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The Use of Student Self-Reporting vs. Teacher Identification of Depression in School-Age Children

Dianna Phares, PhD, DNP, APRN, BC

Background

- Depression is one of this nation’s silent evils, affecting 15 million Americans.
- Investigators are only now beginning to understand that depression is the leading cause for the destructive trend of alcohol and substance abuse, bullying, acting out in class, and the shootings at Columbine and other schools.
- School teachers and administrators cannot identify depression in their students, do not understand the manifestations of the disease, and have drastically misclassified the magnitude of the role that depression plays in undermining student mental health, academic success in school, and a healthy school environment.
- Researchers are aware that depression exists in school-age children, but very little research has been done with children in the school environment; no large-scale screenings have been conducted in schools to be used as an early warning device to identify depressed students.
- In two studies where teachers are used to determine which of their students are depressed (Epkins, 1995 & Augur, 2004), teachers shared some agreement with the children’s self-reporting.

Methods

Inclusion Criteria:
- Articles published in 1995 or later
- Elementary and Middle School-aged children
- Different geographical locations and regions
- Any gender or ethnicity but not a factor here

Exclusion Criteria:
- Studies without statistical analysis
- Studies published in foreign languages
- Studies published as abstracts only
- Studies which did not have a self-reporting component as a part of their methodology.

Search Process:
- Sources: PubMed, WebMD, OVID, Medline, Google, published systematic reviews and meta-analyses.
- Search terms: depression, school-aged children, self-reporting of depression, teacher reporting of depression; depression inventories
- All three authors mutually agreed upon criteria to meta-analysis article candidates. This included hypothesis-driven studies.
- Potential candidate articles were later excluded if they did not have a self-reporting methodology; qualitative screening methods were excluded. This included Article #3-5.
- Abstention rates reviewed to determine whether or not they affected the end results of each study.

Statistical Analysis:
- Sample sizes and correlation factors of each study were entered as data in the computer software program Schwarzer’s Meta-Analysis Freeware (Schwarzer, 1993).
- Data collection included screenings using student self-report and teacher evaluations; reporting instruments varied by study; appropriate ethical procedures were followed.
- Statistical tests included: weighted and unweighted Z-values, significance, and corresponding effect size (to adjust for varying sample sizes). See Results for Fail-Safe N values. Tests of homogeneity were also utilized to assess whether or not the sample populations and results were consistent. See Results for Chi-square values.

Findings

Student Self-Reports vs. Teacher Reports as a Predictor of Depression

<table>
<thead>
<tr>
<th>Article #</th>
<th>Abbreviated Title</th>
<th>Research/Hypothesis Tested</th>
<th>Conclusion</th>
<th>Variable of Interest</th>
<th>Statistics Used</th>
<th>Sample Sizes/Controls Used</th>
<th>Mean Effect Sizes/Sigma</th>
<th>Meaningful Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Accuracy/Teacher Reports...</td>
<td>Can Teachers predict depression as well as student self-reports?</td>
<td>Not a good predictor</td>
<td>Correlation of success</td>
<td>N=1424; SD=11.50</td>
<td>N=62; N=62</td>
<td>0.22 (p = 0.2)</td>
<td>Chi-square</td>
</tr>
<tr>
<td>2</td>
<td>Early Warning...</td>
<td>Can Teachers predict depression as well as student self-reports?</td>
<td>Teachers not good predictor</td>
<td>Correlation of success</td>
<td>N=1516; SD=13.16</td>
<td>N=171; N=171</td>
<td>0.19 (p = 0.0)</td>
<td>Chi-square</td>
</tr>
<tr>
<td>3</td>
<td>MalaySchen...</td>
<td>None</td>
<td>Qualitative</td>
<td>Qualitative/Student Report</td>
<td>None</td>
<td>N=107</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Placebo-Controlled</td>
<td>Effectiveness of school-based program</td>
<td>Experimental Double-Blinked</td>
<td>Qualitative</td>
<td>SD=1.4; P; APR, CI 95%</td>
<td>N=302</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Predictors of Efficiency</td>
<td>Metaanalysis of qualitative program</td>
<td>Qualitative</td>
<td>Qualitative</td>
<td>Mean Effect Sizes/Values</td>
<td>N=512</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Teacher Ratings...</td>
<td>Can Teachers predict depression as well as student self-reports?</td>
<td>Reasonable predictor</td>
<td>Correlation of success</td>
<td>N=140; SD=32.54</td>
<td>N=83; N=52</td>
<td>0.07 (p = 0.0)</td>
<td>Chi-square</td>
</tr>
</tbody>
</table>

Only the boldfaced studies were used in the meta-analysis.

Results

- Three studies in two parts with total sample size of N=1225.

- Ethnic percentages were used in some of the articles but not all; hence, these were not considered in the meta-analysis.

- None of the articles used P-values as a measurement; cited r factors were used and converted to effect sizes.

- Among self-reporting students, population size effect (unweighted mean r) = .67

- Among teacher reports, population size effect (unweighted mean r) = .31

- Fail-Safe N values were calculated: for students, 35.57 for a critical r of .05; for teachers, 13.95 for a critical r value of .05.

- Chi-Squares were somewhat large; 26.37275 (2 DFs) for student self-reporting and 15.0873 (2 DFs) for teacher reports.

There was a factor of heterogeneity in the analysis.

Conclusions

Strengths

- The results supported other individual studies where actual self-reporting of school children was a better indicator of true depression without the factor of false-positives introduced by teacher reporting.

- The r-factors of .67 was a strong measure of correlation for student self-reporting.

Limitations

- Only three studies were accessible that used reporting by both children and teachers as part of the methodology.

- Although all children were of school age, not all were surveyed in schools; some studies were conducted in residential psychiatric facilities and some used community settings.

- Confidence factors using P-values were not available; however, the Schwarzer Meta-Analysis software allowed for the conversion of other statistical factors.

Recommendations for Practice

- False-positives will continue to be a problem with the evaluation and reporting of teachers, even when they have received training to identify depressed children.

- Once depressed children are identified, a triage of medical interventions will be necessary, from something as simple as a conversation with a parent and/or counselor to psychiatric intervention with and without medication.

References


