The Diagnostic Validity For New Edition of Tehran-Stanford-Binet Intelligence Scale in Order to Identify the Children with Learning Disabilities

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Abstract: The goal of present study is to investigate the diagnostic validity for new version of Tehran-Stanford-Binet intelligence scale in order to identify the children with learning disabilities. In this psychometric study with classical approach, the statistical society includes all students with learning disabilities related to the primary and secondary school in Tehran provinces. The study sample size was equal with 252 students with learning disabilities who were selected based on purposive sampling. For gathering the information from new version of Tehran-Stanford-Binet intelligence Scale was used. It includes 10 subtests in verbal and nonverbal domains (fluid reasoning, knowledge, quantitative reasoning, visual spatial processing and working memory and eight IQ). Highlight characteristics of this tool is its ability to calculate the combined scores connected to the reading skills. To analyze the data and calculate the diagnostic validity of this method was used of the distribution graph, confidence interval of Octoploid IQ and ROC curves methods. The results showed that this scale with emphasis on all three methods had the good diagnostic validity and desirable potential to identify students with learning disabilities. So this scale as a valid tool for identifying students with learning disabilities can be used.

Key words: Diagnostic validity, learning disabilities, a new version of Tehran-Stanford-Binet Intelligence Scale.

INTRODUCTION

The learning disability deals with intelligence structures and learning structures. Because these individuals with emphasis on intelligence structures, have a good cognitive ability to learn academic affairs and particularly for reading, But, show a considerable gap between the potential abilities with an emphasis on the intelligence structures and learning domains with emphasis on academic performance, (Askariyan and Sagharchiyan, 2009). This gap is such that the students with learning disabilities, despite having the average or above average IQ in the academic areas, have weakness and show lower performance than their cognitive potential ability. Evans (2007) stated that “scores of cognitive abilities based on the theory of Carroll, Horren and Cattell (cHc) can be useful and very effective in early prediction of difficulties in reading, writing, calculating and other academic skills” (Afrooz and kamkari, 2010).

Therefore, it can be acknowledged that the theoretical base of combined scores in reading, with emphasis on the new version of Tehran-Stanford-Binet Intelligence scale, includes the valid theories which have been proposed by Carroll, Horren and Cattell. These valid theories became a strong support for increasing the efficiency of the intelligence scale and have significantly strengthened the theoretical basis of this scale. The fifth version of the Stanford-Binet intelligence scale, in many cases has destroyed abundant limitations within the area of measurement and diagnosis of learning disability, and adopted the appropriate strategies for identifying these individuals in a combinatorial method, so that in testers’ manuals of this test an introduction related with the topics of identifying learning disability, has been titled in 2003 and in the Chapter 5 of this manual (technical help), a table was presented so that can be used in analyzing the difference in academic achievement disability of students.

The guidelines after publishing the authority granting law for individuals with learning disabilities in 2005, was conducted in the fifth version of the Stanford-Binet Intelligence scale and have provided some guidelines for assessing the children with learning disabilities (Roid, b2003).

This study also aimed to identify the diagnostic validity of reliable tool such as the new version of the Tehran-Stanford-Binet Intelligence scale with emphasis on the combined axis of reading, to identify the students
with learning disabilities, in the areas of Dyslexia, in the first and second grades of primary school of Tehran province cities.

Over several decades, the combined scores and indicators have been proposed on psychometrics. This issue will help the clinical experts and exceptional children to develop diagnostic hypotheses and achieve practical information in the process of psychological assessment with diagnostic and treatment approaches.

The combined axes from subtests of a scale and according to the patterns of specific test sub-scores are obtained. Tagen and Bridges (1967) and Silver Stein (1968) tried to use a combination of Intelligence-Scale and Kessler’s subtests scores, to develop the composite indices. Such actions on the intelligence-scale and Kessler’s scale were published in 1991.

Furthermore, Tegen and Bridges (1967) and Silver Stein (1968) developed the composite indices through the combination of subtests scores of Kessler’s scale and Intelligence-Scale, Kaufman and his colleagues have performed the useful actions about the combined indices in 1994 regarding the beneficial aspects which were there.

Then, Roid using the subtests scores of Stanford-Binet intelligence scales (New Edition), initiated the combined axes for learning disabilities, and studied the clinical and psychometric properties of such combined scores (Kaufman, 2005).

Roid (2003) and Pamplon suggested the scores of working memory and knowledge as central axes for reading and it can predict the academic achievement of reading and similarly by combining the scores of working memory and quantitative reasoning, have illustrated that it has an ability to predict the academic achievement of Mathematic.

