

Abstract

Introduction

While acute stress is increasingly becoming part of life, 'chronic stress' has remained a relatively unfamiliar entity. In the absence of a valid tool for measurement, prevalence of chronic stress among Sri Lankan adults and its role as an independent risk factor for mental disorders is unknown. Further, studying social determinants of chronic stress may shed light on its prevention.

Objectives

To describe the prevalence of chronic stress using a newly developed tool and to describe the social determinants of chronic stress and its association with depression and Obsessive Compulsive Disorder (OCD) among adults in the district of Colombo

Methods

A validation study was conducted to develop a new tool, "Chronic Stress Measurement Scale" (CSMS) to assess chronic stress in the Sri Lankan context and to validate it in a sample of 350 adults using principal component analysis. Steps included defining the construct, item generation, content analysis of items, item reduction and identification of response categories. Construct, convergent and discriminant validity were further performed for CSMS.

Another validation study was conducted to translate "Obsessive Compulsive Inventory-Revised" (OCI-R) to local language (OCI-R-Sinhala) to assess OCD and its criterion validity against the clinical diagnosis of OCD.

A cross-sectional, community-based study was conducted in the district of Colombo among 2410 adults aged over 18 years, selected using stratified, cluster sampling with probability-proportionate-to-size of its actual population. Following informed written consent, trained pre-intern doctors administered the newly validated CSMS and OCI-R-S, and already available CES-D (Center for Epidemiological Studies–Depression). Social determinants of chronic stress were assessed via interviewer-administered questionnaires. This was further complemented by obtaining in-depth knowledge on these determinants in a qualitative study.

Results

Principle component analysis demonstrated 48 items being factorable in the development of CSMS as a 9-factor model: excessive demand, familial matters, excessive work, personal matters, chronic worrying, inter-personal tension, dissatisfaction with duties, societal responsibilities and lack of social recognition. CSMS showed satisfactory validity and reliability (Cronbach's alpha: 0.69 -0.84; test re-test coefficient: 0.66–0.91). OCI–R-S demonstrated its reliability and validity against its criterion (clinical diagnosis): 84.4% sensitivity; 85.6% specificity; 0.73 Kappa; and 0.87 Cronbach alpha. Response rate was 96.5%. The prevalence of high-level chronic stress among adults was 17.4% (95% CI: 15.9%-18.9%). Being a resident in highly urban: CMC and urban: non-CMC areas, being non-Buddhist, age <40 years, high social status, residential insecurity, living alone, in-debt, performing shift duty, insecure employment, presence of chronic disease/s, substance abuse to cope stress, poor partner relationships, abuse by partner/self, parental death/separation during childhood and childhood traumatic experience were the social determinants of high-level chronic stress independent of confounding effects. Social responsibility, social status, cultural norms, social insecurity, social isolation and self/social discrimination were also qualitatively identified as social determinants of chronic stress. The social determinants varied in relation to work, home and personal traits when considered at different levels of urbanization (highly urban, urban and rural). The prevalence of current depression was 15.7% (95% CI: 14.2%-17.2%) while that of OCD was 3.5% (95% CI: 2.77%-4.23%). High-level chronic stress as an independent risk factor for depression (adjusted OR: 10; 95% CI: 7.8–12.9) and for OCD (adjusted OR: 18.2; 95% CI: 10.7–30.7) was significant.

Conclusions and Recommendations

Nearly one in 6 adults showed high level of chronic stress, indicating an emerging public health problem in the district of Colombo. Owing to social determinants of chronic stress varying at area level, surveillance and mental health promotional activities should target vulnerable groups at multiple levels. CSMS as a low-cost, valid and reliable tool should be introduced at community level for early identification of chronic stress in adults, and thereby prevent its sequelae. Findings further encourage health planners to take policy decisions to enhance psycho-social well-being of the society.

Key words: chronic stress, social determinants, prevalence, mental disorders, adults