, graphs, and percentages.

Results: For reliability statistics, the mean age of the participants was 54.87, with a standard deviation of 0.7648. The translated ASSQ questionnaire had a Cronbach's alpha of 0.584. After testing and re-testing on parents of Autism patients, the inter item correlation (Pearson Correlation) varied between (0.510-0.845). After translation of ASSQ, the intra-class correlation varied from 0.345 to 0.484.

Conclusion: Urdu version of autism spectrum screening questionnaire is a valid and reliable tool for autism children.

Keywords: Autism, Screening, Questionnaire, Autistic

INTRODUCTION

ASSQ is one of the most widely used autism screening tools. Ehlers and Gillberg designed and developed it with the help of Lorna Wing ("Autism Spectrum Screening Questionnaire", 2020). Early diagnosis of autism is necessary to improve quality of life by engaging one in health-promoting activities; hence screening of this condition is very important so as to prevent maladjustments during school-age. Autism Spectrum Screening Questionnaire has better screening properties as it has a wider composition of autistic traits, but it is systematized for a bounded age range – from 7- 16 years[1].

Screening tools play an integral role in epidemiological studies of ASD[2]. ASSQ comprises 27 items/statements which are further marked on a 3-point scale (0-indicates normal; 1- indicates some abnormality; and 2- indicates explicit abnormality). This Questionnaire is usually filled up by either parents or teachers of autistic children and takes approximately up to 10 minutes. Its total sum score ranges from 0 to 54. ASSQ has a stable three-part structure (social difficulties, motor obsessive-compulsive disorder, and autistic style). Five items on this scale refer to repetitive or restricted behavior, while six items cover topics on communication disorder, and eleven items address problems of social interaction. The rest of the five items justifies motor clumsiness and other correlated symptoms including "motor and vocal tics"[1,3].

The validity of this questionnaire has been shown. Data was received from the parents of 94 children. ASSQ had a total score of 5.2 6.6 among children with ASD. Children with ASD had substantially higher total ASSQ scores than any other group (all p.0001). The area under the curve for ASD versus unaffected control patients was 0.957, with a cut-off of 12 having the highest sensitivity (0.957) and specificity (0.825)[2].

A growing corpus of research on autism spectrum disorder (ASD) reveals that it has a sensory-motor component. However, policy and practice fall behind in acknowledging physical

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therapists' potential contributions to ASD research, practice, and education. Physical therapists (PTs) have the potential to play a substantially larger role in ASD treatment. Our attention is required because significant modifications in the criteria for diagnosing ASD are in the works. (4). Autistic children are socially awkward and this leads to self-isolation and depression. Self-isolation on the other hand promotes a sedentary lifestyle, which ultimately leads to greater problems[1].

This translation procedure involves three steps. Firstly, two native Urdu translators, one with technical knowledge and the other with a medical background, independently translate the scale in Urdu. This is called forward translation. The next step is a backward translation in which two health care professionals with certified knowledge of English, translate this Urdu version into English again, this is done by blinding the translator with the original English version.

Autism even though being one of the common childhood problems, is not extensively studied in Pakistan. Research on Autism Spectrum Disorder is important for understanding neurodevelopmental disorders. Pakistan is a country where the Urdu language is widely spoken and understood, ASSQ being an important screening tool for diagnosis is not currently translated in Urdu. I intend to translate as well as validate this scale in Urdu to facilitate health care professionals, physical therapists, parents as well as teachers of autistic children.

MATERIALS AND METHODS

This was a cross-cultural validation study conducted at the Rising Sun Institute in Lahore utilizing convenient sampling. Twenty pediatric rehabilitation experts and parents of children with autism spectrum disorders, ranging in age from 6 to 17, were included in the study. Two different translators translated the original English edition of ASSQ into Urdu (forward translation). One of the translators was a technological expert, while the other was a medical professional. These interpreters could communicate well in both English and Urdu. The Urdu version of the ASSQ was subsequently translated into English (backward translation). This was carried out by a healthcare expert who had been blinded to

the original English version of the ASSQ. The final version was given to an expert panel for assessment after both scales were compared. Panel created the final translated Urdu version of the data. The guardian's approval was obtained in advance, and anonymity was guaranteed. The data was entered into and analyzed using the SPSS version 21 application. The variables in the study were represented using descriptive statistics such as tables, graphs, and percentages.

