A Comparative Study of Moroccan IQ

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Abstract:

After the studies launched by Lynn in 1978 to gather the IQ in the World, and the results are compared to the British average of 100. There are, also, five different studies, which are done on Moroccan citizens abroad, in the book "Intelligence a Unifying Construct for Social Science by Lynn and Vanhanen (2012)"; in addition three other studies and an adaptation of IQ test done locally in Morocco, which did not belong to Lynn and Vanhanen (2012). All studies about Moroccan citizens abroad revealed very high data compared to locally conducted studies. Therefore, we will try in this article to make a comparative study of the results and the two tests carried out locally in all Moroccan IQ studies.

Keywords: IQ, Moroccan, Raven, Wechsler.

Introduction

The principal objective of our study is to compare the IQ studies of Moroccan citizens residing in the Netherlands compared to those of local Moroccans. Which the samples of Moroccans living abroad obtained very high results in the IQ tests, contrary to the studies of IQ tests carried out locally in Morocco. Also adds that immigrants from any country are not necessarily representative of their country of origin and their IQ can be increased by a better environment as in Europe. On the other hand, the Moroccan sample is representative of the Moroccan population in spite of the conditions of the use of the tests and the targeted samples and don’t forget to point out the importance of the economic influence on the IQ. Add to the above that we will make a comparison between the different tests of IQ made locally in Morocco.

Materials ans Methods:

We conducted a reading and bibliographic research on studies of local and foreign Moroccan IQ, as well as the tests on which all the studies carried out
locally in Morocco are based. And during our reading and bibliographic research we based ourselves on "Intelligence to Unifying Construct for the Social Sciences by Lynn and Vanhanen (2012)" which brings together a whole set of programmed research that presents international IQ results for all countries of the world consisting of the refinement of these international IQs and the examination of their economic, social, demographic, and epidemiological correlates; as was also based on the studies made after the publication of this book and without forgetting a missing adaptation of the WISC test in 1986.

**Results**

<table>
<thead>
<tr>
<th>Age</th>
<th>Nombre</th>
<th>Test</th>
<th>IQ</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.5</td>
<td>85</td>
<td>SPM</td>
<td>74</td>
<td>0.3021</td>
</tr>
<tr>
<td>26</td>
<td>202</td>
<td>SPM</td>
<td>81</td>
<td>4.6477</td>
</tr>
<tr>
<td>12 – 17</td>
<td>1177</td>
<td>SPM</td>
<td>73.33</td>
<td>0.7758</td>
</tr>
</tbody>
</table>

Table 1: above shows the gross results of SPM studies in Morocco.

Concerning the translation and adaptation of WISC in 1986 to Moroccan schoolchildren, the sample of the study included a total of 400 subjects, targeting school children aged (10-11) years and (15-16) years, and which were divided into two groups of 200 subjects (100 girls and 100 boys in each age group). The split-half coefficients were calculated for all tests in each age group. They oscillate between (65) and (81).

<table>
<thead>
<tr>
<th>Age</th>
<th>Nombre</th>
<th>Test</th>
<th>IQ</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enfant</td>
<td>177</td>
<td>RAKIT</td>
<td>75</td>
<td>5.2873</td>
</tr>
<tr>
<td>Enfant</td>
<td>76</td>
<td>RAKIT</td>
<td>79</td>
<td>2.4588</td>
</tr>
<tr>
<td>11</td>
<td>720</td>
<td>CITO</td>
<td>84</td>
<td>1.0767</td>
</tr>
<tr>
<td>5-8</td>
<td>94</td>
<td>LPTP</td>
<td>85</td>
<td>1.7838</td>
</tr>
<tr>
<td>Adulte</td>
<td>167</td>
<td>GATB</td>
<td>84</td>
<td>1.0767</td>
</tr>
</tbody>
</table>

Table 2: Above presents the raw results of IQ studies on Moroccan immigrants.

**Discussion:**

The three studies that are done locally by the Raven Progressive Matrix Standard (SPM) test to provide better estimates of the results. It is proposed that the best estimate of Moroccan IQ that can be obtained on average from the three results
is an IQ of 74. The first study was spread over a sample of 85 children (boys, girls, age = 8.5 years in 2006) in the city of Kenitra with a result of a British IQ of 74. The second study spread over group of 202 adults (92 men, 110 women, average age = 26 in 2010) consisting of administrators, cleaners, waiters and cooks in the rooms of residence in university in the cities of Casablanca, Marrakesh, Meknes and Tangiers and earned a British IQ of 81. While The third study consisted of 1,177 high school students (723 boys, 454 girls, aged from 12 to 17 years between 2010-2012) in the village of Sidi El Kamel a rural area and obtained a British IQ of 73.33. SPM scores by age group for the Sidi El Kamel Children’s College (rural area) 2012 are slightly similar to those obtained in 2007 in Sidi El Kamel by Latifi et al. (2009) and slightly lower than those of the children of the college of M'rirrt, Morocco (semi-urban area) reported by El Azmy et al. (2013), but better than those of Indians, tribal children noted by C.G Deshpande and Patwardhan (2006), and considerably lower compared to children of the same age in developed countries. And let us don’t forget the almost total absence of preschool education, combined with the absence of any cultural and creative activity in rural areas. Previous studies have been limited to samples with literacy difficulties in people over the age of 50, whose families had low incomes compared to those of European origin. Most of the targeted cities are neglected cities. In addition, these samples scored lower.

