

The validation of a workaholism scale within the South African banking industry

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COMMENTS

The reader is reminded of the following:

- The editorial style of this manuscript follows the guidelines of the *South African Journal of Industrial Psychology* (SAJIP). The referencing style in this mini-dissertation follows the format prescribed by the Publication Manual (6th edition) of the American Psychological Association (APA). These practices are in line with the policy of the Programme in Industrial Psychology of the North-West University (Potchefstroom) to use the APA style of referencing in all scientific documents as from January 1999.
- The mini-dissertation is submitted in the form of a research article.

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DECLARATION

I, **Janle Horn**, hereby declare that “The validation of a workaholism scale within the South African banking industry” is my own work and that the views and opinions expressed in this work are those of the author and relevant literature references as cited in the manuscript.

I further declare that the content of this research was not and will not be submitted for any other qualification at any other tertiary institution.

A handwritten signature in black ink, appearing to read 'Janlé Horn', written over a horizontal line.

Janlé Horn

November 2015

CONFIRMATION OF LANGUAGE EDITING



26 October 2015

I, Ms Cecilia van der Walt, hereby confirm that I took care of the editing of the dissertation of Ms Janlé Horn titled *The validation of a workaholism scale within the South African banking industry*.

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SUMMARY

Title: The validation of a workaholism scale within the South African banking industry

Keywords: Validation, workaholism, workaholic, work addicts, work engagement, organisational commitment, burnout, work hours, work overload, banking industry

Workaholism is recognised as a problem, for both the individual and the organisation. The phenomenon is associated with several negative outcomes (i.e. lower levels of work engagement, less commitment to the organisation and also heightened levels of individual burnout), which adversely impact the well-being of individuals as well as the productivity and efficiency of organisations. The modern economic environment is also driving individuals to work harder than ever before, ultimately reinforcing workaholic behaviour. In spite of the destructive nature of workaholism, there is no validated measuring instrument available for South African organisations. The study therefore intended to validate the Dutch Work Addiction Scale (DUWAS-10) within the South African context.

Specifically, the research aimed at investigating whether the DUWAS-10 is a valid and reliable measuring instrument, by exploring its factor structure, convergent validity, discriminant validity and predictive validity. To this end, a quantitative research design was used, i.e. a cross-sectional research approach was implemented. Participants from the banking industry ($N = 345$) were chosen based on their convenient availability and proximity to the researcher. The reliability of the DUWAS-10 was explored by considering Cronbach's alpha coefficients, which should be 0.70 and larger to be considered acceptable. Furthermore, the convergent and discriminant validity was examined; convergent validity was established by determining the degree to which workaholism is similar to other theoretical constructs with which it should be comparable (e.g. work overload and work hours), whereas discriminant validity was established by exploring whether workaholism differs from constructs from which it should differ theoretically (e.g. work engagement). Lastly, predictive validity was established by investigating the regressions between workaholism and applicable organisational outcomes (e.g. work engagement, organisational commitment and burnout).

The results showed that the DUWAS-10 should be operationalised as a one-factor structure, as the two-factor structure (i.e. *working excessively* and *working compulsively*) was rejected

due to problematic discriminant validity between those two components. Furthermore, the scale showed acceptable reliability ($\alpha = 0.78$) as well as convergent and discriminant validity by meeting the specified criteria. It was also found that the scale provided valid relationship directions with pre-determined organisational outcomes (e.g. work engagement, organisational commitment and burnout). It can therefore be concluded that workaholism has a negative relationship with work engagement and organisational commitment, while it has a positive relationship with burnout. Furthermore, the evidence suggests that the workaholism scale can be used to assess workaholism within the South African context, specifically in the banking industry.

Recommendations were made for practice and also for future research.

OPSOMMING

Titel: Die validering van 'n maatstaf vir werkbehepthheid in die Suid-Afrikaanse bankbedryf

Sleutelwoorde: Validering, werkbehepthheid, werkverslaafde, werkverslaafdes, werksbetrokkenheid, organisasie-verbintenis, uitbranding, werksure, werkoorlading, bankbedryf

Werkbehepthheid word erken as 'n probleem, vir beide die individu en die organisasie. Die fenomeen word geassosieer met etlike negatiewe uitkomstes (bv. laer vlakke van werksbetrokkenheid, swakker verbintenis tot die organisasie en ook verhoogde vlakke van individuele uitbranding), wat individue se welstand negatief beïnvloed asook die organisasie se produktiwiteit en effektiwiteit. Die moderne ekonomiese omgewing dryf individue ook om harder as ooit tevore te werk, wat uiteindelik werkbehepthheids gedrag bevorder. Ten spyte van die destruktiewe aard van werkbehepthheid is daar geen gevalideerde meetinstrument vir Suid-Afrikaanse organisasies beskikbaar nie. Die studie het dus ten doel gehad om die *Dutch Work Addiction Scale* (DUWAS-10) binne die Suid-Afrikaanse konteks te valideer.

Die navorsing was spesifiek daarop gerig om te bepaal of die DUWAS-10 'n geldige en betroubare meetinstrument is deur die faktor struktuur, konvergente geldigheid, diskriminante geldigheid en voorspellingsgeldigheid te ondersoek. Met hierdie doel voor oë is 'n kwantitatiewe navorsingsontwerp gebruik; 'n dwarsnitnavorsingsbenadering is geïmplementeer. Deelnemers uit die bankbedryf ($N = 345$) is gekies gebaseer op hul gerieflike beskikbaarheid asook dat hulle naby die navorser geleë was. Die betroubaarheid van die DUWAS-10 is ondersoek deur Cronbach se alfa koëffisiënt te gebruik, wat 0.70 of groter moet wees om as aanvaarbaar beskou te word. Voorts is die konvergente en diskriminante geldigheid ondersoek; konvergente geldigheid is bepaal aan die hand van die graad waarin werkbehepthheid ooreenstem met ander teoretiese konstruksies waarmee dit vergelykbaar behoort te wees (bv. werksoorlading en werksure), terwyl diskriminante geldigheid vasgestel is deur te bepaal of werkbehepthheid van konstruksies verskil van dit waarvan dit teoreties behoort te verskil (bv. werksbetrokkenheid). Laastens is voorspellingsgeldigheid vasgestel deur die regressies tussen werksbetrokkenheid en organisasie-uitkomstes te ondersoek (bv. werksbetrokkenheid, verbintenis tot die organisasie en uitbranding).

Die resultate het bevestig dat die DUWAS-10 as 'n eenfaktorstruktuur geoperasionaliseer moet word, aangesien die tweefaktorstruktuur (met ander woorde buitensporig hard werk en kompulsief werk) verwerp was weens problematiese diskriminante geldigheid tussen die twee komponente. Verder het die skaal aanvaarbare betroubaarheid ($\alpha = 0.78$) asook konvergente en diskriminante geldigheid getoon deur aan die gespesifiseerde kriteria te voldoen. Daar is ook gevind dat die skaal geldige verbandaanwysings met voorafbepaalde organisasie uitkomst getoon het (bv. werkbetrokkenheid, verbintenis tot die organisasie en uitbranding). Die gevolgtrekking kan dus gemaak word dat werkbeheptheid 'n negatiewe verband toon met werkbetrokkenheid en verbintenis tot die organisasie, terwyl dit 'n positiewe verband toon met uitbranding. Die resultate dui daarop dat die werkbeheptheidskaal aangewend kan word om werkbeheptheid binne die Suid-Afrikaanse konteks te assessee, spesifiek in die bankbedryf.

Aanbevelings is gemaak vir die praktyk asook vir toekomstige navorsing.

CHAPTER 1
INTRODUCTION

Introduction

Organisations experience incessant pressure to adapt and progress in the ever-changing world of work (Lu, Wang, Lu, Du & Bakker, 2014). Consequently, organisations require employees that are enthusiastic, devoted and involved in their work since the quality of the labour force is important for the success of an organisation (Porter, 2004). Due to technological developments (e.g. the internet), the modern work environment enables employees to work harder than ever before in allowing employees to perform their work at any place, at any given time, blurring the lines of work-life balance (Mazzetti, Schaufeli & Guglielmi, 2014). This has led to concerns with overwork and its impact on employee well-being (Korunka & Hoonakker, 2014). Indeed, Dahlgren, Kecklund and Akerstedt (2006) found that employees who that frequently work long hours are more exposed to work-related stressors, have less time for relaxation and family; ultimately decreasing their time for effort recovery.

Nevertheless, employees that appear to work excessively are applauded by society since they are perceived to be more productive (Porter, 1996). Contrary to the popular belief that workaholics are desirable employees, a number of studies have shown that workaholism has negative effects on both employee well-being and organisational outcomes (Aziz & Vitiello, 2015; Shimazu, Schaufeli, Kimiyana & Kawakami, 2015). Organisations may therefore fail to observe the harmful impact the phenomenon can have on individual and organisational outcomes. Regardless of whether society considers this phenomenon a psychological problem or a “clean” addiction, the issue of addiction-like work behaviour should be of concern to managers and organisations (Porter, 1996). Thus far little research has been conducted regarding workaholism within the South African context (Hulley, 2010). More specifically, empirical studies are impeded by a lack of validated measures (McMillan, Brady, O’Driscoll & Marsh, 2002). Therefore this study seeks to validate a workaholism scale (the Dutch Work Addiction Scale; DUWAS-10) to assist future researchers to pursue quality research on the subject within South African organisations.

1.1 Problem statement

Despite the popularity and common usage of the term “workaholic”, the scientific understanding of the concept of workaholism has been fairly restricted, regardless of several

studies attempting to explain the phenomenon (McMillan et al., 2002). Oates (1971) defined workaholism as “the compulsion or uncontrollable need to work incessantly” (p.11), whereas Fassel (1990) described workaholism as a harmful manifestation in which a person is obsessed with work-related activities. Furthermore, workaholism involves individuals that devote an excessive amount of time to work activities, persistently think about work and also work beyond organisational expectations (Scott, Moore & Micell, 1997). Consequently, workaholics can be perceived in both a positive and negative light. On the one hand, workaholics are addicts that have an obsession with work and can’t regulate themselves effectively, but on the other hand, they can be particularly meticulous, devoted and committed employees (Ng, Sorenson & Feldman, 2007).

According to Gorgievski, Bakker and Schaufeli (2009) there are three distinct features that are applicable to workaholics: (1) they are extremely hard workers that spend a lot of time on work-related activities when given the choice; (2) they are reluctant to disengage from work activities and yet when they do, they still ponder about work frequently; and (3) they work beyond what is reasonably expected to achieve their goals and organisational objectives. Thus, workaholism is an obsession with work, i.e. the activity of work consumes the individual completely by taking disproportionate space in the employee’s identity, ultimately having a negative influence on other life domains (Gorgievski & Bakker, 2010). Additionally, employees that demonstrate workaholic tendencies are inclined to experience negative emotions (e.g. guilt) during and after carrying out work activities since their motivation to work excessively is not because of the satisfaction derived from working or their high achievement orientation, but simply because they are perfectionistic and set unreasonably high standards for themselves (Bakker, Demerouti, Oerlemans & Sonnentag, 2013). Furthermore, workaholics also experience frustration and anxiety if they are impeded from performing their work-related activities (Gorgievski & Bakker, 2010).

