International Journal of Multidisciplinary Research and Development
Online ISSN: 2349-4182, Print ISSN: 2349-5979; Impact Factor: RJIF 5.72
Received: 22-12-2018; Accepted: 25-01-2019
www.allsubjectjournal.com
Volume 6; Issue 2; February 2019; Page No. 151-158

Adaptation and standardization of the Copenhagen Burnout Inventory for University educators (CBI-UE)

Amadioha Ambrose[1], Ajala Ibrahim[2]
[1] Department of Educational Psychology, Guidance and Counselling, University of Port Harcourt, Rivers State, Nigeria
[2] Spectrum Developmental Solutions, University of Port Harcourt, Rivers State, Nigeria

Abstract
The present study is in an instrumentation research aimed at adapting and ascertaining the psychometric properties of an existing scale titled Copenhagen Burnout Inventory for University Educators (CBI-UE). In this study, the original instrument developed by Kristensen, Borritz, Villadsen, & Christensen (2005) was adapted. The study was guided by five research questions and four null hypotheses. This instrumentation research design anchored on the classical test theory was used for the study. A convenience sample of 305 university educators drawn from the University of Port Harcourt was used for the study. Cronbach Alpha, Split half, percentile rank, independent sample t-test were used to analyze the data. Findings from the study revealed that the instrument as adapted adequately measured burnout with high internal consistency (0.707), and moderate split half (0.518). The subscales of the instrument also yielded moderate internal consistencies ranging from 0.552-0.675. Construct validity also yielded values as high as 0.814. In addition, the CBI-UE significantly differentiated between male and female, senior and junior, married and unmarried university educators, as well as science based and non-science based educators. Percentile scores were used to establish the norms for the CBI-UE. It was suggested that the instrument should be used with caution in assessing burnout among university educators.

Keywords: burnout, university educators, scale development, burnout inventory

Introduction
The task of the 21st century university educator is not limited to the traditional roles of teaching and research, but extends to other vital aspects of meaningful living such as economic contribution and civic engagement (Bothwell, 2015) [8]. On this basis, Bothwell (2015) [8] assertions that the work schedule and demands of academic can be very stressful and demanding. Other factors which further compound the roles of the university educators as identified by Adebiyi (2013) [1] include excessive work hours, heavy work load, poor management relationship, diminishing resources for personal development, unfavorable students to staff ratios, pressure to attract external funds, job insecurity, lack of recognition or reward, and role ambiguity. Although to most individuals outside the university teaching profession, the work of a university teacher has been regarded as a low stress occupation (Gillespie, Walsh, Winefield, Dua & Stough, 2001) [14]. Though their pay packets is not as high as those in the business and industry sectors, university educators have been admired for their job security, low job demands, flexibility in working hours and liberty to pursue personal research interest. Research evidence shows that such perception by non-university educators are exaggerated and unrealistic (Winefield, 2000) [14]. The reality is that university educators are confronted with working conditions that are not only volatile but also threatening. Apart from low salaries and remuneration, university educators are faced with lack of autonomy, poor or unavailability of research grants, increased pressure to attract external funds, assaults from students and the ever present "publish or perish" syndrome (Kuss, Mensah & Gyaki, 2014) [20]. The increasing stress as a result of these incapacitating factors has attracted the attention of scholars for over four decades now and has been given a unique name "burnout". Before proceeding, it is pertinent to reiterate that this study is aimed at standardization and validating of a Copenhagen Burnout Inventory for University Educators (CBI-UE) as well as ascertaining the influence of certain demographic variables on the burnout level of university lecturers.

Conceptualization of Burnout
Burnout has been defined in various ways and has had a popular origin as well as scientific ones. Despite the difficulty in proposing a standard definition, there has been a wide spread variety of opinions about what it is and what could be done in addressing it. However, there has been an underlying consensus about three core dimensions of the burnout experience with subsequent research leading to various theoretical perspectives.
According to Bradley cited in Schaufelli and Enzmann (1998) [28] the concept was first applied to helping professions where he proposed a new organizational structure to counteract staff burnout among probation officers. Modern operationalization of burnout has been credited to the psychoanalyst, Herbert Freudenberger who described the changes in work behaviour of new and inexperienced volunteers, recent graduates who were very idealistic and highly committed to their voluntary work schedules with drug addicts. According to Frendanberger (cited in Schanfeli & Enzman, 1998) [28], these volunteers presented a gradual depletion of energy and loss of motivation and commitment, which was accompanied by a wide array of mental and physical symptom. Another psychologist, Christiana Maslach explored ways that workers in demanding occupations handle the disappointments and frustrations experienced on the job by utilizing learned defense strategies

such as detached concern and dehumanization (Maslach, Schaufeli & Leiter, 2001) [23]. She and her colleagues later conducted extensive interview with health care workers such as physicians, nurses, psychiatrists, hospice counselor and attorneys to further develop her hypothesized construct.

