



## A study of the IQ in Palestine

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### ABSTRACT

The Coloured Progressive Matrices (CPM) was standardized in Palestine in 2011 on a sample of 257 children aged 6.0 to 11.5 years, tested individually. The sample obtained a British IQ of 85.

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## 1. Introduction

We believe that no studies have been published of intelligence in Palestine. There are, however, two studies that may give a reasonable approximate estimate of the Palestine IQ. The first is a study of the intelligence of Arab school children in Israel, who could be expected to have approximately the same IQ as Arab children in Palestine, carried out by [Lieblich and Kugelmas \(1981\)](#). This reported the IQ of a sample of 639 6–16 year olds tested with the Wechsler Intelligence Scale for Children-Revised for whom an IQ of 86 (in relation to a British IQ of 100) was calculated by [Lynn and Vanhanen \(2012\)](#). The second is the PISA (Program for International Student Assessment) study of 15 year olds tested in a number of countries in 2009 in mathematics, science and reading. The results are highly correlated with IQs and have therefore been adopted as a proxy for IQs by [Meisenberg and Lynn \(2011\)](#), who estimate an IQ of 83.3 for Palestine from the data. In this paper we present the first data for intelligence in Palestine measured with an intelligence test.

## 2. Method

The Coloured Progressive Matrices (CPM) is a test of non-verbal reasoning for children aged 4 to 11 years constructed and standardized in Britain in 1949 ([Raven, Court, & Raven, 1995](#)). The test has been administered in many countries throughout the world, from which IQs have been calculated and are given in [Lynn and Vanhanen \(2012\)](#). The test was standardized in Palestine in 2011 by [Hammad \(2012\)](#) on a sample of 654 boys and 604 girls aged 5.5 to 11.5 years attending representative elementary schools in Gaza. The population from which the sample was drawn consisted of all children in Palestinian government elementary schools ( $N = 230,707$ ). The study is described in an unpublished M.A. thesis of the Islamic University in Gaza and is written in Arabic. The majority of the sample were tested in groups but 257 (133 boys and 124 girls) of the children were tested individually.

The CPM has been intended for administration to children individually, unlike the SPM which has been intended for administration to children and adults in groups. The first British standardization of the CPM was carried out in Scotland in 1949 on 609 children aged 5–11.5 tested individually. The second standardization of the CPM was carried out in 1949 on 609 children aged 5–11.5 tested individually. The second British

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**Table 1**

Coloured Progressive Matrices data for children in Palestine tested individually.

Age	Score	British Percentile	British IQ
6.0	21	63	105
7.0	21	25	90
8.0	22	16	85
9.0	25	16	85
10.0	26	18	86
11.0	27	9	80
11.6	29	16	85

standardization of the CPM was carried out in Scotland in 1982 on 598 children aged 5–11.5 tested individually. The third British standardization of the CPM was carried out in 2007 on a sample from the whole of the UK on a little over 609 children aged 5–11.5 tested individually (Raven, 2008). Although the CPM has been intended for administration to children individually, it has sometimes been administered to groups of children and adults.

### 3. Results

Because the British norms for the CPM have always been given for children on the test administered individually, the 257 Palestinian children who were tested individually are the appropriate group to compare with British norms. The results are given in Table 1. This shows, reading from left to right, the ages of the children, their scores on the CPM, the British percentiles in the 2007 British standardization given in Raven (2008), and the British IQ equivalents. The mean of the IQs of the seven age groups is 88. The British IQ of the 6 year olds at 105 is much higher than that of the other six age groups, which lie in the range between 80 and 90. It should be regarded as a sampling error and discounted. The mean British IQ of the six age groups 7 to 11.5 years is 85 and is proposed as the best estimate of the Palestine IQ in this study. This figure is not adjusted for a possible Flynn effect increase in the British IQ from 2007 to 2011 because it is not known whether the British IQ increased during these years.

Hammad's (2012) study also gives data for a sample of 654 boys and 604 girls aged 5.5 to 11.5 years attending representative elementary schools in Gaza, of whom 1001 tested in groups as well as the 257 children tested individually. The results are given in Table 2. This shows, reading from left to right, the ages of the children, their scores on the CPM, the British Percentiles in the 2007 British standardization given in Raven (2008), and the British IQ equivalents. The mean of the IQs of the 13 age groups is 74.8. Results are also given for the mean score of boys as 21.12 (Sd = 7.38) and girls as 21.63 (Sd = 6.89). The difference is not statistically significant.

### 4. Discussion

The two previous studies of an IQ for Palestine summarized in the introduction gave estimates of 86 and 83.3. The two

**Table 2**

Coloured Progressive Matrices data for children in Palestine tested in groups.

Age	N	Score	British Percentile	British IQ
5.5	30	11	5	75
6.0	36	14	9	80
6.5	36	14	9	80
7.0	109	15	5	75
7.5	61	16	5	75
8.0	116	16	2.3	70
8.5	56	18	2.3	70
9.0	157	19	2.3	70
9.5	65	20	5	75
10.0	170	23	7	78
10.5	68	24	9	80
11.0	139	24	5	75
11.6	215	25	2.3	70

estimates are in close agreement and were averaged to 84.6 by Meisenberg and Lynn (2011) and Lynn and Vanhanen (2012). The present result gives an IQ of 85 and is in close agreement with the results of the two previous studies. We consider that the best estimate for an IQ for Palestine now available is obtained by averaging the three results to give an IQ of 84.8. This figure is typical of many studies of the IQ in the Middle East and South Asia reported by Lynn and Vanhanen (2012).

The study also shows that the CPM administered as a group test gives an IQ of 74.8 and therefore 10 IQ points lower than the result for the test administered individually. This suggests that caution needs to be exercised in the interpretation of data obtained from the group administration of the test.

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### References

- Hammad, I.M.A. (2012). Standardization of Colored Progressive Matrices test in the Palestinian environment. Unpublished MA Thesis. Islamic University: Gaza, Palestine.
- Lieblich, A., & Kugelmas, S. (1981). Patterns of intellectual ability of Arab school children in Israel. *Intelligence*, 5, 311–320.
- Lynn, R., & Vanhanen, T. (2012). *Intelligence: A unifying construct for the social sciences*. London: Ulster Institute for Social Research.
- Meisenberg, G., & Lynn, R. (2011). Intelligence: A measure of human capital in nations. *J. Soc. Polit. Econ. Stud.*, 36, 421–454.
- Raven, J. (2008). *Coloured Progressive Matrices and Crichton Vocabulary Scale Manual*. London: Pearson.
- Raven, J. C., Court, J. H., & Raven, J. (1995). *Coloured Progressive Matrices*. Oxford, UK: Oxford Psychologists Press.