Research indicates that working hard is not necessarily a problem as long as employees can recover from the effort expended on work activities (Van Wijhe, Peeters, Schaufeli & Ouweneel, 2013). However, workaholics struggle to detach themselves from their work due to their internal compulsion to work excessively; they work unreasonably long hours, continue work when they get home, over weekends and even on vacation - ultimately neglecting their need to recover from work (Bakker et al., 2013; Gorgievski & Bakker, 2010; Van Wijhe et al., 2013).

The critical role of recovery can be understood from the perspective of the effort-recovery model (Bakker et al., 2013). The effort-recovery model's main assumption specifies that, primarily, *normal* load reactions which are related to effort expenditure at work (such as increased heart rate and fatigue) can develop into *long-lasting* load responses if employees are continuously exposed to workloads without adequate recovery (Geurts & Sonnentag, 2006), i.e. after hours or over the weekend. Workaholics spend inordinate amounts of time on work-related activities with insufficient opportunities to recover completely from their energy expended (Shimazu & Schaufeli, 2009). Thus employees that work long hours without taking adequate time to recover can experience adverse health and well-being consequences over time (Van Beek, Taris & Schaufeli, 2011).

Workaholism is connected to negative outcomes both for organisations and their employees (Van Beek, Hu, Schaufeli, Taris & Schreurs, 2012). McMillan and O'Driscoll (2004) identified workaholism as a contributing element to job-related stress, ill health (e.g. coronary heart disease), burnout, and even secondary addictions such as alcoholism. Additionally, Skosana (2014) stipulate that between R12 billion and R16 billion per year is lost in South Africa because of absenteeism, which can be ascribed to several factors, including stress, burnout and employee ill-health. Thus, the direct and indirect impact of workaholism on corporate profitability, employee productivity and public health cannot be overlooked (McMillian & O'Driscoll, 2004).

Furthermore, workaholic employees have a tendency to influence other employees negatively due to their propensity for antagonistic and hostile behaviour, i.e. since others seemingly cannot match the workaholic's efforts and devotion to work (Mudrack, 2004). Workaholics are therefore inclined to create a tense atmosphere at work, because of their habit of constantly checking up on co-workers (Mudrack, 2004). Moreover, workaholic employees can actually demonstrate poor performance since these individuals tend to devote more attention to ritualised and time-consuming activities (e.g. reviewing completed work), instead of focusing on potentially more important tasks and responsibilities (Gorgievski, Moriano & Bakker, 2013). Gorgievski and Bakker (2010) found similar results: when workaholics perform poorly it can be attributed to their perfectionism, rigidity and inflexibility since they have an inclination to make assignments more complex than is necessary and also have an unwillingness to delegate tasks and consequently spend an inordinate amount of time on these tasks. However, Gorgievski and Bakker (2010) also established that working

excessively may *facilitate* performance, whereas working compulsively may *impair* performance due to the influence of negative emotions. The previous findings are supported by Shimazu and Schaufeli (2009) who showed that workaholics can be poor performers given the many negative attitudes and behaviours related to workaholics that could inhibit their job performance. These findings suggest that, in general, workaholism can interfere with the employee's ability to perform work-related activities efficiently and effectively.

Furthermore, previous research has associated workaholism with various organisational outcomes, including a negative relationship with: work engagement (Van Wijhe, Peeters & Schaufeli, 2011) and job satisfaction (Burke, 2004), but a positive relationship with: ill health (McMillan & O'Driscoll, 2004), burnout (Mudrack, 2004), working overtime (Bakker et al., 2013; Shimazu & Schaufeli, 2009; Van Beek et al., 2011), work overload (Bakker et al., 2013; Hu et al., 2014) and turnover intention (Douglas & Morris, 2006; Van Beek et al., 2012; Van Beek, Taris, Schaufeli & Brenninkmeier, 2014). In addition, workaholism has shown a positive relationship with organisational commitment (Burke, Richardsen & Mortinussen, 2004; Liang & Chu, 2009). However, Douglas and Morris (2006) argued that workaholism has a negative relationship with organisational commitment – presenting an inconsistency in the literature. Consequently, workaholism negatively influences the organisation's competitive advantage since the majority of the previously mentioned factors have observed and unobserved cost implications for organisations (Bakker et al., 2013; Shimazu & Schaufeli, 2009; Shimazu, Schaufeli, Kubato & Kawakami, 2012; Van Beek et al., 2012).

However, the relationship of workaholism with these constructs has not yet been empirically determined within the South African context. In addition, the extent of workaholism continues to increase universally - including in South Africa where there is a strong drive for economic growth at all levels - it therefore demands a better understanding of the subject matter which is necessary and timely (McMillan et al., 2002; Ng et al., 2007). Moreover, in spite of the influence of workaholism on multiple levels of society, research has been hindered by a lack of validated measures (McMillan et al., 2002), and this is also the case in South Africa. Consequently, a validated workaholism scale is required in order to pursue quality research on the subject in South African organisations. Foxcroft and Roodt (2009) describes the validity of an instrument as the degree to which a scale or test measures what it is intended to measure. It is important to validate an instrument since inadequate validity

could perhaps lead to erroneous, imprecise and vague outcomes when interpreting the results. Therefore the study will emphasise the factor structure, convergent validity, discriminant validity and predictive validity of the DUWAS-10. In addition, the study aims at determining the reliability of the measuring instrument, which refers to the accuracy or internal consistency of the measurement scale(s) (Brown, 2015).

The Dutch Work Addiction Scale (DUWAS-10) was created by Schaufeli, Taris and Bakker (2006) and will be utilised for the purpose of this study. The DUWAS-10 was developed according to Taris and Schaufeli's (2003) conceptualisation of workaholism, in which workaholism refers to an irresistible inner drive to work extremely hard, and comprises working *excessively* and working *compulsively*. Working excessively refers to the behavioural dimension of workaholism, whereas working compulsively refers to the cognitive dimension (Schaufeli, Shimazu & Taris, 2009). The items of the DUWAS-10 scale were adapted from two general workaholism scales: Work Addiction Risk Test (WART; Robinson, 1999) and the Workaholism Battery (WorkBat; Spence & Robbins, 1992). Schaufeli et al., (2006) developed a two-factor scale which originally consisted of 17 items. However, seven problematic items were removed, leaving the 10 item measure with the most promising psychometric features (Del Líbano, Llorens, Salanova & Schaufeli, 2010).

In conclusion, this study sought to validate the DUWAS-10 amongst a sample of banking employees in South Africa. The banking industry is well-known for being one of the most demanding sectors because of extended work hours and extremely competitive nature (Williams, 2012). Therefore workaholism was expected to be apparent in this sector due to the pace of work (Geier, 2014).

1.2 Research questions

The study was guided by the following research questions:

- How are workaholism, work engagement, organisational commitment, work overload, work hours and burnout conceptualised in the literature?
- Is the workaholism scale (DUWAS-10) valid and reliable within the South African context? More specifically can the following be established?
 - What Cronbach's alpha reliability values does the workaholism scale show?
 - What factor structure does the workaholism scale show?

- What convergent validity with other theoretical constructs does the scale show?
- What discriminant validity does the workaholism scale show?
- What predictive validity does workaholism show with appropriate outcomes, i.e. work engagement, organisational commitment and burnout?
- What recommendations can be made for future research and practice?

1.3 Expected contribution

The current study will contribute to the individual, the organisation and literature.

1.3.1 Contribution to the individual

Workaholism has been recognised to influence individuals' work engagement and beliefs regarding their work, specifically with regard to job discontent, lower levels of commitment, higher levels of burnout and higher turnover intention (Burke, 2004; Douglas & Morris, 2006; Van Wijhe et al., 2011). Furthermore, workaholism is associated with unwell-being and ill health, which could lead to physical illnesses such as coronary heart disease (McMillian & O'Driscoll, 2004; Shimazu et al., 2012). Thus employees are affected to such an extent that they eventually cannot function optimally, consequently impairing their performance and endangering their well-being. Hence the purpose of this study was to provide insight about employees' inclination towards workaholism, which would create awareness regarding the effects of being dependent on work and the potential negative outcomes. Consequently, preventing employees from experiencing the negative outcomes related to workaholism, instead enjoying the positive outcomes related to work engagement.

1.3.2 Contribution to the organisation

Limited information is available regarding the relationship between workaholism and organisational outcomes such as: work engagement, organisational commitment, turnover intention and burnout within the South African context. The afore-mentioned factors are determinant elements of the prosperity of an organisation since they have an impact on employees' performance, productivity and their intention to leave - all of which could prevent the organisation from achieving their strategic objectives and a competitive advantage

(Bakker et al., 2013; Shimazu & Schaufeli, 2009; Shimazu et al., 2012; Van Beek et al., 2012). Therefore this study can create awareness within organisations regarding the impact of workaholism and the influence it may have on their employees as well as on the organisation. The applicable practitioners can then actively start to address workaholism, by implementing interventions so as to increase employee well-being and organisational effectiveness.

1.3.3 Contribution to the literature

Workaholism is a popular term in industry, yet there is a lack of conceptual and methodological literature concerning the subject (Snir & Zohar, 2008). Thus the purpose of this study was to bridge the gap regarding workaholism by means of accelerating the advancement of future researchers with the topic in South Africa by providing a validated scale. Limited research has been done regarding the relationship of workaholism with work engagement, organisational commitment, turnover intention, work overload, work hours and burnout - apparently none in the South African context; as a result, a considerable gap has been identified to address.

1.4 Research objectives

The research objectives are divided into a general objective and specific objectives.

1.4.1 General objective

The general objective of this study was to validate a workaholism scale within the financial sector of South Africa.

1.4.2 Specific objectives

The specific objectives of the research are:

- To determine how workaholism, work engagement, organisational commitment, work overload, work hours and burnout are conceptualised in the literature.
- To determine whether the workaholism scale is reliable and valid in the sample pertaining to the following:

- Acceptable Cronbach's alpha reliability values ($\alpha \geq 0.70$);
- Factorial structure;
- Convergent validity with other theoretical constructs (i.e. work overload and work hours);
- Discriminant validity with those constructs from which it is supposed to differ.
- Predictive validity of workaholism with appropriate outcomes, i.e. the relationship with work engagement, organisational commitment and burnout.
- To provide recommendations to management and for future research.

1.5 Research hypotheses

The following hypotheses are presented to assist in answering the research questions and to reach the objectives of the study:

H₁: Workaholism comprises a two-factor structure (consisting of working excessively and working compulsively).

H₂: The workaholism construct(s) will present acceptable reliability coefficients.

H₃: There is a positive relationship between workaholism and work overload.

H₄: There is a positive relationship between workaholism and work hours.

H₅: Workaholism shows acceptable discriminant validity.

H₆: Workaholism has a negative predictive relationship to work engagement.

H₇: Workaholism has a negative predictive relationship to organisational commitment.

H₈: Workaholism has a positive predictive relationship to burnout.

1.6. Research method

The research method comprises an empirical investigation and a literature review.