Their research results showed that we can predict the risk of learning disability only with the Stanford-Binet intelligence scale and it is not required to wait the children to enter the school up to the time which their reading skills to take form.

In a survey by Tipish (2009) which was done on 528 children with the range of 7-5 years age using a cut-off point of 89 in the scale of standardized combined scores, 27 cases of children with learning disabilities in reading (dyslexia) were diagnosed that approximately 81% was correctly diagnosed and their initial identification are consistent with these disabilities in them.

Reports related to the children with the learning disabilities in schools was established by an independent assessment that this type of assessment was designed based on academic achievement tests and IQ tests, including Stanford-Binet intelligence scale.

The perpetuity of combined scores associated with reading disabilities (verbal working memory, nonverbal working memory, verbal and nonverbal knowledge) has been calculated about 95% that this validity-coefficient represents the amount of credit which is desirable, because this validity by combining four individual subtests with coefficients of 84 to 89 was obtained and then its results can be assured (Roid, 2011).

Pomplan and Castle (2010) also in order to use the fifth edition of Stanford-Binet intelligence scale, for the assessment of learning disability also used of VOODKAK Johnson’s reading test scores (Third edition) and using the aforementioned test as a valid criterion to validity criteria has been addressed.

Through the correlation analysis was determined that a sample size of 472 students ranging in age from 6-14 years, The fifth edition of the Stanford-Binet Intelligence scale shows the correlation between 0.40 to 0.45 in the reading subtests by the third edition of Woodcock Johnson. Researchers have concluded that the axis of combined reading score has the external and internal validity (Roid, 2011).

Woodcock, Mcgrew & Mather (2010) conducted a research on Psychometric Properties of students with learning disability with the axis of the combinatorial reading. The researchers studied 76 students, who underwent the rigorous and recovery training in restorative services and were under the direct supervision of school psychologists.

Found that using the discriminant function analysis can distinguish a significant distinction between individuals with learning disabilities and without learning disabilities and in this discrimination, nonverbal working memory factor has a determining role. Thus, working memory plays an important role in order to identify learning disabilities and it can be used to develop the discriminant function model.

Tippin (2007) has done a research in order to examine the psychometric properties of the new edition of the Tehran-Stanford-Binet Intelligence scale with emphasis on identification of reading disability. He considered 129 students with learning disabilities as a clinical sample, and 292 students without learning disabilities as a normative group and after cloning compared together their sexuality, social status, cultural, racial, ethnic state, and educational level. Researches has shown that quantitative nonverbal reasoning and verbal knowledge and then of fluid non-verbal reasoning in the students with learning disabilities are different, compared to the control group.

Roid (2010) studied 212 students who ranging in age from 5 to 19 years as the statistical sample, in line with the use of the Stanford-Binet Intelligence scale (fifth edition) to assess the learning disabilities. All statistical samples were students who had a learning disability and the detection process was accurate and had a precise and reliable documentation. In addition, they were registered in the special training programs for the
improvement of reading disabilities. Regarding the review of these students’ subtests scores, was found that the verbal memory subtests with 7.88 and then the verbal knowledge subtests with 8.23, enjoy the lowest rate. The standard deviation of verbal memory subtest and verbal knowledge were 2.7 and 2.3 respectively.

By comparing these student with their equivalent students in the educational and cultural fields, was found that these differences statistically are significant and effect size for the verbal subtests and verbal knowledge are 0.82 and 0.64 respectively (Roid, 201).

Roid (2011) in line with exploiting from transversal principles and concepts of validity assessed the two groups of students with learning disabilities and without learning disabilities and found that the scores of combined axis can diagnose the 81 percent of these children. He using the ROC curve considered the cut-off point of 89 for the learning axis and proposed the sensitivity coefficient. By critically investigating the sensitivity coefficient, Roid (2011) concluded that the combined axis of learning from the Stanford-Binet Intelligence Scale (Fifth edition), can play the role of screening in identification of learning disability in the preschool students (Roid, 2011).

