

Translation and validation of receptive expressive emergent language test in Urdu

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³Substantial contributions to the conception or design of the work for the acquisition, analysis or interpretation of data for the work, ¹Drafting the work or reviewing it critically for important intellectual content, ³Final approval of the version to be published, ^{4,5}Agreement to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

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A B S T R A C T

Background: REEL-3 is a language test which is used to identify potential receptive and expressive language problems in children up to 3 years old and to determine the effect of physical and/or environmental risks that cause primary delays in early speech and language development. This present study aims at translating an English Receptive Expressive Emergent language test into Urdu and find out its validation to make its application easier for local Urdu speaking population. This will ultimately help in the evaluation and intervention of the early language

Objective: To translate an English receptive and expressive language test into Urdu and find its validation.

Methodology: The study design for this research was descriptive study design. Purposive sampling technique was used for study. This study was carried out at Riphah International University Lahore-Campus and data was collected from Lahore, Pakistan from January 2020 to July 2020 Brislin translation method was used for translation and content validity was determined by using Aiken's Content Validity Coefficient. The sample size for this study was 30 (10 Urdu language experts, 10 English language experts and 10 Speech and language pathologists).

Results: According to the expert's opinion the translated statements satisfy the age appropriateness, show syntactical significance and excellently fulfill all components of language. High values of content validity make this Urdu translated version of test a valid and an appropriate test for the assessment of Receptive and Expressive language.

Conclusion: The use of a standardized and comprehensive language assessment tool would facilitate accurate assessment of children's language levels. The REEL-3 periodic evaluation will allow the clinician to check linguistic development patterns according to the culture and norms of local Urdu speaking population of Pakistan. This test represents the phonemically and culturally appropriate words for the screening of receptive and expressive language skills in Urdu speaking population.

Keywords: Receptive Expressive Emergent language test, Urdu translation, Validation, Content validity.

Introduction

Language development is a crucial factor in the growth of children. It helps the child to communicate and understand thoughts. It also helps to think, solve problems and maintain relations. Language learning is a key step in reading and

writing. This also builds children's literacy skills. Language development is a crucial factor in the growth of children. It helps the child to communicate and understand thoughts. It also helps to think, solve problems and maintain relations.¹

Throughout infancy, every individual person acquires the potential to use a conversational system that includes a confined set of symbols (e.g., sounds, or written or typed characters) as each sender and receiver. Human beings may also hold data by means of these symbols communicate emotions and influence the behavior of others.²

By nature, a willingness to share information is a fundamental element of language. Structured in essence implies that there is an organizational structure with a recognizable shape. The trends are well established so that all other language users can be recognized. Language has essential foundations that distinguish it of other forms of communication and generate new words and structures continually.³ Children acquire language very rapidly from birth to age five. The linguistic development phases of humans are common. Though, there is a considerable difference between the age and rate of a child reaching any milestone in language development. Therefore, an adult child's language development should not be based on certain children but on expectations. Girls are usually faster than boys to learn a language.⁴

Throughout the development of expressive language, children often speak the pace and speed of adult speech in long, unintelligible babbles. Receptive development of language (the understanding and interpretation of language) usually improves more rapidly than expressive language (the ability to communicate).⁶ Acquisition of first language leads to development of the native language of children. The acquisition of a second language applies to the acquisition of a language other than a native language.⁸

The acquisition of language is a significant step in the growth of children. Children ought to develop their receptivity and expressiveness (capacity to use) in order to become effective communicators. Different people: including parents / guardians, family members, students, and speech and language pathologists, play an important role in supporting this process. Young children's families, parents and teachers of school age children must help to develop their language, as this main phase often lays the foundation for secondary written language learning. During first five years of childhood, as brain growth is most accelerated, the largest proportion of a child's language development usually takes place.³