1.6.1 Research approach

A quantitative approach was followed for the purpose of this study. Quantitative research was implemented for the purpose of determining the direction of relationships among measured variables with the intent to explain, predict and control phenomena (De Vos, Strydom, Fouché & Delpont, 2011). Specifically, a cross-sectional survey design was implemented. The data were collected at one point in time and used to determine differences among the participants in that population at that particular moment in time (De Vos et al., 2011).

1.6.2 Literature review

A comprehensive literature review regarding workaholism was completed. Relevant articles which have been published between 1990 and 2015 were consulted by means of internet searches via databases such as Academic Search Premier; EbscoHost; SAePublications; Business Source Premier; SACat; PsycArticles; PsycInfo; Emerald; ProQuest; Science Direct; and Nexus. The main journals consulted due to their relevance to the topic of interest are the following: *Journal of Occupational Psychology*; *European Journal of Personality*; *Psychology & Health*; *Journal of Managerial Psychology*; *Journal of Occupational Health Psychology*; *Journal of Organizational Behaviour*; *Journal of Counselling Psychology*; *Psychological Reports*; *South African Journal of Industrial Psychology*; *Journal of Organizational Change Management*; *Journal of Management Research*; *European Psychologist*; *Journal of Organizational Behaviour*; *Journal of Behavioural and Social Sciences*; *International Journal of Stress Management*; *Social Behaviour and Personality Assessment* and *Journal of Organizational Change Management*.

1.6.3 Participants

For purposes of this study, convenience sampling was used. De Vos et al. (2011) explain convenience sampling as a non-probability sampling technique where participants are chosen based on their accessibility and proximity to the researcher. The data were collected among employees from the banking sector in the Gauteng Province ($N = 345$). The researcher aimed to include individuals from different genders, ages, marital statuses and racial groups in the sample group (Black, White, Coloured and Indian people). The participants were required to

have a good understanding of the English language to be able to successfully complete the questionnaire, i.e. at least grade 10.

1.6.4 Measuring instruments

Biographical questionnaire: A biographical questionnaire was employed to establish the demographic characteristics of the research participants to be able to provide an informative description of the study population. These characteristics included: age, gender, marital status, level of education, length of employment in current organisation and work hours.

Workaholism: The Dutch Work Addiction Scale (DUWAS-10) was used to measure workaholism (Schaufeli et al., 2009). The scale includes a total of 10 items: two 5-item subscales measuring *working excessively* (e.g. “I spend more time working than on socializing with friends, on hobbies, or on leisure activities”) and *working compulsively* (e.g. “I feel obliged to work hard, even when it is not enjoyable”). The DUWAS-10 is scored on a four-point Likert-type scale, ranging from 1 (Almost never) to 4 (Almost always). The Cronbach’s alpha coefficients for these sub-scales varied between 0.80 and 0.86 (Del Líbano et al., 2010).

Work engagement: The Utrecht Work Engagement Scale (UWES) was utilised to measure the participants’ levels of engagement (Schaufeli, Salanova, Gonzáles-Romá & Bakker, 2002). The UWES is scored on a seven-point frequency scale, ranging from 0 (Never) to 6 (Every day). Three dimensions of engagement can be distinguished, namely *Vigour* (6 items; e.g. “I can continue working for very long periods at a time”), *Dedication* (5 items; e.g. “I find the work that I do full of meaning and purpose”) and *Absorption* (6 items; e.g. “I am immersed in my work”). The Cronbach’s alpha coefficients for these sub-scales varied between 0.68 and 0.91 (Storm & Rothmann, 2003).

Organisational commitment: The Organisational Commitment Scale (OCS) of Allen and Meyer (1997) was utilised to measure the participants’ organisational commitment levels. The OCS consists of 24 structured items, eight items per dimension (Allen & Meyer, 1997). The three dimensions of organisational commitment can be distinguished, namely *Affective Commitment* (e.g. “I would be very happy to spend the rest of my career with this organisation”); *Continuance Commitment* (e.g. “I am not afraid of what might happen if I quit

my job without having another one lined up”); and *Normative Commitment* (“I think that people these days move from company to company too often”). The OCS is scored on a seven-point Likert-type scale, ranging from 1 (Strongly disagree) to 7 (Strongly agree). The Cronbach’s alpha coefficients for these sub-scales have varied between 0.73 and 0.85 (Allen & Meyer, 1997).

Burnout: The Maslach Burnout Inventory (MBI; Maslach & Jackson, 1981) was utilised to measure the participants’ level of burnout. Three dimensions of burnout can be distinguished, namely *Emotional Exhaustion* (9 items; e.g. “I feel used up at the end of the workday”); *Depersonalisation* (5 items; e.g. “I don’t really care what happens to some recipients”); and *Personal Accomplishment* (8 items; e.g. “I have accomplished many worthwhile things in this job”). The MBI is scored on a seven-point frequency scale, ranging from 0 (Never) to 6 (Always). The reported Cronbach alpha for these sub-scales varied between 0.72 and 0.89 (Maslach & Jackson, 1981). The MBI has also been implemented in South Africa with acceptable Cronbach’s alphas (e.g. Du Plooy & Roodt, 2010; Storm & Rothmann, 2003).

Work overload: Work overload was measured by a four-item measurement which was developed by Sverke, Hellgren and Öhrming (1999), an example of an item: “My work contains elements that are too demanding”. The items were scored on a five-point Likert-type scale, ranging from 1 (Disagree) to 5 (Agree), where a high score represents a higher workload. A reliability coefficient of 0.77 was obtained for this scale (Pienaar, Sieberhagen & Mostert, 2007).

Work hours: This variable was measured by two items to assess the total number of working hours per week. The items that were: “How many hours do you work during a standard working week?” and “How many hours do you spend working at home (beyond normal working hours and flexitime) during a standard week?”

1.6.5 Research procedure

Permission to gather data was obtained from organisations within the banking industry. Each of the respective organisations was contacted either telephonically or via e-mail to explain the purpose of the study. A hard copy of the questionnaire was handed out to the participants and it took approximately 15 minutes to complete the questionnaire. The respondents were given

one day to complete the questionnaire. Once all the data had been collected, the data analysis could commence. The organisation requested feedback on the questionnaire which was distributed amongst the employees; feedback was given on general results, however no specific individual results were shared to ensure confidentiality.

1.6.6 Statistical analysis

Mplus 7.3 (Muthén & Muthén, 2014) was used to establish latent variables in a structural equation modelling framework. Due to the ordered categorical nature of the workaholism scale (four-point) the more appropriate mean and variance adjusted weighted least squares estimation methodology was implemented (WLSMV), as it is more suited to estimate models of this nature. First, confirmatory factor analysis (CFA) was implemented to specify the measurement model (Brown, 2015). CFA was therefore used to investigate the factor structure of the workaholism scale, i.e. if the two-factor structure was the best-fitting model (H_1). The fit of the models was considered by means of the chi-square (χ^2 ; lowest value indicates the best fitting model), comparative fit index ($CFI \geq 0.90$), Tucker-Lewis index ($TLI \geq 0.90$), and root mean square error of approximation ($RMSEA \leq 0.08$) (Van de Schoot, Lugtig, & Hox, 2012). In terms of reliability the Cronbach's alpha coefficient was calculated with SPSS (IBM Corp, 2013), to support or reject H_2 . The correlation matrix was used to ascertain the relationships between the study variables; this allowed for determination of the convergent and discriminant validity of workaholism (H_3 - H_4). The effect sizes for correlations was considered medium for $r \geq 0.30$ and large for $r \geq 0.50$ (Cohen, 1988), and discriminant validity issues was considered for $r \geq 0.85$ (Brown, 2015).

Then, a structural model was specified by adding regressions to the total measurement model between the variables as hypothesised from the literature – the structural model's fit was also considered by the same fit indices discussed for the measurement models above. The structural model enabled the researcher to investigate the predictive validity of workaholism (H_5 - H_8) by considering the significance of the regression paths and their accompanying beta coefficient values (β). The level of statistical significance was set at the 95% level ($p < 0.05$).

1.6.7 Ethical considerations

This research project was conducted in a fair and ethical manner. Important aspects such as voluntary participation, informed consent, doing no harm, confidentiality and the maintenance of privacy was addressed and established (de Vos et al., 2011). The research proposal was submitted for ethical approval to the Faculty Research Ethics Committee before the study commenced.

1.7 Overview of the chapters

This mini-dissertation will consist of three chapters:

Chapter 1: Introduction

Chapter 2: Research article

Chapter 3: Conclusions, limitations and recommendations

1.8 Chapter summary

The following were presented in this chapter: the problem statement, research objectives and the research hypothesis. The measuring instruments used and the research method were explained, followed by a brief overview of the chapters.

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CHAPTER 2
RESEARCH ARTICLE

The validation of a workaholism scale within the South African banking industry

Abstract

Orientation: Workaholism has a harmful impact on corporate profitability and productivity and also on employee health and well-being. However, no validated instrument is available to measure workaholism within the South Africa context.

Research purpose: This research aimed to investigate whether the Dutch Work Addiction Scale (DUWAS-10) proves to be a valid and reliable instrument within the South African banking context.

Motivation for the study: Currently, no workaholism scale has been validated within the South African banking context. A valid and reliable instrument is therefore required to determine the relationship between workaholism and organisational outcomes within the South African context, and for future studies of the phenomenon.

Research design, approach and method: A quantitative research approach was utilised to determine the psychometric properties of the Dutch Work Addiction Scale (DUWAS-10). Specifically, a cross-sectional design was implemented. The sample comprised employees working within a large banking organisation ($N = 345$).

Main findings: The results indicated that the DUWAS-10 could not be confirmed as a two-factor structure, namely *working excessively* and *working compulsively*, due to problematic discriminant validity. However, the revised one-factor structure showed acceptable fit to the data. Furthermore, the results showed that the workaholism construct correlated positively and practically significantly with work overload and work hours. Lastly, the results showed that workaholism had a negative predictive relationship with work engagement and organisational commitment, as well as a positive predictive relationship with burnout.

Practical/Managerial implications: Workaholism can no longer be ignored, or considered a positive employee attribute, since the results indicate how it can affect work engagement, burnout and organisational commitment levels of South African employees.

Contribution/Value-add: This study provided evidence with regard to the psychometric properties of the Dutch Work Addiction Scale (DUWAS-10). The study also contributed to the limited information available concerning the relationship between workaholism and organisational outcomes in South Africa, and by providing a reliable and valid scale for pursuing further research in this area.

Keywords: Validation, workaholism, workaholic, work addicts, work engagement, organisational commitment, burnout, work hours, work overload, banking industry.

Introduction

Society has different perceptions regarding the value and consequences of working hard (Van Beek, Taris & Schaufeli, 2011). Some consider time to be money and are determined to use it well; ultimately managing, investing and using time in a productive manner (Gini, 1998). Furthermore, individuals tend to devote a significant amount of time on work activities, yet some individuals allocate more time to work than others (Van Wijhe, Peeters & Schaufeli, 2014). There are several reasons why people work hard, but in some cases individuals are motivated by a compulsive inner drive to work excessively, which is referred to as workaholism (Van Wijhe et al., 2014). Workaholism is evident when employees over-commit their personal resources (i.e. time and energy) to their job (Snir & Harpaz, 2006). Thus, workaholics are overly involved in their work and struggle to detach themselves from work due to their internal compulsion to work extremely hard (Bakker, Demerouti, Oerlemans & Sonnentag, 2013).

