



## MEASURING BURNOUT OF HUMAN SERVICE WORKERS: TESTING THE COPENHAGEN BURNOUT INVENTORY IN SRI LANKAN CONTEXT

Darshana Samaraweera<sup>i</sup>,

Junainah Abd Hamid,

Abdol Ali Khatibi,

S. M. Ferdous Azam,

Isuri Dharmaratne

Management and Science University,

Malaysia

### Abstract:

Measuring of directly unobservable or latent variables has been a serious concern among researchers engaged in quantitative research in the fields like social sciences, and humanities. This is mainly because of the challenges in quantifying the data related to latent variables. Purpose of this article was to test the reliability of the English version of the Copenhagen Burnout Inventory (CBI) developed in Denmark during the PUMA (Danish acronym for Project on Burnout, Motivation and Job Satisfaction) Project in Sri Lankan context with a sample of 180 pre service ESL teachers. The data analysis shows how certain items in the CBI work in a different cultural setting. The overall conclusion was that the English version of the CBI is a reliable tool to measure burnout status of pre service ESL teachers in Sri Lanka.

**Keywords:** burnout, reliability, latent variables

### 1. Introduction

Measuring of directly unobservable or latent variables has been a serious concern among researchers engaged in quantitative research in the fields like social sciences, and humanities. This is mainly because of the challenges in quantifying the data related to latent variables. Research tools used to measure such variables need to be highly reliable and valid if the results of such measures are to be accepted in the academic world. If the real construct to be measured is not captured it not only affects the research study, but also the system the findings of the particular study aims to provide direction. Especially, in fields such as psychology decisions made as a result of research

---

<sup>i</sup> Correspondence: email [darshanianie@gmail.com](mailto:darshanianie@gmail.com)

have to be highly accurate since such decisions affect the lives of people. Further, the scales developed in one context may not be hundred percent applicable for use in another context due to various reasons like cultural background. Hence, developing a strong tool to capture a latent variable through a rigorous process as well as testing such a tool continuously in different contexts is of utmost importance to maintain the value of research. The principle objective of this article, in this light, was to test one of the most widely used and recent scales used to measure burnout of human service workers; the Copenhagen Burnout Inventory (CBI) in the Sri Lankan context. In the present study, the CBI was tested with a group of 180 pre service teachers of English who were under their third year internship period at selected schools.

## 2. Burnout

Burnout is a construct in psychology developed over the past four decades as a result of the extensive contribution made by Christina Maslach, Herbert Freudenberger as founders and many other researchers all over the world who contributed to the development of the construct as a unique research area. Burnout, according to Maslach and Jackson (1981) is a disorder that appears in professionals working with people as a result of *“emotional exhaustion and cynicism”*. When people have to work continuously with people who have problems of some kind, they are prone to be tired emotionally. As described by Maslach and Jackson (ibid), mental weariness thus emerge could over time treacle down to one’s work life creating negative attitudes towards what they do and finally challenging the quality of work they engage in. This work related syndrome developed as a result of *“emotional and physical fatigue”* (Creedy et al, 2017) has initially been characterized by Maslach and Jackson (1986) as *“a syndrome of emotional exhaustion, depersonalization, and reduced personal accomplishment that can occur among individuals who do ‘people work’ of some kind”* (p.1). Although burnout was initially attributed as a syndrome that could occur among human service workers, later there were challenging ideas that contended burnout cannot be limited to human service workers. While arguing on this, Schaufeli and Toris (2005) very strongly point out that burnout is strongly linked to *“exhaustion and withdrawal”* (p.260), where in the case of human service workers withdrawal is from those who receive services and in the case of others exhaustion and withdrawal from what they do. In this light, it is more appropriate to understand that burnout is not only an occupation related syndrome found among human service workers but also among others, as well though it is prominently manifested among human service workers such as health service workers and teachers.