One of the most popular definition of burnout is that propounded by Maslach (1986) who stated that burnout is generally conceived to be a chronic response to pressure and involves emotional exhaustion, feelings of low accomplishment and a depersonalization of others in the work context- a tendency to treat them as objects rather than humans. Instead of proposing a straight-forward definition of burnout, Cordes and Dougherty in Ajala (2015) [2] summarized various conceptualization of the term including.

a. To fail, wear out or become exhausted
b. A loss of creativity
c. A loss of commitment to work
d. An estrangement from clients, job and agency
e. A response to the chronic stress of making it to the top
f. A symptom of inappropriate attitudes towards clients and self, often associated with uncomfortable physical and emotional discomfort

Frendenberger and Richelson (1980) [12] defined burnout in terms of chronic fatigue, depression and frustrations typically engendered by commitments to undertakings that did not realize the person's ambitions and expected rewards. This has been criticized as problematic by Driscoll (2000) [16] because "it confound burnout with variables which are normally considered as distinct from, although related to burnout, especially depression and chronic fatigue. Blasé (2002) defines burnout as being a result of long term stress leading to total exhaustion, apathy, alienation from work and withdrawal into a number of defensive strategies. In almost all the definitions of burnout, it can be seen that stressful conditions, expectations and environment have been explicitly or implicitly identified as precursors or antecedents of burnout. This has made some individuals or authors such as Schaufili and Enzman (1990) to refer to occupational stress and burnout as essentially the same construct. However, other scholars have shown that the constructs of occupational stress and burnout are district but complementary, and any explanation that uses them synonymously is only an attempt at confusion. Faber in Ekechukwu (2008) [11] differentiated between stress and burnout concisely by stating that burnout is usually a result of unmediated stress which has continued for some time, with no way out or support system for the sufferer. This categorization is in line with the foremost stress researcher, Han Selye in Amadi (2011) [3] who identified two types, of stress: eustress and distress. According to Selye in Amadi, stress is an essential component of human existence with eustress being positive or beneficial leading to growth or adjustment and distress refering to negative or harmful stress. Hert in Ekechutwu (2008, p 29) further differentiated between stress and burnout by emphasizing that while stress is characterized by over-engagements, reactive emotions, hyperactivity and result in physical damage, burnout on the other hand is characterized by disengagement, blunted emotion, exacerbated hopelessness, exhausted motivation and drive which lead to detachment and result to emotional damage.

Officially, burnout has not been recognized by major classification systems such as Diagnostic and Statistical Manual of Mental. Disorder- 5 (DSM V, American Psychiatric Association (APA), 2013) [4] and the International Classification of Diseases (ICD-10, World Health Organization, 1992). However, evidence abounds which has been used to justify sick leave in several countries (Bianchi, Schonfield & Laurent, 2015) [5]. Another indicator that burnout is being recognized is based on the fact that ICD-10 coded burnout as Z73.0 and identified its symptoms as a factor influencing health status and contact with health service professionals. The increasing recognition given to burnout as a distinct health related issues has been criticized by other authors. According to Bianchi *et al*. (2015) [5] at least four reasons account why this should not be so.

1. The foundation on which burnout was proposed and developed is weak and is based on subjective judgement, often relying on anecdotal evidence.
2. Burnout substantially overlaps with depression because it shares similar emotional and behavioural symptoms;
3. The three dimensional structures of burnout as often espoused in the burnout literature is unrealistic because emotional exhalation, which is the nucleus of burnout has been found to be strongly associated with depressive symptoms more than the other two dimensions, namely depersonalization and reduced personal accomplishments;
4. Defining burnout as job-related syndrome is incoherent because limiting a pathological condition to specific context (in this case job type) does not provide solid basis for singularizing burnout. This is because major assessment of burnout which does not provide holistic assessment beyond the job context, is narrow and incoherent with the integrative model of mental health (Bianchi, Schonfiled & Lairent 2015b) [6].