However, due to the excessive amount of time and energy spent on work activities, workaholics have insufficient opportunities to recover from their expended efforts, ultimately resulting in exhaustion, both emotionally and cognitively (Shimazu & Schaufeli, 2009). Hence workaholism has serious implications for employee health and well-being as it drains employee resources to the point of exhaustion (Van Wijhe et al., 2014), which is considered to be the core component of burnout (Schaufeli & Taris, 2005). Workaholism is a relevant and applicable phenomenon in modern society, yet there is a lack of scientific knowledge concerning workaholism, especially within the South African context (Mostert, Peeters & Rost, 2011). Furthermore, research has been hindered by a lack of validated measures (Andreassen, Griffiths, Hetland & Pallesen, 2012; Douglas & Morris, 2006). Therefore this study aims at validating the Dutch Work Addiction Scale (DUWAS-10) within the South African context to assist future researchers to pursue quality research regarding the concept and its implication.

Since the term workaholism was devised, more than four decades ago, the concept received considerable attention, both in the general public and amongst professional practitioners (Douglas & Morris, 2006). However, irrespective of the popularity of the concept it is apparent that little empirical investigations have been conducted concerning it (Andreassen, Hetland & Pallesen, 2010). As a result, clarity regarding the definition, conceptualisation and

measurement of the construct is lacking, which has led to diverse and conflicting opinions about whether or not the condition is desirable (Andreassen & Pallesen, 2013; Clark, Michel, Zhdanova, Pui & Baltes, 2014; McMillan, O’Driscoll & Brady, 2004). Nevertheless, the majority of empirical studies reinforce the notion that workaholism is mainly related to negative outcomes for both the individual and the organisation (Burke, 2004; Douglas & Morris, 2006; McMillan & O’Driscoll, 2004; Mudrack, 2004; Van Wijhe, Peeters, Schaufeli & Van den Hout 2011; Van Beek, Hu, Schaufeli, Taris & Schreurs, 2012; Van Beek, Taris, Schaufeli & Brenninkmeier, 2014). Specifically, previous research has indicated that workaholism adversely affects organisational outcomes such as: work engagement, organisational commitment and work-life conflict - all of which have observed and unobserved cost implications for organisations (Bakker, Demerouti & Burke, 2009; Bakker et al., 2013; McMillan et al., 2004; Johnstone & Johnston, 2005; Taris et al., 2006;).

Despite the apparent destructive nature of workaholism, it is frequently considered an “acceptable addiction” and regarded as valuable behaviour by some employers (Fry, Matherly & Vitucci, 2006). Therefore, this addiction is appreciated and encouraged by some elements of society because these employees are seen as productive and that they produce results (Gini, 1998). However, organisations fail to notice the potentially fatal syndrome - “*karoshi*” (Kanai, 2009). The concept *karoshi*, more commonly known as “death from overwork”, is a popular term within Japanese culture, which refers to individuals’ experiencing health problems due to long working hours, which can lead to permanent disability or even death (Herbig & Palumbo, 1994; Iwasaki, Takahshi & Nakata, 2006). It is therefore not unknown that long working hours can indeed deteriorate employee health (Kanai, 2009). This is in line with the health impairment process of the job demands-resources (JD-R) model which states that work overload results in an erosion of employee energetic capacity, which ultimately leads to poor health (both psychological and physical) and the subsequent impairment of employee performance (Bakker, Demerouti & Sanz-Vergel, 2014).

In the context of the effort-recovery model (Van Hooff, Geurts, Kompier & Taris, 2007), workaholics become so immersed in their work due to their inner drive to work excessively that they struggle to detach themselves from it, ultimately neglecting their need for recovery (Bakker et al., 2013). Effort expenditure at work is related to acute load reactions, which consist of short-term physiological and psychological costs (Meijman & Mulder, 1998).

Under optimal circumstances, these costs are manageable if the individuals decrease their effort expenditure after work-hours and over weekends to facilitate recovery before the next working day/week (Taris, Van Beek & Schaufeli, 2010). However, workaholics do not engage in these opportunities to recover due to the excessive nature of working, causing an accumulation of negative load reactions, which increases the probability of long-lasting and irreversible conditions (Taris et al., 2006).

Previous studies have determined the relationship between workaholism and several organisational outcomes, including a negative relationship with work engagement (Schaufeli, Taris & Van Rhenen, 2008), a negative and positive relationship with organisational commitment (Burke, Richardsen & Mortinussen, 2004; Douglas & Morris, 2006; Liang & Chu, 2009) and a positive relationship with burnout (McMillan & O'Driscoll, 2004). Nevertheless, these relationships were only confirmed in other contexts and the purpose of the current study was to determine the relationships between workaholism and the aforementioned organisational outcomes within the South African context. Therefore it was considered necessary and timely to validate a workaholism scale, more specifically the Dutch Work Addiction Scale (DUWAS-10), within the South African context to be able to establish the relationship between workaholism and other organisational outcomes, and lay the foundation for future research on the topic.

Literature review

Workaholism

Oates (1971) described workaholism as a compulsion or uncontrollable need that is experienced by individuals to work continuously, whereas Schaufeli, Shimazu and Taris (2009c) referred to workaholism as an addiction found in individuals that are inclined to work extremely hard and are preoccupied with their career, which results in them working in a compulsive manner. The essential elements of workaholism comprise personal reluctance of individuals to disengage from work and their tendency to persistently think about work (McMillan, O'Driscoll & Burke, 2003). Thus workaholism can be categorised into two general dimensions; namely working in an *excessive* and a *compulsive* manner (Del Líbano, Llorens, Salanova & Schaufeli, 2010).

Specifically, workaholics have the tendency to work in a compulsive manner since they are preoccupied with their career, ultimately causing them to continuously think about work even when they are not actively busy with work activities (Shimazu, Demerouti, Bakker, Shimada & Kawakami, 2011). This is a symptom of their irresistible inner drive to be involved in work-related activities – usually referred to as the cognitive dimension of workaholism (Snir & Harpaz, 2006). Furthermore, workaholics are also inclined to work in an excessive manner, which emphasises the inordinate time they allocate to work activities, ultimately working beyond organisational and economic requirements - this propensity is more commonly known as the behavioural dimension of workaholism (Van Wijhe et al., 2011). Both the cognitive and behavioural dimension need to be present for the behaviour to be considered work addiction (Schaufeli, Bakker, Van der Heijden & Prins, 2009a).

The underlying motivation that determines workaholic behaviour can be more clearly understood from the perspective of the self-determination theory (SDT; Ryan & Deci, 2000). According to SDT, “an understanding of human motivation requires a consideration of innate psychological needs for autonomy, competence and relatedness” (Ryan & Deci, 2000, p. 69). Firstly, *autonomy* refers to the need of individuals to control their own performance and experience supremacy at work because of self-determined behaviour (Andreassen et al., 2010). Secondly, *competence* reflects the need of individuals to direct their energy towards work for the purpose of completing tasks effectively and experiencing accomplishment (Van den Broeck et al., 2011). Thirdly, *relatedness* specifies the need of individuals to have meaningful associations with other people (Van Beek et al., 2012). The theory stipulates that these three motives drive the behaviour of individuals to fulfil their basic needs (Ryan & Deci, 2000). The behavioural pattern of workaholics can therefore be understood in terms of basic need satisfaction, i.e. if an individual feels incompetent at work, he/she could possibly work excessively to make themselves feel more competent (Andreassen et al., 2010). The SDT is also related to the workaholism triad of Spence and Robbins (1992), which reflects three workaholism components, namely *work involvement* (e.g. devotes spare time to work-related activities); *drive* (e.g. even when work is not satisfying they feel forced to work hard); and *enjoyment of work* (e.g. they do much more than what is required simply because they enjoy it). Therefore, the internal compulsion (e.g. *drive*) individuals experience with their career could be associated with basic needs (i.e. competence, autonomy and relatedness) which are unsatisfied (Kets de Vries, 2005). The compulsion or drive of individuals is thus

considered to be inordinate attempts to fulfil these basic unmet needs (Andreassen et al, 2010).

The development, validity and reliability of the DUWAS-10

Schaufeli et al. (2009c) developed the revised Dutch Work Addiction Scale (DUWAS-10). The development process of the DUWAS-10 comprised construct conceptualisation, item adaptation (merging two existing workaholism scales), evaluation and refinement. The items of the DUWAS-10 were grouped into two dimensions, namely *working excessively* and *working compulsively*. The items were adapted and merged from the Work addiction Risk Test (WART; Robinson, 1999) and the Workaholism Battery (Taris, Schaufeli & Verhoeven, 2005). The items of DUWAS-10 primarily aimed at measuring the underlying motivation of individuals to endure hard work as well as the compulsiveness of excessive work behaviour (Schaufeli et al., 2009c).

Schaufeli et al. (2009c) used two independent explorative and confirmatory samples from the Netherlands ($N = 7549$) and Japan ($N = 3311$), which included participants from various occupational groups. The samples were specifically selected based on their contrary number of working hours and the value attached to work (Schaufeli et al., 2009c). In the first step an exploratory factor analyses (EFA) was completed and three factors emerged with eigenvalues larger than one. Apart from the expected *working excessively* (WE) and *working compulsively* (WC) factors, a third factor emerged with three items loading on it. Further evaluation was deemed necessary, after which two overlapping items were removed. A second EFA was completed and confirmed an unambiguous two-factor structure, i.e. WE and WC.

Hypothesis 1: Workaholism comprises a two-factor structure (consisting of working excessively and working compulsively).

According to Nunnally and Bernstein (1994), Cronbach's alpha should ideally be larger than 0.70 to present sufficient internal consistency (reliability). The DUWAS-10 presented acceptable reliability scores in both the Dutch and Japanese sample, which indicated high levels of internal consistency (Schaufeli et al., 2009c). However, the *working compulsively*

(WC) scale presented a slightly lower, but considered acceptable, value ($\alpha = .68$) in the Japanese sample (Schaufeli et al., 2009c).

Hypothesis 2: The workaholism construct(s) will present acceptable reliability coefficients.

Workaholism, work overload and total work hours

Kanai and Wakabayashi (2001) found a strong positive relationship between workaholism and job demands, such as work overload. Workaholics are aware of their excessive workload, yet unable to control their compulsion to work due to the anxiety experienced when they are away from work (Scott, Moore & Miceli, 1997). The above-mentioned findings are supported by Schaufeli, Taris and Bakker (2006b) who indicate that workaholism is positively linked to numerous indicators of overload, more specifically they work longer hours than their colleagues, continue to work at home and even work on holiday and during weekends. This is also in line with the *work involvement* component of Spence and Robbins (1992)'s workaholic triad, which specifies that workaholics is characterised by a tendency to work anytime at any place. Workaholism is therefore expected to show convergent validity with work overload.

Hypothesis 3: There is a positive relationship between workaholism and work overload.

