Relation between social context and intelligence. National Study of Polish Adolescents

INTRODUCTION
The study was conducted in Poland on a group of pupils, who are studying at upper secondary schools: 100 general upper secondary schools, 59 vocational secondary schools: 3 and 4 years full time schools and 48 basic vocational schools. The participants were second year students.

RESULTS

CONCLUSION
On the basis of the results obtained it can be stated that:
- there is no strong correlation between SES social class position rate (HISEI) and the Raven’s Progressive Matrices result
- statistically significant differences between the types of school in the Raven’s Progressive Matrices result occur: F(3, 4040) = 410.26, p<.00001, R2=0.23
- parents’ level of education (HEDU) does not differentiate results of the intelligence test
- the distribution of the Raven’s Progressive Matrices result is differentiated with reference to social class position according to EGP: F(3, 10484) = 224.67, p<.00001, R2=0.1543

REFERENCES

VARIABLES
A. Intelligence
- Raven Standard Progressive Matrices, Version: Standard were used to measure the general intelligence factor. This test measures general intelligence, understood as the ability to think clearly and make sense of complexity, which is known as educative ability. This is also the ability to perceive new patterns and relationships, and to forge (largely non-verbal) constructs which make it easy to handle complexity (Raven, Raven, Court, 2003).
- The measure of general intelligence was the result of Raven’s Progressive Matrices. Internal consistency of the tool, based on Cronbach’s alpha in this study was 0.9047.

B. The main measures of social context were:
- **SEI** (International Socio-Economic Index)
  - The index captures the attributes of occupations that convert parents’ education into income. The index was derived from the optimal scaling of occupation groups to maximize the indirect effect of education on income through occupation and to minimize the direct effect of education on income, net of occupation (both effects being net of age) (Ganzeboom, de Graaf and Treiman, 1992).
- **EGP** (Erikson–Goldthorpe–Portocarero Index) as an indicator of social class position. This is a categorization which allocates individuals and families into social classes (Erikson and Goldthorpe, 1992)

METHOD
The study was conducted in Poland on a group of pupils, who are studying at upper secondary schools: 100 general upper secondary schools, 59 vocational secondary schools: 3 and 4 years full time schools and 48 basic vocational schools. The participants were second year students.

Table 1. Number, percentage distribution and proportion of participants by sex

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>%</th>
<th>Weighted proportion</th>
<th>Std. Err.</th>
</tr>
</thead>
<tbody>
<tr>
<td>male</td>
<td>2,112</td>
<td>52.26</td>
<td>0.55456</td>
<td>0.00836</td>
</tr>
<tr>
<td>female</td>
<td>1,929</td>
<td>47.74</td>
<td>0.445704</td>
<td>0.00836</td>
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<tr>
<td>total</td>
<td>4,041</td>
<td>100.00</td>
<td></td>
<td></td>
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</tbody>
</table>

Table 2. Frequency and percentage distribution of participants by the type of school. HEDU (the average age of best educated parents) and HISEI (Highest International Socio Economic Index, M=100, SD=15) in respect to the type of school

<table>
<thead>
<tr>
<th>Type of School</th>
<th>Frequency</th>
<th>Percent</th>
<th>HEDU</th>
<th>HISEI</th>
</tr>
</thead>
<tbody>
<tr>
<td>3A General upper secondary</td>
<td>2272</td>
<td>56.22</td>
<td>104.9411</td>
<td>13.20841</td>
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<tr>
<td>3B General-vocational upper secondary (3 years)</td>
<td>107</td>
<td>2.65</td>
<td>96.73238</td>
<td>11.88936</td>
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<tr>
<td>3B General-vocational upper secondary (4 years)</td>
<td>1019</td>
<td>25.22</td>
<td>95.00727</td>
<td>11.34997</td>
</tr>
<tr>
<td>3C Vocational</td>
<td>642</td>
<td>15.91</td>
<td>90.55591</td>
<td>10.42104</td>
</tr>
</tbody>
</table>

Graph 1. The relation between the Raven’s Progressive Matrices result and HISEI according to type of school

Graph 2. The Raven’s Progressive Matrices result in particular types of schools

Graph 3. Distribution of the HISEI by the type of school

Graph 4. Distribution of the Raven’s Progressive Matrices result according to EGP