

Ten myths about work addiction

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Background and aims: Research into work addiction has steadily grown over the past decade. However, the literature is far from unified and there has been much debate on many different issues. *Aim and methods:* This paper comprises a narrative review and focuses on 10 myths about work addiction that have permeated the psychological literature and beyond. The 10 myths examined are (a) work addiction is a new behavioral addiction, (b) work addiction is similar to other behavioral addictions, (c) there are only psychosocial consequences of work addiction, (d) work addiction and workaholism are the same thing, (e) work addiction exclusively occurs as a consequence of individual personality factors, (f) work addiction only occurs in adulthood, (g) some types of work addiction are positive, (h) work addiction is a transient behavioral pattern related to situational factors, (i) work addiction is a function of the time spent engaging in work, and (j) work addiction is an example of overpathologizing everyday behavior and it will never be classed as a mental disorder in the DSM. *Results:* Using the empirical literature to date, it is demonstrated that there is evidence to counter each of the 10 myths. *Conclusion:* It appears that the field is far from unified and that there are different theoretical constructs underpinning different strands of research.

Keywords: behavioral addiction, study addiction, work addiction, workaholism, work engagement

INTRODUCTION

Reliable statistics on the prevalence of individuals addicted to work on a country-by-country basis are almost non-existent. Only two countries (Norway and Hungary) have carried out nationally representative studies. Norwegian studies reported that approximately 7.3%–8.3% of Norwegians were addicted to work using the Bergen Work Addiction Scale (Andreassen, Griffiths, Hetland, & Pallesen, 2012; Andreassen, Nielsen, Pallesen, & Gjerstad, in press). A Hungarian study (Demetrovics, Richman, van den Brink, & Maraz, 2017; Paksi, Rózsa, Kun, Arnold, & Demetrovics, 2009) reported that 8.2% of the 18- to 64-year-old population working at least 40 hr a week is at risk for work addiction using the Work Addiction Risk Test (Robinson, 1996). A comprehensive literature review by Sussman, Lisha, and Griffiths (2011) using US data provided a tentative estimation of the prevalence of work addiction among Americans at 10%. Some estimates are as high as 15%–25% among employed individuals (e.g., Atroszko, Pallesen, Griffiths, & Andreassen, 2017; Porter, 1996), although some of these estimates appear to relate to excessive and committed working rather than a genuine addictive behavior. Other scholars claim that the rates of work addiction are high among professionals (e.g., lawyers, medics, and scientists) (Doerfler & Kammer, 1986; Killinger, 1992). Such individuals may work very long hours, expend high effort in their job, delegate rarely, and may not necessarily be more productive (Griffiths, 2005a). Furthermore, the available measures are not clinically validated and considering the

ad hoc cut-off scores and the different screening instruments and samples used in the studies, scholars have to be cautious concerning any epidemiological data in the field (and also holds true for most behavioral addictions). It also appears that those who are genuinely addicted to work appear to have a compulsive drive to gain approval and success but can result in impaired judgment, poor health, burnout, and breakdowns (Griffiths, 2005a) as opposed to what might be described as “enthusiastic workaholism” where few problems are associated with the behavior. This paper comprises a narrative review and focuses on 10 myths about work addiction that have permeated the psychological literature (see Table 1 for brief overview).

MYTH 1: WORK ADDICTION IS A NEW BEHAVIORAL ADDICTION

Fact: The mentioning of work addiction in the recent debate related to the growing concern about the threat of overpathologizing everyday behaviors by Kardefelt-Winther et al. (2017) arguably left some readers with the impression that work addiction is a newly developed and/or understudied concept

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Table 1. Summary of myths concerning work addiction

