

CONSTRUCTION AND STANDARDIZATION OF VERBAL LEARNING DISABILITIES CHECKLIST FOR SCHOOL CHILDREN

By

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ABSTRACT

For identifying children with four major kinds of verbal learning disabilities viz. reading disability, speech and language comprehension disability, writing disability and mathematics disability, the present task was undertaken to construct and standardize verbal learning disabilities checklist. The checklist was developed by keeping in view the Indian school and social situations where school going children are being nurtured. For that, the data were collected from school teachers, parents, learning disabled and normal school children belonging to 9 to 15 years age group by adopting the procedure of purposive sampling technique at different stages. An item pool was developed initially by consulting various sources and theoretical and empirical literature available in the concerned area and organizing intensive discussions with experienced school teachers, teacher educators, parents of disabled children, teachers serving in special schools, psychologists, psychiatrists, pediatricians and educational counselors. The preliminary draft of verbal learning disabilities checklist was given to 35 field experts (experienced school teachers, teacher educators, teachers serving in special schools, psychologists, psychiatrists, pediatricians and educational counselors) to critically judge and evaluate the content accuracy, relevance, logic, duplication/repetition and coverage of the items. Items of checklist were again put to intensive evaluation so that the checklist only contain those statements/items which are highly capable of discriminating between a learning disabled child from a normal child without any learning disability. This was carried out by judging the consensus between teachers' ratings and parents' ratings in respect of learning disabled children. The reliability of the checklist was ascertained with the help of test-retest reliability (separately for teachers' ratings and parents' ratings) and inter-rater reliability (between teachers and parents' ratings) by computing correlation indices. The validity of checklist was also ascertained and suggestive norms were developed for initial identification of children with verbal learning disabilities. These norms were developed by taking into account the expert advice of experienced school teachers, pediatricians, psychologists and psychiatrists and can be used just for referral to expert assessment and diagnosis of verbal learning disabilities among the school going children.

Keywords: Construction, Standardization, Verbal Learning Disability, Checklist.

INTRODUCTION

For any person who is diagnosed with a learning disability, it can seem scary for him/her at first instance. But, really speaking, a learning disability doesn't have to do with a person's intelligence — after all, successful people such as Walt Disney, Alexander Graham Bell, and Winston Churchill, all had learning disabilities. Mangal (2009) is of the view that "somebody with a learning disability is said also to have 'significant impairment of intellectual functioning' and 'significant impairment of adaptive/social functioning'." This means

that the person will have difficulties understanding, learning and remembering new things, and in generalizing any learning to new situations. Because of these difficulties with learning, the person may have difficulties with a number of social tasks, for example; communication, self-care, awareness of health and safety. A final dimension to the definition is that these impairments are present from childhood, not acquired as a result of accident or following the onset of adult illness. A child with a learning disability cannot try harder, pay closer attention, or improve motivation on their own; they need

help to learn how to do those things (Learning Disabilities Helpline, n.d.). According to Wallace & McGoughlin (1979), "learning disabilities are problems that affect the brain's ability to receive, process, analyze, or store information. These problems can make it difficult for a person to learn as quickly as someone who isn't affected by learning disabilities." Learning disabled children and adults look and act like the rest of the population. They are bright and often talented in creative or physical areas. Their disability, with its accompanying frustration, withdrawal, or coping behaviours, rears its head in the face of specific tasks or expectations (About Learning Disabilities, n.d.). There are many kinds of learning disabilities. Certain kinds of learning disabilities can make it difficult for a person to read, write, spell or solve mathematics problems. One cannot tell by merely looking at a person that he has a learning disability, which makes learning disabilities hard to diagnose. Learning disabilities usually first show up when a person has difficulty in speaking, reading, writing, figuring out a math problem, communicating with a parent, or paying attention in class. Some child's learning disabilities are diagnosed in a school when a teacher notices that the child can't follow directions for a game or is struggling to do work he or she should be able to do easily.

Learner (1976) reported that most learning disabilities fall into one of two categories: verbal and nonverbal. Children with verbal learning disabilities have difficulty with words, both spoken and written. The most common and best-known verbal learning disability is dyslexia which causes children to have trouble recognizing or processing letters and the sounds associated with them. Children with non-verbal learning disabilities may have difficulty processing what they see. They may have trouble making sense of visual details like numbers on a blackboard.

