Comparison of first-grade primary level students' educational achievement in according to the results of evaluation plan of health and educational readiness of beginners upon entering school in the educational region of Osku

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ABSTRACT

The research was aimed at comparing first-grade primary level students' Educational achievement in according to the results of Evaluation Plan of Health and Educational Readiness of beginners upon entering school in the Educational district of Osku. The methodology for this research was post facto-causal comparative research, and measurement tool included documents (ID of first-grade primary level students' Health and Educational Readiness Evaluation of beginners entering the school and Report on Educational achievement or Work Sheet). The statistical population consisted of all primary school students in the city of Osku, who amounted to 5000 with Educational case. The number of sample chosen based on the Cochran formula was 300 people who were selected via cluster sampling method. Research findings were analyzed by statistical software of SPSS, statistical methods of independent t Test, one-way variance Test (ANOVA), Levin Test, Test of UNIANOVA. The findings revealed that there was a significant difference in students' educational achievement in terms of their hearing levels (reference to experts and healthy hearing), and also there was a significant difference in students' educational achievement based on their eyesight levels (reference to expert and healthy eyesight). Also, there was no difference among students' Educational achievement according to various levels of health primary assessment (extreme skinniness, skinny, natural, obese and fat). Students' Educational achievement was found to be different based on their Educational talent. It was also found that there was a significant difference in students' educational achievement in terms of variables gender, eyesight, hearing evaluation.
1. INTRODUCTION

Learning capacity among children can be called educational achievement. Educational achievement is referred to quantitative and qualitative changes in the students' skills and knowledge due to enjoying formal education, which are measured by their annual curricular average rates (Lotfabadi, 2011). The primary childhood period is a critical period in the rational development of people. The quality of the child’s verbal and perceptual experiences have determining role in his/her later educational achievement. Educational experts maintain that readiness for entering school involves general readiness, and since children are different in terms of readiness acquisition, thus it is necessary to determine their abilities prior to entering the school. As we know, one of the most important issues in an Education System is full attention to physical and mental health and individual differences, children's talents and abilities as well as adjusting Educational programs appropriate to such talents, where this issue will certainly be useful in the future education process.

Since the ancient educational methods are famous in Iran and this method has made a passive educational method, the students and other learners have learned passive educational methods. Indeed, they have not any active role and freedom in such a method (Taghva et al, 2014).

In today’s world, public education is one of the main pillars of sustainable development, and each country allocates a significant deal of its national income to education. In fact, education is located at the core of human society, and one of its major goals is to train proficient young children and adolescents. Therefore, teachers establish the basis of a successful educational system, and the first stage to have effective educational staff can be reached through diagnosing the factors which affect the performances of school teachers (Allakbari, 2015).

The term mental health is an extended concept that includes mental well-being, the feeling of self-empowerment, competency, understanding inter generation relationship, and the ability to determine potential emotional, and intelligent talents in the sense the person can realize his abilities and adapt to the common life stresses and becomes helpful and efficient person from the view point of profession (Kaledian et al, 2013). Cheerfulness, joy and the feeling of being fortunate is one of divine blessings bestowed on man in the light of the mental health and well-being; In addition the mental health is one of the effective and important factors in the promotion and development of humans (Kaledian et al, 2013).

Mental health is the ability to communicate harmoniously and coordinately with others, change and modify the personal and social settings, and solve conflicts and personal inclinations justly, rationally and appropriately. The term “mental health” is unfortunately used with little ambiguity and it is usually mistaken, because people consider it a mere desire of people who have mental disorders and complaints and could be treated by making the use of psychotherapists. In this sense, "health" stands against: physical health " and it is imagined that mental health is distinct from the physical health, while both these impressions are wrong. By mental or rational health, it is meant some activities carried out for helping suffering
people so that these people are saved from their problems and also, they are guided in preventing predicaments and miseries. Thus, mental health never ignores the quality of the humans’ physical health (Mahmoudfakhe et al, 2014).

