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Effect of the good school toolkit on school staff mental health, sense of job satisfaction and perceptions of school climate: Secondary analysis of a cluster randomised trial

Joshua Kayiwa [a,*], Kelly Clarke [b], Louise Knight [c], Elizabeth Allen [c], Eddy Walakira [d], Sophie Namy [e], Katherine G. Merrill [c], Dipak Naker [e], Karen Devries [c]

[a] Ministry of Health, Public Health Emergency Operations Centre, Kampala, Uganda
[b] Institute for Global Health, University College of London, UK
[c] London School of Hygiene and Tropical Medicine, London, UK
[d] Makerere University, Kampala, Uganda
[e] Raising Voices, Kampala, Uganda

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ABSTRACT

The Good School Toolkit, a complex behavioural intervention delivered in Ugandan primary schools, has been shown to reduce school staff-perpetrated physical violence against students. We aimed to assess the effect of this intervention on staff members' mental health, sense of job satisfaction and perception of school climate. We analysed data from a cluster-randomised trial administered in 42 primary schools in Luwero district, Uganda. The trial was comprised of cross-sectional baseline (June/July 2012) and endline (June/July 2014) surveys among staff and students. Twenty-one schools were randomly selected to receive the Toolkit, whilst 21 schools constituted a wait-listed control group. We generated composite measures to assess staff members' perceptions of the school climate and job satisfaction. The trial is registered at clinicaltrials.gov (NCT01678846). No schools dropped out of the study and all 591 staff members who completed the endline survey were included in the analysis. Staff in schools receiving the Toolkit had more positive perspectives of their school climate compared to staff in control schools (difference in mean scores 2.19, 95% Confidence Interval 0.92, 3.39). We did not find any significant differences for job satisfaction and mental health. In conclusion, interventions like the Good School Toolkit that reduce physical violence by school staff against students can improve staff perceptions of the school climate, and could help to build more positive working and learning environments in Ugandan schools.

1. Background

Violence against children is common in certain parts of the world, with devastating health and social effects, including depression, suicide attempts, poor educational attainment and increased risk of experiencing or perpetrating violence in adulthood (Boden et al., 2007; Norman et al., 2012; Fang and Corso, 2007; Ehrensaft et al., 2003; Hillis et al., 2016). Available national data indicate that over 40% of children in East Africa experience some form of life-time physical violence during childhood (UNICEF-Uganda and Ministry of Gender Labour and Social Development, 2015; UNICEF-Tanzania, 2011; UNICEF-Kenya, 2012). Perpetration of physical violence by school staff - including teachers, caretakers and administrative staff - may account for a large proportion of the total burden of childhood physical violence exposures, especially in Sub-Saharan Africa (Devries, 2016). A study conducted in Luwero District, central Uganda, indicates that >90% of primary school students have ever experienced physical violence (e.g. slapped, hit or caned) by a school staff member in their lifetime. More than 50% reported such exposures within the past week (Devries et al., 2014).

Violence in schools has negative effects on students' emotional well-being, affects school attendance, and is inversely associated with staff mental health and teaching quality (Forero et al., 1999; Wilson et al., 2011). This is a pertinent issue in sub-Saharan African contexts, where low levels of job satisfaction and poor motivation among teachers may hinder progress towards sustainable development goals for education and development (Forero et al., 1999; Wilson et al., 2011). A positive school environment has been demonstrated to reduce staff-perpetrated violence, influence academic achievements, and reduce absenteeism (Bradshaw et al., 2012; Espelage et al., 2014; Dominguez Alonso et al., 2009). Earlier work elsewhere linked school-based violence with staff's mental health, sense of job satisfaction and perceptions of school

* Corresponding author at: Ministry of Health, Emergency Operations Centre, P O Box 3675, Kampala, Uganda.
E-mail address: joshua.kayiwa@gmail.com (J. Kayiwa).

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climate (Astor et al., 2002; Evans, 1997; Grayson and Alvarez, 2008). Very few interventions have been tested for their efficacy in improving these three outcomes in the context of low and middle-income countries (Bonell et al., 2013).

A recent randomized controlled trial in Luwero District, Uganda, evaluated the impact of the Good School Toolkit, a complex behavioural intervention delivered in primary schools to reduce school-based staff-perpetrated physical violence against children. The Toolkit involves supporting staff and students to develop a collective vision for the school, create a nurturing learning environment and strengthen school governance. The Toolkit significantly reduced past-week physical violence against students among the intervention schools, compared to controls (odds ratio 0·40, 95% CI 0·26–0·64, $p < 0·0001$) (Devries et al., 2015). We hypothesized that, through reductions in violence and/or by improving the learning environment, the intervention would have benefits for school staff members' mental health, job satisfaction and perceptions of school climate. In this study, we aim to test these hypotheses by conducting secondary analyses of data from the trial.

2. Methods

2.1. Study setting and design

We use data from the Good School Study (GSS), a cluster randomized controlled trial conducted between September 2012 and May 2014 in Luwero District, Uganda. The study was a collaboration between Raising Voices, a Ugandan-based Non-Governmental Organisation (NGO), Makerere University, the UCL-Institute of Education and the London School of Hygiene and Tropical Medicine. Luwero District has a population of >450,000 and comprises both rural and urban areas. The study protocol and main trial results are reported in full elsewhere (Devries et al., 2014; Devries et al., 2015; Devries et al., 2013; Child et al., 2014; Knight et al., 2016; Gannett, 2016).

