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# Intelligence in Jordan: Norms for the Standard Progressive Matrices

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## Abstract

The Standard Progressive Matrices (SPM) was standardized in Jordan in 1972 on a sample of 960 children aged 8 to 14 years. The sample obtained a British IQ of 75.65.

**Key words:** Jordan, Standard Progressive Matrices, intelligence

## Introduction

A research program to collect IQs for all nations in the world was initiated by Lynn (1978) and has been extended in a number of subsequent publications summarized in Lynn and Vanhanen (2012a). It has been shown in numerous studies that national IQs are a significant correlate of national differences in educational attainment, economic development, per capita income and a number of other political, demographic,

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sociological, epidemiological, climatic and geographical phenomena reviewed in Lynn and Vanhanen (2012a; 2012b). In all these studies, national IQs are given in relation to a British mean of 100 and standard deviation of 15. In this paper, we add to this research program by summarizing a hitherto unpublished study of a standardization of the Standard Progressive Matrices in Jordan.

In the most recent compilation of national IQs in Lynn and Vanhanen (2012a), four studies are given of the IQ in Jordan. These are 82 measured by Piagetian tests (Za'rour and Khuri, 1977), 84 measured by the Kaufman ABC, 86 measured by the Advanced Progressive Matrices (Lynn and Abdel-Khalek, 2009), and 88.6 measured by 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 PISA results are highly correlated with IQs and have therefore been adopted as a measure of IQs by Lynn and Vanhanen (2012a).

## **Method and Results**

A standardization of the Standard Progressive Matrices (SPM) in Jordan was presented in an MA thesis written in Arabic by Ali Safadi (1973). The sample consisted of 960 school students aged 8.0 to 14.0 years at representative low, middle and high socio-economic schools in Amman. The children were tested in class and instructions for the test were given in Jordanian Arabic, the language of everyday use.

Table 1 gives the data from the study consisting of the mean scores for twelve age groups, the British percentiles of the mean scores derived from the British 1979 standardization of the SPM, and British IQ equivalents of the percentiles given in Raven (1981). The average of the 12 IQs is 74.25. The thesis was dated 1973, so it can be assumed that the data were collected in 1972 and therefore seven years before the British standardization data were collected in 1979. The British SPM IQ increased by approximately 2 IQ points a decade during the 1970s (Lynn and Hampson, 1986), so to adjust for this increase 1.4 IQ

points need to be added to the Jordan IQ raising it to 75.65. Thus, the comparison is between the Jordan IQ in 1972 obtained in this study and the British IQ in the same year.

Table 1. Standard Progressive Matrices data for children in Jordan

Age	Score	British Percentile	British IQ
8.5	12	6	76.5
9.0	14	3	72.0
9.5	16	7	78.0
10.0	18	6	76.5
10.5	15	0	60.0
11.0	18	1	65.0
11.5	26	6	76.5
12.0	30	7	78.0
12.5	32	12	82.0
13.0	28	5	75.5
13.5	30	5	75.5
14.0	31	5	75.5

## Discussion

The four previous studies of an IQ for Jordan summarized in the introduction gave estimates of 83, 84, 86 and 88.6 which can be averaged to approximately 85. The present

results give a substantially lower IQ of 75.65. For a new estimate of an IQ for Jordan taking account of the present result, the five results can be averaged to give an IQ of 83.5.

It should be noted that the lower IQ obtained in the present study appears to be due to the fact that the IQ of Jordan (relative to that in Britain) increased over the years 1972 – 2009. The IQ in 1972 obtained in the present study was 75.65. It increased to 82 measured by Piagetian tests in 1975 (Za'rour and Khuri, 1977), to 84 measured by the Kaufman ABC in 1985 (El-Mneizel, 1987), to 86 measured by the Advanced Progressive Matrices in 2007 (Lynn and Abdel-Khalek, 2009), and to 88.6 measured by the PISA tests in 2009. These increases suggest that IQ gains were greater in Jordan compared to Britain in the 1970-2009 period.

### References

- El-Mneizel, A. F. (1987). Development and psychometric analysis of a Jordanian adaptation of the Kaufman Assessment Battery for Children. Ph.D. dissertation, University of Alabama.
- Lynn, R. (1978). Ethnic and Racial Differences in Intelligence: International Comparisons. In R. T. Osborne, C. E. Noble, and N. Weyl (Eds.) *Human variation: The biopsychology of age, race, and sex*. New York: Academic Press.
- Lynn, R. & Abdel-Khalek, A. (2009). Intelligence in Jordan: Norms for the Advanced Progressive Matrices. *Mankind Quarterly*, 50, 114-119.
- Lynn, R & Hampson, S.L. (1986). The rise of national intelligence: evidence from Britain, Japan and the USA. *Personality and Individual Differences*, 7, 23-32.  
[https://docs.google.com/document/d/1jXZFFCyf9E\\_TKaHNUUviGOH-vp-ZdTKywhYMU\\_Bjk34/edit#](https://docs.google.com/document/d/1jXZFFCyf9E_TKaHNUUviGOH-vp-ZdTKywhYMU_Bjk34/edit#)
- Lynn, R. & Vanhanen, T. (2012a). *Intelligence: A Unifying Explanatory Construct for the Social Sciences*. London: Ulster Institute for Social Research.

Lynn, R. & Vanhanen, T. (2012b). National IQs: A review of their educational, cognitive, economic, political, demographic, sociological, epidemiological, climatic and geographical correlates. *Intelligence*, 40, 226-234.

Raven, J. (1981). *Irish and British Standardisations*. Oxford: Oxford Psychologists Press.

Safadi, Ali. (1973). Raven scale application in the Jordanian environment. Unpublished MA Thesis. University of Jordan: Jordan.

Za'rour, G.I. & Khuri, G.A. (1977). The development of the concept of speed by Jordanian school children in Amman. In P.Dasen (Ed) *Piagetian Psychology*. New York: Gardner Press.