Considering from another angle, there are many types of learning disabilities. Some of the disabilities commonly found are dyslexia (inability to read properly), dyscalculia (inability in math reasoning), dysgraphia (difficulty with syntax) and visual and auditory difficulties.

Now, the question arises that how these learning disabilities emerges among children. Experts have

noticed that learning disabilities tend to run in families and they think that heredity or genetic factors could play a determinant role. Some experts think that learning disabilities can be traced to brain development, both before and after birth (Cruickshank & Hallahan, 1975; Learner, 1985). For this reason, problems such as low birth weight, lack of oxygen or premature birth may have something to do with learning disabilities. Young children who receive head injuries may also be at risk of developing learning disabilities. Infants and young kids are susceptible to environmental toxins (poisons). Poor nutrition in early years of life may also lead to learning disabilities later in life. Just because one child has trouble studying for a test or doing well on a learning task doesn't mean he has a learning disability.

The first step in identifying or diagnosing a learning disability is to rule out vision or hearing problems. A person may then work with an expert, a psychologist or learning specialist who will use specific tests to help diagnose the disability. Often, these can help in pinpointing that child's learning strengths and weaknesses in addition to revealing of his/her particular learning disability. Although, a diagnosis of a learning disability can feel upsetting for a child or even to his/her parents, it's actually the first step in resolving the situation. Once a child's particular problem has been identified, he or she can then follow different strategies or take steps to manage the disability which will further help in restoring his/her self-esteem and confidence (Alley & Deschler, 1979; Gearheart, 1973).

Individuals with learning disabilities can face unique challenges that are often pervasive throughout the lifespan. Depending on the type and severity of the disability, interventions and current technologies may be used to help the individual learn strategies that will foster future success. Some interventions can be quite simplistic, while others are intricate and complex (Learning Disability, n.d.).

In operational terms, learning disabilities are the problems that affect the brain's ability to receive, process, analyze or store information. These problems can make it difficult for a child to learn as quickly as someone who isn't affected by learning disabilities. The children with verbal

learning disabilities have difficulty with words, both spoken and written. They may be able to read or write just fine but struggle with other aspects of language and some children have trouble with the act of writing as their brains struggle to control the many things that go into it from moving their hand to form letter shapes to remembering the correct grammar rules involved in writing down a sentence.

The learning disabilities can be broadly classified into verbal and non-verbal learning disabilities. Non-verbal learning disabilities are mainly non-language based that include auditory and visual perception disabilities, fine motor skills disabilities, attention deficit disorder (ADD), Attention Deficit Hyperactivity Disorder (ADHD) and socio-emotional disabilities. On the other hand, verbal learning disabilities are typically language based which include; reading disability, speech and language comprehension disabilities, writing disability and mathematics disability. A detailed description of major types of verbal learning disabilities is given here:

Types of Verbal Learning Disabilities

1. Reading Disabilities: A reading disability is a condition in which an individual displays difficulty in reading resulting primarily from neurological factors. National Institute of Neurological Disorders and Stroke (NINDS) defines reading disability or dyslexia as, "Dyslexia is a brain-based type of learning disability that specifically impairs the individuals' ability to read. These individuals typically read at levels significantly lower than expected despite having normal intelligence. Although, the disorder varies from person to person, common characteristics among individuals with dyslexia are difficulty with spelling, phonological processing (the manipulation of sounds), and/or rapid visual-verbal responding. Dyslexia is a learning disability that manifests itself as a difficulty with reading decoding, reading comprehension and/or reading fluency.

It is separate and distinct from reading difficulties resulting from other causes, such as a non-neurological deficiency with vision or hearing, or from poor or inadequate instruction in reading comprehension affects the learner's

ability to understand the meaning of words and passages. Students with learning disability in reading comprehension may also struggle with basic reading skills such as decoding words, but comprehension is the greater weakness. Some students with a learning disability in reading comprehension can read aloud with little or no difficulty pronouncing words, but they do not understand or remember what they've read (Agarwal & Rao, 2007).

A learning disability in reading comprehension likely involves difficulty with language processing and visual reasoning centers of the brain. A learning disability may result from inherited conditions or developmental differences in the brain. Individuals with a learning disability in reading comprehension have difficulty understanding the important ideas in reading passages. They have difficulty with basic reading skills such as word recognition. Their phrasing and fluency are often weak. They frequently avoid reading and are frustrated with reading tasks in school.