The use of invalid IQ tests in the education areas of exceptional children and lack of reliable confident criterion in order to recognize the children with learning disability, has led the invalid assessments to be done and prior to the student arrival to the school, the identification possibility of these individuals and screening them in this period may not exit and this weakness can have a fatal impact on these students’ academic motivation and achievement in their identification area. This impact in some cases was severe enough that the best age for reconstructive and corrective interventions was lost and we cannot compensate the lost time. hence, this research was placed in the area of principal researches and for psychological identification and assessment of learning disability can be used, and we try to determine the diagnostic validity of Stanford-Binet Intelligence scale (Fifth edition) in line with the measurement of this phenomenon and its objects are as follow:

1- Study of the diagnostic validity using the distribution graph of Stanford-Binet Intelligence scale subtests
2- Study of the diagnostic validity for the Tehran-Stanford – Binet intelligence scale (Fifth edition) using the ROC curve.

2. Methodology:

The statistical population, sample and method of research process: The statistical population of this research includes all first and second levels of elementary school students with learning disabilities from the cities of Tehran that includes the educational areas of Eslamshahr, Nasim Shahr, Boostan and Golestan, Shahre Gods, Fardis and Malaard. Since, the identification of learning disabilities as a criterion is essential in selection of statistical sample can be counted; the purposive sampling method using the diagnostic interview and referring to the files of aforementioned students has been done. Totally, the statistical sample includes 252 students. The research method in this project was of the Psychometric Research Project type with classic approach.

Research tools: In this study with emphasis on the research purpose was used of the standardized Tehran-Stanford –Binet intelligence scale (Fifth Edition) that can be placed in the category of standard tools in line with the intellectual status assessment. Tehran-Stanford-Binet intelligence scale was taken from the Stanford-Binet intelligence scale (Fifth Edition) that by Roid (2008) was structured and by monitoring of Pearson Psychometrics Institute has been standardized, validated and accredited. This scale for assessing the students in ranging age from 2 to more than 85 years was used and based on a universal set that was composed of 10 subtests, has been designed.

This tool includes two verbal and non-verbal areas and 5 subtests including the fluid reasoning, knowledge, quantitative reasoning, spatial visual processing and working memory have been supposed in each of them. This tool includes performing the three booklets with titles of manual booklet, verbal and non-verbal booklets. The manual booklet is composed of two subtests of fluid non-verbal and verbal knowledge types and in line with identifying the entry-level of verbal and non-verbal booklets can be used. The booklet No.2 or the non-verbal booklet also is composed of 4 subtests, including the knowledge, quantitative reasoning, visual - spatial visualization and working memory in 6 consecutive levels and also booklet No.3 or the verbal booklet is composed of 4 subtests, including the fluid reasoning, quantitative reasoning, visual –spatial processing and working memory in 5 consecutive levels. (Afrooz and Kamkari, 2010).

It should be noted that executing this tool can lead to extract the eight independent IQ with titles such as knowledge IQ, fluid reasoning IQ, quantitative reasoning IQ, visual-spatial processing IQ, working memory IQ, verbal IQ, non-verbal IQ, and total IQ and in addition to these named IQs, can distinguish the numbers sensitive to changing and the combined numbers related to the reading disabilities and insufficiency of calculation. With emphasis on the researches conducted on the axis of this intelligence scale identified that the subtests of Stanford-Binet intelligence scale (Fifth Edition) have the high validity and the validity coefficients between 0.84 to 0.89 within the decuple subscales of this intelligence have been extracted, the calculated coefficients for this tool showing that this tool has the high validity in subtests and the combined scores (Roid, 2005).
RESULT AND DISCUSSION

According to Watkins’ method titled as the distribution graph of intelligence subtests in the diagnostic validity of distribution graph for the subtests of Wekesler and Stanford frequently can be used, we accurately investigate the diagnostic validity and after descriptive analysis, the above method to interpret the distribution between the subtests scores in the verbal and non-verbal areas can be used. It should be noted that above method to identify the student with learning disabilities with emphasis on the balance scores of 10 and verbal and non-verbal scores can be used and in line with investigating the difference between the verbal, non-verbal IQ and other students’ IQs of Wechsler and octoploid IQs in Tehran-Stanford-Binet intelligence (FIFTH EDITION) (fluid reasoning, knowledge, quantitative reasoning, visual –spatial processing and total, verbal, non-verbal working memory), the special attention to the standard deviation more than one and difference more than 15 in diagnostic areas should be paid. Hence, research findings are presented in Table 1:

Table 1: Method of Distribution chart for different decuple sub-Tests.