If education is beyond the child's capacities, the teacher's efforts, and those of the school and parents will be futile, and more, this may entail serious problems. According to existing statistics, over 10% of the children in any society are suffering from different physical and mental complaints, where some of these problems can lead to the incidence of disabilities and irreparable illnesses. Also, according to the research conducted, 50-70% of the students' success in any educational grade hinges on their cognitive readiness and physical and mental readiness, and 80% of educational drop-outs in primary levels occurs as a result of such problems as eyesight, hearing and intelligence, if not dealt with, they not only lead to rejection from school and repetition of levels by students but also lead to the emergence of extreme problems and deteriorating side effects. The execution of screening plans is necessary for determining children's educational readiness in order to enter primary learning (Shahrami, 2001). This timely determination (diagnosis) will pave the way for the student's success at school. According to the definition of educational achievement, it is meant as domination over theoretical knowledge and information in one certain area. Educational achievement denotes the extent to which learners have been successful in reaching their ends (Estaki, 2010).

Thus, timely determination of educational readiness of children for the sake of primary level student's educational achievement, given the outcomes of the beginners' educational readiness and health upon entering school as well as its examination, is a subject which going to be investigated in this research. One of the major issues in Education is the issue of students' educational achievement. Today, students' educational achievement has been focused attention as a major index for the assessments of educational systems. In addition to this, educational achievement has always been important for teachers, students, parents and theorists working in educational areas. In Iran, each year, formally, over a million children enter the first arena of acquiring science and knowledge, i.e. schools. With the start of the educational year, the child leaves the home setting and enters a system where this system enjoys a higher position in developing and perfecting the healthy structure of the society in the future.

The country's educational system can play an effective and valuable role in forming the social developmental structure when proportion has been respected in it, and this proportion cannot be achieved unless the students, who are the most important elements of this system, are placed in Education classes while enjoying physical and mental positions. The Exceptional Education Organization in the country, via determining individual differences and with the aim of proper placement of the child in the Education system, cooperated with the Ministry of Health, Treatment and Medical Training and executed the Evaluation Plan of Health and Educational Readiness of beginners upon entering school since 1994. The major principle in the evaluation plan is that the application of expert human force and also using screening tests and accurate diagnosis of the children for as much as possible needs to be placed in a category where its conditions will yield the maximum utility of the children from the Education system given their physical and mental properties. In order to understand some of children's abilities and talents, there are some plans in place. Since physical health, in particular, enjoying eyesight, hearing health and primary assessment of the previous readiness and health of the child assumes importance for the beginning of the education, thus, in this plan; children's physical and mental health status is examined.
Now, given what was said, it is necessary to indicate the availability of a screening system in the primary diagnosis of students. Therefore, after determining the students’ educational position, the student's educational achievement should be discussed. In new approaches, via a dynamic and forward looking approach, the determination and measurement of student’s progress and growth capacities is the basis for the mental and Educational measurement, and is thus an inseparable part of the Education that would help improve interactions (Lotfabadi, 2011). Intelligence and talent are assumed to be the basis for learning curricular material in the school setting. Thus, since screening can identify problems in primary stages is valuable. Given the significance of the subject and determination and organization of students with special needs, and resulting rise in the classrooms' effectiveness, demands for forming and executing screening plans across the country has become a common issue, such that today, after the lapse of two decades since the start of screening and measurement of primary level children, it is almost impossible register students without considering having Health Notebook, being a sign of passage through Educational Readiness and Health Measurement Plan.

Though there is a long way to determine and standardize children ready for entering the school, this has been a long step in the direction of improving educational status and education for the primary school level. Given the fact that degree of progress and Educational drop-out is one of the criteria for the effectiveness of the Educational system, discovery and study of variables affecting educational achievement will lead to understanding and prediction of more effective variables in the society. This, examination of variables which are related with educational achievement in various lessons is one of the main topics of research in the Education system (Farahani, 2007). Via studying many problems of the primary school level, including learning disorders, behavioral problems and drop-outs from lack of measuring students entering school, we delve into the subject better. Upon implementing the measurement, many factors causing drop-out are controlled for. Researchers have shown strong evidence about the effects of timely intervention in comparison to non-intervention. Today, need for timely diagnosis of children exposed to risks has been accepted as a principle. According to international statistics, between 10 to 15% of children suffer from physical, sensory and growth related problems by the time of birth. By using screening tests, the gravity of their disability can be reduced (Mirzaeioskuei, 2016).

