

Abstract

Introduction

Prevalence of occupational stress (OS) among secondary teachers in district of Colombo was found to be as high as 83.4% in 2017. This is a situation that needs urgent intervention to prevent physical, psychological and economic burden to teachers themselves, families and society by large.

Objective

The current study designed and evaluated an intervention to reduce OS among secondary teachers in Sinhala medium government schools in the district of Colombo.

Methods

The study comprised three components. Designing an intervention package to reduce OS among secondary teachers was the first component. Design was based on scientific evidence gathered through a systematic review registered in the PROSPERO (International prospective register of systematic reviews registration). Based on the evidence, a nine session cognitive behavioural and relaxation technique based interventional package was developed. The interventions targeting school administrators was a single session on organizational modification techniques to reduce stress.

Second component was to develop and validate OCOST-Sinhala (OCOST- Organizational Consequences of Occupational Stress Tool), to measure organizational consequences of OS among teachers in secondary schools. Triangulation of quantitative and qualitative methods were used in design and validation. Item generation was guided by a conceptual framework. Reducing the items was through an assessment of a panel of experts and by conducting a Principal Component Analysis (PCA). Construct validity was assessed through confirmatory factor analysis and a multi-trait scaling. Internal consistency and Cronbach' alpha assessed the reliability.

The third component was the cluster randomized trial (intervention and control group 300 secondary teachers in 10 clusters each) in the District of Colombo, to evaluate the effectiveness of an intervention package developed in Component I to reduce OS of secondary teachers. Intervention was delivered to the intervention group of schools over a

period of six months. Control group did not receive any intervention. Effectiveness of the intervention targeted at teachers and administrators were assessed after four and eight weeks of completion of the intervention respectively using a series of primary and secondary outcome indicators analyzed at individual secondary teacher level and cluster level and also using a multivariate Generalized Estimating Equation analysis. The process was also evaluated for feasibility and acceptability.

Results

The tool to assess organizational consequences had 45 items in seven domains (Self-efficacy, Work engagement, Motivation, Job Satisfaction, Enthusiasm, Workload & Work Performance). CFA and multi trait scaling analysis confirmed the construct validity with reliability confirmed as good (Cronbach's alpha 0.923; test re-test reliability > 0.7).

Evidence generated showed that intervention package was effective in reducing OS among teachers and in achieving most outcome measures. The intervention significantly reduced occupational stress (OR=0.3, 95%CI 0.2-0.5) ($p<0.001$) as well as psychological distress (OR=0.03, 95%CI 0.01-0.07) ($p<0.001$), OCOS (OR=0.1, 95%CI 0.04-0.3) ($p<0.001$) and the habit of smoking (OR=0.09, 95%CI 0.01-0.7) ($p=0.02$) among the school teachers when the effect of clustering and other independent variables were controlled. Furthermore, it also significantly increased the knowledge about OS (0.6 95%CI 0.5-0.7) ($p<0.001$), healthiness of diet ($\beta=0.3$, 95%CI 0.2-0.4) ($p<0.001$), level of adequate physical activity (OR=3.2, 95% CI 2.1-4.9) ($p<0.001$) and effective coping of OS ($\beta=0.2$, 95%CI-0.17-0.3) ($p<0.001$) among the secondary school teachers

The intervention targeted at school administrators also was effective with improvements in the pre-post assessments ($p<0.001$).

Conclusions and Recommendations:

The intervention package to reduce OS among secondary teachers in Sinhala medium government schools in the district of Colombo was found to be highly effective and is recommended to be incorporated to the basic training of teachers or implemented through the school health programme.

Key words: occupational stress, organizational consequences, cluster randomized trial