<table>
<thead>
<tr>
<th>Subtests</th>
<th>The experimental difference</th>
<th>The critical difference (0.05)</th>
<th>The critical difference (0.01)</th>
<th>Significant level</th>
<th>Diagnostic validity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fluid, non-verbal reasoning</td>
<td>-1.04</td>
<td>2.76</td>
<td>3.63</td>
<td>---</td>
<td>No</td>
</tr>
<tr>
<td>Non-verbal knowledge</td>
<td>-2.89</td>
<td>2.75</td>
<td>3.62</td>
<td>0.05</td>
<td>Yes</td>
</tr>
<tr>
<td>Non-verbal quantitative reasoning,</td>
<td>-1.35</td>
<td>2.76</td>
<td>3.63</td>
<td>---</td>
<td>No</td>
</tr>
<tr>
<td>Non-verbal visual spatial processing</td>
<td>-0.79</td>
<td>2.75</td>
<td>3.62</td>
<td>-----</td>
<td>No</td>
</tr>
<tr>
<td>Non-verbal working memory</td>
<td>-2.73</td>
<td>2.65</td>
<td>3.49</td>
<td>0.05</td>
<td>Yes</td>
</tr>
<tr>
<td>Verbal fluid reasoning</td>
<td>-0.53</td>
<td>3.01</td>
<td>3.97</td>
<td>---</td>
<td>No</td>
</tr>
<tr>
<td>Verbal knowledge</td>
<td>-2.80</td>
<td>2.83</td>
<td>3.73</td>
<td>0.05</td>
<td>Yes</td>
</tr>
<tr>
<td>Verbal quantitative reasoning,</td>
<td>-1.55</td>
<td>2.80</td>
<td>3.86</td>
<td>-----</td>
<td>No</td>
</tr>
<tr>
<td>Verbal Visual spatial processing</td>
<td>-0.54</td>
<td>3.02</td>
<td>3.98</td>
<td>-----</td>
<td>No</td>
</tr>
<tr>
<td>Verbal working memory</td>
<td>-4.17</td>
<td>2.91</td>
<td>3.83</td>
<td>0.01</td>
<td>Yes</td>
</tr>
</tbody>
</table>

According to the statistical analysis associated with the distribution graph method of subtests differences, it can be known that a significant difference between the non-verbal knowledge subtests and non-verbal working memory with the non-verbal balance scores in the students with learning disabilities is there and non-verbal knowledge subtests and non-verbal working memory in identifying the students with learning disabilities has the diagnostic validity or consequential validity. Also, there is a significant difference between the verbal knowledge subtests (in the level of 0.05) and verbal working memory (in the level of 0.01) with the verbal balance scores in the students with learning disabilities and the verbal knowledge subtests and verbal working memory in diagnosing the students with learning disabilities has the diagnostic validity or consequential validity.

One of the common methods in studying the diagnostic validity of differences between verbal and non-verbal IQs of Wechsler and Stanford-Binet intelligence scales is the confidence interval method with more than one standard deviation that as the most acceptable method for identifying the diagnostic validity of verbal and non-verbal IQs can be supposed.

In order to identify the IQs of Stanford –Binet intelligence scales as the fluid reasoning IQ, knowledge IQ, quantitative reasoning IQ, visual-spatial processing IQ, working memory IQ, verbal and non-verbal IQ, we can accurately study the diagnostic validity of above scales in order to identify the learning disabilities. When this aforementioned difference reaches beyond standard criteria, we can suppose the associated IQ as a diagnostic axis so that it has the diagnostic validity. Therefore, if each one of septet IQs in Tehran-Stanford-Binet intelligence scale, Fifth Edition, (with the exception of total IQ) to offer a score lower than 85 as a clinical sample in the students with learning disability, we can suppose this associated axis has the diagnostic validity (Roid 2011).

Table 2: Methods of confidence interval septet IQs.

<table>
<thead>
<tr>
<th>Octoploid IQ</th>
<th>Average experimental</th>
<th>Average Theoretical</th>
<th>Distance Confidence</th>
<th>Diagnostic validity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fluid Reasoning IQ</td>
<td>95.33</td>
<td>100</td>
<td>Less than 1 SD</td>
<td>No</td>
</tr>
<tr>
<td>Knowledge IQ</td>
<td>83.81</td>
<td>100</td>
<td>More than 1 SD</td>
<td>Yes</td>
</tr>
<tr>
<td>Quantitative Reasoning IQ</td>
<td>91.93</td>
<td>100</td>
<td>Less than 1 SD</td>
<td>No</td>
</tr>
<tr>
<td>Spatial visual processing IQ</td>
<td>95.90</td>
<td>100</td>
<td>Less than 1 SD</td>
<td>No</td>
</tr>
<tr>
<td>Active memory IQ</td>
<td>80.21</td>
<td>100</td>
<td>More than 1 SD</td>
<td>Yes</td>
</tr>
<tr>
<td>Non-verbal IQ</td>
<td>88.53</td>
<td>100</td>
<td>Less than 1 SD</td>
<td>No</td>
</tr>
<tr>
<td>IQ verbal</td>
<td>87.62</td>
<td>100</td>
<td>Less than 1 SD</td>
<td>No</td>
</tr>
</tbody>
</table>