	Myth	Fact
1	Work addiction is a new behavioral addiction	Work addiction has been studied for decades and fits very well into recently postulated criteria for conceptualization of a behavioral addiction
2	Work addiction is similar to other behavioral addictions	Work addiction is a fundamentally different type of behavioral addiction because it is related to possibly most important social role of an adult, i.e., of a worker, and work is widely perceived as productive and positive activity
3	There are only psychosocial consequences of work addiction	There is lots of evidence that work addiction is linked to life threatening physical illnesses
4	Work addiction and workaholism are the same thing	This depends on how these constructs are defined but “work addiction” is theoretically rooted in addiction whereas workaholism includes a wider range of theoretical underpinnings and in some research is seen as something positive rather than negative
5	Work addiction occurs as a consequence of individual personality factors	The factors that contribute to work addiction go far beyond personality alone include other individual factors as well as the structural characteristics of the work activity itself and the situational characteristics of the workplace environment
6	Work addiction only occurs in adulthood	Study addiction, conceptualized as potential early form of work addiction, has been reported in high school and university students
7	Some types of work addiction are positive	If an activity is defined as an addiction, the long-term consequences of excessive work will always outweigh any short-term benefits
8	Work addiction is a transient behavioral pattern related to situational factors	There is a compelling evidence for the persistence of work addiction in a minority of individuals; however, the prevalence rates are unknown due to lack of consensus regarding diagnosis criteria
9	Work addiction is a function of the time spent engaging in work	While the time spent engaging in an activity (particularly an excessive activity) is correlated with those addicted, time in and of itself is not a core component of addiction. Content and context of the behavior are far more important in determining addictive behavior than time
10	Work addiction is an example of overpathologizing everyday behavior and it will never be classed as a mental disorder in the DSM	Work is one of the very few everyday behaviors that has been pathologized. If there are agreed criteria for work addiction and an individual meets those criteria, they should be classed as a work addict

(Atroszko & Griffiths, 2017). There has also been a discussion about the risk of overabundance of unsubstantiated addictive disorders. For instance, Billieux, Schimmenti, Khazaal, Maurage, and Heeren (2015) described a hypothetical case of someone they deem fitting into the criteria of the concept of “research addiction” (p. 142), invented for the purpose of the argument. However, it is worthwhile noting that the hypothetical example of “research addiction” already fits well into the persisting compulsive overinvolvement in job/study to the exclusion of other spheres of life, and if it leads to serious harm (and conflict symptoms suggest that it may), then it could be argued that the person in Billieux et al.’s paper is addicted to work.

What we could perhaps agree on is that for the example of “research addiction,” we do not have to invent a new addiction (just as we do not distinguish between vodka addicts, gin addicts, or whisky addicts as there is an overarching construct of alcoholism), because work addiction is not new to the psychological literature and has significantly evolved over time (Atroszko & Griffiths, 2017). The first clinical descriptions resembling work addiction appeared in the early 20th century (Ferenczi, 1919). The formal notion of work addiction was introduced to the psychological literature almost 50 years with the Oates’ (1968, 1971) seminal publications. Over the past 30 years, a marked increase in papers on the disorder has been published (Sussman, 2012). Consequently, work addiction is not a recently identified problem. However, it is a topic which from early on caused much confusion and

controversy, with “workaholism” sometimes being conceptualized as a positive phenomenon, and promoted as a passion and positive high engagement (e.g., Machlowitz, 1980; Ng, Sorensen, & Feldman, 2007).

Emerging from the decades of misperception, the slowly developed clarification of the construct, based on research in both eastern and western cultures (for reviews, see Andreassen, 2014; Andreassen & Pallesen, 2016; Griffiths & Karanika-Murray, 2012; Quinones & Griffiths, 2015; Sussman, 2012), follows well the recently emphasized postulates for conceptualization of a behavioral addiction (Kardefelt-Winther et al., 2017). First, there has been a relatively long period of a person-centered approach to research, based on diverse theoretical frameworks, and exploring the phenomenology of the work addiction, and identifying its etiology and course (Oates, 1971; Robinson, 2014; for a review, see Andreassen & Pallesen, 2016). Second, assessment instruments have been developed and evaluated in terms of their psychometric properties (e.g., Andreassen, Hetland, & Pallesen, 2014; for a review, see Andreassen, 2014; Andreassen & Pallesen, 2016; Clark, Michel, Zhdanova, Pui, & Baltes, 2016; Griffiths & Karanika-Murray, 2012; Quinones & Griffiths, 2015; Sussman, 2012) leading to scales (Andreassen et al., 2012; Atroszko et al., 2017; Orosz et al., 2016) based on common addiction components (Griffiths, 2005a, 2005b). However, there is still much to be done in this field because almost all studies are based on self-report questionnaires, and clinical validation of the concepts is generally lacking (Sussman, 2012).