As mentioned, workaholics have an uncontrollable inner drive to work persistently and therefore devote disproportionate amounts of time to work-related activities (Bakker et al., 2013). Therefore long working hours is considered to be a critical component of workaholism (Ng, Sorenson & Feldman, 2007). Workaholics are inclined to allocate much more time to work than others and they work beyond what is expected of them in terms of normal working hours (Schaufeli et al., 2006b). Subsequently they are inclined to create more work for themselves because they refuse to delegate tasks to others and they tend to make projects more complex than is required - subsequently increasing their own job demands even more (Schaufeli et al., 2008). Similarly, Mudrack (2004) found that workaholics tend to take responsibility for the work of other individuals by attempting to solve problems which co-workers created themselves; continuously examining the work of colleagues and feeling

obligated to respond to dilemmas. They are also inclined to focus on ritualised activities such as continuously re-checking completed work, which is quite time-consuming (Mudrack, 2004).

Hypothesis 4: There is a positive relationship between workaholism and total work hours.

However, although it is expected that workaholism should be correlated with work overload and total work hours, it should also be statistically distinguishable from these concepts as a stand-alone construct. Therefore workaholism should show acceptable discriminant validity from similar, yet dissimilar, concepts (e.g. work overload and work hours), i.e. the correlation between workaholism and these similar concepts should be sufficiently large, but below the cut-off point for problematic discriminant validity ($r < 0.85$) as suggested by Brown (2015).

Hypothesis 5: Workaholism shows acceptable discriminant validity.

Work engagement and workaholism

The relationship between workaholism and work engagement suggests that workaholics are inclined to work because of an uncontrollable internal compulsion (introjected motivation) and irrational feelings that they *should* be working - therefore they are not engaged in work because of their internal passion (intrinsic motivation) for work (Clark et al., 2014), but due to a compulsion. This is supported by Gorgievski and Bakker (2010) who differentiate between two forms of passion for work; (1) work engagement, a “harmonious passion” for work; and (2) workaholism, an “obsessive passion” for work. Harmonious passion suggests that an individual has the ability to control the activity, despite the importance of it (Vallerand, 2008). However, in terms of the obsessive passion, the individual is controlled by the activity, which eventually occupies an inordinate amount of time in the individual’s life and causes disruptions in other realms of life (Vallerand, 2008). Work engagement and workaholism are therefore considered to be opposite poles (Hu et al., 2014).

In addition, workaholics are continuously exposed to high workloads, in combination with insufficient opportunities for recovery which continue for extended periods of time, leading to an accumulation of negative load responses (e.g. exhaustion and a lack of work

engagement), sooner or later becoming irreversible (Taris et al., 2010). Consequently, workaholics tend to experience a decline in their overall well-being (Van Wijhe et al., 2011), which leads towards the impairment of energy levels (e.g. vigour) and therefore an overall decrease in work engagement levels. Indeed, Andreassen, Ursin and Eriksen (2007) found that workaholism has a negative relationship with work engagement. This study expects a similar negative relationship.

Hypothesis 6: Workaholism has a negative predictive relationship to work engagement.

Organisational commitment and workaholism

Organisational commitment includes three different forms of commitment, namely affective commitment (AC), normative commitment (NC) and continuance commitment (CC) (Meyer & Allen, 1991). AC refers to the emotional attachment to the organisation, the identification with the organisation and the involvement in the organisation felt by employees; whereas NC denotes the obligation felt by the employee to stay with the organisation; and CC refers to the financial implications associated with leaving (Meyer et al., 2012). This study only focused on the affective commitment dimension, which represents the employees' degree of emotional attachment towards the organisation (Yew, 2007). The relationship between workaholism and organisational commitment states that a demanding work environment, in combination with an organisational culture that values and emphasises work pressure is inclined to instil workaholic behaviour (Van Wijhe et al., 2014). In addition, the previously mentioned employees tend to exhibit behaviours of low work engagement and a higher intention to leave the organisation, which could also indicate lower organisational commitment (Clark et al., 2014). However, there is inconsistency in the literature regarding this argument; Douglas and Morris (2006) specify that workaholism has a negative relationship with organisational commitment, whereas Schaufeli et al. (2008) found that workaholism is positively related to organisational commitment. This current study also argues that workaholism will be negatively related to organisational commitment.

Hypothesis 7: Workaholism has a negative predictive relationship to organisational commitment.

Burnout and workaholism

Burnout is considered a three dimensional syndrome which involves high levels of *exhaustion* (continuous fatigue due to the depletion of emotional resources), *cynicism* (the feeling of pessimism and detachment towards one's organisation and co-workers) and *inefficacy* (unsuccessful work behaviour characterised by a decrease in effectiveness and personal accomplishments) (Maslach, Schaufeli & Leiter, 2001). However, the core components of burnout have been argued to be exhaustion and cynicism (Schaufeli & Taris, 2005), operationalised as a one-factor (De Beer & Bianchi, 2015), and is used as such in this study. The relationship between workaholism and burnout has been studied in previous research and several studies have found that workaholism is positively related to burnout (Clark et al., 2014; Molino, Bakker & Ghislieri, 2015; Stoeber & Damian, 2015). In addition, workaholics are inclined to attempt to complete more work than their capacity allows, both mental and physical capacity, ultimately causing them to feel drained and fatigued (Van Wijhe et al., 2014). This makes sense considering that workaholics devote the majority of their time to work-related activities, which diminish their energetic resources, leaving them exhausted (a core component of burnout) and eventually burned out (Schaufeli et al., 2009a). These findings are consistent with past studies which indicated that workaholics have a higher risk propensity for experienced burnout (e.g. Andreassen et al., 2007; Taris et al., 2005; Taris, Geurts, Schaufeli, Blonk & Lagerveld, 2008).

Hypothesis 8: Workaholism has a positive predictive relationship to burnout.

The remainder of the article presents the research methodology, the research results that were obtained and a discussion of the results in combination with established literature - as well as recommendations and implications both for organisations and future researchers.

Research design

Research approach

A quantitative research approach was utilised for purposes of the study, to explain phenomena by means of collecting data to answer research questions with the assistance of

statistical techniques (De Vos, Strydom, Fouché & Delpont, 2011). Specifically, a cross-sectional design was employed to describe the differences of a group of individuals at a specific point in time (De Vos et al., 2011).

Research method

Research participants

Convenience sampling was used to collect data for a sample which included different South African employees from a large banking institution ($N = 345$). The banking industry was an applicable target population because of the nature of the workplace environment (i.e. long hours, fast-paced and a high pressure, competitive, work environment); workaholic behaviour was therefore expected to be present among banking employees (Devi, 2012).

Table 1 presents a breakdown of the participants comprising the sample.

Table 1

Characteristics of the participants ($N = 345$)

Item	Category	Frequency	Percentage (%)
Gender	Female	210	60.90
	Male	120	34.80
	Missing values	15	4.30
Ethnicity	Black people	151	43.80
	White people	93	27.00
	Coloured people	36	11.00
	Indian people	42	12.80
	Asian people	3	0.90
	Other people	2	0.60
	Missing values	18	5.20
Household	Single	87	25.20
	Married or living with a partner	182	52.80
	Divorced or separated	21	6.10

	Living with parents	40	11.60
	Widowed	1	0.30
	Missing values	14	4.10
Education	Grade 12	104	30.10
	Degree (Graduate or Honours)	107	31.00
	Postgraduate degree	29	8.40
	Diploma	86	24.90
	Missing values	19	5.50
Language	Afrikaans	71	20.60
	English	119	34.50
	Sepedi	25	7.20
	Sesotho	19	5.50
	Setswana	31	9.00
	siSwati	3	0.90
	Tshivenda	11	3.20
	isiNdebele	0	0.00
	isiXhosa	15	4.30
	isiZulu	28	8.10
	isiTsonga	6	1.70
	Other	3	0.90
	Missing values	14	4.10
Employment	Less than 1 year	33	9.60
	1-5 years	163	47.20
	5-10 years	72	20.90
	10-15 years	27	7.80
	15-20 years	17	4.90
	20-25 years	9	2.60
	More than 25 years	10	2.90
	Missing values	14	4.10

The characteristics of the participants are displayed in Table 1. The mean age of the sample was shown to be 35.17 years ($SD = 9.79$). The majority ($n = 210$; 60.90%) of the sample comprised female employees and the overall sample group consisted mostly of black ($n = 151$; 43.80%) and white ($n = 93$; 27.00%) employees. Furthermore, participants that were single (25.20%) and married or living with a partner (52.80%) were the main contributors of the sample and the majority of the respondents either spoke English (34.50%) or Afrikaans (20.60%). In terms of education, most of the employees had obtained a university degree (39.40%), followed by a grade 12 certificate (30.10%). Most of the participants were employed with the organisation for 1-5 years ($n = 163$; 47.20%) and 5-10 years ($n = 72$; 20.90%).

Measuring instruments

Biographical questionnaire: A biographical questionnaire was utilised to determine the demographic characteristics (e.g. age, gender, marital status, length of employment and work hours) of the research participants to provide a comprehensive description of the study population.

Workaholism: The Dutch Work Addiction Scale (DUWAS-10; English version) was used to measure workaholism (Schaufeli et al., 2009c). The scale included a total of 10 items with two 5-item subscales measuring *working excessively* (e.g. “I spend more time working than on socializing with friends, on hobbies, or on leisure activities”) and *working compulsively* (e.g. “I feel obliged to work hard, even when it is not enjoyable”). The DUWAS-10 is scored on a four-point Likert-type scale, ranging from 1 (Almost never) to 4 (Almost always). The Cronbach’s alpha coefficients for these sub-scales have varied between 0.80 and 0.86 (Del Líbano et al., 2010).

Work engagement: The 9-item Utrecht Work Engagement Scale (UWES-9) was utilised to measure the participants’ levels of engagement (Schaufeli, Bakker & Salanova, 2006a). The UWES is scored on a seven-point frequency scale, ranging from 0 (Never) to 6 (Every day). Work engagement was constituted as a single latent variable (Fong & Ng, 2012), measured by 9 items from its three components: *Vigour* (3 items; e.g. “When I get up in the morning, I feel like going to work”), *Dedication* (3 items; e.g. “I find the work that I do full of meaning and purpose”) and *Absorption* (3 items; e.g. “I am immersed in my work”). The Cronbach’s

alpha coefficients for these sub-scales have varied acceptably between 0.85 and 0.92 (De Bruin & Henn, 2013).

Organisational commitment: The Organisational Commitment Scale (OCS) of Allen and Meyer (1990) was used to measure the participants' affective commitment levels. Therefore, affective commitment was measured with 8 items (e.g. "I would be very happy to spend the rest of my career with this organisation"). The OCS is scored on a seven-point Likert-type scale, ranging from 1 (Strongly disagree) to 7 (Strongly agree). The Cronbach's alpha coefficients for the OCS have varied between 0.73 and 0.85 (Allen & Meyer, 1997).