According to the statistical analysis associated with the confidence interval of combined axes in the septet IQs of Tehran-Stanford-Binet intelligence scale (Fifth edition), it can be found that the significant difference
will be between knowledge (83.81) and working memory (82.21) with total IQs in the students with learning disability and the difference between their experimental and theoretical average is beyond a standard deviation. Therefore, knowledge and working memory IQs in diagnosing the students with learning disabilities have the diagnostic validity or consequential validity. One of the methods which for studying the psychometric properties of diagnostic tests can be applied is the use of ROC curve. Roc curve that is known as the receiver operating characteristics curve has the effective contribution in identifying the psychometric properties of diagnostic tests.

Table 3: Descriptive tables about reading levels.

<table>
<thead>
<tr>
<th>Status</th>
<th>Ratio</th>
<th>Frequent</th>
<th>Reading Levels</th>
<th>Diagnosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>False positive</td>
<td>13</td>
<td>32</td>
<td>Lack of Dyslexia (Reading score more than 85)</td>
<td>False positive</td>
</tr>
<tr>
<td>True positive</td>
<td>58</td>
<td>148</td>
<td>Mild dyslexia (Reading score between 70 and 85)</td>
<td>True-positive</td>
</tr>
<tr>
<td></td>
<td>25</td>
<td>62</td>
<td>Severe dyslexia (Reading score between 55 and 70)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>10</td>
<td>Deep Dyslexia (Reading score less than 55 and less)</td>
<td></td>
</tr>
</tbody>
</table>

Referring to the Roc curve, the phenomenon, disability or disorder can be indicated and the positive symbol to be supposed as a reagent of disability, disorder or disease incidence that this status by diagnosing the phenomenon can be identified both as True -positive diagnosis and False positive diagnosis. If, the learning disability to be identified and we see that these students have the learning disability, we can call it as “ True-positive diagnosis, while, if the diagnostic test to name the students with learning disability (True diagnosis) but the students to be without learning disability (False positive diagnosis), then the diagnostic validity is compromised and sensitivity is reduced . On the one hand, the following table indicates the information related to the combined-axis sensitivity of reading and on the other hand, indicates the learning disabilities levels.

With the emphasis on above descriptive table, it can be acknowledged that of the 252 samples that were investigated, 13 % of samples took incorrectly the normal persons label (reading score higher than 85) and 87 % of them correctly took the label of persons with learning disabilities with emphasis on their reading scores. Three groups, with mild dyslexia (reading score higher than 85), severe (reading score 55 to 70), deep (reading score lower than 55) with emphasis on the reading score levels have been categorized. Therefore, it can be said that the Tehran-Stanford intelligence scale has the sensitivity coefficient about 0.87 that this sensitivity coefficient shows the desirable coefficient and confirmed the identification ability of students with learning disability though this IQ test and has a desirable diagnostic validity.

3.Conclusion:

The results show that the diagnostic validity associated with distribution graph method of Tehran-Stanford-Binet intelligence scale subtests indicates that this scale has the appropriate diagnostic validity in the verbal and non-verbal areas and knowledge and working memory subtests. With emphasis on being low these two subtests in the students with learning disability, it can be concluded that these two indices have an essential prediction power to identify the students with learning disabilities and emphasizing the alpha level of 0.05, these two indices have the proper diagnostic validity. Also with emphasis on the confidence interval method was identified that amongst the octet IQs of Tehran –Stanfors -Binet intelligence scale, the working memory IQ and non-verbal areas and knowledge and working memory subtests. With emphasis on being low these two subtests of Stanford-Binet intelligence scale indicates that this scale has the appropriate diagnostic validity in the verbal and non-verbal areas and knowledge and working memory subtests.