As stated previously, the proposition by Maslach and Jackson (1986) that burnout is a syndrome of emotional exhaustion, depersonalization and reduced personal accomplishment that occur among individuals who do "people work" or some kind, is the most popular. In fact, Schanfeli and Enzman cited in Kristenzen, Bornit Villasden and Christensen (2005) [19] stated that over 90% of global empirical research on burnout studies adopt the three dimensional construct of burnout-emotional exhaustion, depersonalization and reduced personal accomplishment. According to Maslach (1998) emotional exhaustion is characterized by feelings of being emotionally overextended and depletion of one's emotional resources. Workers experiencing this feel drained and used up, without any source of replenishment. They lack enough energy to face another job, day or client. This component or dimension is the basic dimension of burnout (Whitehead, 2001) [31]. Depersonalization refers to a negative, cynical or excessively detached response to other people, which often includes a loss of idealism. It usually develops following emotional exhaustion. Reduced personal accomplishment refers to a lower sense of self-efficacy and productivity in work.

These researchers agrees with the position of Schaufeli and Enzman (1998) who asseverated that it is impossible to present a general definition of burnout because burnout is job related and includes myriads of social and attitudinal symptoms present as well as psychological conditions. However, burnout as used in this paper refers to an extreme state of psychological strain and depletion of energy resources arising from prolonged exposure to stressors which exceeds an individual's resources to cope, particularly

stressors associated with professionals working within the human servicing sector.

Symptoms of Burnout

It has been noted that, during the cycle of burnout, individuals experience specific physiological and emotional responses. Kahill (1988) further noted that the symptoms could be clustered into five broad groups: physical, emotional, behavioural, interpersonal and attitudinal. Physically, the individual who is burned out may experience high blood pressure, headaches, digestive problems, fatigue and psychosomatic illnesses. Emotional reactions to burnout highlighted in the literature are feelings of powerlessness, hopelessness, anxiety, boredom or frustration; becoming detached from people and things around them; and developing depressive attitudes, irritability, or cynicism (Dunham, 1992). Behavioural symptoms include increased alcohol and tobacco use, absenteeism, turnover or talk of leaving the job, and decreased job performance. Interpersonal symptoms include reactions such as moodiness, impatience, withdrawal from both clients and colleagues, and intolerance toward others. Maslach (1993) highlights the following as some attitudinal symptoms of burnout: cynicism, loss of self-esteem, and negative attitude towards ones job, colleagues and the organization.

Consequences of Teachers Burnout

The resultant effect of burnout in teachers goes beyond the general health-related problems described previously. Teachers' burnout result into several negative effects in all levels of the workplace. In a series of preliminary research on burnout, Maslach and colleagues (Jackson & Maslach, 1980; Pines & Maslach, 1980) [12, 26], as well as Freudenberger (1975), indicated that burnout can result in a decline in quality of care or service that is provided. Yet another paramount consequence is the influence of burnout on frequency of absenteeism, which may be due to sick leave among teachers. Pines (1985) and Leung, Siu, and Spector (2000) [21] both reported that burnout could result in teachers having recurrent bouts of flu, headaches, fatigue, poor self-esteem, difficulty in interpersonal relationships, substance abuse, inability to concentrate on a subject, rigidity, and a tendency to blame others for one's problems.

High job turnover or decision to leave teaching, either as a result of early retirement or the prospects of increased job satisfaction and better remuneration in other professions, is also likely to result in burnout. In some instances, teachers remain involuntarily, which could result in a decline in performance (Burke & Greenglass, 1996). Tardiness and low levels of productivity or performance on the job are often observed. On a moral level, there is usually evidence of expressed cynicism by university educators towards their work and stakeholders (that is, students, parents, other colleagues), and the organization as a whole.

Measurement of Burnout

Psychological characteristics can be measured by observation, interview or self-report. Early studies in the area of burnout were primarily observations of human service workers by Freudenberger and others. However, these observations were seen as neither systematic nor standardised and in the late 1970's efforts were directed towards developing questionnaires and inventories to measure self-reported levels of burnout. Perhaps, the best known do-it-yourself inventory is the Freudenberger Burnout Inventory (FBI) (Whitehead, 2001) [31]. Typically, do-ityourself inventories have not been studied empirically, and are based on the authors' definitions of burnout, with norms being arbitrary and interpretations not strictly valid.

Two questionnaire instruments that have featured consistently in the research literature include the Burnout Index (BI), (Pines, Aronson & Kafry, 1981) [27] and the Maslach Burnout Inventory (MBI) (Maslach, Jackson & Leiter, 1996). A brief description of these instruments is provided, including some limitations and criticisms of the instruments, as well as the rationale for adapting the Copenhagen Burnout Inventory.

