NIGERIAN ADAPTATION OF THE ROBINSON'S WORK ADDICTION RISK TEST (WART): A MEASURE OF WORKAHOLISM

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Abstract

This study aimed at making the Robinson's Work Addiction Risk Test (WART) relevant for Nigerian samples. Exploratory factor analysis (total N = 311) performed on the data revealed that the factorial structure of the Nigerian version of the WART was very similar to that of the original US version. The reliability coefficient alpha of the scale was high surpassing reliabilities reported for the original version. For parsimony, a follow up study was conducted to develop a short version of the WART. The twoout of the 5 dimensions of the full version that had the strongest factor loadings: the Overdoing (8 items) and the Control-perfectionism (7 items) subscales of the WART were subjected to tests and it was found that the 15-item scale is valid and the items are internally consistent and could be used as a short version of the scale. It is therefore concluded that the Nigerian version of the WARTis as adequate as the originalversion in assessing workaholism; and that the Overdoing and Control-perfectionismsubscalesadditively is a valid measure of workaholism and thus are recommended.

Keywords: Work addiction risk test, workaholism, Nigeria.

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Introduction

The 1990s workday phrase "8 to 4" – has become old fashioned andreplaced by the new millennium phrase "24/7"- that is, every hour of each day, andevery dayof each week (Robinson, 2007). This phrase has become a catchword for managers of organisations and a way to show customers that despite 'inadequate'official work hours,their satisfaction is guaranteed. Organizations therefore have adjusted their time to ensure their customers'satisfactionor else they would be edged out on competition. Some individuals who work very hard have questioned the adequacy of the twenty four hours of each day in marching the pace of developmentand the ever increasing business competitionof the 21st Century. Today, there is no time to waste, there are no spare hours meant for vacation and the use of the internet facilities has made the situation worse as it has created no clear-cut divide between vacation and work periods. These trends, according to Robinson (2007) are clear denotationof how work has permeated every second, minute or hour of our day.According to Robinson, most workers no longer take vacations at all because doing so would spell loss to theiremploying organization.Now like never before, many employeesfind it difficult to separate themselves from work even when they have a choice not to do so(Machlowitz, 1980).While others say "thank God it's Friday", workaholics say "thank God it's Monday" (Robinson, 2007). In the same vein, Sullivan (1999) asserted that nowadays the nature of business has created no clear role prospects andhas shrunkthe boundaries between work and personal life (Dewilde, Dewettinck, & De Vos, 2007).

Moreover, due to a shift in the nature of vocations (Arthur & Rousseau, 1996) people are now obliged to overwork in order to make a significant contributionto their employing organization (Dewilde, *et al.*,2007). According to Douglas and Morris (2006), there are reasons people work so hard and the extent to which this workplace behaviour impact on organizations has fascinated researchers. Although scholars have shown keen interest in workaholism (e.g., Fassel, 1990; Killinger, 1991; Koonce, 1998; Waddell, 1993), empirical investigation on the construct has been lacking as only few of such studies have been conducted (e.g., Burke, 1999; Dewilde, *et al.*,2007; Porter, 2001; Robinson & Post, 1997; Snir& Zohar, 2000; Spence & Robbins, 1992). These few studies according to Burke (2001),are not directed by clear definitionsor by standard measures.Similarly, Taris, Schaufeli and Verhoeven (2005) stated that although workaholism has been part of dailylexicon for the past 40 years, the understanding of the term is still vague.Also,Líbano, Llorens, Salanova and Schaufeli (2010) asserted that despite

the usefulness of workaholism in advanced society, researchers have not given the construct the needed empirical attention. According to Líbanoand colleagues, this is due to disagreement about its meaning and measurement.Interestingly, things are beginning to change as it is now believed that the conceptual confusion regarding the conceptualization and definition of workaholism is beginning to lift and measures of workaholism have begun to surface.