One of the indispensable priorities and necessities in the area of on time interventions and screening based evaluations is primary services of diagnosis and identification through primary screening. Screening is a process which deals with identifying children who may be unable and incapable or need more comprehensive evaluations (Reference to expert centers). By using screening tools, one can carry out more accurate evaluations and designing. In many cases, families are unaware of the importance of screening and its role in primary prevention. In screening, experts, parents, nurses and children instructors should be applied in order that data are gathered. Among problems existing in the education system since old time, one can refer to wastage of material and non-material capital due to weakness in identification off children who need special education. According to the views of exceptional educational experts and practitioners, prior to the implementation of the measurement plan, a considerable part of children were those who were registered in exceptional schools, were those who could not continue their education after being registered in normal schools due to mitigated to average mental and physical problems, and thus after a 2-3 year interval, they used to refer to an exceptional school for the continuation of their education.
In case, this group of children's problems is diagnosed at the time they enter schools, not only mental problems education, one can prevent the wastage of millions of dollars. Although mental retardation is estimated to be one percent, however, various studies have reported different rates which depend on definitions used methodology and the population under study (Naeanian et al, 1995). Access to a standardized screening test allows for the identification of the mentally retarded children who even after reaching the legal age cannot make use of school's Educational programs due to mental retardation within the Educational system.

Summarily, it has to be stated that though there is no disagreement over the significance and the impacts of childhood's first years on children's later growth with special needs among experts and education officials, a large number of children exposed to risk who are not diagnosed with minor or medium disabilities, due to apparent clinical features, parental unawareness and non-expert view, they lose valuable opportunities for leaning and acquiring major experiences through interventional programs prior to the school level, and this hinders students' educational achievement. In implementing interventional programs properly, parents serve as the main reference for gathering growth and developmental information regarding the child and also cooperation and participation in executing such interventions. While teaching beginners, one has to bear in mind to teach the child accurately in an appropriate time, i.e. the time when environmental encounters leave the highest effects in the development of the child's inherent talents. Currently, what faces the teacher with problems is that annually some children who are present in the class fail in learning learnable and have no choice but to resume those efforts. Therefore, as mentioned, the aim of this research was to compare first-grade primary level students' Educational achievement in according to the results of Evaluation Plan of Health and Educational Readiness of beginners upon entering school in the Educational district of Osku.

2. METHODOLOGY

The present research is a survey in terms of controlling for condition in a research, and temporarily, it was a cross sectional one, wherein data were gathered via documents (ID of first-grade primary level students' Health and Educational Readiness Evaluation of beginners entering the school and Report on Educational achievement or Work Sheet).

Statistical population and sample size

The statistical population consisted of 5000 primary level students (first, second, and third grade students) in the city of Osku. From this number, 300 people, based on Cochran Table, and on a cluster form, were studied as a statistical sample.

Measurement of variables

Measurement educational readiness and health of beginners entering school: It was measured by using documents (ID for measuring educational readiness and health), among boys and girls in the primary level.

Educational achievement measurement: It was measured by using Reports Leaves on educational achievement (Worksheet) among first grade students.
Reliability and validity of the tool and procedure

Beginners' educational readiness and health measurement tool includes 52 questions in cognitive and linguistic areas. This test is known as the First Step Test, which is developed by American and European countries. This test was purchased by the National Exceptional Education Organization in 1994. In the beginners' measurement plan, raters, in order to determine children's educational readiness, concern themselves with determining and predicting the future situation of the children via examining children's educational readiness on a standardized intelligence scale, while in recent years the validity of these tests prepared in America and Europe has been criticized by some experts, because these tests must meet our cultural conditions of our society. Thus, such factors as time, culture, environment and conditions can affect tests' validity. In terms of reliability, factor of re-asking also reduces the test's reliability. In other words, if a subject is taken an educational Measurement Test twice, the likelihood of the subjects' response rising will increase. In children's intelligence test, one cannot solely rely on tests, and in this relationship, one has to pay attention to test's conditions and environment, the test taker's ability and the child's mental conditions. For example, a child under pressure by his parents because of not answering their questions on the day of the examination, how can he cope with answering the questions comfortably in an unfamiliar setting. Also, some test's questions may keep the child's individual's differences and experiences away from his own view. Despite this, administrative experts and officials in charge of the national educational talent measurement plan are optimistic to this plan and maintain that the administers of this plan are sufficiently committed and expert not to make mistakes. In terms of reliability, these test, given the fact that the subject is placed in two different situations, may answer differently, or that the face that the same test may be administered in two turns, its reliability may be reduced.