RESULTS

Age of the patients: For reliability statistics, the average age of participants was 54.87, with a standard deviation of 0.7648. Cronbach's alpha of 0.584.

Cronbach's Alpha	No of Items
.584	20

Internal consistency: The translated version of the ASSQ questionnaire
Test-retest Reliability: After testing and re-testing on parents of Autism patients, the inter item correlation (Pearson Correlation) varied from (0.510-0.845).

Domains	Statistics	Total score of BI
Question No-1-10	Pearson Correlation	.510
	Sig.(2-tailed)	0.05
	N	300
Question No-11-20	Pearson Correlation	.605
	Sig.(2-tailed)	.030
	N	300
Question No-21-27	Pearson Correlation	.845
	Sig.(2-tailed)	.003
	N	300

Inter-Rater and Intra-Rater reliability: After ASSQ translation, the intra-class correlation varied from 0.345 to 0.484.

	ICC	95% CI		F Test with True Value			
		Lower Bound	Upper Bound	Value	df1	df2	Sig
Single Measures	.345	.008	.086	1.936	29	75	.002
Average Measures	.484	.176	.716	1.936	29	75	.002

DISCUSSION

The ASSQ is a 27-item scale that may be used regardless of gender; however it does have age restrictions and should only be used for children ages 6 to 17. Despite its roots as a high-functioning autism screening tool, the ASSQ is now widely used in Europe to screen for all types of ASD, including Asperger syndrome. A private school in a Pakistani neighborhood put this Urdu version of the ASSQ to the test. The cut-off score of 19 was used when teachers and parents filled out the papers. The findings of comparing the original ASSQ score to the Urdu-ASSQ score were similar[5].

In 2011, a study was conducted in Beijing, China, with the goal of determining the validity of a Mandarin Chinese translation of the ASSQ. CH-ASSQ effectively separates clinically diagnosed ASD patients from unaffected persons, according to our early findings. As a result, as demonstrated by the current study, the measure may be useful for screening for ASD in Mandarin Chinese-speaking urban populations[2].

According to a 2012 study done in India, there is a substantial demand for screening and diagnostic tools for Autism Spectrum Disorders in South Asian regional languages such as Bengali and Hindi. Researchers identified a significant difference in scores between children with ASC (N=45 in Bengali, N=40 in Hindi) and typically developing children (N=43 in Bengali, N=42 in Hindi). SDT are abundant throughout South Asia, according to these data, and they are a useful resource for epidemiological research and clinical diagnosis in the region[6].

In 2012, the Thai Version of the ASSQ was developed as part of a research project.(Thai-ASSQ). The Thai-ASSQ was administered to 400 parents and teachers of children aged 4 to 18 who had high-function autism and Asperger's disorder, as well as children with other mental illnesses and typical children. According to the current study, the computed value for Pearson correlation of test re-test reliability was 0.764–0.954, which was close to the Thai version (0.510–0.845)[7]..

The striking feature of the current study was that autism is a mixed category of mental, emotional, physical, and developmental problems. As a result, a broad understanding is required to evaluate and assess this type of patient. As a result, for the Pakistani community, this is the best Urdu version of the ASSQ tool for diagnosing and ruling out autism spectrum disorders.

Because it was tested on a smaller sample, the translated version's generalizability is restricted. The ASSQ should be translated into other commonly spoken languages in Pakistan. This translated version can be utilized on children with ASD, but not on children with other common neurological illnesses like Down syndrome, cerebral palsy, and so on. It should be mentioned that Pakistan is divided into numerous major dialect regions; therefore it cannot be utilized in areas where Urdu is not widely spoken. A diagnosis cannot be made solely based on the results of a screening questionnaire.

CONCLUSION

Urdu version of autism spectrum screening questionnaire is a valid and reliable tool for autism children.
Conflict of interest: Nil

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