The current paper aims at adapting and reporting the psychometric properties of one of the measures of workaholism, the Robinson's (1999) Work Addiction Risk Test (WART) for Nigerian samples. This proposed adaptation is pertinent because although societies/culture differs, business environments where workaholism is displayed are often very similar though each culture may have a unique experience of workaholism (Kanai, Wakabayashi, & Fling, 1996). It is this uniqueness in experiences ofworkaholism that justifiesthe adaptation of this measure that is alien to the Nigerian environment. Moreover, most studies on workaholismwere conducted with data from the United States (McMillan, O'Driscoll, Marsh & Brady, 2001);therefore, if no further cross-cultural,validity, comparison or generalizability of the workaholism measure is not establishedthe general understanding of the construct is most likely to be distorted or suffer cultural bias.

Conceptualization and Definitions of Workaholism

Despite that workaholism has been conceptualized in different ways, there is uniform agreementamong researchers that the term first appeared in an article by Oates in 1971 (see Machlowitz, 1980). Oates' original essay was compared to alcoholism (drinking to excess) and the term workaholismwas designated to represent acompulsion for working to a damagingpoint. Machlowitz (1980) made the term common when she used workaholics to represent individuals who worked long hours even when they could have chosen not to. Many researchers have endorsed Machlowitz's (1980) definition of workaholismby generalizing the term for anyone who put long hours to work (e.g., Scott, Moore &Miceli, 1993; Friedman &Lobel, 2003). Although working long hours correspondsto the impression of a workaholic, several studies have found that to define workaholism by the number of hours worked only may be misleading because such excludes inner compulsion or feeling driven to work (Burke, 1999; Taris, *et al.*, 2005).

Whereas many scholars (e.g., Oates, 1971; Porter, 2001) view workaholism as a negative condition that has adverse effects on personal relationships and general well-being, others (e.g., Machlowitz, 1980; Ng, Sorenson & Feldman, 2007; Peiperl& Jones, 2001) conceptualizeworkaholism as a state with positive consequences for both workaholics and their employing organizations. Thus, the concept of workaholism has been variously defined. For example, Mosier (1983) defined workaholics simply as those who work at least 50 hours a week. Spence and Robbins (1992) definedworkaholism based on their notion of a 'workaholic triad', which consists of three properties: work involvement, a feeling of being compelled to work, and work enjoyment. Snir and Zohar (2000) definedworkaholism as the individual's steady and considerable allocation of time to work-related activities and thoughts, which does not derive from external necessities. Also, Schaufeli, Taris and Rhenen (2008) were of the view that workaholics work so hard, out of an inner compulsion, need, or drive, and not because of extrinsic factors such as earnings, organisational culture, or poor marriage. Snir and Zohar's (2000), and Schaufeli*et al.* (2008) definitions seems to lead to a conceptual confusion in that the amount of time spent at work could be affected by a variety of external factors such as extrinsic rewards (Brett & Stroh, 2003); work-leisure trade-off (Killingsworth, 1993); social contagion (Brett & Stroh, 2003); organisational culture (Porter, 1996); demands of employers (Maume&Bellas, 2001; Clarkberg& Moen, 2001); holding a professional or managerial position (Jacobs &Gerson, 1997); economic slump (Kanai & Wakabayashi, 2004); economic recovery (Babbar&Aspelin, 1998); labour-market conditions (Alesina, Glaeser,&Sacerdote, 2005); the pressures of globalisation (Blair-Loy& Jacobs, 2003), poor marriage anda strong desire for career advancement (Taris, *et al.,* 2005).Ng*et al.*(2007) defined workaholics as those who enjoy the act of working, who are obsessed with working, and who devote long hours and personal time to work. Although the definitions of workaholism may differ from author to author there is a central theme surrounding all these definitions - substantial investments of time at work. The current study adopted Robinson's (1997) definition of workaholism as individual different characteristic referring to over-indulgence in work activities to the ejection of most other life activities.

