

WORK ENGAGEMENT IN NIGERIA: ADAPTATION OF THE UTRECHT WORK ENGAGEMENT SCALE FOR NIGERIAN SAMPLES

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ABSTRACT

The aim of this study was to adapt the Utrecht Work Engagement Scale (UWES) for Nigerian samples. Employees from two occupational groups in Nigeria completed the survey (total $N = 268$). Exploratory factor analysis using the principal component factor analyses confirmed the original three-factor model. Internal consistency of the full version of the scale was sufficiently high ($\alpha = .85$) and $.89$ for the shortened version. The test-retest reliability with an interval of three months was $.77$ for the full scale whereas it is $.81$ for the shortened version. A further test of significance utilizing analysis of variance (ANOVA) statistic showed that of the three variables tested: age, gender and occupational groups, only gender showed a significant difference in response to work engagement scale. These results, in general, suggest that the UWES is valid and reliable (internally consistent); the factor validity studies showed that the scores are best represented by the three factors and therefore is an adequate measure of work engagement in Nigeria.

Keywords: Utrecht, work engagement, Nigeria

INTRODUCTION

Since antiquity psychology, especially Occupational Health Psychology (OHP) focused on negative aspects of human behaviour such as malfunctioning, weakness and pathology (Schaufeli & Salanova, 2007). Even to a lay person, psychology literarily means repairing or healing the mentally sick or individuals with emotional problems. This prevailing negative preconception of psychology is illustrated by the fact that the number of researches on negative states outweighs that on positive states by a ratio of 14:1 (Myers, 2000). An earlier estimation of Diener, Suh, Lucas and Smith (1999) revealed a poorer ratio of 17:1. Similarly, Bakker and Schaufeli (2001) observed that about 94% of all researches that have been conducted so far in OHP focused on the negative aspects of worker's health and well-being. In contrast, only about 5% deals with positive aspects. This seems to have affected productivity in organisations, in that hardly have any new means or methods of improving organisational effectiveness been identified. This may be the reason Bakker and Schaufeli (2008) emphasised the need for Positive Organisational Behaviour (POB) research, which is defined as the study and application of positive-oriented human resource strengths and psychological capacities that can be measured, developed, and effectively managed for performance improvement in today's workplace (Luthans, 2002). However, there seems to be a transformation because since the beginning of this century, more attention is being paid to what has come to be known as positive psychology: the scientific study of human strength and optimal functioning (Seligman & Csiksentmihalyi, 2000).

This approach is considered to supplement the traditional focus of psychology on disease model not to replace it (Seligman, 1998). This recent trend to concentrate on optimal functioning also aroused attention in organisational psychology (Luthans, 2002; Luthans &

Youssef, 2007). This trend towards positive psychology has led to the emergence of the concept of work engagement. Work engagement has continued to attract research attention within the scientific community. The current study is about the psychometric evaluation of the Nigerian version of a self-report questionnaire to assess work engagement - the Utrecht Work Engagement Scale (UWES-N). This study is pertinent because increasing job insecurity engendered by social and economic pressures seem to have caused many employees to be disengaged in their work. As a result, the study of work engagement has become a vital area in organisational and social psychology in many countries including Nigeria. Nigeria's emergence from a traditional agro-based society to a somewhat industrial society with increasing growth and spread of formal organisation makes the study of work engagement even more imperative. As in many other countries that have embraced the construct, work engagement is potentially fruitful for the study and practice of well-being of Nigerian workers. So in order to study and to maximize the concept of work engagement in Nigeria, the adaptation of the UWES should be the first step.

CONCEPTUALISATION AND DEFINITION OF WORK ENGAGEMENT

Work engagement was conceptualised by Khan (1990) as the harnessing of organisational members' selves to their work roles where people employ and express themselves physically, cognitively and emotionally during role performances. Work engagement is the assumed opposite of burnout. In fact, it is research on burnout that stimulated studies on its presumed opposite: work engagement. Maslach and Leiter (1997) suggest that burnout and engagement are two opposite poles of one continuum and rephrased burnout as an erosion of engagement with the job, whereby energy turns into exhaustion, involvement turns into cynicism, and efficacy turns into ineffectiveness. According to Maslach and Leiter, engagement is characterised by energy, involvement and professional efficacy, which are perfectly and inversely related to the three burnout dimensions.