Burnout: The Maslach Burnout Inventory (MBI; Maslach & Jackson, 1981) was utilised to measure the participants' levels of burnout. The core components of burnout were measured for this study: *Emotional exhaustion* (9 items; e.g. "I feel used up at the end of the workday") and *Depersonalisation* (5 items; e.g. "I don't really care what happens to some recipients") as a one-factor structure (De Beer & Bianchi, 2015). The MBI is scored on a seven-point frequency scale, ranging from 0 (Never) to 6 (Always). The reported Cronbach's alpha for these sub-scales varied between 0.72 and 0.89 (Maslach & Jackson, 1981). The MBI has also been implemented in South Africa with acceptable Cronbach's alpha coefficients (e.g. Du Plooy & Roodt, 2010; Storm & Rothmann, 2003).

Work overload: Work overload was measured by the four-item scale which was developed by Sverke, Hellgren and Öhrming (1999), an example of which is an item: "My work contains elements that are too demanding". The items were scored on a five-point Likert-type scale, ranging from 1 (Strongly disagree) to 5 (Strongly agree), where a high score represents a higher workload. A Cronbach's reliability coefficient of 0.77 has been obtained for this scale in South Africa (Pienaar, Sieberhagen & Mostert, 2007).

Total work hours: This variable was measured as a continuous sum-scored variable indicated by two items to assess the total number of working hours *per week*. The items that were included: "How many hours do you work during a standard working week?" and "How many hours do you spend working at home (beyond normal working hours and flexitime) during a standard week?" were added together as a final continuous variable.

Research procedure

Ethical clearance was obtained from the North-West University's Faculty Research Committee for this study (EMS15/06/18-01/01). Permission to collect data was then obtained from a large South African bank where booklets were distributed amongst the employees. Participants were given a day to complete the questionnaire before it was collected. 400 booklets were printed and distributed among three departments. A total of 345 booklets were collected from the organisation, indicating a response rate of 86%. The data was then captured and screened for any errors before statistical analysis commenced.

Statistical analysis

Structural equation modelling (SEM) methods were implemented in Mplus 7.31 (Muthén & Muthén, 2015). The measurement model was formed by means of confirmatory factor analysis (CFA) (Brown, 2015). The weighted least squares (mean- and variance adjusted) estimation algorithm (WLSMV; Muthén, du Toit, & Spisic, 1997) was used to estimate the parameters of the SEM models. WLSMV is the most appropriate and indicated technique as the study variables were of ordered categorical nature including four-point scales (e.g. workaholism – the main scale of interest to this study) and research has shown that WLSMV provides more accurate results compared to maximum likelihood (ML) implementations which consider the variables to be continuous - underestimating the true relationships between indicators (Flora & Curran, 2004; Liang & Yang, 2014). The most practical way of describing the conceptual difference between the two estimation methods is by considering that the distance between item response scales (Never, Sometimes, Often, and Always) are not exactly the same (as is ML's assumption), but different (as assumed in WLSMV). To this end WLSMV computes polychoric correlations between the categorically ordered indicators and performs more efficiently compared to even Bayesian methods in terms of robustness and assumptions of normality of data on samples of 200 participants and above (Holgado-Tello, Chacón-Moscoso, Barbero-García, & Vila-Abad, 2010; Liang & Yang, 2014). For SEM with WLSMV the standard traditional fit indices are still used to consider model fit to the data, specifically the following fit indices were considered: The comparative fit index (CFI), the Tucker-Lewis index (TLI), and the root mean square error of approximation (RMSEA). For the CFI and TLI values of 0.90 and above are considered adequate, and for the RMSEA values of 0.08 and below (Van de Schoot, Lugtig, & Hox, 2012). These indices

assisted in answering H_1 – the fit of the factor structures to the data. Furthermore, Cronbach’s alpha coefficients (α) were calculated for all of the study variables in the final measurement model as the indicator of reliability (internal consistency) to answer H_2 .

Even though polychoric correlations are computed between item indicators with WLSMV, the resultant latent variables are still continuous values and a normal Pearson correlation matrix was generated for these latent variables. Practical effect sizes for correlations were considered medium ($r = 0.30-0.49$) and large effects ($r = 0.50-0.84$) (Cohen, 1992) – and assisted in answering the hypotheses regarding the convergent validity of the workaholism scale (H_2-H_3). Correlations that were excessive ($r = 0.85$ and above) would necessitate further investigations for discriminant validity (Brown, 2015). Discriminant validity was assessed with the method described by Farrell (2010), which indicates that the average variance extracted (AVE) by two individual latent variables being compared should be larger than the shared variance between those two variables – these considerations were imported to answer H_5 .

Finally, to specify the structural model and investigate the predictive validity of the workaholism scale, regressions were added to the final CFA model in accordance with the predictive research hypotheses (H_6-H_8). The fit of the structural model would also be considered with the fit indices described for the CFA (measurement) model. Thus, the standardised beta coefficients (β) were important to answer H_6-H_8 in terms of their size, direction, as well as statistical significance. Statistical significance for all parameters in the model was set at the traditional 95% level ($p < 0.05$).

Results

Measurement models: Fit and factor loadings

The model was specified and all indicators were set as categorical data except for the total work hours which remained a continuous covariate in the model. Results of the CFA revealed that the measurement model was an adequate fit to the data (CFI = 0.90; TLI = 0.90; RMSEA = 0.07). However, the correlation between working excessively and working compulsively was 0.89 – indicating problematic discriminant validity, and Farrell’s test for discriminant validity showed that the shared variance between the two constructs was indeed larger than

the AVE extracted. This result necessitated that H_1 be rejected – as the two-factor structure did not show discriminant validity. Therefore workaholism had to be operationalised as a one-factor structure for the remainder of the study. It is also important to note that the latent variable did not explain a statistically significant amount of variance in item three for working compulsively (‘I feel that there is something inside me that drives me to work hard’; $p = 0.66$). This was also the case for item three in the one-factor model ($p = 0.17$), and this item was therefore excluded from further analysis (see Table 2 for factor loadings of the final measurement model). The fit of the revised measurement model revealed acceptable fit to the data (CFI = 0.92; TLI = 0.91; RMSEA = 0.06) – and the study was continued with the one-factor structure for workaholism.

Table 2 below presents the factor loadings for the DUWAS items.

Table 2

Standardised loadings for workaholism as a one-factor model

Factor	Item	Loading	S.E.	<i>p</i>
Workaholism	compulse1	0.66	0.05	0.001
	compulse2	0.92	0.04	0.001
	compulse4	0.37	0.06	0.001
	compulse5	0.30	0.06	0.001
	excess1	0.72	0.05	0.001
	excess2	0.49	0.05	0.001
	excess3	0.60	0.05	0.001
	excess4	0.58	0.04	0.001
	excess5	0.54	0.05	0.001

Notes: S.E. = Standard error; All p -values < 0.001

All of the items loaded significantly on the workaholism factor ($p < 0.001$). Specifically, the highest factor loading was shown to be for item compulse2 ($\lambda = 0.92$, S.E. = 0.04; ‘I feel obliged to work hard, even when it’s not enjoyable’), and the lowest loading was for item compulse5 ($\lambda = 0.30$, S.E. = 0.06; ‘I find myself doing two or three things at one time such as eating and writing a memo, while talking on the telephone’). Furthermore, all of the standard errors were relatively small, indicating the accuracy of the estimation process.

Reliability coefficients and correlation matrix for the study variables

Cronbach's alpha reliability coefficients were calculated as indicators of internal consistency for the variables and are given on the diagonal of the correlation matrix in brackets below.

Table 3 below presents the correlation matrix for the study variables.

Table 3

Reliabilities and correlation matrix for the latent variables

Variables	1	2	3	4	5	6
1. Workaholism	(0.78)					
2. Work overload	0.55 ^{*b}	(0.70)				
3. Burnout	0.53 ^{*b}	0.66 ^{*b}	(0.89)			
4. Commitment	-0.30 ^{*a}	-0.48 ^{*a}	-0.65 ^{*b}	(0.76)		
5. Work engagement	-0.29 [*]	-0.38 ^{*a}	-0.67 ^{*b}	0.69 ^{*b}	(0.85)	
6. Total work hours	0.37 ^{*a}	0.18	0.13 [*]	-0.03	0.09	n/a

Notes: Cronbach's reliability coefficients in brackets on the diagonal; * = correlation statistically significant $p < 0.01$; a = medium practical effect; b = large practical effect; n/a = not applicable

The Cronbach's reliability coefficients were all above the cut-off threshold ($\alpha \geq 0.70$), indicating acceptable internal consistency. Specifically, this was the case for the workaholism latent factor ($\alpha = 0.78$) - supporting H_2 . The correlation matrix showed that workaholism was positively correlated with both work overload ($r = 0.55$; large practical effect) and total work hours ($r = 0.37$; medium practical effect) – supporting H_3 and H_4 - and provided evidence for convergent validity. Furthermore, workaholism was negatively statistically significantly correlated to work engagement with a borderline medium practical effect size ($r = -0.29$), and correlated positively with burnout with a large practical effect size ($r = 0.67$). Therefore, workaholism was negatively correlated with positive outcomes and positively correlated with negative outcomes, as expected.

The correlations between all of the variables were all below the 0.85 cut-off suggested for concerns regarding discriminant validity of variables (Brown, 2015). However, an investigation of the AVE by all variables and the shared variance of the study variables were conducted to be thorough. As Table 4 below displays, the shared variance between workaholism and the other variables was not larger than the AVE (in brackets on the

diagonal) by each individually – suggesting sufficient and acceptable discriminant validity for the workaholism construct and supported H_5 .

Table 4

The shared variances between variables and the AVE on the diagonal in brackets

Variables	1	2	3	4	5
1. Workaholism	(0.44)				
2. Work overload	0.26	(0.51)			
3. Burnout	0.30	0.40	(0.72)		
4. Commitment	-0.13	-0.22	-0.36	(0.43)	
5. Work engagement	-0.10	-0.23	-0.49	0.39	(0.75)

Note: All values statistically significant.

Structural model fit and regression results

In accordance with the research hypotheses (H_6 - H_8), regression paths were added to the final measurement model. The structural model was considered an acceptable fit to the data (CFI = 0.90; TLI = 0.90; RMSEA = 0.07). The results of the regressions are given in Table 5 below.

Table 5

Regression results for the structural model

Structural path	β	S.E.	p	Result
Workaholism → Work engagement	-0.29	0.06	0.001	Significant
Workaholism → Organisational commitment	-0.42	0.05	0.001	Significant
Workaholism → Burnout	0.67	0.03	0.001	Significant

Notes: β = Beta coefficient; S.E. = Standard error; p = Two-tailed statistical significance; $p < 0.001$

Workaholism had a statistically negative predictive relationship to work engagement in the sample ($\beta = -0.29$, S.E. = 0.06, $p = 0.001$; supporting H_6). Workaholism also predicted organisational commitment negatively ($\beta = -0.42$, S.E. = 0.05, $p = 0.001$; supporting H_7). Finally, workaholism predicted burnout positively ($\beta = 0.67$, S.E. = 0.03, $p = 0.001$; supporting H_8). Therefore, collectively, all of the predictive validity hypotheses (H_5 - H_8) were supported. Figure 1 presents the predictive regression relations between workaholism and the organisational outcomes (i.e. work engagement, organisational commitment and burnout).

Figure 1 below presents a visual structural model with regression results.