Across Canada and the United States, it is recommended that a speech and language pathologist conduct a systematic language assessment, where parents / families are informed that their child has been unable to meet developmental milestones and that they cannot understand language communication until 18 months.¹³ To communicate includes to speak and to listen to verbal language. Modalities

of communication may commonly be described as "either receptive language that includes interpreted, decoded or understood language or expressive language that encodes or generates a message." Language can be subdivided further into language categories (syntax, morphology and phonology), contents (semantics), and usage (pragmatics). Language is defined as "a code of ideas representing the world by means of a conventional system of arbitrary signals of communication." It indicates language comprises of any aspect of content or context which is linguistically controlled or interpreted for some reason or intent.^{4, 14}

Informal and formal assessment approaches or resources can also be utilizing to assess language abilities of children with varying language needs (such as children with specific language needs (e.g. adolescents usually emerging infants, adolescents with language deficits or disorders), children studying English as a second language, or other languages, native children who may understand English dialects. Formal evaluation methods can be characterized as evaluation methods with established administrative, assessment and interpretation expectations, such as standardized tests.⁶ Therefore, educators and speech pathologists may evaluate and give guidance to them about the understanding as- well-as use of the increasingly difficult verbal aspect of a child and identify the receptive and expressive language acquisition needs of different young children between the age of 1.5 and 9.⁵

Children develop normally receptive language skills before developing their expressive language. Receptive language is the integration and comprehension of words, and the comprehension of meaning. Then steady development of expressive language begins as receptive language continues to develop. Expressive language is normally considered to begin with a period of pre-verbal communication in which infants uses gestures and vocalizations to inform others of their intention. New ways then adopt old roles according to a common principle of development, such that children use words to convey the same communicative functions that they have already articulated by symbolic means.⁴

Researchers and clinicians belonging to different disciplines have an interest in the assessment of early language and communicative skills. For clinicians, assessment enables the early identification of children with slow language or communicative development, and provides a basis on which to suggest adequate treatment. The systematic assessment and training of language development in children is essential. Professionals working with children who have language difficulties have consistently

recognized the need to identify, design, and validate specific language assessment tools. Language assessment serves as a crucial method for evaluating the effectiveness of early intervention services provided to children.³

There is also a need for a language evaluation method that provides accurate standard-referenced estimates of the language functioning of children with special needs. This form of assessment is typically carried out not to identify targets or priorities for intervention, but instead to evaluate the results of intervention or to determine the eligibility of children for services. Although there are various assessments available for pre-school and older children, relatively few instruments evaluate children's language development from birth to 36 months of age. Of these, one of the most frequently used is the Receptive-Expressive Emergent Language Scale (REEL).⁵

The popularity of the REEL is attributed to many factors. Firstly, the test is based on the hypothesis that language development starts in early infancy and is closely related to the development of the social and communicative nonverbal behaviors of children. Second, the test includes a comprehensive list of language behavior that helps examiners to gain equal scores of both expressive and receptive language ages. Third, most of the test items are true to the degree that they are indicative of the concepts and behaviors' recorded in the literature of the language or found in other developmental studies.⁶ Fourthly, even persons who do not have comprehensive language assessment training can administer the REEL in around 10 to 20 minutes. Fifthly, since the evaluation is performed by interviewing an adult who knows the child, the test reliability is appropriate.⁷

Language is therefore an important part of communication. Urdu is Pakistan's native language and was introduced in Central Asia in the 17th century. Urdu is a Turkish term "ordu" that means army or camp. In the invasion of ancient India and Eastern Persia, Urdu was used as the code-language by Muslim warriors. Those were predominantly Arabs, Turks and Persians but the largest of the soldiers came from Persia. This is why Urdu became popular in Persians and Urdu began dominating Farsi in a short span of time, and another explanation is that Urdu was spoken widely in many races. There is also an official language which is often used by large numbers of people in order to serve them. Urdu vocabulary includes 70% of Persian, and the rest is of Arabic, Persian and other native languages, but Urdu Grammar incorporates Arabic and Turkish elements and some uniqueness which cannot occur in all three Urdu languages. Urdu today also incorporates English and Hindi vocabulary owing to the globalization and growth of social communities in Pakistan.⁸