Work engagement is defined as "a positive, fulfilling, work-related state of mind that is characterised by vigour, dedication, and absorption" (Schaufeli, Salanova, Gonzalez-Romá, & Bakker, 2002, p. 74). According to them, work engaged individuals are full of vitality, they feel they are glued to their work, and are better able to deal with job demands (Schaufeli & Salanova, 2007). Engagement is neither a momentary nor a specific state, but refers to a more persistent and pervasive affective-cognitive state that is not focused on any particular object, event, individual, or behaviour (Shimazu, *et al.*, 2008). Vigour is characterized by high energy levels and mental resilience while working. Dedication refers to being strongly involved in one's work and experiencing a sense of significance, enthusiasm, and challenge. Absorption entails being fully concentrated and happily engulfed in one's work, whereby time passes quickly and one has difficulties with separating oneself from work (Schaufeli & Bakker, 2004). In short, engaged employees have high levels of energy and are enthusiastic about their work, they are often fully immersed in their work so that time flies (May, Gilson, & Harter, 2004). The experiences of time passing quickly and forgetting everything around one are evidence of the absorption dimension (Schaufeli & Bakker, 2001). The current study adopts Schaufeli *et al.*'s. (2002) definition of work engagement.

UTRECHT WORK ENGAGEMENT SCALE (UWES)

Because of the importance of the work engagement construct, the Utrecht Work Engagement Scale (UWES; Schaufeli, *et al.*, 2003) was developed to measure the underlying dimensions of work engagement including vigour, dedication, and absorption. UWES is available in 17

languages (Schaufeli & Salanova, 2007) and have been psychometrically evaluated in over ten countries including China (Yi-Wen & Yi-Qun, 2005), Finland (Hakanen, 2002), Greece (Xanthopoulou, Bakker, Demerouti, & Kantas, 2007), South Africa (Storm & Rothmann, 2003), Spain (Schaufeli, *et al.*, 2002), and The Netherlands (Schaufeli & Bakker, 2003; Schaufeli, *et al.*, 2002), Japan (Shimazu, *et al.*, 2008). In most of these countries, the factor validity studies show that scores on the UWES are best represented by three factors (e.g., Schaufeli, Bakker, & Salanova, 2006); however, not all items are invariant across countries (Schaufeli, *et al.*, 2006). Due to the fact that UWES has been validated across many cultures, researchers (e.g., Storm & Rothmann, 2003) have acknowledged that it can be used as an unbiased instrument to assess work engagement because the three-factor model has proven cross-national validity. Despite this global recognition and acceptance of the potency of the UWES structure and its psychometric values the relevance of the scale has not been ascertained in Nigeria.

UWES DEVELOPMENT AND INITIAL VALIDATION

The UWES has initial item pool of 24, but after psychometric evaluation, 7 unstable items were eliminated so that 17 items remained (Schaufeli, *et al.*, 2002). It is a self-report instrument that includes the three dimensions: vigour, dedication and absorption. The original UWES (UWES-17) includes 17 items (Schaufeli, *et al.*, 2002): vigour (6 items), dedication (5 items), and absorption (6 items). The UWES-17 has encouraging psychometric features (Schaufeli, *et al.*, 2006). More specifically, the internal consistencies (Cronbach's alpha) of the scale range between .80 and .90 (Durán, Extremera, & Rey, 2004; Schaufeli & Bakker, 2004). Thus, values of Cronbach's alpha exceed the value of .70 that is traditionally used as a rule of thumb (Nunnally & Bernstein, 1994).