Burnout Index (BI).

This 21-item instrument is a unidimensional questionnaire used to measure burnout at a 7-point frequency rating scale, with end points of 'never' and 'always', and an overall burnout score is derived by computing the person's mean score across the 21 items. The 21 items (none of them refer to an actual work situation) include for example 'being tired' and 'feeling weak' (physical exhaustion); 'feeling depressed' and feeling burnt out' (emotional exhaustion); 'being unhappy' and 'feeling rejected' (mental exhaustion). The BI appears to be a highly reliable instrument with internal consistency coefficients exceeding 0.90. The stability of the BI is also relatively high as indicated by test retest reliability coefficients (r) ranging from 0.66 to 0.89 across one and four month interval, respectively (Pines & Aronson, 1988) [25].

However, empirical evidence by Schaufeli and Van Dierondonck (1993) [30] challenge the one-dimensionality of the BI. Although the authors distinguish conceptually the three kinds of exhaustion (physical, mental and emotional), they suggest the existence of three different, reliable and interrelated dimensions that do not concur with those that are included in the definition of burnout as used by Pines and Aronson. Factorial studies of the BI have typically obtained just a single dimension and there has been little attempt to apply confirmatory factor analysis to the Burnout Index. Schaufeli and Van Dierondonck (1993) [30] reported confirmatory factor analysis data which indicated a better fit for a three-dimensional model of the BI than for a one dimensional structure. Thus while the utility of the BI is confirmed, exploration of the construct and criterion validity is warranted, as an alternative to the MBI.

Maslach Burnout Inventory (MBl)

The most popular and widely used measure of burnout is the Maslach Burnout Inventory (MBI) This inventory was developed by Maslach and Jackson, (1996), and was introduced in the early 1980's. The second edition was published five years later, and the third edition has been published (Maslach & Jackson, 1996). As mentioned previously, in the MBI test authors describe burnout as a three-dimensional syndrome that is characterised by emotional exhaustion, depersonalisation, and reduced personal accomplishment. The original MBI is a self -report questionnaire containing 22 items, divided into the three subscales based on the three dimensions. This version required respondents to report both frequency (never or every day) and intensity (very mild to very strong) of each item. The intensity dimension was however abandoned in the second revision as both ratings were extremely highly correlated (r>.80) (Schaufeli & Enzmann, 1998) [28].

Studies of the construct validity of the MBI tend to support the construct validity of the instrument. Convergent and discriminant validities of the instrument have also been positive, indicating that the MBI scales measure the same construct as do other burnout instruments such as the BI. Emotional exhaustion section of the instrument appears to be the best validated dimension. For example, confirmatory factor analysis of the MBI conducted by Kalliath, Gillespie, O'Driscoll and Bluehorn (2000) [16] revealed that emotional exhaustion was the most valid of the three components and that personal accomplishment did not yield a distinct factor. The resulting two factor instrument displayed suitable reliability and predictive validity.

In 1996, Maslach and colleagues published a version of the MBI which was modified for use in other non-human servicing occupations (Maslach & Jackson, 1996). This version of MBI-GS (General Survey) contains 24 items, with burnout "pertaining to any occupation in which people are psychologically engaged" (p.240). Although emotional exhaustion is still conceived by Maslach as the fundamental dimension of burnout, it is also suggested that the cynicism dimension will be more critical to burnout than depersonalisation.

Copenhagen Burnout Inventory

As stated in this work, the MBI is the most utilized instrument for the measurement of burnout to the extent that Kristiansen, *et al.* (2005) opined that this instrument and Maslach definition of burnout have become two sides of the same coil. Despite the dominant position of the MBI and its successor the MBI-GS, it has received significant scholarly criticism due to a number of factors.

Ganden (1987) highlighted the difficulties of using the MBI among individuals that do not have important interactions with each other. Milfont, Denny, Amaratunga, Robinson and Merry (2008) as well as Kristensen *et al.* (2005) [19] have shown the difficulties involved in using the instrument in other cultures other than the US where it was developed. Demerouti, Bakker, Vardakou and Kantes (2003) [10] criticized the items of the MBI because they are not well formulated in the same direction. Finally, Yeh, Cheng, Chen, Hu and Kristensen (2007) [33] asserted that of the three dimensions proposed by the MBI, only emotional exhaustion is the core representation of the syndrome and considering depersonalization and reduced professional or personal effectiveness as other components are misconceptualizations, because they represent a coping strategy and a consequence respectively. Lastly, the MBI from the first edition (including the recent MBI-ES for teachers) are commercial instruments and researchers have been limited in their use because payment and copyright permission have to be made before it can be used for research purpose (Halbebon & Demerouti (2005). Compos, Carlotto and Maroco (2013) [9] also criticized the MBI because it only took into consideration the emotional aspect of exhaustion without considering the physical and mental.