### 2.1 Measuring of Burnout

Burnout is a construct that is not observable directly. Instead, burnout is manifested through many other factors and therefore is not possible to measure easily. Developing a reliable measure to capture the construct of burnout was a challenging task during the initial period of burnout research. According to Maslach and Jackson (1986) during the

initial period where the research attempts were exploratory in nature, researchers mainly depended on “*interviews, questionnaires, surveys, and observations*”. As further explained by Maslach and Jackson (ibid), Maslach, et al. (2008) though such attempts had not been able to create a scientific impact on assessing burnout owing to reasons such as personal bias of the respondents “*the generally consistent patterns emerged from these studies*” paved way to identify “*core aspects or dimensions of burnout*” and to develop a scientific tool to measure burnout. Maslach Burnout Inventory (MBI) thus developed became the most used tool among the researchers. However, there were many other attempts in developing measures to capture the construct around the same time. Out of them, the Burnout Measure (BM) (Pines, Aronson, and Kafry 1981) is the next most used tool in the world. According to Pines and Aronson (1988, as given by Schaufeli et al, 1993) burnout is a state of tiredness created as a result of engagement in work that is “*emotionally demanding*”. The tool they developed to measure consists of 21 items which are measured on a seven point scale. Apart from the MBI and BM there were other developments and Schaufeli et al (ibid) identify them as “*burnout measures with limited applications*”. Samaraweera (2018) presents a summary of such attempts as given in table 1.

**Table 1:** Burnout measures with limited application

Year	Instrument	Author/s	Remarks
1980		Freudenberger & Richelson	The best known self-report tool
1981	“How burned-out are you?”	Barnhall & Ezel	A self-report inventory, but no proper investigation done
1981	“What’s your burnout score?”	Steward & Meszaros	A self-report inventory, but no proper investigation done
1981	“The National Job Burnout Survey”	Veninga & Spradley	A self-report inventory, but no proper investigation done
1984	“Teacher Attitude Scale (TAS)”	Faber	A 64 item inventory, which is an adaptation of MBI
1985	“The burnout test- Examine your beliefs about work, about leisure, about yourself”	Dailey	A self-report inventory, but no proper investigation done

One of the recent improvements in the area of measuring burnout is the development of the tool “Copenhagen Burnout Inventory (CBI)” by Kristensen, Borritz, Villadsen & Cristensen (2005) as a part of the PUMA (Danish acronym for Project on Burnout, Motivation and Job Satisfaction) Project that took place in Denmark targeting human service workers, particularly the health service workers in Denmark. According to the authors when they planned the PUMA project they had not found any of the then available tools including the MBI as strong tools to collect data related to burnout owing to reasons such as; considering “*reduced personal accomplishment*” which actually is a consequence of burnout as a dimension of burnout, and “*unacceptable questions*” in the tool which they found would not be possible in Denmark. The new tool they developed thus has three dimensions; personal burnout (PB), work related burnout

(WB), and client related burnout (CB) with 6, 7, and 6 items respectively. The items in the CBI are measured on a scale of 5 points.

### **3. The Study**

The main objective of the present study was to test the English version of the Copenhagen Burnout Inventory (CBI) in the Sri Lankan context. This was seen as a very appropriate task in the Sri Lankan context since there is less importance given to the research in this area. Though the human service workers show symptoms of burnout, there is lack of awareness on how to capture the construct and as a result human capital development process of the country is lagging behind.

#### **3.1 The Sample**

Sample for this study comes from the education sector in Sri Lanka, particularly from the field of teaching English in the general education sector. Since there is a need for more and more research in the area of teacher development a very important group of teachers was selected for the present research; a group of 180 pre service English (ESL) teachers from three National Colleges of education (NCOEs) where ESL teachers are given initial training. The sample of pre service teachers were selected randomly from a group of 340 third year internship trainees from three NCOEs.