Administration of the Measurement Plan of Educational Readiness and Physical Health

1. Primary assessment:

In this stage, all children who are qualified for registration in the first grade class refer to the center and after completing the questionnaire by the secretary of the center are assessed in terms of physical situation and educational readiness by trainers and in case they are diagnosed not to have any problems, they are introduced to schools.

2. Specialized assessment:

The children who, in the first stage and based on international criteria and standards, are diagnosed with suspected problems, are introduced to specialized clinics for more accurate assessment, and are evaluated by relevant experts equipped with fuller facilities and in a more time period.

3. FINDINGS

Findings in Tables 1 and 2 indicate that there is a significant difference in students' educational achievement based on hearing level (weak and healthy hearing), where the students with healthy hearing were found to be having higher educational achievement compared to those with hearing problems (weak hearing).
Table 1. Independent T Test for measuring the role of physical health in educational achievement.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Measurement level</th>
<th>No.</th>
<th>Mean</th>
<th>SD</th>
<th>Mean standard error</th>
</tr>
</thead>
<tbody>
<tr>
<td>educational achievement</td>
<td>Weak hearing</td>
<td>76</td>
<td>3.06</td>
<td>1.024</td>
<td>0.117</td>
</tr>
<tr>
<td></td>
<td>Healthy hearing</td>
<td>222</td>
<td>3.37</td>
<td>0/790</td>
<td>0.053</td>
</tr>
</tbody>
</table>

Table 2. Independent T Test for measuring the role of physical health in educational achievement.

<table>
<thead>
<tr>
<th>Variable</th>
<th>t</th>
<th>Freedom degree</th>
<th>Mean dif.</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>educational achievement</td>
<td>-2.425</td>
<td>107.226</td>
<td>-0.31259</td>
<td>0.017</td>
</tr>
</tbody>
</table>

Table 3. Descriptive statistic pertaining to students' educational achievement based on eyesight level.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Measurement level</th>
<th>No.</th>
<th>Mean</th>
<th>SD</th>
<th>Mean standard error</th>
</tr>
</thead>
<tbody>
<tr>
<td>educational achievement</td>
<td>Weak eyesight</td>
<td>85</td>
<td>3.09</td>
<td>0.983</td>
<td>0.106</td>
</tr>
<tr>
<td></td>
<td>Healthy eyesight</td>
<td>213</td>
<td>3.38</td>
<td>0.831</td>
<td>0.054</td>
</tr>
</tbody>
</table>

Table 4. Comparison of students' educational achievement based on eyesight level.

<table>
<thead>
<tr>
<th>Variable</th>
<th>t</th>
<th>Freedom degree</th>
<th>Mean dif.</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>educational achievement</td>
<td>-2.602</td>
<td>296</td>
<td>-0.28616</td>
<td>0.010</td>
</tr>
</tbody>
</table>
A significant difference was found in students' educational achievement based on their eyesight level (weak and healthy eyesight). With reference to students' educational achievement in Table 3, it becomes clear that the students with healthy eyesight were having higher educational achievement compared to those with weak eyesight.

**Table 5.** Examining the significance of difference among students in the variable of students' educational achievement based on preliminary assessments

<table>
<thead>
<tr>
<th>Variable</th>
<th>Sum of the squares</th>
<th>Freedom degrees</th>
<th>Average squared</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>educational achievement</td>
<td>36.823</td>
<td>3</td>
<td>0.306</td>
<td>0.748</td>
<td>0.748</td>
</tr>
</tbody>
</table>

Table 6 indicates that there was no difference in students' educational achievement based on preliminary assessment.