The Standard Progressive Matrices SPM is one of three versions of the Raven Progressives Matrices (RPM). John C. Raven published the first in 1938 and a revised version in 1956; the RPM included three versions the colored version Progressive Matrices (CPM) designed as a simple test for children aged 5 to 11, version (SPM) the standard progressive matrices are used to study people aged 12 to 60 with a intellectual capacity medium and Advanced Progressive Matrix (APM) version developed as a more difficult test for individuals of high intellectual ability. RPM tests are widely regarded as the best tests of abstract or non-verbal reasoning ability. Raven's progressive matrices were initially designed to measure only the educational capacity, or the ability to extract and understand information from a complex situation, called "fluid intelligence" (Raven et al., 2003). Therefore, RPM tests are widely used in clinical, educational and scientific circles as a measure of general intelligence, which considers it one of the best psychometric measures of Spearman's g-factor (Snow, Kyllonen & Marshalek, 1984).

The Standard Progressive Matrices (SPM) test is constructed by a brochure that consists of five sets (A to E) of 12 elements each (for example, A1 to A12), with the elements in a set becoming increasingly difficult, requiring ever greater
cognitive ability to code and analyze information. All articles are presented in black ink on a white background. Its strengths were that it could be used with respondents of all ages, ranging from early childhood to old age, and that it was so important that it was reasonably administered in homes, schools and work (where time is necessarily limited) as well as in laboratories. It was therefore particularly useful for comparative studies.

The objective of the study by W. I. S. C. addressed to the Moroccan schoolchildren was to translate it and to adapt it so that it is very useful for the local schoolchildren. Knowing that Wechsler tests consist of verbal and performance subtests, they cover all cognitive functions. The study sample included a total of 400 subjects (ages 10-11) and (15-16) years old, or two groups of 200 subjects (100 girls and 100 boys in each age group). The results of the item analysis show that more than half (58%) of the items in the tests are in the range of difficulty (between the difficulty 30 and 70 indexes) which is usually considered the most favorable by the builders. The majority of the items have a discriminative power superior to (.20), which means that they work well for the Moroccan subjects. The coefficients obtained are satisfying; they oscillate between (.65) and (.81).

In 1949 Wechsler’s intelligence scale for children and adolescents came out as an extension to the bottom of an adult IQ test is very often used by school psychologists, clinical psychologists and neuropsychologists working in schools, clinics, hospitals, universities and forensics to determine whether a child is gifted or very gifted and assess the cognitive strengths, weaknesses of this student in the context of identifying and diagnosing learning difficulties or learning disabilities, talents of high potentials, cognitive profile in the context of a developmental delay or impact of brain damage. This Wechsler test is for children from 6 to 16 years and 9 months. Usually lasts between 65 and 80 minutes and produces a result quite typical of the classical measure of intelligence; or a score whose median is 100.

For example, the latest version of WISC, WISC-V is based on the Cattell-Horn-Carroll theory, whose rating structure includes five main indexes (Verbal Comprehension, Fluid Reasoning, Visual Spatial, Working Memory and Processing Speed). Two options are provided as general information by Spearman measures on WISC-V: total intelligence quotient and general ability index.

In the Wechsler tests we find that fluid reasoning is constructed by three subtests matrix reasoning, figure weights and arithmetic, which implies that Raven’s matrices don’t fully respond to fluid reasoning like WISC test.
According to the second table above, the five studies of Lynn based on Moroccan immigrants in Europe estimated that IQ vary between 75 and 85 with a median of 82.4 are neither sufficient nor targeted because immigrants aren’t necessarily representative of their country of origin and their IQ can be increased by a better environment in Europe, so the adapted tests aren’t carried out at international level, only local. In the first two studies in Table 2, the test used is the RAKIT test which is a complete test for children aged four to twelve in the Netherlands. One of the most influential and best-supported theories of intelligence is the Cattell-Horn-Carroll model (CHC, Alfonso, Flanagan, and Radwan, 2005). In the third study, career researchers use the CITO test in the last grade of primary school to determine the most appropriate grade level and generally a tool of choice for secondary education. And the last two studies use the LPTP and GATB which is an abbreviation for The General Ability Test Battery that can be used to assess the probability if you will succeed in specific careers or training programs and that measures nine different abilities and use them to study the relationship between cognitive abilities, mainly general information, and specific careers or training programs.

Even if North Africa has a lower IQ compared to Europe which is geographically close to Morocco. It is found that the IQ values and studies carried out on Moroccan citizens in the Netherlands are very close to IQ values and locally performed studies. If we compare the values of each study by age of each test performed locally compared to Moroccans living abroad. It can be concluded that the influence of the environment in Europe doesn’t affect the achievement of the same values of all Europeans.

**Conclusion:**

The values of IQ in North Africa are lower than those in Europe. Immigrants have slightly higher IQ than the population in their home country, and may have benefited from an environmental benefit from an economically developed society in Europe. Also the Wechsler test is very much develop that the Raven test because Raven is built by matrices that respond only on the fluid intelligence but in the latest version of WISC V the matrices are one of three subtest in WISC that build the fluid reasoning purely says fluid intelligence.

**Reference:**