A research has shown that there is a lack of required number of speech therapists operating in various locations in compliance with the needs of special centers and hospitals in Pakistan. It is estimated that more than 22 million people in a total population of more than 160 million suffered from voice, language, swallowing and hearing disability, according to a survey report published in daily Dawn, and our country has a very limited number of qualified SLPs to address the needs of 22 million people across the nation. Moreover, the majority of speech therapists at the institutes have no professional qualification in the field, which is why they have lacked clinical evaluation methods, the preparation of effective therapy plans, therapeutic intervention, elimination from treatment goals and the development of home modification interventions for children with language difficulties.⁹ During the research, it was also addressed that the systematic research methods for evaluation and care have not been obtained by Institutes because of financial restriction, restricted clinical knowledge and time limits which could prove that structured protocols cannot be established to trigger particular treatment domains. The research also found that most speech therapists use the conventional medium of therapy to fulfill their patients' needs. For the management, a paradigm shift to explore the field of speech and language pathology has been used in addition to the integration of new and conventional clinical materials.⁹

In Pakistan, mostly informal assessment techniques are used for intervention purposes and very few Speech and Language Pathologists use the formal protocols and tests. Most of the Urdu speaking population lacks the formal Speech and Language testing due to the language of the formalized tests. Either they face the language barriers or the norm and culture differences.

This paper presents the translation of an English Receptive Expressive Emergent language test into Urdu and content validity of the Urdu translated Receptive component of the REEL test according to the experts, in order to facilitate its application to the local Urdu speaking population. The validity of the contents is intended to determine how attributes measured by an instrument are in accordance with the test and representative of the targeted construct for a particular assessment purpose. This aspect of content validity has been examined in relation to the REEL, but needs to be re-examined whenever the original instrument is adapted to another language and culture. Accordingly, our main task with regard to validity was to carefully consider the content validity of the REEL according to experts. This will ultimately help in the evaluation and intervention of the early language skills in future. It will also facilitate the elimination of biasness between the responses of clinicians and parents.

Methodology

A descriptive study design was used for this research. This study was conducted at Riphah International University Lahore-Campus from January 2020 to July 2020 with the ethical approval number (Ref. No. RCRS-RE-MS-SLP/Spring 2020/016). Data was collected from Lahore, Pakistan. The population included was Urdu Language Experts, English Language Experts and Speech Language Pathologist. Purposive sampling technique was used for conducting this study. This research was performed after taken the informed consent by participants who met the inclusion criteria. The sample size for this study was 30 (10 Urdu language experts, 10 English language experts and 10 Speech and Language Pathologists). Urdu language experts (with minimum qualification Masters in Urdu and 5 years' experience). English language experts (with minimum qualification Masters in English and 5 years' experience). Speech & Language Pathologists (with minimum qualification MS-SLP with 5 years' experience with children with language disorders) were included.¹⁰ Non-practicing speech and language pathologists was excluded.

Procedure: The Brislin Translation and Back-Translation Program is a well-known method to establish relevant and effective cross-cultural research designs. In this model, a bilingual expert blindly translates the tool from the source language (SL) into the target language (TL) and a second bilingual expert blindly translates it into the source language, without regard to the actual language edition. When the back-translated edition involves a discrepancy in interpretation in relation to the source, the words are re-translated and blindly translated by another bilingual professional. This iterative activity is replicated until there is no significance error.¹¹

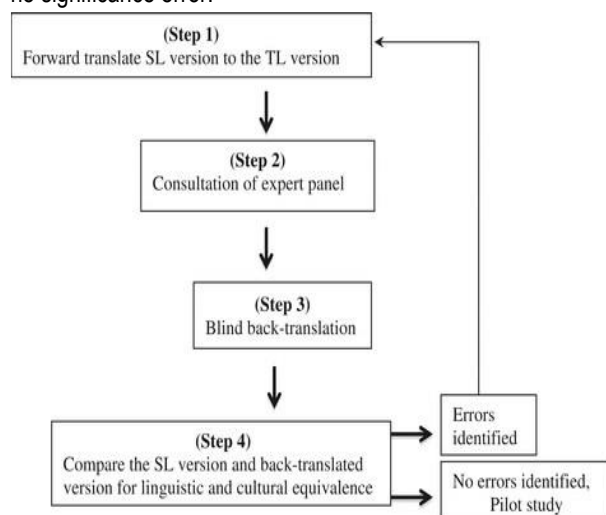


Figure 1: Steps of Brislin's method of translation application.¹²

After the translation the next step is to find out the content validity. In this study Aiken's Content Validity Coefficient (V) used to find out content validity.¹²

