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Burnout: a burning issue among Sri Lankan students

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Evolution of the concept of burnout

The term 'burnout' had emerged as a social problem in the colloquial language even decades prior to it being explored as a scholarly construct. It had also been described in fictional literature prior to scientific literature. A classic example is the novel, "A Burnt-out Case" by Graham Greene (1961), in which the protagonist's spiritual aridity is analogized to a medical case of burnout (1).

The clinical concept of burnout came to light following its description in scientific literature by Herbert Freudenberger (2). Simultaneously, the extensive psychoanalytic studies conducted by Christina Maslach with her colleagues paved the way to the introduction of the widely accepted three-dimensional concept of burnout as a syndrome of emotional exhaustion, depersonalization and reduced personal accomplishment that can occur among individuals who do 'people work' of some kind" (3). As of now, the entity of burnout is included in the International Classification of Diseases (ICD) 10th Revision, where it is listed as a problem related to life management difficulty (4). In the upcoming ICD 11th Revision, burnout is listed as a problem associated with employment or unemployment (5), including a detailed description in line with the three-dimensional definition of burnout proposed by Maslach and her colleagues.

The virtual use of Maslach Burnout Inventory (MBI) at the budding stages of burnout research has led to the artefactual notion that burnout was exclusively found among human service professionals (6). However, the introduction of MBI-General Survey (MBI-GS) in 2002 has expanded the horizons of burnout research outside the human services, as its dimensions are defined more generally and do not refer to working with recipients (7).

Concept and definition of student burnout

Amidst the trends that emerged in burnout research, several scholars have suggested the potential existence of burnout among student populations (8). This concept had been in the limelight along with the introduction of MBI-Student Survey (MBI-SS) (6). Though students are not employed in a work setting, their core structured and obligatory activities such as attending classes and completing assignments lead to the ultimate objective of passing examinations or acquiring a degree (9-10), and therefore such activities ought to be considered as 'work' from a psychological perspective (10). Accordingly, student burnout is defined as, "a three-dimensional syndrome that is characterized by feelings of exhaustion due to the demands of studying, a cynical attitude of withdrawal and detachment, and reduced professional efficacy regarding academic requirements" (6).

Exhaustion (EX) is defined as feelings of strain, particularly chronic fatigue resulting from overtaxing work. Cynicism (CY) is manifested in an indifferent or a distal attitude toward work in general, a loss of interest in one's work and not seeing it as meaningful. Reduced professional efficacy (rPE) refers to diminished feelings of competence, less successful achievements and to lack of accomplishment in one's work (6).

Assessment tools of student burnout

The first reported measure to assess student burnout is MBI-SS introduced in 2002 (6). Some of the other study instruments include 'School Burnout Inventory' (11), 'Oldenburg Burnout Inventory for Students' (12) and the 'Copenhagen Burnout Inventory Student Version' (13). However, MBI-SS has been the most widely used instrument to assess burnout in different student populations across the globe (14-15). The MBI-SS is a self-administered questionnaire with 16 items representing the three dimensions of student burnout. The frequency in which the respondents experience feelings related to each dimension is assessed using a seven-point, fully anchored response format. The rating scale ranges from 0 ('never') to 6 ('every day'). The high scores on EX and CY and low scores on PE are indicative of burnout (6).

One of the most controversial and recurring issues that had been in question on measuring burnout is whether it should be conceptualized as a continuous phenomenon or as a dichotomous phenomenon (16). The MBI and other less frequently used psychometric assessment tools of burnout produce continuous scores on one or multiple dimensions of burnout, and thereby place respondents based on relative burnout scores, rather than on absolute criterion scores (16). This had led to the inability to quantify the magnitude of the problem of burnout in terms of its prevalence (17).

Global evidence on the prevalence of burnout among school students

Amongst the global research on student burnout, a vast majority has assessed burnout among university

undergraduates (6, 10, 18-20). In comparison, the amount of research conducted among high school students is scanty. Even among the few studies available, magnitude of the problem had been quantified only in a limited number (17). The prevalence of burnout among Finnish junior high school students was reported as 10.9% (21) and according to another research from Finland, approximately 10-15% of adolescents suffered from severe school burnout (22). A study conducted among Chinese middle-school students reported 12.6% of students having distressed academic burnout profile (23), while a study conducted among Swedish first year high school students reported that 32.9% had a high degree of stress symptoms. Of the latter, 25% were classified as having clinical state of burnout (24).

The evidence on student burnout from South Asia is sparse and the global evidence reflects that the prevalence of burnout among different student populations tend to vary substantially; thus, generalization of those findings across countries should be done cautiously considering the wide differences in socio-cultural milieu governing educational environments.