2. Speech and Language Comprehension Disabilities:

Speech and language disabilities can be one of the earliest types of disabilities to identify. This is because some of the symptoms are noted because of a lack of social integration, failure to reach developmental hallmarks and the palpable lack of expression in young children. However, if an educator is not trained or informed of the characteristics, such disabilities can be unnoticed for years. This can cause regression in essential verbal expression skills and lead to low academic achievement. A speech and language disability is a deficiency in either expressive or receptive processing of language. A speech disability is characterized by difficulty in articulation of words. Examples include stuttering or problems producing particular sounds. A language disability is a specific impairment in understanding and sharing thoughts and ideas, i.e. a disorder that involves the processing of linguistic information. Problems that may be experienced can involve grammar, semantics (meaning), or other aspects of language. When an individual is unable to produce speech sounds correctly or fluently, or has problems with his or her voice, then he or she has a speech disorder. When an individual has trouble

understanding others (receptive language), or sharing thoughts, ideas, and feelings completely (expressive language), then he or she has a language disorder. Receptive language disorder is a type of learning disability affecting the ability to understand spoken, and sometimes written, language. Students with receptive language disorders often have difficulty with speech and organizing their thoughts, which creates problems in communicating verbally with others and in organizing their thoughts on paper. This leads to substantial difficulty communicating. They have difficulty with language processing and the connection between words and ideas they represent. Some individuals may also have problems with pronunciation of words and speech / sound production.

3. *Writing Disabilities:* Dysgraphia is a deficiency in the ability to write, primarily in terms of handwriting but perhaps also in terms of coherence. It occurs regardless of the ability to read and is not due to intellectual impairment. Acquired dysgraphia is known as 'agraphia'. Individuals with dysgraphia usually can write on some level, and often lack other fine motor skills and may be cross dominant finding tasks such as tying shoes difficult. They can also lack basic grammar and spelling skills (for example, having difficulties with the letters p, q, b, and d), and often will write the wrong word when trying to formulate thoughts on paper. In childhood, the disorder generally emerges when the child is first introduced to writing. The child may make inappropriately sized and spaced letters, or write wrong or misspelled words despite thorough instruction. Children with such disorder may have other learning disabilities, but they usually have no social or other academic problems. Disabilities in basic writing affect the learner's ability to write words with correct spelling, appropriate word choice, and basic mechanics such as letter formation, grammar, and punctuation. Children with learning disabilities in basic writing may not understand the relationship between letters and the sounds they represent and often cannot distinguish the correct written word from the incorrect word. Learning Disabilities in writing may be hereditary, caused by differences in brain development, brain injury, or stroke.

They are not solely the result of problems with expressive or receptive language, visual or hearing problems, or hand-eye coordination, but they can be complicated by these conditions. Common characteristics of individuals with learning disabilities in basic writing skills include difficulty completing school work, using writing in everyday situations, and are at risk for school failure. They may have difficulty producing letters on paper, and may not understand the relationship between letters, words, and sounds. They may also have problems basic reading because of weaknesses in understanding letter/sound connections.

4. *Mathematics Disabilities:* Dyscalculia (or math disability) is a specific learning disability involving innate difficulty in learning or comprehending simple mathematical arithmetical operations. It is akin to dyslexia and includes difficulty in understanding numbers, learning how to manipulate numbers, learning mathematical facts and a number of other related symptoms. Mathematics disabilities can also occur as the result of some types of brain injury, in which case the proper term is 'acalculia', to distinguish it from dyscalculia which is of innate, genetic or developmental origin. In some cases, difficulties in mathematics stem from sequencing difficulties because mathematics can be learnt on a set of procedures that must be followed in a sequential manner. This may also be due to memory deficits. Those individuals experiencing difficulty in remembering things will have difficulty in remembering the order of operations to be followed or the specific sequence of steps to be taken to solve a mathematics problem. Lastly, difficulties in mathematics may be on account of a form of mathematics phobia. This often stems from the belief that one 'cannot do mathematics'. This will stem from some negative experiences in the past or is often due to a lack of confidence.

Keeping these four kinds of verbal learning disabilities into forefront, it was thought worthwhile to undertake a study mainly concentrated on construction and standardization of an instrument to detect verbal learning disabilities among adolescents as no standardized

instrument is available presently that can identify the presence of verbal learning disabilities among children of the age group of 9 to 15 years especially in Indian socio-demographic conditions.