STATEMENT OF THE PROBLEM

The psychometric properties of the UWES (Schaufeli & Bakker, 2003) have been assessed by different researchers and in diverse countries since the scale's development. The initial problem is that while UWES responses have been studied in many countries, there has been no investigation of its structural validity and reliability in a Nigerian sample. Furthermore, it has been demonstrated that UWES items are not constant across countries. This is problematic because the scale has continued to gain popularity among Nigerian researchers, thus making it imperative to examine the dimensionality and reliability of UWES responses in Nigeria. Besides, there are ample research opportunities on work engagement in Nigeria as an emerging economy and adapting the scale for Nigeria would stimulate research in this direction.

RESEARCH QUESTIONS

The current study attempted to provide answers to the following five research questions:

1. What are the underlying factors of the UWES-17 items in a Nigerian sample?
2. What are the internal consistency reliability estimates of the UWES dimensions?
3. Does work engagement differ with age?
4. Is there significant gender difference in response to the work engagement scale?
5. Does work engagement differ between occupational groups in Nigeria?

METHOD**Samples and Procedure**

Participants in this study were Nigerian employees drawn from across two occupational groups: banking sector and employees in a production company in Nsukka, South-East Nigeria. A total of 268 employees completed the questionnaire (Mean age = 33.7, $SD = 8.3$). Their ages ranged from 23 to 51 years. Demographic information was collected from participants including gender, marital status, education, employment status, job tenure, and organisational tenure. Table 1 presents the demographic characteristics of participants.

Table 1: Demographic characteristics of participants

Variables	Levels	No.	(%)
Gender	Male	197	(73.51%)
	Female	71	(26.49%)
Age	Young	146	(54.48%)
	Old	122	(45.52%)
Marital status	Married	177	(66.04%)
	Single	91	(33.96%)
Education	Secondary		
	School graduate	47	(17.54%)
	University graduate	163	(60.82%)
	Postgraduate	28	(21.64%)
Employment status	Full time	203	(75.75%)
	Part time	65	(24.25%)
Job tenure	Short tenure	151	(56.34%)
	Long tenure	69	(43.66%)
Organisational tenure	Short tenure	197	(73.51%)
	Long tenure	71	(26.49%)

In order to adapt the UWES-17 for Nigerian samples, it was first subjected to face and content validity and reliability tests. The 17-item scale was presented to eight experts; four from the management and four from psychology. They included four Industrial/organisational (I/O) Psychologists and three regional heads of Human Resource (HR) units of three banks and one from a production company. Those from the management were asked to verify whether the items in the scale actually represent what is ordinarily regarded as work engagement in their respective organisations, while the I/O psychologists were, on the other hand, requested to identify which items they think do not measure the three dimensions of engagement as was operationally defined in the study. There was 100% agreement among the experts that all the items have face and content validity. A total of 305

employees received the survey in their places of work, but out of this number only 297 copies of the scale were adequately completed and returned, representing a response rate of 97.38%. Out of this number also, 29 (9.76%) copies were not usable and only 268 (90.24%) copies were subjected to analyses.

Instrument

Work engagement was measured with a preliminary Nigerian version of the UWES (UWES-N) that was originally developed by Schaufeli *et al.* (2002). The items of the UWES are grouped into three subscales that reflect the underlying dimensions of engagement: Vigour (six items), Dedication (five items), and Absorption (six items). All items are scored on a 7-point Likert scale ranging from 0 (“Never”) to 6 (“Always”).

Completion and scoring of UWES

The UWES can be administered individually or in group and it takes about 5-10 minutes to complete the scale (Schaufeli, *et al.*, 2002). The UWES may be used for individual as well as for group assessment. For instance, it could be used as part of an employee satisfaction survey, or a psychosocial risk evaluation (Schaufeli, *et al.*, 2003). It is recommended that the test takers be made to clearly understand the process involved in completing the scale before they respond to the items.