#### **3.2 Data Collection**

The English version of the “Copenhagen Burnout Inventory (CBI)” was administered with the 180 subjects for data collection. Data collection of the pre service ESL teachers happened administering the tool at the three NCOEs when they visited their respective colleges for briefing during the internship period.

Data thus collected were analysed using the version 21 of SPSS for internal consistency and the reliability scores obtained after a reliability scale test were considered in this study to understand the reliability of the tool. Apart from this, an exploratory factor analysis was also conducted to further verify the tool.

#### **3.3 Analysis and Presentation of data**

##### **3.3.1 Personal Burnout Dimension**

When the data collected from the pre service ESL teachers related to the Personal Burnout component were analysed, a very good alpha value of .83 was obtained. Further, the inter-item correlation matrix was also considered to determine the internal consistency of the items. Table 2 displays the alpha values thus obtained.

**Table 2:** Inter-item correlation matrix for PB (pre service ESL teachers)

	PB1	PB2	PB3	PB4	PB5	PB6
PB1	1.000					
PB2	.643	1.000				
PB3	.646	.579	1.000			
PB4	.411	.420	.458	1.000		
PB5	.417	.401	.440	.556	1.000	
PB6	.385	.402	.251	.371	.462	1.000

As given in the table all the items seem to correlate adequately with alpha values between 0.3 and 0.9 and therefore the items in this dimension can be considered reliable in this context. Further, when a factor analysis was conducted, a KMO value of .819, which can be considered as very good, was derived. A single factor was extracted which explained 46.4% of the total variation in the 6 items. The minimum factor loading was .525.

### 3.3.2 Work Related Burnout Dimension

When the data related to the dimension “Work related burnout” were analysed, an alpha value of .82 was obtained. Then the inter item correlation matrix was studied for internal consistency. The inter item correlation matrix for Work related burnout is given in the table 4.

**Table 4:** Inter-item correlation matrix for WB (pre service ESL teachers)

	WB1	WB2	WB3	WB4	WB5	WB6	WB7
WB1	1.000						
WB2	.570	1.000					
WB3	.658	.667	1.000				
WB4	.449	.383	.521	1.000			
WB5	.463	.528	.470	.381	1.000		
WB6	.435	.415	.390	.278	.572	1.000	
WB7	.249	.090	.194	.379	.329	.182	1.000

Here all the items adequately correlate internally with alpha values within the range of 0.3 and 0.9 except for the item number 7. Item number 7 here is related to the family which is culturally a very sensitive topic in this part of the world, especially for the females. Considering all these, it was decided to drop the item no. 7 from the research tool and run the test again. The inter item correlation matrix obtained after the item no. 7 was dropped is given table 5.

**Table 5:** Inter-item correlation matrix for WB after dropping item 7 (pre service ESL teachers)

	WB1	WB2	WB3	WB4	WB5	WB6
WB1	1.000					
WB2	.585	1.000				
WB3	.655	.675	1.000			
WB4	.461	.386	.524	1.000		
WB5	.459	.535	.454	.405	1.000	
WB6	.430	.424	.372	.308	.604	1.000

After dropping the item, the remaining six items are seen to be adequately correlating with each other with alpha values between 0.3 to 0.9 and for the entire dimension, a higher alpha value of .85 was obtained. In the factor analysis, a very good KMO value of .837 was indicated for the 6 items. Here too, at least one factor was extracted that explained 49.4% of the variance in the 6 items. The minimum factor loading was .581.

### 3.3.3 Client Related Burnout (CB)

For the entire dimension, CB a very high alpha value of .85 was obtained from the reliability scale test. Inter-item correlation matrix for the six items included to measure this dimension is given in the table 6.