Mental health problems in collegiate cycle students in Sri Lanka

In Sri Lanka, the period of general education comprises all Grades from 1 to 13 in the school system. Broadly there are two main divisions, viz., primary division (first five years) and secondary division (Grades 6-13). The latter division is subdivided into three levels, namely junior secondary level (Grades 6-9), senior secondary level (Grades 10-11) leading to General Certificate of Examination (GCE) Ordinary Level (O/L) and senior secondary level (Grades 12-13) leading to GCE Advanced Level (A/L). The latter is also known as the collegiate cycle (25).

Even though burnout has not been assessed among collegiate cycle students, several studies have assessed different mental health conditions among them. Local evidence suggests that there is a wide range in the prevalence of psychological distress among collegiate cycle students in different

educational settings; 38.0% in Gampaha District (26), 43.1% in Moratuwa Educational Division (27) and 63.2% in Gangawata Educational Division (28). A study conducted in Galle Municipal Council Area revealed 21.2% of collegiate cycle students having mild depression and 21.0% having severe depression (29), whereas another study conducted in Ratnapura Municipality revealed 22.9% and 28.6% having severe depression in Grades 12 and 13 students respectively, and 28.6% of Grade 12 and 32.1% of Grade 13 students having severe anxiety (30). Despite the variation in the prevalence of different mental health problems among collegiate cycle students, the most striking observation is the high prevalence estimates of all mental health issues assessed.

Health programmes for collegiate cycle students in Sri Lanka

The School Health Programme in Sri Lanka, which is coordinated by the School Health Unit, Family Health Bureau (FHB) and School Health and Nutrition branch of the Ministry of Education, is one of the oldest best school health programmes in the region, which caters for 70% of adolescents in the country (31). Albeit the island-wide coverage of this programme, there is no provision to screen or manage mental health problems among collegiate cycle students owing to a multitude of pragmatic issues.

In a recent rapid assessment of school health programmes in the South-East Asian Region, the Sri Lankan programme was assessed using the World Health Organization's '4S' framework to identify its strengths, weaknesses, gaps and opportunities (31). The main weakness identified of the services and commodities was lack of focus of the service package on mental health wellbeing and promotion. Further, the fact that schools are not explicitly identified as a setting for health promotion especially in relation to mental health related policies, was highlighted as a gap in relation to the supportive policies (31). In addition to the school health programme, counselling services by teachers are offered in schools with more than 400 students. Additionally, Ministry of Social Services, Ministry of Child Care and Women

Development and Ministry of Youth Affairs and Skill Development provide networks of counselling services at the divisional secretariat level. Though such amenities are in place, the utilization of services by students and effectiveness of the service provision to the target population are debatable issues.

Importance of assessing student burnout in Sri Lanka

Considering the ever-increasing concern over the education system of Sri Lanka having negative repercussions on the mental wellbeing of students, exploring the problem of burnout is a timely need. Thus, it is no longer applicable solely to the practitioners of clinical and psychological medicine, but to the public health practitioners as well.

Despite many studies that have assessed mental health problems among collegiate cycle students, none of the studies has specifically focused on addressing the mental health problems that can be directly attributed to their academic endeavours. Though academic endeavours are usually considered as the ostensible reason for mental health problems, other numerous non-academic factors could have contributed significantly. Thus, it is of utmost importance to explore the concept of student burnout, which is directly assessing psychological well-being in relation to academic endeavours.

Even though burnout is a relatively novel concept in the Sri Lankan context, it has been assessed in a few occupational categories including primary school teachers (32), nursing officers (33), public health midwives (34), police officers (35), postgraduate medical trainees (36), lawyers (37), doctors (38) and prison officers (39). Since burnout is a work environment related concept, none of the tools used in the previous studies in different occupational settings is appropriate to assess student burnout. To provide compelling evidence on student burnout, the prevalence of burnout has to be quantified rather than merely describing the burnout scores obtained in assessment tools. This quantification serves as an advocacy tool for convincing relevant stakeholders about the gravity of the problem. Thus, developing

clinically validated cut-off values for burnout assessment tools is crucial.

The wealth of research across the globe signifies that burnout has a multitude of correlates and important dysfunctional ramifications on affected populations. However, these correlate and ramification profiles are not invariant across study settings. Thus, in an era of evidence-based practice, it is imperative to explore the correlates of student burnout in the Sri Lankan context.

In burnout research, there is an emerging trend focusing on the positive antipode; work engagement (40). Work engagement is defined as, “a positive, fulfilling, work-related state of mind that is characterised by vigour (VI), dedication (DE) and absorption (AB). Rather than a momentary and specific state, engagement refers to a more persistent and pervasive affective-cognitive state that is not focused on any specific object, event, individual or behaviour” (40). Exploration of work engagement and its association with burnout is imperative to formulate strategies and policies in promoting well-being targeted at this population.