Hence, for early detection of school going children (in the age group of 9 to 15 years) with different types of verbal learning disabilities and to recommend such cases for further intensive diagnosis and assessment to experts and qualified professionals, present work was undertaken with following specific objectives in hand:

Objectives:

1. To prepare the preliminary draft of verbal learning disabilities checklist for school going children.
2. To examine relevance and select highly discriminating statements for final draft of verbal learning disabilities checklist.
3. To estimate reliability of verbal learning disabilities checklist through test-retest method and inter-rater reliability method.
4. To ascertain the validity (content, predictive and intrinsic validity) of verbal learning disabilities checklist.
5. To develop suggestive norms for initial identification of children with verbal learning disabilities on the basis of checklist results.

Research Method:

For construction and standardization of verbal learning disabilities checklist, survey technique under descriptive method of research was employed.

Sampling:

For development of checklist, purposive sampling procedure was employed at different stages of data collection by keeping in view the objectives of the empirical work in hand. Firstly, a purposive sample of 35 field experts consisting of experienced school teachers, teacher educators, teachers serving in special schools, psychologists, psychiatrists, pediatricians and educational counselors was taken to critically judge and evaluate the content accuracy, relevance, logic, duplication/repetition and coverage of the items included in the preliminary draft of verbal learning

disabilities checklist. At the second stage, for selecting such statements/items in the checklist which are highly capable of discriminating between a learning disabled child from a normal child, a total of 20 learning disabled children were selected by using judgment sampling technique by seeking the opinion of concerned school teachers. These school going children were in the age range of 9 years to 15 years and were having one or the other type of verbal learning disability. At the third stage, for estimating test-retest reliability of checklist, a sample of 200 school going children in the age group of 9 years to 15 years was selected. This sample of children was comprised of both learning disabled and normal children selected at random from 7 primary, 5 middle/high, 3 senior secondary and 2 special schools. Then onwards, purposive selection of a total of 34 teachers was made from the schools where these 200 children were studying. Along with this, purposive sampling was employed to select parents of sampled 200 students. However, 17 parents refused to provide necessary information with regard to their children. So, a total of 183 parents (either father or mother) were selected. This selection of 34 teachers and 183 parents was done in order to estimate inter-rater reliability of verbal learning disabilities checklist.

Technique Employed for Developing Verbal Learning Disabilities Checklist

A checklist is a guide comprised of a list of characteristics related to the behaviour domain to be observed. According to Kempfer (1960), "a checklist is a simple device consisting of a prepared list of statements which are thought by the researcher to be relevant to the problem being studied. The observer is required to indicate the presence or absence of the characteristic (as mentioned in the statement) by checking 'yes' or 'no' to each statement/item." In the present case, a checklist has been constructed to identify verbal learning disabilities among school going children. The items of this checklist have been prepared in accordance with the method suggested by Kempfer (1960). However, this instrument has dual characteristics of a checklist as well as of a rating scale i.e. items of this checklist are to be checked / rated by the observer (either parents or teachers of child) on

either of three points in a continuum viz. always/often, sometimes, rarely/never instead of on two discrete points i.e. 'yes' or 'no'. This was done so that specific learning disability behaviour/symptom/characteristic mentioned in each statement of checklist can be measured accurately for its presence along with its frequency of occurrence in the child under observation. This was considered as more helpful in ensuring acceptability and authenticity of the checklist among the observers. Hence, the present checklist was developed by combining the principles of a checklist as given by Kempfer (1960) and principles of developing a rating scale as suggested by Guilford (1954) and Harthshorne & May (1929). The items / statements belonged to four major types of verbal learning disabilities viz. reading disability, writing disability, speech and language comprehension disability and mathematics disabilities.

Construction of Preliminary Draft of Verbal Learning Disabilities Checklist:

In order to develop verbal learning disabilities checklist for school-going children, an item pool was created by consulting different literature on learning disabilities and research studies in the field of learning disabled students. Along with this, the statements of opinion were also collected from experienced school teachers, teacher educators, parents of disabled children, teachers serving in special schools, psychologists, psychiatrists, pediatricians and educational counselors after having intensive informal discussions with them. The theoretical/research literature and the critical discussions with field experts provided a sound base for construction of an initial item pool of 62 statements/items related to four different types of verbal learning disabilities. These items were prepared in both Hindi and English language so that it may be easier for the respondent to complete it without any conceptual misunderstanding. The items of the checklist were initially developed in statement form which were to be checked on two alternative responses 'yes' or 'no'. The 'yes' response to any statement showed the presence of verbal learning disability whereas, 'no' response indicated absence of verbal learning disability. These preliminary items of the checklist were then