Work Addiction Risk Test (WART), its Development and Initial Validation

Robinson and his co-workers developed and validated the original (United States) version of the WART (Robinson, 1999). Robinson and colleagues reported that the25 items of the WART were drawn from a list of 35 symptoms reported by clinicians who were involved in the project of finding out those who are workaholics as they worked with families and clients on work addiction (e.g., Oates, 1971). According to Robinson (2007), the selected items had high content validity, with an average score of 89 out of 100, and 90% of the psychotherapists scored 72 or higher (Robinson, 2007).The items were subjected to validity and reliability studies and it was revealed that WART has good psychometric properties (see Robinson, 1999; Robinson, 2007 for a review). The scale is a five-dimensional measure that consists of Overdoing (9 items), Self-worth (2 items), Control-perfectionism (8 items), Intimacy (5 items), and Mental pre-occupations(1 item) subscales. Robinson (1999) establishedimpressive validity on the WART in his study. Also, Robinson (1999) reported that scores on the WART were correlated 0.40 with generalised anxiety inventory and 0.37 with the type A self-report inventory. Moderate significant correlation were obtained on the four scales of the Jenkins activity survey (Jenkins, Rosenman& Friedman, 1967) - the most frequently used scale for type A behaviour - with 0.50 on the type A scale, 0.50 on the speed and impatience scale, 0.39, on the Hard Driving and Competitive scale, and 0.20 on the job involvement scale (Robinson, 2007).According to Robinson, the test-retest reliability of the WART instrument is 0.83, and the coefficient α for the individual items is 0.85. An internal consistency estimate of reliability, Cronbach's α of 0.88 was obtained for the 25 WART items (Robinson, 1999). The WART is a self-report questionnaire rated on a 4-point Likert scalethat anchors on 1 (never true) to 4 (always true).

The WART has been used in clinical practice and in research (Robinson, 2007). For example, Taris*et al.* (2005) have adapted the Scale for the Dutch samples. Their three studies build a strong case for use of the Overdoing subscale which they termed Compulsive tendencies as adequate representative of workaholism. The convergence between the original versionof WART and Overdoing (compulsive tendencies) subscale was high ($.89 < r < .93$, $p < .001$) (Taris, *et al.*, 2005). In addition, Taris*et al.* emphasized that the patterns of correlations with other concepts (e.g., working overtime, work-family conflict, and exhaustion) were very similar. Thus, they concluded that the full WART scale and its Overdoing subscale appear to measure the

same concept. Several other researchers (e.g., Bakker, Demerouti, & Burke, 2009) have used the Overdoing subscale as adequate measure of workaholism in their various studies.

Method

Samples and procedure

Validation and reliability tests of the WART were performed using 311 employees sampled from ten commercial banks in Enugu capital city and a production company in Nsukka, both in Southeast Nigeria. Their ages ranged from 23 to 52 years, with a mean age of 32.8 years. Their average organisational and job tenures were 6.7 and 4.3 years respectively. The 25-item scale was presented to twelve judges from the fields of management and psychology for face and content validation. They included five lecturers (two clinicians and three industrial/organizational psychologists) and seven regional heads of Human Resource (HR) units of six commercial banks and one manager, representing the production sector. Those from the field of management were requested to indicate items they think do not capture the meaning of workaholism from their organisation's standpoint. The psychologists were, on the other hand, requested to confirm whether the items of the scale are representative of what was operationally defined as workaholism in the study. All the experts were unanimous in their judgement that the scale seem to measure the behaviour construct it purports to measure. A total of 341copies of the WART were administered to employees in both sectors (banking and production), out of which 322 copies of the scale were adequately completed and returned, representing a response rate of 94.43%. Out of this number also 11(3.42%) copies were lost to improper completion and the responses of 311 employees on the WART were subjected to item analysis. Two hundred and twenty three (223) employees were drawn from the banking sector whereas 88 employees only were drawn from the production sector.

Instrument

Workaholismwas measured using the full 25-item version of Robinson's (1999) Work Addiction Risk Test (WART). It is a five-dimensional, self-report scale rated on a 4-point Likert scale, ranging from 1 (never true) to 4 (always true). Each respondent is expected to score a maximum of 100 points and a minimum of 25 points on the scale.