$$V = \sum S / [n * (c-1)]$$

Where: S = (r- ℓ_0)

Where: V= Validity index of Aiken, n=Number of assessors (raters/experts) which chose criteria, c = Convenient scale of successive integers, r: Rating by an expert ; ℓ_0 : The lowest category¹¹

This studies main focus was to translate the receptive and expressive components of language into Urdu according to the cultural and normative values of local Urdu speaking population of Pakistan. The purpose of SLPs recruitment in this study was to evaluate either the translated version is according to their patient population requirements.

Data analysis plan: Statistical Package for Social Sciences version 18 was used to analyze data. Descriptive statistics was performed to analyze demographic variables.

Results

The Urdu version of Receptive Expressive Emergent Language test was given to the experts for their response against each item of the test. The response of each expert was analyzed statistically.

Table: 1 Summary Table

Expert #	Satisfy	Fulfilling (Good +Excellent)	Not Fulfilling (Poor & Worst)
Expert 1	8%	92%	
Expert 2	6%	94%	
Expert 3	3%	97%	
Expert 4	12%	87%	1%
Expert 5	3%	97%	
Expert 6	12%	88%	
Expert 7	6%	89%	5%
Expert 8	21%	79%	
Expert 9	3%	97%	
Expert 10	3%	97%	

Note: Satisfy: the age appropriate, Good: show syntactical significance, Excellent: fulfill all components of language, Poor: pragmatically poor, Worst: semantically inappropriate

According to the expert's opinion the translated statements satisfy the age appropriateness, show syntactical significance and excellently fulfill all components of language. Only one receptive language statement was pragmatically poor while three were semantically inappropriate. While only one Expressive Language statement was pragmatically poor while two were semantically inappropriate. When content validities of this Urdu translated version of Receptive

Expressive Emergent Language Test was calculated, the Content Validity Ratio of Receptive Language components lays between 0.72 and 0.9 except only two statements whose content validity was 0.67 and 0.7 respectively. In contrast the content validity ratio of expressive language components lies between 0.72 and 0.9 except one statement whose content validity ratio is 0.7. These high values of content validity of item/questions make this Urdu translated version of test a valid and an appropriate test for the assessment of Receptive and Expressive language.

Table 2. Content Validity (of test items)

Q #	Receptive Language Components		Expressive Language Components	
	ΣS	V value	ΣS	V value
1	33	0.83	36	0.9
2	32	0.8	34	0.85
3	30	0.75	33	0.82
4	33	0.83	33	0.82
5	28	0.7	31	0.77
6	35	0.88	36	0.9
7	32	0.82	31	0.77
8	31	0.787	32	0.8
9	31	0.787	30	0.75
10	32	0.82	36	0.9
11	33	0.83	37	0.92
12	32	0.82	38	0.95
13	34	0.853	36	0.9
14	31	0.787	36	0.9
15	34	0.853	31	0.77
16	32	0.82	39	0.97
17	30	0.752	37	0.92
18	32	0.82	30	0.75
19	33	0.83	34	0.85
20	34	0.853	37	0.92
21	33	0.83	38	0.95
22	34	0.853	34	0.85
23	34	0.853	34	0.85
24	35	0.88	30	0.75
25	35	0.88	39	0.97
26	35	0.88	28	0.7
27	34	0.853	29	0.72
28	36	0.94	34	0.85
29	33	0.83	34	0.85