The Copenhagen Burnout Inventory (CBI) was developed to "remain within the general frame of reference" of burnout research, but equally to avoid and remediate the above shortfalls of the MBI and BI described above. The CBI is a questionnaire with three dimensions: Personal Burnout, Work-Related Burnout and Client-Related Burnout. This instrument was developed by Tage S. Kristensen, Marrian Borritz, Ebbe Villadsen and Karl Bang Christensen in Denmark. Practical considerations lead to the choice of CBI for adaptation for Nigerian university educators.

The practical issues considered in the choice of CBI include that the CBI is in the public domain and as such it can be used by researchers in developing countries like Nigeria where getting proprietary psychological instruments are difficult due to financial and logistics challenges. Also, the authors of the instrument freely encouraged and even made allowance for the adaptation of the instrument by including the word "client" to make room for substituting other terms such as patient, strident, inmate etc. (Kristensen *et al.*, 2005, p 196) [19]. In addition, this scale is generic because it assumes and developes item in line with the assumption that other factors related to the working condition can influence burnout such as health problem and family demands. Finally, with the exception of one item, all other items were keyed in one direction which is useful for statistical computation.

The initial development of the inventory, preliminary result yielded a 19-item questionnaire under the three hypothesized dimensions of personal burnout (six items), work-related burnout (seven item) and client-related burnout (six item) using a sample of 1914 respondents drawn from seven occupations. The internal consistency of each of the three dimensions of the scale was high (ά. = 0.85-0.87). The present study is the adaptation and standardization of the initial scale for university educators in Nigeria. To do this, the work was guided by the following research questions

Research Question

1. What is the internal consistency reliability of the Copenhagen Burnout Inventory for University Educator (CBI-UE)?
2. What is the split half reliability of the Copenhagen Burnout Inventory for University Educator (CBI-UE)?
3. What is the internal consistency reliability of the various subscales of the Copenhagen Burnout Inventory for University Educators (CBI-UE)?
4. What is the construct validity of the Copenhagen Burnout Inventory for University Educator (CBI-UE) using subscale total correlation?
5. What are the percentile ranks of Copenhagen Burnout Inventory for University Educators (CBI-UE)?

The following null hypotheses were tested in this study at 0.05 alpha level to further guide this study

1. There is no significant difference between the burnout of male and female university educators.
2. There is no significant difference between the burnout of senior and junior university educators.
3. There is no significant difference between the burnout of married and unmarried university educators.

Research Methodology

The research design adopted for this study is instrumentation. Instrumentation research design according to Kpolovie (2010:467) is:

> *A very special and important design that is primarily used for the purpose of test development on the basis of test theories to ensure satisfactory high validity and reliability as well as the most appropriate norm, criterion or domain in the measurement and evaluation of psychological attributes or human abilities. Instrumentation research deals with the psychometric*

principles for and the actual test development, validation…and standardization on the basis of certain test theories.

This study adopted instrumentation research design beause it intends to adapt and standardize the Copenhagen Burnout Inventory for University Educators (CBI-UE) in Nigeria.
The population for this study comprised all academic staff in the University of Port. A sample of 305 academic staff was used for the study. A systematic random sampling technique was used to draw the sample from eleven faculties. The faculties were stratified into two broad groups namely science-based and non-science based. Thereafter, proportional random sampling technique was used to draw three faculties from the science-based and two faculties from the non-science based. The science-based faculties selected were agriculture, engineering and natural sciences, while the non-science based faculties were education and management sciences. Finally, an accidental random sampling technique was used to draw the required number of staff from selected faculties.