In order to bridge the gap in the local evidence on student burnout,

- Sinhala version of the MBI-SS was validated and culturally adapted
- clinically validated cut-off values for MBI-SS subscale scores were developed
- prevalence and correlates of burnout among collegiate cycle students were determined
- Utrecht Work Engagement Scale Student version (UWES-S) was validated and culturally adapted and the relationship between burnout and work engagement

were assessed as described below.

Validity and reliability of the Sinhala version of the MBI-SS

Wickramasinghe et al. conducted a school-based, cross-sectional validation study in three Sinhala

medium government schools in Kurunegala District (41). A sample of 194 Grade 13 students studying in all four collegiate cycle subject streams was recruited to the study. A multi-disciplinary panel of experts representing the fields of psychiatry, psychology, public health, teaching, student counselling and medical education assessed the consensual validity of the Sinhala translation of the MBI-SS. The construct validity of the tool was assessed using multi-trait scaling analysis and confirmatory factor analysis (CFA), while reliability was assessed using internal consistency and test-retest reliability.

In the multi-trait scaling analysis, except for item CY13, item-convergent validity and item-discriminant validity were confirmed for the other 15 items. This item, “I just want to get my work done and not be bothered” was found to have poor scores in judgemental validity assessment, mainly owing to its ambivalent nature. In the CFA, a combination of absolute fit indices, relative fit indices and parsimony fit indices was used and the results revealed that the three-factor model fitted the data set better than the one-factor and two-factor models. Further, the modified three-factor model with item 13 deleted proved a better model fit to the data in comparison to the original three-factor model. All three subscales showed high internal consistency with Cronbach's α coefficient of 0.837, 0.869 and 0.881; and test-retest reliability was high ($p < 0.001$). Hence, this validation study concluded that the Sinhala version of the 15-item MBI-SS is a valid and a reliable instrument to assess burnout among collegiate cycle students in Sri Lanka (41).

Clinically validated cut-off values of the MBI-SS scores

The cut-off values for subscale scores of the validated MBI-SS (index test) were computed (42) using Receiver Operating Characteristic (ROC) curves and Youden Index against the clinical assessment of burnout by a consultant psychiatrist based on ICD-10 (reference test) (5). Dichotomous categorization of scores was done based on 'exhaustion+1' criterion (43-44). Accordingly, the cut-off values for the EX, CY and rPE subscale scores were 12.5, 7.5 and 10.5,

respectively. All measures of diagnostic accuracy computed were high (Table 1). Hence, it was concluded that the validated MBI-SS could be effectively used as a screening tool to assess burnout among collegiate cycle students (42).

Prevalence and correlates of burnout among collegiate cycle students in Sri Lanka

Using the validated MBI-SS, the magnitude of burnout among collegiate cycle students were assessed by Wickramasinghe et al. (45). A school-based cross-sectional study was conducted among 872 Grade 13 students in 15 government schools in Mawanella Educational Zone.

The study sample consisted of 796 students (mean=18.4; SD=0.32 years) and of them, the majority was females (n=440; 55.3%). The adjusted prevalence of burnout was 28.8% (95% CI=25.0%-32.7%). Multivariable analysis elicited a multitude of statistically significant associations of burnout (Table 2). Perceived satisfaction related to the school environment (classroom and library facilities), school curriculum (scope, relevance, and difficulty of the subject content), study enthusiasm (preferred subject stream), study support (support from parents and teachers) and future expectations (personal and parental expectations) emerged as statistically significant negative associations with burnout, whereas having to encounter disturbances while studying and being subjected to bullying at school emerged as statistically significant positive associations with burnout. The study revealed high burnout prevalence among Grade 13 students with one in four students likely to have burnout and almost all the significant correlates of burnout are directly related to the academic environment (45).

Relationship between burnout and work engagement among collegiate cycle students in Sri Lanka

In parallel with the validation study of MBI-SS, the validity and reliability of the UWES-S were assessed (46). The 17-item UWES-S was translated to Sinhala

and a multi-disciplinary panel of experts assessed its judgmental validity. Construct validity of the UWES-S was appraised by using multi-trait scaling analysis and exploratory factor analysis (EFA). Reliability of the UWES-S was assessed by using internal consistency and test-retest reliability.

Except for item 13, all other items showed good psychometric properties in judgemental validity, item-convergent validity and item-discriminant validity. EFA using principal component analysis with Oblimin rotation suggested a three-factor solution (including VI, DE, AB subscales) explaining 65.4% of the total variance for the 16-item UWES-S (with item 13 deleted). All three subscales showed high internal consistency with Cronbach's α coefficient values of 0.867, 0.819 and 0.903, and high test-retest reliability ($p<0.001$). Hence, it was concluded that the Sinhala version of the 16-item UWES-S is a valid and a reliable instrument to assess work engagement among collegiate cycle students in Sri Lanka (46).