30	32	0.82	37	0.92
31	31	0.787	32	0.8
32	34	0.853	33	0.82
33	32	0.82	31	0.77
34	35	0.88	37	0.92
35	35	0.88	30	0.75
36	35	0.88	32	0.8
37	34	0.853	35	0.87
38	33	0.83	35	0.87
39	34	0.853	37	0.92
40	35	0.88	34	0.85
41	34	0.853	34	0.85
42	36	0.94	36	0.9
43	31	0.787	30	0.75
44	33	0.83	36	0.9
45	33	0.83	34	0.85
46	34	0.853	37	0.92
47	34	0.853	36	0.9
48	32	0.82	33	0.82
49	36	0.94	36	0.9
50	35	0.88	38	0.95
51	33	0.83	39	0.95
52	34	0.853	36	0.9
53	33	0.83	35	0.87
54	32	0.82	34	0.85
55	33	0.83	32	0.8
56	35	0.88	35	0.87
57	35	0.88	33	0.82
58	35	0.88	36	0.9
59	35	0.88	37	0.92
60	35	0.88	35	0.87
61	29	0.73	32	0.8
62	33	0.83	37	0.92
63	27	0.67	30	0.75
64	29	0.73	29	0.72
65	32	0.82	33	0.82
66	30	0.752	34	0.85

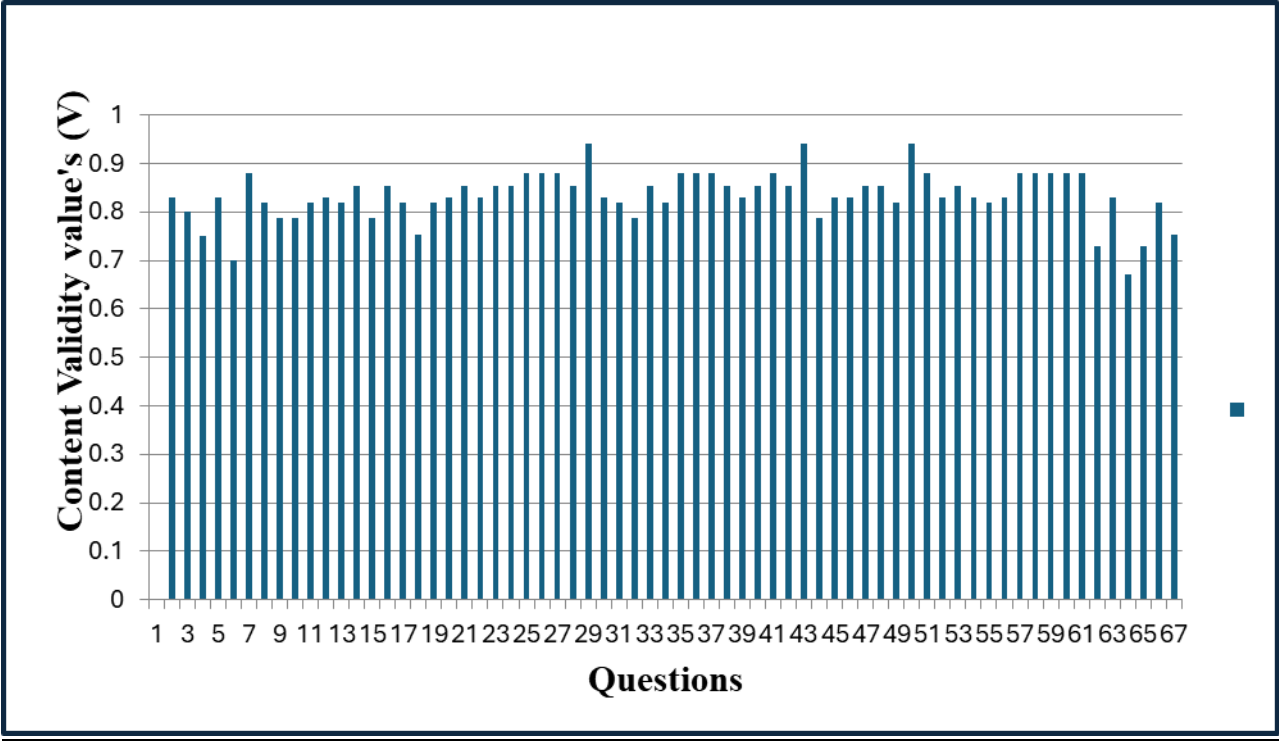


Figure 2 Content validity (Receptive components)