arranged in a random order separately in four different dimensions of verbal learning disabilities, typed and corrected for any spelling or typing errors. These items were subjected to a careful scrutiny. The items, which seemed to overlap with one another, were critically examined. An item conveying the idea most clearly was retained and the language of the items was kept simple to make them suitable to express the idea. This process of scrutiny and evaluation finally yielded 57 items which was referred as preliminary draft of verbal learning disabilities checklist. These 57 items were then distributed in four different kinds of verbal learning disabilities. The distribution of these items in preliminary draft was as follows: Reading Disabilities – 17, Speech and Language Comprehension Disabilities – 15, Writing Disabilities – 12 and Mathematics Disabilities – 13.

Revision, Editing and Modification of Items of Verbal Learning Disabilities Checklist:

This preliminary draft of verbal learning disabilities checklist was given to 35 field experts (experienced school teachers, teacher educators, teachers serving in special schools, psychologists, psychiatrists, pediatricians and educational counselors) to critically judge and evaluate the content accuracy, relevance, logic, duplication/repetition and coverage of the items. The evaluation parameters were explained to the experts and opinion was received with regard to the relevance and accuracy as well as appropriateness of the statements. Each item in the preliminary draft of verbal learning disabilities checklist was to be evaluated by the experts on two points; viz. 'zero' point for irrelevant items and 'one' point for 'relevant' items. On the basis of this evaluation and unanimity of opinion (90% approval) by field experts, 5 statements were dropped down from the preliminary draft of verbal learning disabilities checklist and certain items were modified and revised in the light of critical comments and suggestions offered by them. At this juncture, a major modification was made in the checklist as was suggested by majority of the field experts. It was held by the experts that behaviours associated with verbal learning disabilities as mentioned in the statements occur among children with different frequency and intensity. So,

experts were of the opinion of constructing a rating scale for each statement/item of checklist so that symptoms of verbal learning disabilities can be identified for their presence along with their frequency of occurrence in the behaviour of children. Hence, on the basis of these suggestions and discussions with other researchers in the field of education and psychology, instead of having two discrete points i.e. 'yes' or 'no' for making responses on the checklist, it was decided to have three points rating scale viz. never/rarely, sometimes and often/always for making response on each statement of verbal learning disabilities checklist. Thus, this research instrument acquired the characteristics of both checklist and a rating scale. In this manner, a try-out form of verbal learning disabilities checklist with a total of 52 statements came into existence.

Data Analysis and Results

1. *Selecting Statements for Final Form of Verbal Learning Disabilities Checklist:*

The try-out form of verbal learning disabilities checklist was further subjected to rigorous examination in order to have only highly relevant statements/items in it. In other words, 52 items of checklist were again put to intensive evaluation so that the checklist only contain those statements/items which are highly capable of discriminating between a learning disabled child from a normal child. This was carried out by judging the consensus between teachers' ratings and parents' ratings in respect of learning disabled children. For this, a total of 20 learning disabled children were identified with the help of concerned school teachers. These school going children were in the age range of 9 years to 15 years and were having one or the other type of verbal learning disability. Then, the parents of these children were approached and convinced for cooperating in the research process. For this, the help of school teachers, local persons and pediatricians was also sought.

Afterwards, the parents and teachers of these verbal learning disabled children were requested to rate the concerned learning disabled child on each statement on a five points rating scale by marking '0' for 'highly irrelevant

statement', '1' for 'irrelevant statement', '2' for 'slightly relevant statement', '3' for 'relevant statement' and '4' for 'highly relevant statement' of verbal learning disabilities checklist. The sampled parents and teachers were explained that the statements in the checklist indicate the most critical characteristics of children with verbal learning disabilities and they are required to rate the child on each statement in accordance with child's observed behaviour either in the school situations or at home. They were asked to mark every item without omitting any one and no time limit was imposed. Thus, on the basis of teachers' and parents' ratings of learning disabled children on the checklist, the statements/items which got at least 80% approval by teachers and parents (taken separately) were selected for final form of verbal learning disabilities checklist. It is important to mention here that the statements/items which were treated as 'highly relevant' or 'relevant' by both the teachers and parents in accordance with most critical observed behaviours of learning disabled children in school situations or at homes were retained and the statements which were considered as 'slightly relevant', 'irrelevant' or 'highly irrelevant' were rejected from the final form of the checklist. On the basis of these ratings by parents and teachers, 10 items were rejected and thus, the final form of verbal learning disabilities checklist was constructed which was comprised of 42 statements/items. The distribution of these 42 statements/items in final form of verbal learning disabilities checklist was as follows: Reading Disabilities – 12, Speech and Language Comprehension Disabilities – 11, Writing Disabilities – 9 and Mathematics Disabilities – 10. A copy of verbal learning disabilities checklist is attached at Annexure-I.