The third method which to explain the diagnostic validity of this scale has been used, is the ROC method. According to the findings from Roc curve, the sensitivity rate of Tehran-Stanford-Binet Intelligence scale (Fifth Edition) to identify the students with learning disabilities has been derived and identified that the rate of this sensitivity coefficient in this scale is equivalent to 87%. In other words, it can be concluded that this scale is able to identify 87% of individuals with learning disabilities. These results are consistent with the findings from Roid’s researches, because in Roid’s research, the sensitivity coefficient of 87% for the combined reading axis of Stanford-Binet intelligence scale has been derived and it can be offered that this tool has the sufficient sensitivity coefficient and according to the findings from the present research was known that in our society, this tool has the highest sensitivity coefficient and this confirms that the diagnostic validity is desirable for screening the students.

Roid (2011), Tippish (2009), Pomplyn and castle Woodcock, Mcgrew and Matter (2010) indicated that through the Fifth edition of Stanford-Binet intelligence Scale, we can identify the defect in working memory and knowledge and learning disability before entering the school too. Also, the properties of Stanford-Binet intelligence scale (Fifth Edition) in psychometric by above researches have been offered and identifies that this tool has the proper and desirable diagnostic validity to screen this group of students with learning disabilities in
which the sensitivity coefficient of 0.81 indicates that 81% of students with proper screening had the learning disabilities. According to the researches of Roid (2010), Brongingzodonel (2009), Tippin (2007), Sagharchian (2009), Moosavi (2010) and Ashatari (2004), it was concluded that between the normal students and students with learning disabilities is a significant difference amongst working memory and knowledge subtest and this difference was in a way that these two factors have the lower rate in the students with learning disabilities. Therefore, we can say that these two factors are as the proper distinguishing indices to identify and screen the learning disabilities.

Findings of this research were consistent with the research results of Ashtari (2004), Sagharchian (2009), Moosavi (2010), Shartol (2004), Kryon and Shankoler (2005), Prefti and Goldman (2007), Sigel and Ryan (2009), Woodcock and Matter (2010), Tippin (2007) and Roid (2010) were in accordance with their findings, while the results of this area are not in accordance with the findings of Sainioric and Erlic (2011). Therefore, the results associated with the validity of this IQ test indicates that amongst the quintet factors of this IQ test, the factor of non-verbal knowledge, non-verbal working memory, verbal knowledge and verbal working memory have the diagnostic validity and we can use this tool to identify the diagnostic validity and students with learning disability. Also, the IQs of knowledge and working memory have the confidence interval more than one standard deviation and we can have an accurate diagnosis based on the learning disability of students with emphasis on the mentioned indices. At last, the sensitivity coefficient of this tool was calculated on reading axis and identified that has the sensitivity coefficient of 0.87. Based on this sensitivity coefficient, we can claim that this tool is able to identify and diagnose the 87% of students with learning disability that is a desirable amount of the sensitivity coefficient.

Regarding the process of diagnostic method and performing the research in line with gathering the experimental data, the research limitations include a weak in ecological validity specially space and lack of proper chair (seating) for test in some learning disabilities treatment centers, improper interference of parents in line with more accurate diagnosis process of intellectual profile through Tehran-Stanford-Binet intelligence scale (Fifth Edition) about re-performing the IQ test, lack of specialized statistical software utilization in line with suggesting an optimal cut-point in the reading axis referring to new assumptions of diagnosis tests in ROC curve and non-cooperation of some private centers in line with increasing the external validity.

Regarding the findings of our research and process of diagnostic method, it is recommended to be paid attention in standardizing the reading and writing subtest in the first class of elementary school with the aim of identifying the learning disability and an appropriate platform for standardizing the third edition of Woodcock Johnson test be provided. Also, it is recommended that the movement of exceptional measurement to be more active and the advanced statistical techniques of psychometric analysis can be enjoyed in the platform of software and new applied discussions associated with the diagnostic validity in the educational content of MA and PhD students of exceptional degree (exceptional children) to be replaced.

On the one hand, valid actions and measurement for identifying the dyslexic students according to the different types of dyslexia and especially understanding of reading should be done to create the valid diagnostic tools for measure and assess the learning disability in understanding the standard of reading. Finally, since the findings of research is focused on the desirable psychometric properties of Tehran-Stanford-Binet intelligence scale in order to diagnose the learning disability, it is recommended that the expert group in diagnosing the learning disabilities of exceptional children to perform the regular researches for exploiting from the principle of retrial in the provinces of Iran especially in Kurdistan and Khuzestan that by this way, the mentioned tools can be applied in the ethnic and racial subcultures of Iranians.

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