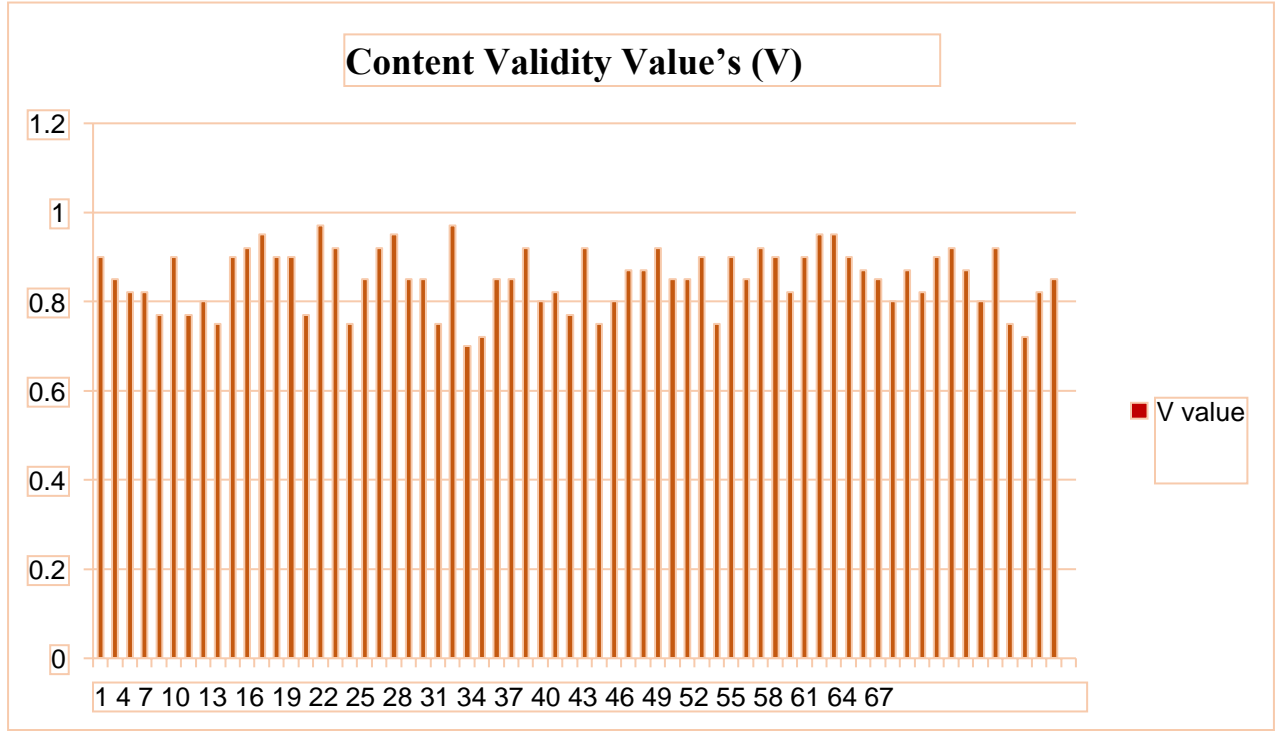


Figure 3 Content validity (Expressive components)

Discussion

In order to communicate successfully, receptive and expressive language is important. Children who have problems in learning may find it challenging to follow instructions in their homes or in their school setting and face problems in addressing questions and requests properly. Difficulties of communication within the school atmosphere may contribute to vision and hearing and/or behavioral problems. Because most things include a deep understanding of the vocabulary, access to the course or the education and learning assignments needed for the level of the year can also be challenging for a child.¹² Different screening and assessment tools are available worldwide to measure language skills of children according to their age and to provide speech and language therapy as early as possible in case of any problem. However, there are different languages which are spoken in different continents and these languages have different speech sounds such as Urdu, German, and French etc. Urdu language is in the top 25 languages which are spoken worldwide and more than 100 million people speak Urdu language in different countries. Urdu is Pakistan's national language as well.