In order to reduce response biases (social desirability) or the ones that might result from specific connotations related to ‘work engagement’ this term, that is, work engagement is not used in the title of the scale. A more neutral term ‘*Work & Well-being Survey*’ is chosen instead, with UWES in parentheses (Schaufeli, *et al.*, 2002). The mean score of the three UWES subscales is the bases for interpreting the scores of respondents. This is achieved by adding the scores on the particular scale or subscale and dividing the sum by the number of items of the scale or subscale. Hence, the UWES, yields three subscale scores and/or a total score that range between 0 and 6 that totals 102 for the full version and 54 for the short version.

RESULTS

This section reports outcome of the analyses of psychometric properties of the UWES in a Nigerian sample. The results of the descriptive statistics are provided, followed by the results of the five research questions postulated in the study.

Descriptive statistics

Table 1: Mean and Standard Deviation Scores of Age on Work Engagement Scale

Age	Mean (M)	Std. Deviation	Number
Young	58.13	10.82	146
Old	58.24	10.33	122
Total	59.07	9.73	268

Table 2: Mean and Standard Deviation Scores of Female and Male on Work Engagement Scale

Gender	Mean (M)	Std. Deviation	Number
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Female	57.52	10.71	101
Male	59.07	10.41	167
Total	58.09	10.26	268

Table 3: Mean and Standard Deviation Scores of Occupational Groups (Banking & Production) on Work Engagement Scale.

Organisation	Mean (M)	Std. Deviation	Number
Banking	58.62	9.94	179
Production	57.49	11.53	89
Total	58.17	10.58	268

The descriptive statistics computed shows that older respondents reported slightly higher mean score on work engagement scale ($M = 58.24$, $SD = 10.33$) compared to the younger respondents ($M = 58.13$, $SD = 10.82$) (see Table 1). The results equally indicated that male respondents reported slightly higher mean score on work engagement scale ($M = 59.07$, $SD = 10.41$) compared to their female counterparts ($M = 57.52$, $SD = 10.71$) (see Table 2). The result further revealed that respondents from the banking sector reported higher mean score on work engagement scale ($M = 58.62$, $SD = 9.94$) compared to their counterparts from the production sector ($M = 57.49$, $SD = 11.53$) (see Table 3). Results of test of significance of the means are reported in Table 4 below.

Table 4: Three-way ANOVA Summary Table Showing the Reports of Age, Gender and Occupational Group Differences on Work Engagement Scale.

Source	Sum of Square	df	Mean Square	F
Age (A)	99.34	1	99.34	.88
Gender (B)	415.06	1	415.06	3.70*
Occupation (C)	6.64	1	6.64	.06
A x B	20.58	1	20.58	.18
A x C	282.00	1	282.00	2.52
B x C	364.20	1	364.20	3.25
A x B x C	61.02	1	61.02	.55
Error	17930.15	260	112.06	
Total	18697.99	267		

Note: * $p < 0.05$

A further test of significance, utilizing analysis of variance (ANOVA) showed that it was only gender that showed a significant difference in response to work engagement scale. Age showed no significant difference. With regards to the two occupational groups surveyed in the study, the ANOVA test did not also reveal any significant differences in their response to work engagement scale, that is, between workers from the banking sector and their counterparts from the production sector. However, the first research question that hinged on the underlying factor of the UWES-17 items in a Nigerian sample was addressed by computing an exploratory factor analysis using Varimax rotation with Kaiser Normalisation method. Following these analyses, the second research question was addressed by examining the internal consistency of UWES-17 scores.

Validity and Reliability of UWES-N

The result of the item analysis computed revealed that the item-total correlations ranged from .38 to .68. For the individual scales, vigour dimension has a Cronbach's α of .73; dedication has .79, and absorption has .70. The 17 items cumulatively yielded a Cronbach's α of .85 against a Cronbach's α of .93 observed by Schaufeli and Bakker (2003). The observed difference in the reliability index might have resulted from the sample size used. While the original version used a sample size of 9,679, the present study utilised only 268 participants (see Appendix A for the inter-item correlation). A test-retest reliability coefficient of .77 after three weeks interval was also obtained. This agrees with earlier studies (e.g., Schaufeli, *et al.*, 2006) which asserted that UWES-17 has acceptable psychometric properties.