Instrument for Data Collection
The instrument used for data collection was the adapted Copenhagen Burnout Inventory (Kristensen *et al*., 2005) [19]. This instrument is divided into two sections namely A and B. Section A elicited personal biographical data that covered gender, cadre, marital status, faculty, year of employment into the institution. Section B elicited information on the different subscales of the CBI. The second section B was made up of 19 items divided into three subscales of *personal burnout* (six items) *work-related burnout* (seven items) and *student-related burnout* (six items). With the exception of item 10, all other items were keyed in a positive direction. The instrument was constructed on a five point likert scale of Always, Often, Sometimes, Seldom and Never with the corresponding value of 5, 4, 3, 2 and I points respectively. The maximum score obtainable were 30, 35 and 30, while the minimum score obtainable were 6, 7 and 6 for the subscales of personal burnout, work-related burnout, and student related burnout respectively. The CBI-UE was administered directly to the respondents with uniform instructions by the researcher in the various faculties. The internal consistency of the various sections were determined with Cronbach Alpha and same applied to the total items of the test. Construct validity was determined using, sub-scale total correlation. Finally the hypotheses testing were tested using independently t-test.

Result Presentation
Research Question One: What is the internal consistency reliability of the Copenhagen Burnout Inventory for University Educators (CBI-UE)?

Table 1: Cronbach alpha reliability of the Copenhagen Burnout Inventory for university educators

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.705	.707	19

Table 1 showed that the Cronbach alpha reliability of the entire 19 items was 0.705, while the standardized Cronbach coefficient was 0.707

Research Question Two: What is the split half reliability of the Copenhagen Burnout Inventory for University Educator (CBI-UE)?

Table 2: Split-half reliability of the Copenhagen Burnout Inventory for university educators

Reliability Statistics			
Cronbach's Alpha	Part 1	Value	.631
		N of Items	10[a]
	Part 2	Value	.604
		N of Items	9[b]
	Total N of Items		19
Correlation Between Forms			.344
Spearman-Brown Coefficient	Equal Length		.512
	Unequal Length		.513
Guttman Split-Half Coefficient			.510

a. First 10 items of the inventory, b-last 9 items of the inventory

Table 2 showed that the reliability of the first half of the test which comprised the first 10 items was 0.631, while the reliability of the second half was 0.604. The split half reliability of the entire scale was 0.513.

Research Question Three: What is the internal consistency of the various subscales of the Copenhagen Burnout Inventory for University Educator (CBI-UE)?

Table 3: Cronbach Alpha reliability of the various subscales of the CBI for university educators

Sub-Scale	N	No of Items	Cronbach's Alpha
Personal Burnout	305	6	0.552
Work Related Burnout	305	7	0.533
Student Related Burnout	305	6	0.675

Table 3 showed that subscale one made up of six items has reliability coefficient of 0.552, while subscale two with seven items has reliability coefficient of 0.533. Subscale three reliability coefficient of 0.675.

Research Question Four: What is the construct validity of the Copenhagen Burnout Inventory for University Educators (CBI-UE) using subscale total correlation?

Table 4: Construct validity coefficient of the CBI-UE using subscale total correlation

Correlations					
		Personal_Burnout	Work_Related_Burnout	Student_Related_Burnout	Cbi_Total
Personal_Burnout	Pearson Correlation	1	.483**	.134*	.752**
	Sig. (2-tailed)		.000	.019	.000
	N	305	305	305	305
Work_Related_Burnout	Pearson Correlation	.483**	1	.178**	.814**
	Sig. (2-tailed)	.000		.002	.000
	N	305	305	305	305

Student_Related_Burnout	Pearson Correlation	.134*	.178**	1	.446**
	Sig. (2-tailed)	.019	.002		.000
	N	305	305	305	305
CBI_Total	Pearson Correlation	.752**	.814**	.446**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	305	305	305	305

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Table 4 showed that the three subscales had correlation coefficients of 0.752, 0.814 and 0.416 for personal burnout, work-related burnout, and student-related burnout respectively. The construct validity has correlational coefficient average of 0.67. The inter-subscales coefficients were 0.483 for personal and work-related burnout, 0.134 for personal and student-related burnout; while work-related and student-related burnout was 0.178.

Research Question Five: What are the percentile ranks of Copenhagen Burnout Inventory for University Educators (CBI-UE)?

Table 5: Percentile Ranks of Copenhagen Burnout Inventory for university educators

Percentile	Scores
10	40
20	44
25	46
30	46
40	49
50	51
60	53
70	54
75	55
80	56
90	59
99	65

Table 5 showed that the score of 40 has a percentile rank of 10, the score of 46 has a percentile rank 25; the score of 51 has a percentile rank of 50, and the score of 55 has a percentile rank of 75. The percentile rank of 10 implies that an individual with a score of 40 has burnout more than 10% of university educators used for the study. The percentile rank of 50 implies that the individual with the score of 51 has burnout more than 50% of the university educators used for the study.