However, it is immensely needed to have a criterion based receptive and expressive language screening tool which can screen the ongoing communication problems and deficits in younger age, ultimately effecting the individual's socialization and ability to progress. Accurate screening will make the accurate referral for the child, which lead to early intervention.¹³ Furthermore, it has been proved in the past that culturally and linguistically unbiased tools are always required. These tools give accurate results which are valid and reliable. Speech and Language pathology is an emerging field in Pakistan and have few resources available which are norm referenced and criterion based. Translation and validation of Receptive Expressive Emergent Language test would make it easy for not only Speech and Language Pathologists but also for parents to assess their children and contact for early intervention in case of any deficits.

It is seen that in Pakistan the parents of children with language deficits does not approach Speech and language Pathologists due to lack of awareness and knowledge. Secondly there is no such norm based tool available by which receptive and expressive language skills can be screened in younger (0-3 years old) children. Although, there are different screening tools available online which can screen the child, but these tools are not useable in Pakistan due to differences in culture and language.

Results of this study confirm that REEL-3 can be used for language assessment in children. It has been found that gender and other demographic changes do not impact this test. For speech-language pathologists the option of a valid language evaluation test is highly important. REEL-3 is a standard language assessment test; however, the validity of REEL-3 in Urdu-speaking children with special needs and typically growing children has not been evaluated.¹⁴

Most of language assessment tests are developed and standardized in English population which cannot be used comprehensively in non-English speaking populations due to linguistics variations and cultural differences across population. Therefore, due to speech-language pathologist's familiarity and comprehensiveness of receptive and expressive language components, the need for translation and testing the content validity of REEL-3 in Urdu speaking children was realized. This is the first study to translate and to establish content validity of REEL-3 in Urdu language.

The Receptive Expressive Emergent Language scale was translated and sent to the professionals for their expert opinion and continuous follow up was required to get response from these professionals. The purpose of testing content validity was to determine whether the content of the REEL-3 test remains consistent after being translated into Urdu. Content validity ensures that the test accurately represents the construct it is designed to measure. It was hypothesized that children from different groups might exhibit varied performance on the REEL-3 test, with a statistically non-significant relationship potentially observed. Moreover, content validity could be further evaluated across diverse language-related domains, including language delay, autism, cochlear implants, and learning disabilities.¹⁴

The Receptive Expressive Emergent Language Test is principally consisted of 66 questions while age limit of this test is 0-3 years. A total of 10 Speech & Language Pathologists were asked to give their responses about the Urdu translated version of Receptive Emergent Language test. According to the expert's opinion the translated statements satisfy the age appropriateness, show syntactical significance and excellently fulfill all components of language. This is the first study that has demonstrated the systematic translation and validation of Receptive Expressive Emergent Language scale in the Urdu language.

Conclusion

The results revealed that the Urdu version of Receptive Expressive Emergent Language test is valid. The use of a standardized and comprehensive language assessment tool would enable accurate assessment of children's language

levels. The REEL-3 periodic evaluation will allow the clinician to check linguistic development patterns. This test represents the phonemically and culturally appropriate words for the screening of receptive and expressive language skills in children aged 0-3 years. It is concluded that Receptive Expressive Emergent Language test is a valid tool for screening receptive and expressive language skills in younger children of Urdu speaking population.

Supporting Information:

S1 File:Receptive expressive emergent language test (REEL-3) (Urdu Translated version)

Risks: No risks and ethical harms associated with this research.

Benefits: The present study will make the application of this tool (REEL-3) easier for local population. This will eventually help in early language evaluation and intervention. It will also facilitate to eradicate biasness between the clinicians and parent's responses

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