As a result of the effort to define what work addiction is not, there is now agreement among some researchers about the differences between passionate work engagement and work addiction (Andreassen, 2014; Andreassen & Pallesen, 2016; Birkeland & Buch, 2015; Burke & Fiksenbaum, 2009; Hakanen & Peeters, 2015; Karanika-Murray, Duncan, Pontes, & Griffiths, 2015; Karanika-Murray, Pontes, Griffiths, & Biron, 2015; Quinones, Griffiths, & Kakabadse, 2016; Shimazu & Schaufeli, 2009; Shimazu, Schaufeli, Kamiyama, & Kawakami, 2015; Taris, Schaufeli, & Shimazu, 2010; Vallerand, Paquet, Philippe, & Charest, 2010; van Beek, Hu, Schaufeli, Taris, & Schreurs, 2012; van Beek, Taris, & Schaufeli, 2011 see also Griffiths & Karanika-Murray, 2012; Quinones & Griffiths, 2015; Sussman, 2012) and its relationship to other psychopathologies is being gradually established (e.g., Andreassen, Griffiths, Sinha, Hetland, & Pallesen, 2016; Atroszko et al., 2017), suggesting patterns of comorbidity similar to those observed in the case of other addictions (Fatséas et al., 2016). Finally, the persistence of the disorder is well documented with longitudinal data showing its relatively high temporal stability (see “Myth 8” below). As was recently argued (Atroszko & Griffiths, 2017), research on work addiction is beyond the phase of “proof of concept” and research has shown that minority of individuals overinvolve in work in a compulsive repeated manner, over a long time, and that this pattern is different from passion or healthy high engagement, most importantly, because it is related to a long-term impairment due to harm and distress.

What appears to be lacking is the awareness about the concept of “work addiction” among the addiction research community at-large. This may be partially related to the fact that the large amount of research on work addiction is still published in journals devoted to occupational psychology (e.g., *Journal of Occupational Health Psychology*, *Work and Stress*, *Journal of Occupational and Environmental Medicine*, and *Burnout Research*) rather than those which are mainly focused on addiction (e.g., *Addiction*, *Psychology of Addictive Behaviors*, *Addictive Behaviors*, and *Journal of Behavioral Addictions*). Taking this into account, it seems sensible to suggest that the field would greatly benefit from an open discussion and integration of knowledge about work addiction studied within the addiction (rather than occupational psychology) framework or to take a transdisciplinary approach. This may address the need for a more dynamic development of the field, which currently appears to be behind the fast expansion in other domains of behavioral addictions, including those with significantly shorter history of research, such as Internet gaming disorder (Kuss, Griffiths, & Pontes, 2017).

MYTH 2: WORK ADDICTION IS SIMILAR TO OTHER BEHAVIORAL ADDICTIONS

Fact: Work addiction has many similarities to other behavioral addictions (e.g., gambling, gaming, shopping, sex, etc.), but also fundamentally differs from them in a critical way because it is the only behavior that individuals are typically required to engage in the behavior for 8 hr a day and is an activity that individuals receive gratification from the local environment and/or society more generally for engaging in the activity. There may also be some benefits

from normal (and excessive) work (e.g., financial security through earning a good salary, financial bonuses based on productivity, international travel, free or reduced medical insurance, company car, etc.). Unlike other behavioral and substance addictions where one of the key criteria is typically a negative impact on occupational duties, work addicts cannot negatively impact on the activity they are already engaged in (except in the sense that their addiction to work may impact on work productivity or work quality due to the resulting psychological and/or physical illness – see “Myth 3”).

