MANKIND QUARTERLY 2021 61:4 901-904

A Study of Intelligence in Jordan Assessed by the Coloured Progressive Matrices

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We report the results of a new study of intelligence in Jordan for 5- to 11-year-olds assessed by the Coloured Progressive Matrices, a test of non-verbal reasoning. It gives a British-scaled IQ of 84.5. The result is in line with those of earlier studies using Raven's Progressive Matrices in Jordan.
Keywords: Intelligence, Jordan, Coloured Progressive Matrices

IQs for all nations in the world were first presented by Lynn and Vanhanen (2002) and have been subsequently updated in several publications of which Lynn and Becker (2019) is the most recent. In these compilations, national IQs are calculated on a metric with the IQ in Britain set at 100 and standard deviation of 15. There have been three studies of intelligence in Jordan assessed with the Progressive Matrices, a test of non-verbal reasoning ability. The results are given by Lynn and Becker (2019) and are summarized in Table 1. The IQs of the samples were all Flynn Effect corrected, i.e. adjusted for the increase in the British IQ between the time of the British standardization and the time the data were collected in Jordan. None of these data was obtained from primary school children who in a number of studies have a higher IQ than older samples, as shown by Bakhiet et al. (2018) and designated the Simber Effect. In the present study we report the IQs of primary school children in Jordan for the ages 6.6

through 11.0 years calculated from a standardization of the Coloured Progressive Matrices and examine whether there is a Simber Effect for this age range in Jordan.

Table 1. *British-scaled IQs for the Progressive Matrices in Jordan. SPM = Standard Progressive Matrices; APM = Advanced Progressive Matrices*.

Age	Test	N	IQ	Reference
11 – 40	APM	2542	86	Lynn & Abdel-Khalek, 2009
8 – 14	SPM	969	75.6	Bakheit & Lynn, 2014a
12 – 17	SPM	1015	82.6	Bakheit & Lynn, 2014b

Method

The Coloured Progressive Matrices was standardized in Jordan by Bilal Yousef Mahmoud Al-Bustanji (2019) in 2017-2018. The study is reported in Arabic and is summarized here. The sample size was 1013 (556 males and 457 females) ranging in age from 6.6 to 12.0 years and drawn from primary schools in (1) Jerash, a city of approximately 51,000 inhabitants in the north of the country, (2) Amman, the capital city in the center, and (3) Karak, a city of approximately 170,000 inhabitants in the south of Jordan.

Results

The results are given in Table 2 consisting of the numbers in each age group from 6:6 (six years, 6 months), the mean scores, the British percentile equivalents of the mean scores, and the British IQs given in the 2007 British standardization (Raven, 2008). The British standardization does not give data for age 12.0. The mean British IQ of the eleven age groups is 84.5. This result is not corrected for a possible increase in the British IQ from 2007 to 2017-8 because it is not known whether British scores on the CPM have changed during these years.

Table 2. *British-scaled IQs for the Coloured Progressive Matrices in Jordan*.

Age	N	Mean	British %ile	IQ
6:6	78	19	28	91
7	74	20	24	89
7:6	85	20	14	84
8	68	20	9	79
8:6	78	21	6	76

Age	N	Mean	British %ile	IQ
9	68	23	11	81
9:6	89	25	18	86
10	102	26	19	86
10:6	94	27	18	86
11	96	27	12	81
11:6	99	30	25	90
12	82	30	-	-

Discussion

There are four points of interest in the results. First, the mean IQ of the three studies for Jordan given in Table 1 is 81.4. The present result gives an IQ 84.5. The addition of the present study raises the "best estimate" of average IQ for Jordan to 82.1 when calculated as the mean, and 83.55 when calculated as the median of the four studies.

Second, the present result giving an IQ for Jordan of 84.5 is virtually identical to the IQ of 86 for the sample aged 11 to 40 years tested with the Advanced Progressive Matrices reported by Lynn and Abdel-Khalek (2009) as shown in Table 1. This suggests that there has been no change in the Jordanian IQ during the thirty-one years from 1986, when the APM data were collected, to 2017-18 when the present CPM data were collected. However, such a conclusion is tenuous because we compare different ages and different tests.

Third, the present result does not support a Simber Effect. There is no substantial decline of the British-scaled IQs with age in Table 2. The correlation between these two variables is a negligible -.044. Also, the average IQ of primary school children in the present study was only slightly higher than the IQ of 82.6 reported for teenagers in Bakhiet & Lynn (2014b).

Fourth, it has been reported by Islam, Ababneh and Khan (2018) that in 2012, 35% of marriages in Jordan were consanguineous, and it is known that consanguinity has an adverse effect on intelligence (Afzal, 1988). This will likely have been partly responsible for the low IQ in Jordan. Islam, Ababneh and Khan (2018) have reported that there has been a decline in consanguinity in Jordan, with the rate decreasing from 57% in 1990 to 35% in 2012, and this decline is likely to continue. If this occurs, it can be anticipated that the IQ in Jordan will increase.

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