Results

Following the result of the item analysis,item 19 ("It is hard for me to relax when I'm not working") was eliminated because it proved to be weak. Some other studies (e.g., Schaufeli, *et al.*,2008; Taris,*et al.*, 2005) in their separate studies also eliminated item 19 for lack of fitness. So, 24 items that showed satisfactory loadings of 0.40 benchmark used by Flowers and Robinson (2002) on their respective factors were retained.Specifically, the results of item-total correlations ranged from 0.43 to 0.69 (see Appendix A). The reliability of the full 25 (24)-item scale in the current study is satisfactory, alpha = 0.90 (0.89)which is above the reliabilities reported for the original version of the WART. Also, in line with the findings of Taris*et al.* (2005) the reliability alpha of Overdoing subscale (α = 0.87) and Control-perfectionism (α = 0.83) areacceptable; the reliability alpha of the other three subscales Intimacy (α = 0.39),Self-worth (α = 0.42)and Mental pre-occupation (α = 0.33) arenot satisfactory. Further exploratory studies using the principal component factor analysis showed that the original five factors emergedin the present study (see Appendix B) with Overdoing and Control-perfectionismsubscales showing stronger loadingthan the other three dimensions. This issomewhatcontrary to the study of Taris*et al.*(2005) whereloading of the Intimacy (Impaired communication/Self-absorption)subscale was found to be strong as well. These results are somewhat consistent with Flowers and Robinson's (2002) finding that the items of the Overdoing, Control-perfectionism and Intimacysubscalesdiscriminated clearly between workaholics and non-workaholics. Thus, it appears that Overdoing and Control-perfectionism subscales may be separated from the otherthree subscales which appear to beweak and unreliable to be used separately due to their poor loadings.Moreover, Libano*et al.* (2010) asserted that based on parsimony, research evidence shows that the measure of workaholism is better with a shortened version of the scale.

Towards a Short Measure of Workaholism

Although Taris*et al.* (2005) establishedthat the Overdoing subscale is adequateto measure workaholism among Dutch samples; the reasons for their choice for this particular subscale were untenable.Taris and colleaguesfound in their study that the reliability coefficient alphas of the Control-perfectionism and Intimacy subscales were good beside the Overdoing subscale and that three of them are somewhat more important than the other two dimensions (Taris,*et al.*, 2005). Also, they stated that "it appears that Overdoing and Control-perfectionism may be assessed in

their own right: the other subscales are too unreliable to be used separately" (p.47).This above assertionraises concern as to whyTaris*et al.*took their decision in favor of the Overdoing subscale as an absolute short measure of workaholism. They ought to have included the Control-perfectionism and Intimacy in their development of a shortened version of the WART. The present study having found that the coefficient alpha of Overdoing and Control-perfectionism subscales is more satisfactory than the other three subscales argue that the Control-perfectionism subscale should be added to the Overdoing subscale when a shortenedversion of the Robinson's (1999) WART is to be developed for Nigerian samples.

The Overdoing subscale included 8 itemsbecause item 19 was dropped for lack of merit; they are items 3, 5, 6, 7, 8, 15, 18, and 20 whereas the Control-perfectionism subscale consisted of 7 items; they are items 2, 4, 11, 12, 16, 17 and 22 of the full version. The 8-item Overdoing subscale was added to the 7-item Control-perfectionism to make up the proposed 15-item (shortened version) of the WART scale.In order to develop the short version of the WART, hence forth referred to as WART-S-N (Work Addiction Risk Test-Shortened version for Nigerian samples) the 15-item scale was not subjected to any further validity tests. Since theseitems were part of the full version of the WART that had been certified by competent judges as being face and content valid no further validity check was carried out. The results of the reliability test that was run on the items using 311 respondents, the same as on the full version showed that the item-total correlations ranged from .43 to .69 (see Appendix C for the inter-item correlation). For the individual subscales, the Overdoing dimension has a Cronbach's α of 0.87 whereasthe Control-perfectionism has alpha of 0.79. The 15 items yielded a Cronbach's α of .91 and a test-retest reliability coefficient of .83 after three weeks interval.

Furthermore, an exploratory factor analysis was performed on the data using the principal components factor analysis to ascertain whether the two-factor structure of WART-S-N would still hold and it was confirmed that the shortened version of the WART for Nigerian sample is composed of two factors: the Overdoing and Control-perfectionism subscales (see Appendix D). Conclusively therefore, the current study state that the full version of the Robinson's (1999) WART-N and the shortened version, WART-S-N are adequate to measure workaholism in the Nigerian context.