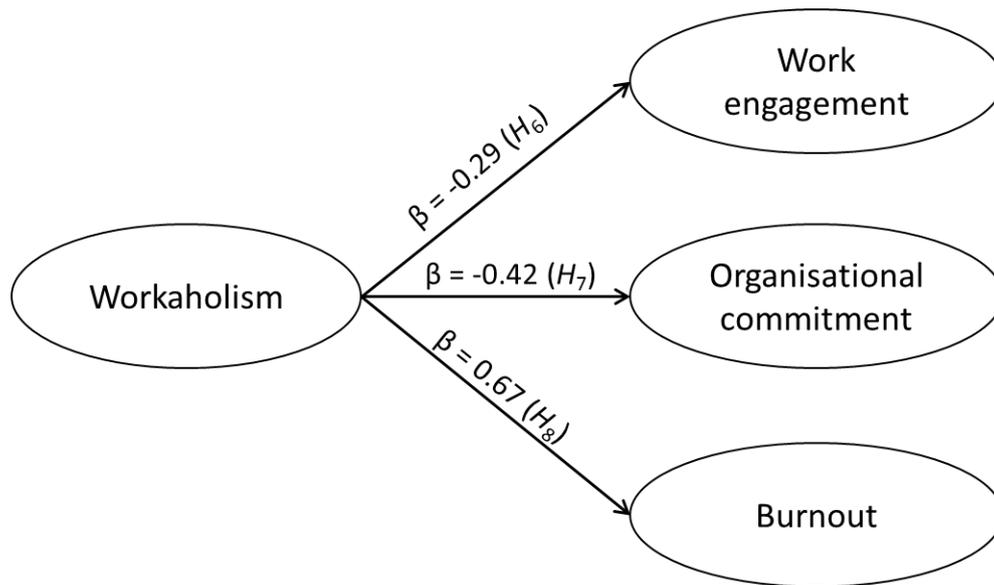


Figure 1. *Structural regression results for the predictive hypotheses*

Discussion

Outline of the results

The study aimed at validating a workaholism scale (the DUWAS-10) by investigating its factor structure, reliability, convergent validity, discriminant validity and predictive validity with the following variables: workaholism, work overload, work hours and several organisational outcomes (i.e. work engagement, organisational commitment and burnout).

Firstly, the study intended to confirm that the workaholism scale comprised a two-factor structure. The results of the CFA revealed that the proposed two-factor measurement model presented a good fit to the data. However, upon closer inspection the correlation between working excessively and working compulsively showed problematic discriminant validity (Brown, 2015). Specifically, the shared variance between the two proposed components was larger than the average variance extracted by each component, further indicating problematic discriminant validity (Farrell, 2010). Hypothesis 1 (H_1) was therefore rejected and workaholism had to be operationalised as a one-factor structure, which also fitted the data adequately – isolating and integrating the explained variance by the working excessively and working compulsively items into a single latent variable.

In terms of reliability, Cronbach's alpha coefficients were calculated to ensure that the study variables were accurately and consistently measured. The results indicated that the Cronbach's alpha coefficients were all above the cut-off threshold of 0.70. Specifically, the final one-factor workaholism construct attained a satisfactory value ($\alpha = 0.78$) – presenting acceptable internal consistency. Hypothesis 2 (H_2) was thus confirmed.

Then, convergent validity was established by investigating whether workaholism correlates sufficiently with other constructs with which it theoretically should correlate (Foxcroft & Roodt, 2009), i.e. the degree of convergence between workaholism, work overload and work hours. As expected, work overload and work hours were found to have acceptable, positive and practically significant relationships with workaholism. Specifically, the results indicated a significant positive correlation with work overload (large effect size), supporting hypothesis 3 (H_3). This is in line with what Shimazu and Schaufeli (2009) found, namely that workaholism is related to increased levels of job demands such as work overload. This can be explained by the research of Taris et al. (2005), which indicated that workaholics are inclined to increase their workload themselves by making simple tasks much more complicated, and as a result they perceive to have a higher workload, ultimately increasing work hours.

Workaholism was also found to be positively, practically and significantly related to work hours (total per week) indicating that as workaholism increases so too does total work hours. This finding is consistent with past research, which also found a positive relation between workaholism and working beyond normal working hours (e.g. Bonebright, Clay & Ankenmann, 2000; Shimazu & Schaufeli, 2009). This is supported by self-determination theory (STD) which recognises that employees' need for competence reinforces longer work hours, because they possibly fail to meet their high personal standards, ultimately investing more time into their work to increase their feelings of low self-worth by trying harder to attain their career goals (Van Wijhe, Schaufeli & Peeters, 2010). Similarly, Taris et al. (2005) found that workaholics spend more time on work than their colleagues, suggesting that their total working hours are inflated in comparison. Hypothesis 4 was therefore also supported.

In terms of discriminant validity, it was imperative for the established workaholism construct to constitute a variable that was not measuring the same phenomenon as other variables in the study (e.g. work overload). It was therefore postulated that workaholism would be related to work overload, burnout, organisational commitment and work engagement – but that

workaholism would be statistically distinguishable from these variables and not correlated (or overlapping) too highly. The results indicated that the correlations between all the variables were well below 0.85, suggesting sufficient and acceptable discriminant validity for the workaholism construct with the other constructs (Brown, 2015). These results provided evidence of discriminant validity and therefore supported hypothesis 5 (H_5).

Furthermore, to show predictive validity, workaholism needed to demonstrate significant regression coefficients to other constructs of theoretical and practical interest – as hypothesised. To this end, regression paths were added to the final measurement model, creating a structural model, to determine whether workaholism was a significant predictor of work engagement, organisational commitment and burnout. The results indicated that workaholism had a statistically negative predictive relation to work engagement. Research by Shimazu, Schaufeli, Kubota and Kawakami (2012) differentiates two types of working hard: workaholism (i.e. undesirable type) and work engagement (i.e. desirable type). A possible reason for the differences could be clarified by the underlying motivations for working hard; workaholics are driven by their compulsive behaviour, whereas engaged individuals are encouraged by their intrinsic motivation (Shimazu, Schaufeli, Kamiyama & Kawakami, 2015). In addition, both work engagement and workaholism is characterised by high effort (e.g. time and energy), but workaholism is related to destructive (negative) affect and work engagement to constructive (positive) affect (Shimazu & Schaufeli, 2009). Thus, workaholism and work engagement are two entirely different concepts (Shimazu & Schaufeli, 2009). This result is also in line with Schaufeli et al.'s (2008) confirmation of a negative relation between workaholism and engagement. This result provided support for Hypothesis 6 (H_6).

In terms of hypothesis 7 (H_7), results indicated a statistically negative predictive relation between workaholism and organisational commitment. This is supported by Killinger (2006) who revealed that workaholic employees work hard because they feel they *should*; feelings of guilt and anxiety are evoked if they don't work, so their work devotion has nothing to do with commitment towards their work or organisation. The affective dimension of workaholism specifically measures the emotional attachment of employees towards their organisation (Hallberg & Schaufeli, 2006). Herbach (2006) acknowledged two affective states: *positive affect* (i.e. optimistic feelings because of reward-seeking and drive) and *negative affect* (i.e. related to loss and withdrawal), which is associated with employees' organisational

attachment. Employees' affective states are directly influenced by their work environment leading to either positive or negative states, which ultimately determine work-related attitudes such as: job satisfaction, work engagement and organisational commitment (Herbach, 2006). Negative affect is stimulated through feelings of nervousness and anxiety which are characteristic of workaholics (Killinger, 2006), which in turn can explain workaholics having lower organisational commitment. Douglas and Morris (2006) also showed that workaholics experience lower job satisfaction, insufficient growth opportunities, high work pressure and a stronger intention to leave the organisation, where the latter points to poor organisational commitment. Van Beek et al. (2012) also found that workaholic employees are more dissatisfied with their careers, are less committed to their organisation and are actively looking for other jobs.

Lastly, workaholism was found to have a positive predictive relation to burnout. As mentioned above, workaholics are not motivated to work hard because they derive satisfaction from work or due to their high achievement orientation – instead they are driven by their perfectionistic nature and overly strict standards (Bakker et al., 2013). Workaholics do not only set unreasonably high standards for themselves, but also allow small margins for errors; therefore little is ever completed well enough (Taris et al., 2010). Consequently, after finalising work, they are known to re-check and redo work, initiating another cycle of excessive work activity (Stoeber & Damian, 2015). Therefore they continuously invest energy and effort towards work-related activities, ultimately draining their energy which eventually results in burnout (Molino et al., 2015). This argument is supported by the job-demands resources (JD-R) model that explains how job demands develop into job stressors (Bakker & Demerouti, 2007), and the effort-recovery model that explains how individuals are then unable to recover adequately (Taris et al., 2006). Furthermore, workaholics continuously increase their work efforts to achieve their personal goals, which expend the individual's energy, ultimately leading to burnout (Schaufeli, Bakker & van Rhenen, 2009b). The results supported hypothesis 8 (H_8).

Practical implications

The study contributed to the understanding of the measurement of workaholism in employees, given that evidence was provided which support the validity and reliability of the Dutch Work Addiction Scale (DUWAS-10), within the South African context. This scale

could assist organisations and applicable practitioners to more accurately identify workaholism among their employees and design or adapt interventions to reduce the negative effects on individuals and organisational outcomes. Therefore it is essential that organisations inform their employees about the existence of workaholism, how it originates, as well as the possible harmful consequences that it implicates. With regard to a decrease in workaholism, organisations should avoid fostering a culture where employees are rewarded for working long hours and then depicted as role models. Instead the organisation should focus on encouraging smart work (i.e. less time, less effort and similar results) and work-life balance (Shimazu & Schaufeli, 2009). Training programs, provided by the organisation which focus on specific skills training such as time management, stress management as well as personal effectiveness could also be helpful (Van Wihje et al., 2010). Lastly, to offset the effects of workaholic behaviour, employees should be encouraged to recover from work by actively detaching themselves from work activities (i.e. mentally and physically) outside of normal working hours (Molino et al., 2015).

Limitations of the study

This study is not without limitations. The purpose of presenting and discussing these limitations is to ensure the researcher's transparency regarding possible shortcomings of the study.

The first limitation of the study is that it only included employees within the banking sector, presenting a somewhat limited view of the phenomenon. Therefore future researchers should consider collecting samples from other industries and sectors to increase our understanding and the impact of workaholism. Secondly, the study utilised a cross-sectional research approach for the purpose of data collection, meaning that data was only collected at a single point in time. This design is a valuable technique for obtaining an overview of how individuals feel about and view their occupation, but this design prevents the study from definitively presenting evidence for causal conclusions regarding the predictive hypotheses (Spector, 1994). Therefore future researchers should also employ a longitudinal design to further add to the understanding of causal processes regarding the variables of interest (Taris & Kompier, 2003). Lastly, the study made use of a self-report questionnaire and people are inclined to answer personally sensitive questions in a more socially desirable manner

(Spector, 1994). Employees could have attempted to portray themselves in a more positive light, tainting the overall picture of workaholism in this industry. Future researchers should therefore utilise a mixed method design by including interviews, structured, unstructured or semi-structured, depending on the responses they wish to elicit – and perhaps objective data (if available) on, for example, total working hours.

