Additional materials for “Well-being and human-animal interactions in schools” (L.E. Pinto & D. Foulkes, published in Brock Education, 2015)

The empathy scale used was the Empathy Index for Children and Adolescents (IECA) a 22-item self-report questionnaire developed and validated by Bryant (1982) to assess dispositional empathy in children aged 6 or older (see below for questions). Since its inception, the IECA has been used by multiple researchers in many contexts and sub-disciplines and has been further validated (see, for example, Daly & Morton, 2003; de Weid et al, 2007; Lovett & Sheffield, 2007).

Empathy Index for Children and Adolescents (IECA)

Items in italics score negatively.

1. It makes me sad to see a girl who can't find anyone to play with.
2. People who kiss and hug in public are silly.
3. Boys who cry because they are happy are silly.
4. I really like to watch people open presents, even when I don't get a present myself.
5. Seeing a boy who is crying makes me feel like crying.
6. I get upset when I see a girl being hurt.
7. Even when I don't know why someone is laughing, I laugh too.
8. Sometimes I cry when I watch TV.
9. Girls who cry because they are happy are silly.
10. It's hard for me to see why someone else gets upset.
11. I get upset when I see an animal being hurt.
12. It makes me sad to see a boy who can't find anyone to play with.
13. Some songs make me so sad I feel like crying.
14. I get upset when I see a boy being hurt.
15. Grown-ups sometimes cry even when they have nothing to be sad about.
16. It's silly to treat dogs and cats as though they have feelings like people.
17. I get mad when I see a classmate pretending to need help from the teacher all the time.
18. Kids who have no friends probably don't want any.
19. Seeing a girl who is crying makes me feel like crying.
20. I think it is funny that some people cry during a sad movie or while reading a sad book.
21. *I am able to eat all my cookies even when I see someone looking at me wanting one.*

22. *I don't feel upset when I see a classmate being punished by a teacher for not obeying school rules.*

References:


Detailed Data Table

Data from the pre- and post-tests were checked for errors, and negatively worded items were reverse coded prior to any analyses.

Significance Level 0.05
2-tailed T-test results

The value of \( t \) is 0.163197. The value of \( p \) is 0.873614. The result is not significant at \( p \leq 0.05 \).

<table>
<thead>
<tr>
<th>Code</th>
<th>Pre</th>
<th>Post</th>
<th>Diff (T2 - T1)</th>
<th>Dev (Diff - M)</th>
<th>Sq. Dev</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.454545</td>
<td>0.409091</td>
<td>-0.05</td>
<td>-0.06</td>
<td>0</td>
</tr>
<tr>
<td>2</td>
<td>0.590909</td>
<td>0.590909</td>
<td>0</td>
<td>-0.01</td>
<td>0</td>
</tr>
<tr>
<td>3</td>
<td>0.545455</td>
<td>0.409091</td>
<td>-0.14</td>
<td>-0.15</td>
<td>0.02</td>
</tr>
<tr>
<td>4</td>
<td>0.545455</td>
<td>0.545455</td>
<td>0</td>
<td>-0.01</td>
<td>0</td>
</tr>
<tr>
<td>5</td>
<td>0.636364</td>
<td>0.666667</td>
<td>0.03</td>
<td>0.02</td>
<td>0</td>
</tr>
<tr>
<td>6</td>
<td>0.666667</td>
<td>0.272727</td>
<td>-0.39</td>
<td>-0.4</td>
<td>0.16</td>
</tr>
<tr>
<td>7</td>
<td>0.666667</td>
<td>0.727273</td>
<td>0.06</td>
<td>0.05</td>
<td>0</td>
</tr>
<tr>
<td>8</td>
<td>0.181818</td>
<td>0.363636</td>
<td>0.18</td>
<td>0.17</td>
<td>0.03</td>
</tr>
<tr>
<td>9</td>
<td>0.545455</td>
<td>0.590909</td>
<td>0.05</td>
<td>0.04</td>
<td>0</td>
</tr>
<tr>
<td>10</td>
<td>0.590909</td>
<td>1</td>
<td>0.41</td>
<td>0.4</td>
<td>0.16</td>
</tr>
<tr>
<td>11</td>
<td>0.545455</td>
<td>0.5</td>
<td>-0.05</td>
<td>-0.06</td>
<td>0</td>
</tr>
</tbody>
</table>

M: 0.01
S: 0.38

Difference Scores Calculations

\( \text{Mean}: 0.01 \)
\( \mu = 0 \)
\( S^2 = SS/df = 0.38/(11-1) = 0.04 \)
\( S^2_M = S^2/N = 0.04/11 = 0.00 \)
\( S_M = \sqrt{S^2_M} = \sqrt{0.00} = 0.06 \)

T-value Calculation

\[
t = (M - \mu)S_M = (0.01 - 0)0.06 = 0.16
\]