In some respects, work addiction is similar to exercise addiction, in which it is an activity that should be a part of people’s lives and often has some benefits even when engaged in excessively. Such activities have been described by Brown (1993) as “mixed blessings” addictions. For instance, in the case of exercise addiction, problematic exercise that interferes with both job and relationships can still have some positive consequences (such as being physically fit). However, it should be emphasized that such positive consequences are typically short lasting, and in the long run, addiction will take its toll on health [even exercise in excess is physiologically unhealthy in the long run in terms of immune function (Gleeson, 2007; Smith, 2003), cardiovascular health (Andersen et al., 2013; O’Keefe et al., 2012), bone health (Michaëlsson, Byberg, Ahlbom, Melhus, & Farahmand, 2011), and mental health (Raglin, 1990)]. Furthermore, some research suggests that work/study and exercise addiction have also similar personality correlates different from other addictions, namely high conscientiousness (Andreassen et al., 2013). This might contribute to the fact that work addiction is so perplexing, because this personality trait is consistently linked to better health (Bogg & Roberts, 2004). Taking into account, this specificity of personality correlates related to work addiction, it should be emphasized that there are few studies on the cognitive functioning of work addicts. Consequently, it is likely that the executive functions of work addicts in some respects differ from those addicted to substance or other behaviors (Grant, Potenza, Weinstein, & Gorelick, 2010).

MYTH 3: THERE ARE ONLY PSYCHOSOCIAL CONSEQUENCES OF WORK ADDICTION

Fact: There is lots of evidence that work addiction is linked to life-threatening physical illnesses. During almost 50 years of gathered data, there is much evidence that work addiction is related to chronic stress in work and outside work, psychological disorders, such as depression and anxiety, and life-threatening physical illnesses (for a review, see Andreassen, 2014; Andreassen & Pallesen, 2016; Clark et al., 2016; Griffiths & Karanika-Murray, 2012; Quinones & Griffiths, 2015; Robinson, 2014; Sussman, 2012). The association between work addiction, depression, and burnout – which might be just another label for clinical depression (Bianchi, Schonfeld, & Laurent, 2015; Schonfeld & Bianchi, 2016) also having significant physical components – is well evidenced (Falco et al., 2013; Innanen, Tolvanen, & Salmela-Aro, 2014; Schaufeli, Bakker, van der Heijden, & Prins, 2009; Schaufeli, Taris, & van Rhenen, 2008; for a review, see Sussman, 2012). Notably, work addiction has theoretically been linked to cardiovascular

disease (CVD), since the 1970s in high profile medical literature (Eliot & Forker, 1976). CVDs are the first cause of death and disability in Europe (Eurostat, 2015) and all over the world (Lim et al., 2013), with up to one third of the adult population around the world suffering from hypertension (Mills et al., 2016). Currently, it is well evidenced that work stress is a risk factor for CVDs (Dimsdale, 2008), and there are studies linking work addiction with CVD (e.g., Salanova et al., 2016). Extreme engagement in work is known to produce “karoshi” – sudden death caused by cardiac event (Kanai, 2009). This phenomenon, together with other indicators of the decline in health and well-being due to work overload, is a growing problem in Asian countries (Tsui, 2008).

Furthermore, the consequences of work addiction are not just bound to the addicted individual. Not infrequently, the main victim of the addiction may be the family of the addict, including children for whom consequences, such as anxiety and depression, may be evident from early on in their lives (Robinson, 2014). What is worth noting is that while the work–family conflict/imbalance problem is present in currently conducted research (Andreassen, 2014; Griffiths & Karanika-Murray, 2012; Quinones & Griffiths, 2015; Sussman, 2012), the line of research related to direct health problems of addicts’ family members has been understudied in the literature and warrants more attention (Matuska, 2010). To sum up, what critically lacks so far are large-scale longitudinal epidemiological studies, which would show how prevalent are the serious health problems of addicted individuals and their families directly attributable to work addiction.