An exploratory factor analysis was performed on the UWES-17 using the principal components factor analysis to ascertain whether the three-factor structure of UWES would hold. In the first analysis, four factors emerged, which almost loaded strongly in the factors, but when the Varimax rotation with Kaiser Normalization analysis was performed on the data, a three clear factor model emerged (see Appendix B). Based on the above finding, work engagement is perceived as a three-factor model in Nigeria representing employee behaviour in the performance of their job. This is consistent with earlier studies on UWES (e.g., Demerouti, *et al.*, 2001; Schaufeli, *et al.*, 2002). It also concurs with Seppala *et al.* (2008) whose factor analyses supported the hypothesised correlated three-factor structure.

Towards a Short Measure of Work Engagement

Besides the UWES-17, a shortened version of 9 items (the UWES-9) has long been advocated. For example, Schaufeli, Bakker and Salanova (2006) utilised data from 10 different countries ($N = 14,521$), and results indicated that the full version of UWES can be shortened to 9 items. The factorial validity of the UWES-9 was demonstrated using confirmatory factor analysis, and the three subscale scores have good internal consistency and test-retest reliability. It has acceptable psychometric values (Schaufeli, *et al.*, 2006). Also, Seppala *et al.* (2008) utilised five divergent occupational samples ($N = 11, 959$) and their confirmatory factor analyses supported the hypothesised correlated three-factor structure – vigour, dedication and absorption of the UWES scale. Seppala *et al.* reported that while the structure of the full version did not remain the same across the samples and time, the structure of the UWES-9 remained relatively stable. The UWES-9 has good construct validity and the use of the 9-item version can be recommended in future research (Seppala, *et al.*, 2008). Despite having used data from numerous countries to test the consistency of UWES-9, its psychometric properties are yet to be examined in a Nigerian sample.

In order to adapt the UWES-9 for Nigerian samples, it was subjected to reliability test. The result of the reliability test that was run on UWES-9 using 268 respondents, the same as on the UWES-17 showed that the item-total correlations ranged from .41 to .66 (see Appendix C for the inter-item correlation). For the individual scales, vigour dimension has a Cronbach's α of .76; dedication has .79, and absorption has .74. The 9 items yielded a Cronbach's α of .91. A test-retest reliability coefficient of .87 after three weeks interval was also obtained. This agrees with earlier studies (e.g., Schaufeli, *et al.*, 2006; Seppala, *et al.*, 2008) which asserted that UWES-9 has acceptable psychometric properties. Also, an exploratory factor analysis was performed on the UWES-9 using the principal components factor analysis to ascertain whether the three-factor structure of UWES would still hold and it did (see Appendix D).

DISCUSSION AND CONCLUSION

The current study confirmed that the UWES-N, both the full version (UWES-17) and the shortened version (UWES-9) are adequate measures of work engagement that can be used in the Nigerian context. This is based on the fact that the UWES has quite satisfactory psychometric properties:

1. The three subscales are internally consistent;
2. The three-factor structure was confirmed;
3. Age was not statistically significant in responses to the work engagement scale;
4. Males reported slightly higher work engagement scores than their female counterparts;
5. There was no statistically significant difference between the two occupational groups tested in their responses to the work engagement scale.

The researcher expect that the adaptation of this scale will stimulate interest not only for further studies or theorising on work engagement in Nigeria, but also as a tool for organisational practitioners as it relates to positive organisational behaviour.

The present study was limited to only two occupational groups; there is the need to extend research on work engagement to other occupational groups by adapting the scale to these groups. The sample size for the present study was small; there is need for an additional sample because this smallness of sample size may have given rise to sampling error. Based on findings from the current study, recommendations for further investigation have been offered. Although the current study supported a three dimensional structure of UWES, the question still remains whether this three-dimensional structure are stable over time in a Nigerian sample. Therefore, future research should attempt to confirm the factor structure of work engagement longitudinally in Nigeria. Whether there are different antecedents and consequences of each of the dimensions is still vague; further research is needed for clarity. This is important because since the behaviour pattern of these dimensions differs significantly, they could as well have different drivers and outcomes.

