Validating Measures on Violence Against Children and Gender Discrimination in Schools

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VIOLENCE AGAINST CHILDREN IS A GLOBAL EPIDEMIC

- More than **ONE BILLION** children experience violence or neglect annually (Hillis et al., 2016)
- Child abuse is associated with poor health outcomes and is transmitted through generations (Hillis et al., 2016; Hillis et al., 2017)
- School-related gender-based violence is common worldwide and has devastating health, social and economic costs, estimated to equal over $111 billion lost in lifetime earnings (Wodon et al., 2021)
SCHOOL-RELATED GENDER-BASED VIOLENCE IN UGANDA

• More than 9 in 10 Ugandan students report experiencing physical, sexual or emotional violence from teachers or staff (Devries, Child et al. 2014, Devries and Naker 2021)

• Female students report experiencing gender discrimination in class which can be detrimental to education (Lubaaie, 2020; Nabbuye, 2018; UNICEF, 2020)
SOCIAL NORMS SUPPORTING CHILD ABUSE

Support for corporal punishment
Justification of sexual harassment and victim blaming
Justification of gender inequities and unequal treatment of genders in the classroom

To comprehensively address and prevent teacher-perpetrated violence against children in schools, norms shifting approaches are required but not available.

(Corboz et al., 2019; Haylock et al., 2016; Lundgren et al., 2019)
VALIDATED MEASURES ARE NEEDED

• Lack of demonstrated effective norm-shifting approaches in part due to inadequate measures, hindering ability to accurately assess effectiveness

• Few studies published on child self-report measures of teacher-perpetrated violence against children; none on gender inequities or positive discipline (Uysal et al., 2022)

We sought to evaluate the internal reliability and construct validity of child measures on norms/experience of teacher-perpetrated VAC and gender inequities
SAMPLE FOR DATA ANALYSIS

- Baseline data for evaluation trial on Save the Children SBC intervention, Commitments, to reduce teacher-perpetrated violence and gender discrimination among children at school by shifting norms
- 4th-6th grade students (age 11 to 14)
- Wakiso school district in Uganda in 24 schools
SAMPLE CHARACTERISTICS

- 1191 participants analyzed (97.8% retention)
- Evenly split by gender (51% female)
- Average age = 11.38 (min 10, max 14)
- Included 3rd-6th graders
QUESTIONNAIRE

• 30 minutes, delivered by trained research assistants
• Developed from previous VAC questionnaires and formative research
• Included direct and indirect (i.e. vignette) questions
• Assessed critical student experiences in four broad categories, 19 items assessed in this study

Feeling comfortable at school
Abusive and positive discipline
Sexual harassment
Gender inequities in the classroom
SCALES DEVELOPED FROM THIS ANALYSIS

1. SEXUAL HARASSMENT
2. GENDER DISCRIMINATION
3. POSITIVE DISCIPLINE
Analytical Methods

**Construct Validity**

- Exploratory Factor Analysis (EFA) on binary data to determine number of scales and items on each scale
- Polychoric correlation matrix with maximum likelihood estimation (MLE) factor extraction, promax (oblique) rotation
- # factors determined through scree plots, interpretation, Akaike's Information Criterion (AIC), hypothesis testing (Knekta et al., 2019)

**Internal Reliability**

- Cronbach alpha coefficient (>0.65)
- Tucker and Lewis's Reliability Coefficient (>0.5)
- Retest in CFA* (Anselmi et al., 2019)
## Selection of Factor Model

<table>
<thead>
<tr>
<th></th>
<th>2-Factor Model</th>
<th>3-Factor Model</th>
<th>4-Factor Model</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>AIC</strong> (Lower Better)</td>
<td>4953</td>
<td>3660</td>
<td>2993</td>
</tr>
<tr>
<td><strong>Tucker Lewis Criterion</strong> (Higher Better)</td>
<td>0.48</td>
<td>0.55</td>
<td>0.57</td>
</tr>
<tr>
<td><strong>Interpretation</strong></td>
<td>Not Easily Interpretable</td>
<td>Interpretable and All Factors Have at Least 3 Items</td>
<td>Interpretable but Last Factor Only 2 Items</td>
</tr>
</tbody>
</table>
## Summary of Resulting Scales

<table>
<thead>
<tr>
<th>Construct Interpretation</th>
<th>% Variance Ignoring Other Factors</th>
<th># Items Loading</th>
<th>Cronbach Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sexual Harassment</td>
<td>78.3</td>
<td>3</td>
<td>0.66</td>
</tr>
<tr>
<td>Gender Discrimination</td>
<td>13.7</td>
<td>3</td>
<td>0.80</td>
</tr>
<tr>
<td>Positive Discipline</td>
<td>8.1</td>
<td>4</td>
<td>0.69</td>
</tr>
</tbody>
</table>
# Sexual Harassment Scale