MYTH 4: WORK ADDICTION AND WORKAHOLISM ARE THE SAME THING

Fact: The issue of whether “workaholism” and “work addiction” are the same entity depends on how these constructs are defined. For instance, Griffiths (2005b) has argued that any behavior that fulfills six core components (i.e., salience, conflict, mood modification, tolerance, withdrawal symptoms, and relapse) should be operationalized as an addiction. These six components have also been the basis of many psychometric instruments for assessing potential addictions including work addiction (Andreassen et al., 2012). The empirical research carried out by the present authors over the past 5 years concerning “work addiction” is theoretically rooted in the core addiction literature (e.g., Andreassen et al., 2012; Andreassen, Griffiths et al., 2014, 2016; Atroszko, Andreassen, Griffiths, & Pallesen, 2015, 2016a, 2016b; Atroszko et al., 2017; Quinones & Griffiths 2015; Quinones et al., 2016; Shonin, Van Gordon, & Griffiths, 2014; Van Gordon et al., 2017), whereas “workaholism” more generally includes a wider range of theoretical underpinnings and in some research is a construct seen as something positive rather than negative (see “Myth 7” for further details and explanation of this point). Arguably, in popular press and in common everyday language, “workaholism” is often used as a positive notion to describe very engaged workers, which adds significantly to the confusion about the two terms (Robinson, 2014).

“Workaholism” is arguably a generic term that throughout the literature (as well as by lay people and the

popular press) appears to equate to excessive working irrespective of whether the consequences are advantageous or disadvantageous (Griffiths, 2011). There is clearly lack of precise dictionary definitions of “work addiction” and “workaholism” (Robinson, 2014), and there is no reason to assume that they could not be used as synonyms. However, the common use of the term “workaholism” to denote anything related to high involvement in work may suggest that for practical reasons in the professional literature on work addiction, understood within addiction framework, it would be advisable to limit the usage of this term. While it is almost impossible to control natural usage of terms, preference for “work addiction” in addiction literature would be a way to emphasize the addiction framework in which the phenomenon is being conceptualized. In short, “work addiction” is a psychological construct, whereas “workaholism” is arguably a more generic term.

MYTH 5: WORK ADDICTION EXCLUSIVELY OCCURS AS A CONSEQUENCE OF INDIVIDUAL PERSONALITY FACTORS

Fact: Over the past three decades, there has been a lot of research examining the personality characteristics of work addicts and arguably anyone reading the psychological literature would probably conclude that personality factors are the key to understanding the psychology of work addiction. For instance, research has demonstrated that there are positive associations between work addiction and neuroticism, perfectionism, narcissism, and Type A personality (i.e., competitive and achievement-oriented individuals), whereas studies on associations with conscientiousness, openness, and agreeableness have shown mixed results (Andreassen, Griffiths et al., 2014; Andreassen, Hetland, & Pallesen, 2010; Aziz & Tronzo, 2011; Burke & Matthiesen, 2004; Burke, Matthiesen, & Pallesen, 2006; Byrne & Reinhart, 1989; Clark, Lelchook, & Taylor, 2010; Edwards, Baglioni, & Cooper, 1990; Killinger, 1992; Naughton, 1987; Scott, Moore, & Miceli, 1997).

However, the factors that contribute to work addiction go far beyond personality traits alone and include other individual factors as well as situational and structural determinants of the work activity itself. Furthermore, while neuroticism is consistently linked to work addiction and is congruent with what is known about relationship of mental problems with personality (Kotov, Gamez, Schmidt, & Watson, 2010), studies on all other Big Five personality traits produce mixed results (Andreassen, Griffiths, et al., 2014; Atroszko et al., 2017). Also, research on study addiction (argued to be a precursor to work addiction; see “Myth 6”) has demonstrated a consistent relationship with high conscientiousness, and in some samples, association with higher agreeableness has been reported (Atroszko, 2015; Atroszko et al., 2015).