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Appendix A

RESULT OF ITEM ANALYSIS OF UWES-17

S/n	Items	Item-Total Correlation
1.	At my work, I feel bursting with energy.	.45
2.	I find the work that I do full of meaning and purpose.	.38
3.	Time flies when I'm working.	.51
4.	At my job, I feel strong and vigorous.	.50
5.	I am enthusiastic about my job.	.59
6.	When I am working, I forget everything else around me.	.53
7.	My job inspires me.	.52
8.	When I get up in the morning, I feel like going to work.	.44
9.	I feel happy when I am working intensely.	.53
10.	I am proud on the work that I do.	.43
11.	I am immersed in my work.	.51
12.	I can continue working for very long periods at a time.	.47
13.	To me, my job is challenging.	.41
14.	I get carried away when I'm working.	.39
15.	At my job, I am very resilient, mentally.	.53
16.	It is difficult to detach myself from my job.	.55
17.	At my work I always persevere, even when things do not go well.	.48

Appendix B

RESULT OF EXPLORATORY FACTOR ANALYSIS OF THE UWES-17

S/n	Items	Factor 1	Factor 2	Factor 3
1.	At my work, I feel bursting with energy.	.722*	-	-
2.	I find the work that I do full of meaning and purpose.	-	.727*	-
3.	Time flies when I'm working.	-	-	.421*
4.	At my job, I feel strong and vigorous.	.510*	-	-
5.	I am enthusiastic about my job.	-	.811*	-
6.	When I am working, I forget everything else around me.	-	-	.522*
7.	My job inspires me.	-	.622*	-
8.	When I get up in the morning, I feel like going to work.	.411*	-	-
9.	I feel happy when I am working intensely.	-	-	.666*
10.	I am proud on the work that I do.	-	.729*	-
11.	I am immersed in my work.	-	-	.555*
12.	I can continue working for very long periods at a time.	.507*	-	-
13.	To me, my job is challenging.	-	.521*	-
14.	I get carried away when I'm working.	-	-	.398*
15.	At my job, I am very resilient, mentally.	.497*	-	-
16.	It is difficult to detach myself from my job.	-	-	.400*
17.	At my work I always persevere, even when things do not go well.	.521*	-	-

Appendix C

RESULT OF ITEM ANALYSIS OF THE SHORT VERSION (UWES-9)

S/n	Items	Item-Total Correlation
1.	At my work, I feel bursting with energy.	.45
2.	At my job, I feel strong and vigorous.	.41
3.	When I get up in the morning, I feel like going to work.	.54
4.	I am enthusiastic about my job.	.50
5.	My job inspires me.	.66
6.	I am proud on the work that I do.	.53
7.	I feel happy when I am working intensely.	.52
8.	I am immersed in my work.	.44
9.	I get carried away when I'm working.	.53

Appendix D

RESULT OF EXPLORATORY FACTOR ANALYSIS OF THE SHORT VERSION (UWES-9) OF THE UTRECHT WORK ENGAGEMENT SCALE

S/n	Items	Factor 1	Factor 2	Factor 3
1.	At my work, I feel bursting with energy.	.411*	-	-
2.	At my job, I feel strong and vigorous.	.340*	-	-
3.	When I get up in the morning, I feel like going to work.	.546*	-	-
4.	I am enthusiastic about my job.	-	.573*	-
5.	My job inspires me.	-	.821*	-
6.	I am proud on the work that I do.	-	.783*	-
7.	I feel happy when I am working intensely.	-	-	.533*
8.	I am immersed in my work.	-	-	.651*
9.	I get carried away when I'm working.	-	-	.551*