Discussion and conclusion

The Nigerian version of the WART scale resemblesthat of the original United States version. The present result is very similar to the findings reported by Flower and Robinson (2002) and that reported by Taris*et al.* (2005). The Nigerian version like other versions consists of 5 empirically distinct but inter-correlated domains. The reliability of the full version is satisfactory; two (Overdoing and Control-perfectionism)subscales which had the strongest loadings were chosen and validated as the shortened version of the workaholism measure. This counteracts with the study of Taris*et al.* (2005) which used the Overdoing subscale only as a measure of workaholism despite the fact that in their study the Control-perfectionism subscale was almost as high as that of the Overdoing subscale. This current result suggest that researchers may consider using the shortened version of the WART-S-N instead of passing through the rigours of using along list of the full version; the shortened version equally provides good insight into the workaholism construct as it affect workers. Besides, parsimony is usually very critical in researches.

One limitation of this study is that only two occupational groups (banking and production sectors) were involved. Further studies that may choose to use different occupational groups may consider a revalidation of the scale to suit their samples. Another limitation of the present study is that no concurrent validity was carried out with other related scales. In addition, there are other measures of workaholism and the extentof the convergence between the WART and these other measures is still vague. Also, the sample used in this study were cross sectional in nature and usually such sample are open to some weaknesses; it is therefore inconceivable to draw solid conclusions on the causal direction of effects; conductingexperimental study or using longitudinal samples is recommended to establish cause and effect.Despite the above stated shortcomings of the present study, the results should be seen as a fair attempt to adapt the WART scale for Nigerian researchers and their samples.

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Appendix A

RESULT OF ITEM ANALYSIS OF THE 25-ITEM WART

S/n	Items	Item-Total Correlation
1	I prefer to do most things myself rather than ask for help.	0.42
2	I get impatient when I have to wait for someone else or when something takes too long, such as long, slow-moving lines.	0.63*
3	I seem to be in a hurry and racing against the clock.	0.52*
4	I get irritated when I am interrupted while I am in the middle of something.	0.74*
5	I stay busy and keep many irons in the fire.	0.61*
6	I find myself doing two or three things at one time such as eating lunch and writing a memo, while talking on the phone.	0.59*
7	I overly commit myself by biting off more than I can chew.	0.66*
8	I feel guilty when I am not working on something.	0.71*
9	It is important that I see the concrete results of what I do.	0.41
10	I am more interested in the final result of my work than in the process.	0.43
11	Things do not seem to move fast enough or get done fast enough for me.	0.69*
12	I lose my temper when things don't go my way or work out to suit me.	0.65*
13	I ask the same question over again, without realizing it, after I've already been given the answer once.	0.41
14	I spend a lot of time mentally planning and thinking about future events while tuning out the here and now.	0.50
15	I find myself continuing to work after my co-workers have called it quits.	0.66*
16	I get angry when people don't meet my standards of perfection.	0.55*
17	I get upset when I am in situations where I cannot be in control.	0.69*
18	I put myself under pressure with self-imposed deadlines when I work.	0.63*

19	It is hard for me to relax when I am not working.	0.24**(excluded)**
20	I spend more time working than on socializing with friends, on hobbies, or on leisure activities.	0.61*
21	I dive into projects to get a head start before all phases have been finalized.	0.43
22	I get upset with myself for making even the smallest mistake.	0.51*
23	I put more thought, time, and energy into my work than I do into my relationships with friends and loved ones.	0.40
24	I forget, ignore, or minimize birthdays, reunions, anniversaries, or holidays.	0.47
25	I make important decisions before I have all the facts and have a chance to think them through thoroughly.	0.44

Appendix B

RESULTS OF EXPLORATORY FACTOR ANALYSIS OF THE WART USING VARIMAX WITH KAISER NORMALIZATION ROTATION METHOD

S/n	Items	1	2	3	4	5
1	I prefer to do most things myself rather than ask for help.	-	-	0.522*	-	-
2	I get impatient when I have to wait for someone else or when something takes too long, such as long, slow-moving lines.	-	0.618*	-	-	-
3	I seem to be in a hurry and racing against the clock.	0.733*	-	-	-	-
4	I get irritated when I am interrupted while I am in the middle of something.	-	0.597*	-	-	-
5	I stay busy and keep many irons in the fire.	0.691*	-	-	-	-
6	I find myself doing two or three things at one time such as eating lunch and writing a memo, while talking on the phone.	0.712*	-	-	-	-
7	I overly commit myself by biting off more than I can chew.	0.817*	-	-	-	-
8	I feel guilty when I am not working on something.	0.763*	-	-	-	-
9	It is important that I see the concrete results of what I do.	-	-	-	0.411*	-
10	I am more interested in the final result of my work than in the process.	-	-	-	0.479*	-
11	Things do not seem to move fast enough or get done fast enough for me.	-	0.711*	-	-	-
12	I lose my temper when things don't go my way or work out to suit me.	-	0.600*	-	-	-
13	I ask the same question over again, without realizing it, after I've already been given the answer once.	-	-	0.541*	-	-
14	I spend a lot of time mentally planning	-	-	-	-	0.599*