2. *Reliability of Verbal Learning Disabilities Checklist:*

The reliability of verbal learning disabilities checklist was ascertained by test-retest procedure and inter-rater reliability method. Test-retest reliability of verbal learning disabilities checklist was determined in two ways viz. teacher's observation scores on the checklist about child at two different occasions and parents' observation scores regarding the child on the checklist at two different times. For this, a sample of 200 school going children in

the age group of 9 years to 15 years was selected. This sample of children was comprised of both learning disabled and normal children selected at random from 7 primary, 5 middle/high, 3 senior secondary and 2 special schools.

(I) Test-Retest Reliability (Teacher's Observation / Rating):

The verbal learning disabilities checklist was given to the concerned teachers for rating the selected children on each item in accordance with their most observed characteristics. The sampled 200 children were rated on the checklist by a total of 34 concerned school teachers at two different occasions after a time gap of minimum three weeks. Then, product moment correlation method was applied on test and retest scores (awarded by the teachers on checklist) to estimate test-retest reliability of verbal learning disabilities checklist. The reliability index 'r' was found to be 0.89 which was highly significant at 0.01 level of significance, for df 198. Hence, it was concluded that the checklist was highly reliable in terms of stability of rating of children at two different times.

(ii) Test-Retest Reliability (Parents' Observation / Rating):

The above mentioned procedure adopted for teachers was also followed for parents to compute test-retest reliability of verbal learning disabilities checklist. The parents of previously selected 200 children were approached with the help of school teachers and school administration and they were requested to rate their child on each statement of verbal learning disabilities checklist. It is important to mention here that parents (both mother and father) of 17 children refused to fill up the checklist and hence, the data were taken from the parents (either mother or father) of remaining 183 children at two different occasions after a time gap of minimum three weeks. On applying product moment correlation method for the two sets of scores (awarded by parents on checklist), the reliability coefficient came out to be 0.94 which was highly significant at 0.01 level of significance, for df 181. This led to conclusion that verbal learning disabilities checklist had got high stability in terms of children's ratings on the basis of their verbal learning abilities.

(iii) Inter-Rater Reliability (Parents and Teacher Observation/Rating):

The data collected from parents and teachers at the first testing stage as explained above were subjected to further analysis in order to estimate inter-rater reliability i.e. similarity in score on the checklist as awarded to a child by his/her teacher and his/her parents (either mother or father). These scores were then correlated to estimate inter-rater reliability of verbal learning disabilities checklist. This was carried out with the help of product moment correlation method and the coefficient of correlation came out to be 0.81 which was highly significant at 0.01 level of significance, for df 181. So, it was held that verbal learning disabilities checklist was internally consistent as well as highly reliable for identification of verbal learning disabilities among school going children.

3. Validity of Verbal Learning Disabilities Checklist:

The validity of verbal learning disabilities checklist was ascertained in the following ways:

(i) Content Validity: The content validity of the verbal learning disabilities checklist was established at the initial stage by reviewing the theoretical/research literature and carrying out intensive discussions in an informal manner with the school teachers, teacher educators, researchers, psychologists, psychiatrists, pediatricians, educational counselors and parents. They were of the opinion that statements/items given in the checklist adequately reflects the symptoms or characteristics of children having language-based learning disabilities. It was further reflected that the statements of the checklist were highly relevant to identify verbal learning disabilities among children. Furthermore, only those statements which received at least 90 percent approval of the field experts were retained in the checklist. Hence, verbal learning disabilities checklist was considered to have adequate content validity.

(ii) Predictive Validity: Although, predictive validity refers to the association between results of an individual indicated by a test and his/her actual performance in future, however, in the present case, the predictive validity of verbal learning disabilities checklist was ascertained by

matching/associating the score awarded to a child (either by teacher or the parents) on the verbal learning disabilities checklist with the current actual behaviour of that child in school/classroom situations or home/family situations. The actual behaviour of 10 learning disabled children was observed by the investigator himself in different non-participant-based as well as participant-based situations and this observation was compared with the scores awarded to those children by their parents and the concerned teacher on the checklist. On the basis of the observation-based results, present verbal learning disabilities checklist was considered to have adequate predictive validity.