**Table 6:** Inter-item correlation matrix for CB

	CB1	CB2	CB3	CB4	CB5	CB6
CB1	1.000					
CB2	.660	1.000				
CB3	.512	.601	1.000			
CB4	.217	.214	.344	1.000		
CB5	.534	.513	.581	.317	1.000	
CB6	.442	.459	.532	.320	.500	1.000

All six items here adequately correlated with alpha values .3 to .9 except item no 4. Item no. 4 was "Do you feel that you give more than you get back when you work with students?". It was observed that this question is more appropriate to a group of teachers with more experience. Since the respondents of the present study have only a limited exposure to the classroom setting during their internship, they may have found it difficult to answer this question. However, since the alpha value is not very low it is recommended that the item be retained. When factor analysis was performed, a KMO value of .846 was recorded.

## 4. Conclusion, Limitations and Future Research Possibilities

Having studied the data presented above it can be concluded that the English version of the Copenhagen Burnout Inventory is a potential tool to measure burnout of the pre service ESL teachers in. Particularly, it is very clear that certain items do not agree with the Sri Lankan context although they have been proven for reliability in other contexts and therefore careful analysis of the tool is necessary before using it in other contexts as well.

Two major limitations of the present study are; a) The present study was conducted only with pre service ESL teachers on internship, and b) only the English version of the CBI was tested. With these limitations, emerge very important research possibilities for the future researchers. One of the future research possibilities is to translate the CBI into local languages and testing the reliability and validity of them so that more research related to professional burnout in the country can be promoted. The second research idea is to reach more occupational categories with the English version

of the CBI and to establish its total reliability as a means of measuring burnout of those professionals who are conversant in English.

## References

1. Boritz, M. (2006). Burnout in human service work-causes and consequences (doctoral dissertation).
2. Cephe, P.T. (2010). A study of the factors leading English teachers to burnout. *H.U. Journal of Education*, 38, 25-34.
3. Creedy, D.K.; Sidebotham, M.; Gamble, J.; Pallant, J.; & Fenwick, J. (2017). Prevalence of burnout, depression, anxiety, and stress in Australian midwives: A cross sectional survey. *BMC Pregnancy and Childbirth*, 17:13
4. Kristensen, T.S., Borritz, M., Villadsen, E., & Christensen, K. B. (2005). The Copenhagen Burnout Inventory: A new tool for the assessment of burnout. *Work & Stress*, 19 (3), 192-207.
5. Maslach, C. & Jackson, S.E. (1981). The instrument of experienced burnout. *Journal of Occupational Behaviour*, 2, 99-113. <http://www.aagbi.org/sites/default/files/Maslach.pdf>
6. Samaraweera, S.A.D. (2018). Burnout of pre service ESL teachers in Sri Lanka: Mentoring as a means of managing burnout through self-efficacy (unpublished doctoral dissertation). Management and Science University: Malaysia
7. Schaufeli, W.B.; Enzmann, D. & Girault, N. (1993). Measurement of burnout: A review. In W.B Schaufeli, C. Maslach, & T. Marek (Eds), *Professional burnout: Recent development in theory and research* (pp 199-215). Washington, D.C.: Taylor and Francis.

Creative Commons licensing terms

Author(s) will retain the copyright of their published articles agreeing that a Creative Commons Attribution 4.0 International License (CC BY 4.0) terms will be applied to their work. Under the terms of this license, no permission is required from the author(s) or publisher for members of the community to copy, distribute, transmit or adapt the article content, providing a proper, prominent and unambiguous attribution to the authors in a manner that makes clear that the materials are being reused under permission of a Creative Commons License. Views, opinions and conclusions expressed in this research article are views, opinions and conclusions of the author(s). Open Access Publishing Group and European Journal of Education Studies shall not be responsible or answerable for any loss, damage or liability caused in relation to/arising out of conflicts of interest, copyright violations and inappropriate or inaccurate use of any kind content related or integrated into the research work. All the published works are meeting the Open Access Publishing requirements and can be freely accessed, shared, modified, distributed and used in educational, commercial and non-commercial purposes under a [Creative Commons Attribution 4.0 International License \(CC BY 4.0\)](https://creativecommons.org/licenses/by/4.0/).