Hypothesis One: There is no significant difference between the burnout of male and female university educators.

Hypothesis Two: There is no significant difference between the burnout of senior and junior university educators.

Hypothesis Three: There is no significant difference between the burnout of married and unmarried university educators.

Table 6: Independent t-tests of burnout differences in terms of gender, cadre and marital status of university educators

		N	Mean	SD	t	df	ά	Sig	Decision
Gender	Male	161	48.14	6.55	5.00	303	0.05	0.000	Reject Ho:1
	Female	144	52.08	7.21					
Cadre	Senior	164	48.32	7.37	4.62	302.99	0.05	0.000	Reject Ho:2
	Junior	141	51.95	6.36					
Marital Status	Married	178	50.79	6.88	2.30	303	0.05	0.02	Reject Ho:3
	Single	127	48.89	7.38					

Table 6 showed that female university educators showed a significantly higher level of burnout than male university educators ($t = 5.00$, $p = 0.00<0.05$), junior university educators showed a significantly higher level of burnout than senior university educators ($t = 4.62$, $p = 0.00<0.05$), and married university educators reported significantly higher level of burnout than single university educators ($t = 2.30$, $p = 0.02<0.05$).

Discussion and Contributions

In this study, attempt was made to adapt and standardize the Copenhagen Burnout Inventory (CBI) for university educators in Nigeria. The findings of the data collected from 305 university educators in the University of Port Harcourt indicated that the adapted form of the Copenhagen Burnout Inventory for University Educators (CBI-UE) has high internal consistency. This proved that the items of the CBI-UE assessed the burnout construct as operationalized by Kristensen *et al.* (2005) [19]. This finding is similar to that of Campos *et al.* (2013) who adapted the original CBI for students in Brazil. Similar level of high internal consistency was obtained by Kristensen *et al.* (2005) [19] during the initial stage of the development of the original CBI. The finding of this study further aligns with Kpolovie (2002) who asserted that an instrument is adjudged reliable, if and only if, all the items of that instrument measured the attribute or construct of interest and nothing else.

From this study, it can be concluded that the validity of the CBI is considerably high. Also, the validity of each of the three subscales of the instrument is high enough. This finding

is in line with Onukwo in Kpolovie and Awaji-Inom (2011) [17] who stated that the more the subscales of an instrument correlate with the total, the more the degree of homogeneity, indicating the validity of the instrument. Another important finding of this study is the establishment of validity of the Copenhagen Burnout Inventory for University Educators based on percentile ranks.

The finding of this study contends that there is a significant difference between the burnout of male and female, senior and junior, married and unmarried university educators

Finally, the contribution of the study is that it has become imperative to adapt the Copenhagen Burnout Inventory within the context of a developing country like Nigeria. As reported above, the CBI-UE that was validated displayed reasonable level of internal consistency and construct validity. It should be noted that the CBI-UE adapted in this study is purely exploratory and should be used with caution in consonance with other established measures of organizational stress and burnout.