(iii) Item Validity: The checklist possessed satisfactory item validity because only those statements/items were included in the final form of the checklist for which there was at least eighty percent agreement separately in parents' ratings and teachers' ratings with respect to the capability of each statement of the checklist to discriminate between learning disabled children and normal children. This was an indication of item validity of verbal learning disabilities checklist.

(iv) Intrinsic Validity: The inter-rater reliability coefficient i.e. 0.81 estimated between teacher's and parent's ratings of school-going children was a strong evidence of both internal consistency and intrinsic validity of verbal learning disabilities checklist.

Procedure for Child Rating on Verbal Learning Disabilities Checklist:

This checklist can be filled or completed either by the concerned teacher or the parents of the child to be examined for initial identification of verbal learning disabilities. All the statements belonging to four types of verbal learning disabilities in the checklist show the presence as well as frequency of occurrence of respective learning disability in the child. The procedure for rating the children by the rater / observer (teachers / parents / guardian) is as follows; a score of '0' is given for item/statement marked at 'never/rarely'; score of '1' is allotted for statement marked at 'sometimes' and a score of '2' is awarded if the statement/item is marked at

'often/always'. The sum of scores on all statement/items of checklist is considered as total verbal learning disability score for a child as rated by the concerned rater (observer). It is normal for the children to display a few of the symptoms mentioned in the checklist. A learning disability may exist or may be responsible for hindered performance if many of the behaviours mentioned in the checklist are present or, if such symptom or behaviours persist beyond the age where such errors are typical and unacceptable. In other words, if several of these behaviour characteristics are exhibited by a child to such a degree that they cause problems in his/her work at school, home or everyday life, then it can be assumed that child has certain sort of verbal learning disability.

Suggestive Norms for Interpretation of Child Ratings on Verbal Learning Disabilities Checklist:

Sr. No.	Percentage of Items Marked as 'Sometimes' or 'Often/Always'	Extent of Learning Disability	Recommendation
1	More than 75% (10 and above)	Severely Learning Disabled	Refer to Neuro Psychologist
2	50% to 75% (6 to 9)	Learning Disabled	Refer to Psychologist or counselor
3	40% to 49% (4 to 5)	Mildly Learning Disabled	Needs Greater Parental and Teachers Attention and Care
4	Less than 40% (3 and less)	Normal Child	-----

Note: Figures in parentheses indicate number of items/statements.

Table 1. Suggestive Norms for Interpretation of Results Obtained on Area – 1 i.e. Reading Disability (Total Items – 12) of Verbal Learning Disabilities Checklist

Sr. No.	Percentage of Items Marked as 'Sometimes' or 'Often/Always'	Extent of Learning Disability	Recommendation
1	More than 75% (9 and above)	Severely Learning Disabled	Refer to Neuro Psychologist
2	50% to 75% (5 to 8)	Learning Disabled	Refer to Psychologist or counselor
3	40% to 49% (4 to 5)	Mildly Learning Disabled	Needs Greater Parental and Teachers Attention and Care
4	Less than 40% (3 and less)	Normal Child	-----

Note: Figures in parentheses indicate number of items/statements.

Table 2. Suggestive Norms for Interpretation of Results Obtained on Area – 2 i.e. Speech and Language Comprehension Disability (Total Items – 11) of Verbal Learning Disabilities Checklist

Sr. No.	Percentage of Items Marked as 'Sometimes' or 'Often/Always'	Extent of Learning Disability	Recommendation
1	More than 75% (7 and above)	Severely Learning Disabled	Refer to Neuro Psychologist
2	50% to 75% (5 to 6)	Learning Disabled	Refer to Psychologist or counselor
3	40% to 49% (3 to 4)	Mildly Learning Disabled	Needs Greater Parental and Teachers Attention and Care
4	Less than 40% (2 and less)	Normal Child	-----

Note: Figures in parentheses indicate number of items/statements.