To elucidate the relationship between burnout and work engagement, not only the conventional bivariate correlation analysis, but also the canonical correlation analysis (CCA) was performed (47). Being a multivariate analytical technique, CCA provided the opportunity to explore the complexity of multiple relationships of constructs in this study (48).

In the bivariate analysis, all three subscales of burnout had significant negative correlations with all three subscales of work engagement ($p<0.001$). The canonical correlation between the burnout and work engagement variables was found to be high. In addition, findings suggested that EX (structure coefficient (r_s)=0.998) and VI (r_s =-0.959) subscales contributed the most towards the explanatory capacity of canonical variables. Hence, it was concluded that there is a complex and strong negative relationship between burnout and work engagement (47).

Recommendations

There are quite a few direct implications of the evidence generated with a view of promoting the mental wellbeing of Sri Lankan students. Due to its

brevity, relative ease of administration and sound psychometric properties, MBI-SS could be used as an effective screening tool at the school level. Thus, it allows identification of the affected students at early stages, which is important in effective secondary prevention and identification of vulnerable students, which is imperative for primary prevention. Given the strong negative correlation of burnout with work engagement, the status of student engagement could be assessed and promoted, rather than delaying any intervention until students develop mental health issues. This concept could be inculcated into the school health programme and the health promoting school concept.

The fact that a multitude of direct academic environment related factors emerged as significant correlates of burnout highlights the importance of developing a targeted package of interventions with cohesive activities rather than having separate ad-hoc activities to promote mental health in the school settings. The initial evidence base generated on student burnout lays a platform on which further pedagogic research on effective teaching-learning methods targeted at ensuring academic achievements while promoting overall student wellbeing.

Positive strides

There are several positive strides taken especially by the Ministry of Health through the School Health Unit and Adolescent Health Unit, FHB to address the

dire need to promote mental health and wellbeing among student populations. Identifying the significance of capacity building of the teaching community to promote mental health of students, a handbook for teachers on psycho-social health promotion of school children has been developed (49).

An educational intervention to improve the psychosocial wellbeing of school-going adolescents has been developed by the School Health Unit and Adolescent Health Unit of the FHB with the involvement of a multidisciplinary panel of experts representing public health, paediatrics, child psychiatry and education sector. The intervention has revealed promising results in promoting psychosocial wellbeing in the target group in Western Province (50). Further, the School Health Unit of the FHB is drafting the School Health Policy with specific attention given to mental health promotion and dedicated policy directions focusing on this much needed aspect.

Above-mentioned are a few examples of positive strides, which would potentially help to address burnout - a burning issue among students. The ongoing COVID-19 pandemic is expected to have serious negative impacts on student mental health due to disrupted education systems with widening disparities (51). Thus, it is imperative to develop further context-specific preventive and promotive interventions with multi-stakeholder involvement to address this burning issue.

Table 1: Indicators of diagnostic accuracy of the Sinhala version of the 15-item MBI-SS

Indicator	Value	95% Confidence Interval
Sensitivity	91.9%	82.5% - 96.5%
Specificity	93.2%	87.5% - 96.4%
Positive predictive value	86.4%	76.1% - 92.7%
Negative predictive value	96.1%	91.2 %- 98.3%
Positive likelihood ratio	13.48	7.15-25.44
Negative likelihood ratio	0.09	0.04-0.20

Table 2: Statistically significant correlates of burnout in collegiate cycle students in the multivariable analysis

Factor	Odds Ratio	95% Confidence Interval	p value
<i>Factors related to the school environment</i>			
Satisfactory classroom facilities	0.1	0.1-0.2	<0.001
Satisfactory library facilities	0.5	0.3-0.9	0.037
<i>Factors related to the school curriculum</i>			
Satisfactory scope of subject content	0.2	0.1-0.5	<0.001
Relevance of subject content	0.2	0.1-0.3	<0.001
Easy understanding of subject content	0.3	0.1-0.5	<0.001
<i>Factors related to the study support</i>			
Satisfactory support from parents	0.2	0.1-0.4	<0.001
Satisfactory support from teachers	0.3	0.1-0.8	0.016
<i>Factors related to the study enthusiasm and future expectations</i>			
Own preference of subject stream	0.1	0.1-0.4	<0.001
Encouraging personal expectations	0.3	0.1-0.9	0.030
Encouraging expectations of parents	0.4	0.2-0.7	0.004
<i>Other factors</i>			
Disturbance to studies	2.1	1.1-4.3	0.043
Subjected to bullying at school	2.7	1.5-4.8	0.001

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