**Table 6.** Examining the significance of difference among students in the variable of students' educational achievement based on students' educational talents

<table>
<thead>
<tr>
<th>Variable</th>
<th>Sum of the squares</th>
<th>Freedom degrees</th>
<th>Average squared</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>educational achievement</td>
<td>36.823</td>
<td>2</td>
<td>18.412</td>
<td>29.265</td>
<td>0.001</td>
</tr>
</tbody>
</table>

**Table 7.** Examining average difference of students' educational achievement based on their talents.

<table>
<thead>
<tr>
<th>Dependent variable</th>
<th>Kind of talent</th>
<th>Kind of talent</th>
<th>Mean differences</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>educational achievement</td>
<td>Slow learner</td>
<td>Medium</td>
<td>-0.385</td>
<td>0.009</td>
</tr>
<tr>
<td>educational achievement</td>
<td>Slow learner</td>
<td>higher</td>
<td>-0.893</td>
<td>0.001</td>
</tr>
</tbody>
</table>
According to Table 7, students with two kinds of talent in the variable of educational achievement were different. Thus, they are different in the two kinds of talents stated, as regards the variable of educational achievement. The results also illustrated that students' educational achievement with higher readiness level was greater than those who were slow learner. Table 7 also indicate that students' educational achievement with higher readiness level was higher than those with medium readiness level.

Table 8. Difference of student's' educational achievement based on gender, eyesight measurement and hearing measurement

<table>
<thead>
<tr>
<th>Sources of changes</th>
<th>F</th>
<th>Average square</th>
<th>Freedom degree</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>0.865</td>
<td>0.616</td>
<td>1</td>
<td>0.353</td>
</tr>
<tr>
<td>Hearing measurement</td>
<td>7.720</td>
<td>5.504</td>
<td>1</td>
<td>0.006</td>
</tr>
<tr>
<td>Eyesight measurement</td>
<td>6.205</td>
<td>4.424</td>
<td>1</td>
<td>0.013</td>
</tr>
<tr>
<td>Gender and hearing measurement</td>
<td>0.452</td>
<td>322</td>
<td>1</td>
<td>0.502</td>
</tr>
<tr>
<td>Gender and eyesight measurement</td>
<td>2.981</td>
<td>2.126</td>
<td>1</td>
<td>0.085</td>
</tr>
<tr>
<td>Gender and eyesight and hearing measurement</td>
<td>0.051</td>
<td>0.036</td>
<td>1</td>
<td>0.821</td>
</tr>
</tbody>
</table>

According to Table 8, students' educational achievement was different based on hearing measurement. Educational achievement in students with healthy hearing was higher than those with unhealthy students (reference to experts). Student's' educational achievement based
on eyesight was also different. Educational achievement among students with healthy eyesight was higher than those with unhealthy eyesight. The results also suggested that there was a significant difference in students' educational achievement based on the variable of gender and hearing measurement. Also, there was a significant difference in students' educational achievement as regards the variable of gender and eyesight measurement. Therefore, one can predicate that there was a significant difference in students' educational achievement as regards gender and hearing and eyesight measurement.

4. DISCUSSION AND CONCLUSION

In this research primary level students' educational achievement as regards results of beginners' educational readiness and health measurement of the Osku region was examined. The results suggested that there was a significant difference in students' educational achievement based on their hearing level (weak and healthy hearing). With reference to students' educational achievement average rates, it becomes clear that students with healthy hearing had higher educational achievement compared to those who had weak hearing problems. The results of this research as compared to those of research by Mayberry (2002) at the research Gallart School which regularly analyzed demographic data in relationship with children's educational achievement in America based on Stanford Achievement Tests, suggested that math and calculation skills among deaf children ate the age of 15 were at the level 7, while this score for the hearing children was at the age of 10. These statistics indicate that loss of hearing does not per se hinder learning and symbol manipulation and abstract relations. Rather, limited verbal knowledge aggravates this issue. The researches done suggested that students'; successful and unsuccessful experiences during education in institutes leave direct effects on their personality, including their mental health.