Conclusion

The aim of the study was to validate a workaholism scale within the South African banking industry. Now that the research has been conducted, it is possible to present that the Dutch Work Addiction Scale (DUWAS-10) has demonstrated to be a valid and reliable measuring instrument. In addition, the results of the study have shown that workaholism consists of a one-factor structure, acceptable reliability coefficients and significant correlations and regressions were established between workaholism, work overload, work hours, work engagement, organisational commitment and burnout. Therefore financial institutions can no longer ignore the negative impact associated with workaholism - on the organisation in which it occurs, as well as on the individual employee. Organisations should therefore address the dysfunctional behaviour patterns of employees which influence the profitability of an organisation.

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CHAPTER 3

CONCLUSIONS, LIMITATIONS AND RECOMMENDATIONS

Conclusions, Limitations and Recommendations

This chapter presents an overview of the conclusions, limitations and recommendations of the study. The conclusions serve to describe the outcomes of the study in relation to the research objectives. Furthermore, the limitations of the study, which represent the shortcomings of the research, are discussed. Finally, recommendations are presented for organisations as well as for future researchers.

3.1 Conclusions

Empirical research on workaholism has been impeded by a lack of validated measures and disagreement concerning the conceptualization of workaholism itself (Buelens & Poelmans, 2004; Schaufeli, Bakker, Van der Heiden & Prins, 2009). Consequently basic questions of definition have not yet been addressed and measurement concerns have also been overlooked (Andreassen, Ursin & Eriksen, 2007). Pertaining to the South African context, no workaholism scale has been validated thus far, inhibiting the advancement of research within this context. The study aimed at bridging this gap by validating a workaholism scale by means of exploring the reliability and validity of the Dutch Work Addiction Scale (DUWAS-10; Schaufeli, Shimazu & Taris, 2009) within the South Africa banking industry.

As set out in chapter one, the general aim of this study was to validate a workaholism scale within the South African context by determining the reliability as well as the validity of the instrument. The research was conducted by evaluating the specific objectives, in combination with the specified hypotheses.

The general objective of the study aimed at conceptualising workaholism, work engagement, organisational commitment, work overload, work hours and burnout as set out in literature. This objective was obtained once a complete literature study had been conducted and presented in the form of a literature review in the second chapter. Specifically, workaholism as the main study variable was found to be conceptualised as occurring in employees addicted to work; consequently allocating excessive amounts of time to work-related activities and continuously thinking about work even when they are not working (Andreassen, Hetland &

Pallesen, 2010). This conceptualisation was also in line with the DUWAS-10 which measures working excessively and working compulsively.

The second objective was to determine the reliability and validity of the measuring instrument amongst a sample of banking employees - the factor structure, convergent, discriminant and predictive validity were investigated. The first step was to investigate the factor structure of the workaholism scale - it was hypothesised to comprise a two-factor structure, i.e. working excessively (WE) and working compulsively (WC). The results of the confirmatory factor analysis (CFA) showed that the measurement model was an acceptable fit to the data (CFI = 0.90; TLI = 0.90; RMSEA = 0.07). However, the correlation between WE and WC was 0.89 – signifying problematic discriminant validity. In addition, the shared variance between the constructs of interest was larger than the average variance extracted (Farrell, 2010). Therefore workaholism was operationalised as a one-factor structure, which also fitted the data well.

The next step was to establish the reliability of the best fitting factor structure. Reliability refers to the internal consistency of the scale and the validity is the extent to which an empirical instrument adequately reflects the real meaning of the measured construct by means of convergent, discriminant and predictive validity (De Vos, Strydom, Fouché & Delpont, 2011). Cronbach's alpha coefficient was calculated for the purpose of determining the reliability of the one-factor workaholism scale. The results indicated reliable values for the workaholism construct ($\alpha = 0.78$) and all of the other study variables. The workaholism scale therefore displayed acceptable internal consistency (reliability).

Next, to determine convergent validity between workaholism and other similar theoretical concepts (i.e. work overload and work hours), correlations were investigated. The purpose of evaluating convergent validity is to determine whether the scale correlates acceptably with other variables with which it should correlate theoretically (Foxcroft & Roodt, 2009). The DUWAS-10 was able to present acceptable correlations between workaholism and both work overload ($r = 0.55$) and work hours ($r = 0.37$). Specifically, positive correlations were obtained with both the constructs. This suggests that due to irresistible inner drive of workaholic employees, they are inclined to increase their own workload as they are unwilling to delegate tasks, focus on ritualised activities and feel obligated to solve the problems of their colleagues, consequently working beyond their normal work hours to complete their

workload. These results were in line with current literature (Mudrack, 2004; Ng, Sorenson & Feldman, 2007; Schaufeli, Taris & Bakker, 2006).

Although it is important for workaholism to correlate with similar constructs, it must also correlate with those constructs to such a degree as to not indicate that the exact same phenomenon was measured, i.e. discriminant validity should be evident (Foxcroft & Roodt, 2009). The results did indeed show that the correlation between workaholism and the other study variables (e.g. work overload and work engagement) were well below the cut-off point of 0.85 as presented by Brown (2015). Furthermore, the scale also demonstrated discriminant validity by showing that the shared variance between workaholism and work overload (and also all the other constructs) was not larger than the average variance extracted by the individual variable(s) which would have indicated problematic discriminant validity (Farrell, 2010).

Furthermore, the study aimed at establishing whether workaholism showed significant regression coefficients to other constructs of interest (i.e. work engagement, organisational commitment and burnout), i.e. predictive validity. To this end, regression paths were added to the final measurement model in line with the predictive hypotheses to constitute the structural model. It was anticipated that workaholism would be a negative predictor of work engagement and organisational commitment and a positive predictor of burnout. This was indeed the case. Therefore, as also shown in past research, workaholics are inclined to experience decreased levels of work engagement (Andreassan et al., 2007), less commitment towards the organisation (Douglas & Morris, 2006), as well as increased levels of burnout (Taris, Geurts, Schaufeli, Blonk & Lagerveld, 2008).

Lastly, the study aimed at presenting limitations and making recommendations for future researchers as well as organisations. These recommendations are made in the following sections to achieve the last objective of the study.

3.2 Limitations

Limitations were identified within the study. Firstly, a cross-sectional design was used for the purpose of the research and it appears to be problematic since it only collects data at one

specific point in time; consequently it does not provide definitive information concerning the direction of causal relationships (Sedgwick, 2014).

Secondly, the sample only involved employees from one sector (i.e. banking industry), since they were believed to be susceptible to the workaholism phenomenon. However, this presented a limited range of participants for the research. Therefore results need to be generalised with caution since the sample is not representative of the entire working population of South Africa.

Thirdly, the study utilised a self-report questionnaire and the validity of this data collection method has been questioned as participants could respond in a manner to portray themselves more socially acceptable; social desirability could therefore be considered a risk (Spector, 1994). Self-report measurements could be limiting for the research, but the concern regarding common method bias (i.e. fluctuation of correlations due to responses) has also been shown to not be of major concern in the measurement of psychological variables (Spector, 1994).

3.3 Recommendations

3.3.1 Recommendations for practice

This study validated a workaholism scale (DUWAS-10) within the South African banking context. Organisations can therefore benefit from the measuring instrument by identifying workaholism amongst their employees and the accompanying impact on individual and organisational outcomes. Pertaining to the literature review as well as the results of the study, it is apparent that workaholism predicts negative outcomes for both the individual and the organisation, which includes employees that are at a higher risk for burnout, decreased levels of organisational commitment and less engaged employees. However, organisations remain uninformed about the risks associated with workaholism. Therefore they should consider utilising the scale to become aware of the occurrence of the phenomenon within the organisation to actively develop strategies to counter the negative influence on organisational outcomes.

When considering strategies to manage, diminish or prevent workaholism, it is important to note that workaholic employees, like other addicts, may generally be in denial about their problem. Therefore it is imperative that the organisation identify employees with disturbed work patterns and handle the situation in a sensitive manner. Consequently extreme care should be taken when referring them to organisational support services (i.e. employee assistance programmes, counsellors or a doctor), since they could be reluctant to visit a psychologist for their “work behaviour”. They could rather be referred for a routine check-up for potential health-related complaints – then the applicable practitioner can refer the individual to a mental health professional, such as a psychologist, if he or she deems it necessary (Van Wijhe, Schaufeli & Peeters, 2010).

Furthermore, the organisation should not focus solely on the individual; the organisational culture should also be taken into consideration since the work behaviour of the individual can be reinforced by the environment (Shimazu & Schaufeli, 2009). Organisations should place more emphasis on an optimised work-life balance and set clear boundaries for employees (Molino, Bakker & Ghislieri, 2015). Therefore the organisation should promote awareness regarding effort-recovery among their workforce by encouraging employees to detach themselves (i.e. mentally and physically) from work after hours and on weekends (Van Hooff, Geurts, Kompier & Taris, 2007). Also, the organisation could provide training programs such as time management and stress management to empower employees to set realistic goals and prioritise them in a way that assists them in coping with their workload (Van Wijhe et al., 2010).

3.3.2 Recommendations for future research

It is recommended that future studies consider utilising a longitudinal design to obtain more concrete evidence regarding the phenomenon (Struwig & Stead, 2001). Specifically, a longitudinal approach will allow researchers to gain more insight into the causal relations pertaining to the behaviour of the individual (Rajulton, 2001).

In terms of the sample, future research should include employees from different sectors (i.e. education, healthcare, manufacturing, mining and hospitality) in the South African context. Subsequently, the prevalence of workaholism within these sectors could then be compared with one another as well as the organisational outcomes. Also, if the sample is representative

of all the different sectors the findings could be generalised to the population with more confidence.

The data for this study was only collected by means of self-report questionnaires. Therefore future researchers should consider using a mixed method approach. The researchers will be able to obtain a better contextual understanding of the situation of the individual and a better understanding of the phenomenon in general. Also, future researchers should attempt to obtain objective data from the organisation regarding the work hours of employees by means of request permission to data that specifies the number of hours worked (i.e. normal working hours and overtime), instead of using subjectively reported data by the participants only.

Finally, future researchers could also investigate personality factors such as conscientiousness as potential moderators in workaholism research. Furthermore, obsessive and compulsive traits could also be considered (Mudrack, 2004).

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Appendix A

The Dutch Workaholism Scale (DUWAS-10)

Component	Code	Item text
Working compulsively	compulse1	It is important to me to work hard even when I don't enjoy what I'm doing
	compulse2	I feel obliged to work hard, even when it's not enjoyable
	compulse3	I feel that there is something inside me that drives me to work hard*
	compulse4	I feel guilty when I take time off
	compulse5	It is hard for me to relax when I'm not working
Working excessively	excess1	I seem to be in a hurry and racing against the clock
	excess2	I find myself continuing to work after my co-workers have called it quits
	excess3	I spend more time working than on socialising with friends, on hobbies, or on leisure activities
	excess4	I stay busy and keep many irons in the fire
	excess5	I find myself doing two or three things at one time such as eating and writing a memo, while talking on the telephone

Note: * = item compulse3 was excluded for further analysis in the current study – see Results section (p. 37).