Table 3. Suggestive Norms for Interpretation of Results Obtained on Area – 3 i.e. Writing Disability (Total Items – 9) of Verbal Learning Disabilities Checklist

Sr. No.	Percentage of Items Marked as 'Sometimes' or 'Often/Always'	Extent of Learning Disability	Recommendation
1	More than 75% (8 and above)	Severely Learning Disabled	Refer to Neuro Psychologist
2	50% to 75% (5 to 7)	Learning Disabled	Refer to Psychologist or counselor
3	40% to 49% (4)	Mildly Learning Disabled	Needs Greater Parental and Teachers Attention and Care
4	Less than 40% (3 and less)	Normal Child	-----

Note: Figures in parentheses indicate number of items/statements.

Table 4. Suggestive Norms for Interpretation of Results Obtained on Area – 4 i.e. Mathematics Disability (Total Items – 10) of Verbal Learning Disabilities Checklist

The rating of any child made either by the parents or the teacher on this checklist can be interpreted by adopting following suggestive norms given in respect of four types of verbal learning disabilities from Table 1 to Table 4.

These norms were established by taking into account the expert advice of experienced school teachers, pediatricians, psychologists and psychiatrists. It is highly significant to mention here that the results obtained on the basis of this checklist are only suggestive and can be used for referral purpose to expert assessment and diagnosis of verbal learning disabilities by qualified professionals.

Conclusions

Following conclusions may be drawn with respect to construction and standardization of verbal learning disabilities checklist for school children.

1. This checklist can be employed for initial identification

of four types of verbal learning disabilities among school-going children in the age group of 9 years to 15 years. These four types of verbal learning disabilities included; reading disabilities, speech & language comprehension disabilities, writing disabilities and mathematics disabilities.

2. The present checklist can be used for Indian school situations and social situations where school going children are being nurtured.

3. The preliminary draft of checklist was comprised of 57 statements which was put to strict and rigorous examination in terms of expert opinions. After such critical examination and taking into consideration the suggestions of field experts, five statements were rejected and certain items were modified/revised.

4. The final version of checklist comprised of 52 statements which were relevant, highly discriminating and spread over four types of verbal learning disabilities. The checklist was developed after seeking expert opinion of experienced school teachers, pediatricians, psychologists and psychiatrists.

5. The reliability of the checklist was estimated by computing correlation indices among teachers' ratings (observations at two occasions), parents' ratings (observations at two occasions) as well as teachers' and parents' ratings and the correlation coefficients were found to be 0.89, 0.94 and 0.81 respectively thereby indicating a high reliability of the checklist.

6. The validity of checklist has also been ascertained in terms of content, predictive, intrinsic and item validity which have been found to be satisfactory.

7. The suggestive norms for interpretation of obtained scores on the checklist have been developed separately for four types of verbal learning disabilities on the basis of which, the intensity of a particular type of learning disability can be identified. The norms can only be used for referral purpose for expert assessment and further diagnosis of learning disability.

Recommendations and Implications:

"Learning Disabilities" refer to a number of disorders that may affect the acquisition, organization, retention,

understanding, or use of verbal or non-verbal information. These disorders affect learning in individuals who otherwise demonstrate at least average abilities essential for thinking and/or reasoning. The present research work was undertaken to construct and standardize a tool (checklist) for identifying school going children with verbal learning disabilities. The present checklist can be used by teachers, professionals and even parents striving to address the unique learning needs of their students or wards. This checklist can be employed by school teachers to identify such children who are struggling academically and may have characteristics of learning disabled. The findings revealed on the basis of this checklist may help a teacher to request a cognitive assessment of the student if he/she is experiencing academic difficulty and has not had a cognitive assessment. This tool can be handy for the teachers in terms of acquainting themselves with the characteristics of students with learning disabilities and will assist them in describing cognitive profiles of students with learning disabilities. On the basis of results of the present study, the teacher can explain why students are underachieving and may clarify for everyone that students are not "lazy" or "just not trying". The observation or initial identification made on this checklist will support teachers' efforts and advocacy for seeking appropriate expert assessment/advice from psychologists, psychiatrists and counselors. After making use of this checklist, a teacher can learn more about the student's strengths and needs and share this information with the professional psychologists or other experts completing the assessment. The results on this checklist will be helpful in providing students access to specialized programmes, technology, assistive devices and other supports at all levels. The teachers then may continue to work closely with the students, making an effort; (i) to provide the instruction and adaptations that are necessary for them to progress academically, (ii) to provide a safe and comfortable learning environment, (iii) to use students to teach each other, and; (iv) to use visual stimuli for increasing novelty in the learning tasks.

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