<table>
<thead>
<tr>
<th>Question</th>
<th>Response</th>
<th>%</th>
<th>Factor Loading</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>In the past three months, how often have you witnessed a teacher calling a pupil names?</strong></td>
<td>1 = Often 2 = Sometimes 3 = Never</td>
<td>11 30 59</td>
<td>0.98</td>
</tr>
<tr>
<td><strong>Have you ever heard a teacher say things about their pupils that make you feel uncomfortable?</strong></td>
<td>1 = Yes 0 = No</td>
<td>41 59</td>
<td>0.95</td>
</tr>
<tr>
<td><strong>Have you heard a teacher at your school make comments about a pupil’s body?</strong></td>
<td>1 = Yes 0 = No</td>
<td>12 88</td>
<td>0.39</td>
</tr>
</tbody>
</table>

*Reverse coded*
### GENDER DISCRIMINATION SCALE

<table>
<thead>
<tr>
<th>QUESTION</th>
<th>RESPONSE</th>
<th>%</th>
<th>FACTOR LOADING</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>DO YOU THINK TEACHERS IN YOUR SCHOOL CALL ON BOYS MORE THAN GIRLS?</strong></td>
<td>1 = YES 0 = NO</td>
<td>10 90</td>
<td>0.99</td>
</tr>
<tr>
<td><strong>MRS. X IS TEACHING MATHEMATICS AND SHE ASKS FOR A VOLUNTEER. MRS. X CALLS ON PAUL TO COME UP, ALTHOUGH SARAH ALSO HAD HER HAND IN THE AIR. WHEN PAUL MAKES A MISTAKE, SARAH RAISES HER HAND. MRS. X DOESN’T CALL ON HER, INSTEAD SHE CALLS ON ANOTHER BOY. A FEW OF THE GIRLS THINK THEY KNOW THE ANSWER AND KEEP RAISING THEIR HANDS, BUT MRS. X NEVER CALLS ON THEM, AND ONLY ASKS BOYS.</strong></td>
<td>1 = YES 0 = NO</td>
<td>11 89</td>
<td>0.89</td>
</tr>
<tr>
<td><strong>DO YOU THINK THIS SITUATION COULD HAPPEN AT YOUR SCHOOL?</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>DO YOUR TEACHERS EVER FAVOR BOYS OVER GIRLS?</strong></td>
<td>1 = OFTEN 2 = SOMETIMES 3 = NEVER</td>
<td>1 19 80</td>
<td>0.87</td>
</tr>
</tbody>
</table>

*REVERSE CODED*
# POSITIVE DISCIPLINE SCALE

<table>
<thead>
<tr>
<th>QUESTION</th>
<th>RESPONSE</th>
<th>%</th>
<th>FACTOR LOADING</th>
</tr>
</thead>
<tbody>
<tr>
<td>In the past three months, how often have you witnessed a teacher praising a pupil?</td>
<td>1 = Often 2 = Sometimes 3 = Never</td>
<td>44 47 9</td>
<td>0.70</td>
</tr>
<tr>
<td>In the past three months, how often have you witnessed a teacher caning a pupil?*</td>
<td>1 = Often 2 = Sometimes 3 = Never</td>
<td>45 50 5</td>
<td>-0.70</td>
</tr>
<tr>
<td>In the past three months, how often have you witnessed a teacher encouraging a pupil?</td>
<td>1 = Often 2 = Sometimes 3 = Never</td>
<td>58 39 3</td>
<td>0.69</td>
</tr>
<tr>
<td>In the past three months, how often have you witnessed a teacher yelling at a pupil?*</td>
<td>1 = Often 2 = Sometimes 3 = Never</td>
<td>23 38 39</td>
<td>-0.69</td>
</tr>
</tbody>
</table>

* REVERSE CODED
This study provides validated and reliable scales for sexual harassment, gender discrimination, and discipline that may be adapted, applied, and further tested in school contexts in Uganda and globally.

- Sexual harassment, gender discrimination, and discipline (both positive and negative) by teachers are common experiences among students in this context.
- Vignette questions show promise to measure student experiences of abuse but need further study.
LIMITATIONS

STRENGTHS

• Large sample of both male and female students
• First study to validate a questionnaire for teacher perpetrated gender discrimination in the classroom via child self-report
• Offers practical (i.e. short), valid, and reliable scales for further testing
• Incorporates direct and some vignettes

LIMITATIONS

• Not generalizable outside of sample
• Unable to test all vignette questions asked through this approach due to statistical limitations within Classical Test Theory
• Complete case analysis; potential for selection bias
• Focused on scale development, does not assess utility of individual items (e.g., comfort at school)
WHAT’S NEXT?

• Further exploration of vignette vs. direct questions using Item Response Theory
• Split-half sample with EFA and CFA to further confirm results
• Investigation on potential selection bias via imputed sensitivity analysis
• Further testing for teacher-perpetrated violence and discrimination against students
REFERENCES


CONTACT US!

SUGGESTED CITATION:

For questions about this study:
• juysal@health.ucsd.edu
• k1barker@health.ucsd.edu

To access suite of Passages resources:
• www.passagesproject.org

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