References

1. Adebiyi DR. Occupational stress among academic staff of Ekiti State University, Ado-Ekiti. European Scientific Journal. 2013; 9(4):202-208.
2. Ajala I. Emotional intelligence as correlate of burnout: case study of secondary School teachers. Term Paper for Psychology of Learning (EDP 801.1), Faculty of Education, University of Port Harcourt, 2015.
3. Amadi GN. Human stress and management: A realistic approach. Port Harcourt: Pam Unique Publishing Coy. Ltd., 2011.
4. American Psychiatric Association. Diagnostic and statistical manual of mental disorders (5th ed.). Arlington, VA: American Psychiatric Publishing, 2013.
5. Bianchi R, Schonfield IS, Laurent E. Is it time to consider the "burnout syndrome" a distinct illness? Frontiers in Public Health. 2015; 3. 10.3389/fpubh.2015.00158
6. Bianchi R, Schonfield IS, Laurent E. Burnout-depression overlap: a review. Clinical Psychology Review. 2015b; 36:28-41.
7. Blase JJ. A qualitative analysis of sources of teacher stress: Consequences of peformance. American Educational Research Journal. 2002; 23(1):13-40.
8. Bothwell E. South African institutions top THE Africa rankings pilot, 2015. Retrieved from https://www.timeshighereducation.com/news/south-african-institutions-top-rankings-pilot
9. Compos JADB, Carlotto MS, Maroco J. Copenhagen burnout inventory-student version: adaptation and transcultural validation for Portugal and Brazil, 2013. Retrieved from http://www.scielo.br/scielo.php?script=sci_arttext&pid=S0102-79722013000100010
10. Demerouti E, Bakker AB, Vardakou I, Kantas A. The convergent validity of two burnout instruments – A multitrait-multimethod analysis. European Journal of Psychological Assessment. 2003; 19(1):12-23.
11. Ekechukwu RO. Correlates of burnout among policemen in Rivers State. Unpublished doctoral theses. University of Port Harcourt, 2008.
12. Freudenberger H, Richelson G. Burn-out: The high cost of achievement. New York: Anchor Press, 1980.
13. Freudenberger HJ. Staff burn-out. Journal of Social. 1974; 30:59-65.
14. Gillespie NA, Walsh M, Winefield AH, Dua J, Stough C. Occupational stress in universities: Staff perceptions of the causes, consequences and moderators of stress. Work and Stress. 2001; 15(1):53-72.
15. Kahill S. Interventions for burnout in the helping profession: A review of empirical evidence. Canadian Journal of Counselling Review. 1988; 22:310-342.
16. Kalliath TJ, O'Driscoll MP, Gillespie DF, Bluedorn AC. A test of the Maslach Burnout Inventory in three samples of healthcare professionals. Work & Stress. 2000; 14:35-50.
17. Kpolovie PJ, Awaji-Inom MT. Development and standardization of Adolescents' Social Phobia Scale (ASPS) in Nigeria. Nigerian Journal of Empirical Studies in Psychology and Education. 2011; 1(12):1-23.
18. Kpolovie PJ. Advanced research methods. Owerri: Springfield Publishers Limited., 2010.
19. Kristensen TS, Borritz M, Villadsen E, Christensen KB. The Copenhagen Burnout Inventory: A new tool for the assessment of burnout. Work and Stress. 2005; 19(3):192-207. doi: 10.1080/02678370500297720
20. Kusi H, Mensah DKD, Gyaki E. Work-related stress among the academic staff of the University of Education, Winneba Campus, Ghana. Journal of Education and Practice. 2014; 5(13):15-23.
21. Leung T, Siu O, Spector PE. Faculty stressors, job satisfaction, and psychological distress among university teachers in Honk Kong: The role of locus of control. International Journal of Stress Management. 2000; 7(2):121-138.
22. Maslach C, Jackson SE. The measurement of experienced burnout. Journal of Occupational Behaviour. 1981; 2:99/113.
23. Maslach C, Schaufeli WB, Leiter MP. Job burnout. Annual Review of Psychology. 2001; 52:397-422. doi: 10.1146/annurev.psych.52.1.39752/1/397.
24. Milfont TL, Denny S, Ameratunga S, Robinson E, Merry S. Burnout and wellbeing: Testing the Copenhagen Burnout Inventory in New Zealand teachers. Social Indicators Research. 2008; 89(1):169-177. doi: 10.1007/s11205-007-9229-9.
25. Pines A, Aronson E. Career Burnout: Causes and Cures (2nd ed.) New York: Free Press, 1988.
26. Pines A, Maslach C. Combatting staff burnout in a day care center: A case study. Child Care Quarterly. 1980; 9:5-16.
27. Pines A, Aronson E, Kafry D. Burnout: From tedium to personal growth. New York: The Free Press, 1981.
28. Schaufeli WB, Enzmann D. The burnout companion to study and practice: A critical analysis. London: Taylor & Francis, 1998.
29. Schaufeli WB, Greenglass ER. Introduction to special issue on burnout and health. Psychology and Health. 2001; 16:501-510.
30. Schaufeli WB, Van Dierondonck D. The construct validity of two burnout measures. Journal of Organisational Behaviour. 1993; 14:631-647.
31. Whitehead AC. Teachers' burnout: a study of occupational stress and burnout among school teachers in New Zealand. Published Doctoral Theses, Massay University, New Zealand, 2001.

32. World Health Organisation. International statistical classification of diseases and related health problems, 10th Revision (ICD-10). Geneva: WHO, 1992.
33. Yeh WY, Cheng Y, Chen CJ, Hu PY, Kristensen TS. Psychometric properties of the Chinese version of Copenhagen burnout inventory among employees in two companies in Taiwan. International Journal of Behavioral Medicine. 2007; 14(3):126-133.