Overall, it can be stated that beginners who have diagnosed to be free from problems in the Test of Health Measurement (Hearing checkup), showed higher educational achievement at schools, and this factor is considered to be a major issue in educational achievement. Thus, officials in charge of educational readiness and physical health measurement must focus this issue and in case a problem arises, they need to fast notify the families so that timely measures are done. Thus, hearing health is a definitive index in educational achievement, and if students are grappling with this problem, it has to be clarified so that treatments are carried out and families are notified and cost are prevented. Meantime, the education organization has to provide intervention programs for such students. If a child suffers from loss of hearing, if diagnosed timely, one can help him/her via offering rehabilitation services such as speech therapy, hearing development, and prescription of hearing aids which are major steps for increasing their repertoire.

These measures carried out to diagnose and identify physical complaints and to determine educational readiness situation of the beginners timely are aimed at helping improve the education qualitatively and prevent educational drop-outs and understand social needs. These simple checkups could reduce costs and prevent irreparable damages. The result obtained from the current research suggests that there was a significant difference in students' educational achievement as regards eyesight levels (weak and healthy eyesight). With reference to students' educational achievement, it becomes clear that students with healthy eyesight are better than those with weak eyesight and they had better educational
achievement. Thus, participation in this test can be effective in educational achievement. Since vision problems can be timely determined and diagnosed, it is advised that beginners be referred to experts so that their problems are diagnosed and their educational achievement is made easier. The results also suggested that the beginners, if participate in the physical health measurement plan (eyesight test), many of the problems will be identified and therapeutic interventions will be removed without costs.

Also, results illustrated that students were different in two kinds of talents as regards the variable of educational achievement. Therefore, students' educational achievement with higher readiness level was higher than those with medium readiness level. The results of this research were consistent with Parker (2005), Green et al, (2004). In their researches, the researchers have concluded that awareness of the students' score in an intelligence test can be of a great value for the teacher; this score can be used as a prediction for how well a student can act, and so, it can help the teacher understand the student's rational thinking. Taylor (1965) reports that according to many studies correlation between educational achievement and measured intelligence tests can change for 30-80%. Thus, one concludes that awareness of the student's score in the intelligence test can be effective. The implementation of screening plans for diagnosing children's educational readiness is necessary. Shahrami (2001) states that this primary evaluation of children is usually done via examining their function on a measured standard scale and for this these test are valuable. Taylor (1965) observes that in order to prepare children for school, learning languages must be prioritized such that it has a major role in development of language and speech and creation of learning and cognitive capacity among children. Shahrami (2001) maintain there is a 99% confidence level between linguistic sub skills with achievement in reading and cognitive sub skills with progress in math. On the other hand, results indicate that there was no relation between bodily mass of students and their educational achievement.

It is believed that timely educational interventions can be effective in the student's educational achievement. Thus, that group of students who are introduced in the Test of health measurement and Eduactional readiness may improve along with appropriate intervention and embody as normal students. The contrary is also correct and the reason why girls are different from boys is due to the rich Eduactional settings and better Eduactional interventions, where these factors are important in educational achievement. The results also suggested that there was a significant difference in students' educational achievement based on variables of gender, eyesight measurement and hearing measurement.

The results were found to be inconsistent with those of Hall and Mason (1995), Juneders and Cohen and Resin (1985). By using a revised Wexler's Children Intelligence Scale, the number of 314 children aged 5-8 were studied. The findings obtained confirmed the better intelligence performance of blind children compared to seeing children in this subscale. The results also illustrated that gender and Eduactional position did not have much effects on the scores obtained from the implementation of the said test. Juniders, Cohen and Resin (1985) found out that seeing and unseeing people make use of similar strategies for improving their own memories, the difference being that the unseen people classify objects based on such features as form, situation in space and memorize them, while the seeing people make use of such features as color and light for classification. Thus, there is a significant difference in students' educational achievement as regards variables of gender eyesight measurement and hearing measurement.
This may be due to lack of parental education to children in childhood. Thus, parents are recommended to improve their way of educating their children so that they are in a better position for learning.

References


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