The GSS included a two-arm cluster-randomised trial design, with primary schools as the unit of clustering. In Uganda, children attend primary school between the ages of 6 and 14 years (Uganda National Planning Authority, 2015). From 268 primary schools in Luwero, we excluded 97 schools with fewer than 40 primary five students, and 20 schools with existing similar school-based interventions. A total of 42 schools were then randomly selected to participate in the trial. This sample size enabled the detection of a 13% difference in the prevalence of reported violence between the intervention and control arms with 5% statistical significance and 80% power. No post-hoc power computations were conducted since this was an exploratory secondary analysis of the original study. Random blocks with a proportionate to stratum size random allocation was used to consent and allocate 21 schools to a wait-listed control arm, and 21 schools to receive the intervention. Head teachers from all 42 schools agreed for their schools to participate.

Data were collected from staff at each school through two cross-sectional surveys: the baseline survey was conducted in June–July of 2012 and the endline survey was conducted in June–July 2014. Both teaching and non-teaching staff members were invited to take part in the surveys and individual written consent was obtained.

2.2. Intervention

The Good School Toolkit is a manualised intervention designed to reduce physical violence against children perpetrated by school staff, and was developed by Raising Voices (Raising Voices, n.d.). The Toolkit aims to improve the learning environment by developing mutual respect, improving staff and student understanding of power relationships and promoting use of non-violent discipline. It involves staff and students in activities such as: setting school-wide goals, developing action plans for the set goals (both academic and recreational) with specific dates for the set deliverables, encouraging empathy by facilitating reflections on experiences of violence, providing school staff with new knowledge on alternative non-violent discipline, and providing opportunities to practice new behavioural skills.

At each school receiving the intervention, two student and two staff protagonists were identified to implement the Toolkit, supported by Raising Voices staff. Staff and student protagonists conducted face-to-face activities with other staff and students in their schools, mainly in groups. The intervention ran for 18 months and is described in full elsewhere (Raising Voices, n.d.).

2.3. Data collection tools and outcomes

All data were collected via interviewer-administered questionnaires programmed into tablet computers or mobile phones, with algorithms designed to minimize erroneous skips. From staff, we collected socio-demographic data as well as data on violence, mental health, job satisfaction and perceptions of school climate. We collected data on staff perpetration of physical, sexual and emotional violence against students and non-students using items adapted from the International Society for the Prevention of Child Abuse and Neglect Child Abuse Screening Tool - Child Institutional (ICAST-CI) (ISPCAN, 2006) and the World Health Organization (WHO) Multi-Country Study on Women's Health and Domestic Violence against Women (García-Moreno et al., 2005).

We used the 20-item Self-Report Questionnaire (SRQ-20) screening instrument (Beusenberg and Orley, 1994) to measure symptoms of common mental disorders (e.g. depression and anxiety) among staff members. Items on this instrument are scored 0 (symptom absent) or 1 (symptom present), and summed to give a range of total scores from 0 to 20. The reliability and validity of this tool have been established elsewhere, including several African settings (Stewart et al., 2013; Stewart et al., 2009; Scholte et al., 2011). In our study, Cronbach's alpha was 0.71, indicating acceptable internal consistency of the instrument (Tavakol and Dennick, 2011). There is no established cut off score for the SRQ in the general population of Ugandan adults, so we used a score cut off of 6 and above to be indicative of a common mental disorder status in our descriptive analysis, following evidence from studies internationally and studies of other populations in Uganda (Devries et al., 2011; Nakimuli-Mpungu et al., 2012).

We generated a composite measure with 16 items to assess staff members' perceptions of the school climate (Table 1). Answers were summed to generate a total score ranging from 16 to 64, with lower scores indicating more negative perceptions of school climate compared to higher scores. Cronbach's alpha for this measure was 0.78. We further generated a composite measure with five items to assess job satisfaction (Table 1). Answers were summed to give a possible range of scores from 5 to 20, with lower scores representing less satisfaction. Internal consistency for the scale was acceptable (Cronbach's alpha = 0.69). Staff responding to fewer than half of the items used to generate any of the three outcomes were recorded as missing.

2.4. Statistical analysis

To assess the impact of the intervention on staff mental health, perceptions of school climate and job satisfaction, we performed complete-cases analyses, using multilevel mixed-effects linear regression models with unstructured correlation structures (which allow for all variances and covariances to be distinctly estimated at school level) to account for clustering at the school level (Littell et al., 2000; Zeger and Liang, 1986). All three variables were analysed as continuous outcomes. Since the three outcomes were not normally distributed, we used non-parametric bootstraping (2000 replications) to estimate bias-corrected 95% confidence intervals. The final models were adjusted for the baseline school mean scores of staff mental health, sense of job satisfaction and perceptions of school climate respectively. Additionally we carried out a further adjusted analysis to allow for the possible imbalance of some factors at baseline. This analysis further adjusted for baseline