	and thinking about future events while tuning out the here and now.					
15	I find myself continuing to work after my co-workers have called it quits.	0.697*	-	-	-	-
16	I get angry when people don't meet my standards of perfection.	-	0.623*	-	-	-
17	I get upset when I am in situations where I cannot be in control.	-	0.618*	-	-	-
18	I put myself under pressure with self-imposed deadlines when I work.	0.639*	-	-	-	-
19	It is hard for me to relax when I am not working.	-	-	-	-	-
20	I spend more time working than on socializing with friends, on hobbies, or on leisure activities.	0.733*	-	-	-	-
21	I dive into projects to get a head start before all phases have been finalized.	-	-	0.501*	-	-
22	I get upset with myself for making even the smallest mistake.	-	0.599*	-	-	-
23	I put more thought, time, and energy into my work than I do into my relationships with friends and loved ones.	-	-	0.498*	-	-
24	I forget, ignore, or minimize birthdays, reunions, anniversaries, or holidays.	-	-	0.477*	-	-
25	I make important decisions before I have all the facts and have a chance to think them through thoroughly.	-	-	0.501*	-	-

Appendix C

RESULT OF ITEM ANALYSIS OF THE SHORT VERSION OF WART-N

S/n	Items	Item-Total Correlation
1	I get impatient when I have to wait for someone else or when something takes too long, such as long, slow-moving lines.	0.69
2	I seem to be in a hurry and racing against the clock.	0.59
3	I get irritated when I am interrupted while I am in the middle of something.	0.68
4	I stay busy and keep many irons in the fire.	0.72
5	I find myself doing two or three things at one time such as eating lunch and writing a memo, while talking on the phone.	0.65
6	I overly commit myself by biting off more than I can chew.	0.58
7	I feel guilty when I am not working on something.	0.61
8	Things do not seem to move fast enough or get done fast enough for me.	0.63
9	I lose my temper when things don't go my way or work out to suit me.	0.66
10	I find myself continuing to work after my co-workers have called it quits.	0.63
11	I get angry when people don't meet my standards of perfection.	0.74
12	I get upset when I am in situations where I cannot be in control.	0.60
13	I put myself under pressure with self-imposed deadlines when I work.	0.70
14	I spend more time working than on socializing with friends, on hobbies, or on leisure activities.	0.69
15	I get upset with myself for making even the smallest mistake.	0.71

Appendix D

RESULT OF ITEM ANALYSIS OF THE SHORT VERSION OF THE WART-N

S/n	Items	Factor 1	Factor 2
1	I get impatient when I have to wait for someone else or when something takes too long, such as long, slow-moving lines.	-	0.731
2	I seem to be in a hurry and racing against the clock.	0.693	-
3	I get irritated when I am interrupted while I am in the middle of something.	-	0.492
4	I stay busy and keep many irons in the fire.	0.740	-
5	I find myself doing two or three things at one time such as eating lunch and writing a memo, while talking on the phone.	0.634	-
6	I overly commit myself by biting off more than I can chew.	0.581	-
7	I feel guilty when I am not working on something.	0.615	-
8	Things do not seem to move fast enough or get done fast enough for me.	-	0.539
9	I lose my temper when things don't go my way or work out to suit me.	-	0.611
10	I find myself continuing to work after my co-workers have called it quits.	0.711	-
11	I get angry when people don't meet my standards of perfection.	-	0.597
12	I get upset when I am in situations where I cannot be in control.	-	0.477
13	I put myself under pressure with self-imposed deadlines when I work.	0.570	-
14	I spend more time working than on socializing with friends, on hobbies, or on leisure activities.	0.551	-
15	I get upset with myself for making even the smallest mistake.	-	0.600