Taking this into account and somewhat mixed results from work addiction studies, it appears advisable to approach work addiction (including study addiction) from a more developmental perspective. The lower conscientiousness and agreeableness among some work addicts may be a consequence of the addiction itself (more specifically, work overload taking its toll on the ability to maintain being organized and increased

irritability with others). To date, there are no such large-scale studies, beyond case studies, following work addicts long enough over time to identify any potential personality changes. It appears that work addiction is less dependent on these personality characteristics than might be concluded from over-viewing work addiction literature, and indeed different patterns of personality may be observed among those addicted to work. The complex relationships between personality, personality disorders, and addictions have fairly long standing recognition (DeJong, Van den Brink, Hartevelde, & van der Wielen, 1993); however, there still appears to be great confusion about the concept of “addictive personality” and whether it even exists (Griffiths, 2017a).

Griffiths (2005b) has consistently argued that addictions always result from an interaction and interplay between many factors including an individual’s psychological constitution (e.g., personality factors, unconscious motivations, attitudes, expectations, beliefs, etc.), genetic and/or biological predisposition, the nature of the activity itself (i.e., structural characteristics), and the social environment that the individual lives in (i.e., situational characteristics). Griffiths (2011) and Griffiths and Karanika-Murray (2012) have outlined many different structural and situational characteristics that can potentially play a contributory role in the acquisition, development, and maintenance of work addiction.

Structural characteristics of work can comprise the type of work (e.g., non-manual/manual, non-stimulating/stimulating, and reactive/proactive), number of hours working per day/week, work flexibility (e.g., how work is integrated with the daily routine of the worker), work familiarity (e.g., repetitive/novel), and financial rewards (e.g., direct and indirect rewards, such as annual salary, medical insurance, pension, etc.). There are also the individual and idiosyncratic rewards of the job that may lead to the individual feeling a psychological “buzz” or “high.” For instance, an academic might feel highly rewarded (and receive positive reinforcement) through such things as getting great feedback from the students they teach, having an academic paper accepted for publication, being awarded a research grant, or appearing in the media relating to their research expertise (Griffiths, 2011). Repeated experiences of these rewards lead to increased job satisfaction. However, repetitive attainment of such rewards could potentially lead the individual toward relentless pursuit of such rewards that interfere in all areas of their life and become problematic and/or addictive. For others, academic work may become very time consuming physically and/or cognitively where work is used as a way of forgetting about all the other stresses and strains in their life (such as relationships with their partner and/or family members).

The situational characteristics of work can comprise social facilitation effects (i.e., working with others or alone), the relationship dynamics between co-workers (e.g., collegiality between line managers and/or work colleagues), work environment aesthetics (e.g., lighting, décor, and color in workspace), physical comfort of work environment, and the organization’s working ethos, policies, and culture (Griffiths, 2011). Fassel (1992) and Wilson-Schaefer and Fassel (1988) went as far as to say that work addiction is as much a “system addiction” as an

individual one, because work addiction is encouraged by major organizations and is often viewed as being socially acceptable. In short, the factors that facilitate and contribute to work addiction are more than just inherent individual characteristics and work addiction is also influenced by both the structural characteristics (of the work activity) and situational characteristics (of the workplace environment).

Research examining the relationship between study and work addiction (see “Myth 6”) may provide some critical insights into this issue, because the transition from school/university to a paid job is related to significant changes in most of the described situational characteristics. Previous research has assumed that there is a common addictive process underlying both study addiction and work addiction (Atroszko et al., 2015, 2016a, 2016b). However, it has to be taken into account that previous studies have found support for an interaction between person characteristics and work culture in relationship to work addiction (Mazzetti, Schaufeli, & Guglielmi, 2014). From a wider addiction perspective, findings related to heroin use among US army soldiers during and after the Vietnam War have been a compelling demonstration of how situational factors are important in understanding addiction (Satel & Lilienfeld, 2013).

Initial studies have demonstrated that study addiction and work addiction are related (Atroszko et al., 2016b). However, more researches are needed to understand the strength of the relationship between study addiction and work addiction over time, and the role of situational factors and individual predispositions (e.g., personality), in the development of work addiction. A major global factor that may have significant effect on both this relationship and the specificity of work addiction is the knowledge-based economy and changes in education that it drives (Powell & Snellman, 2004). For example, the shift in human involvement from mass production into information and knowledge processing may result in a notable proportion of work addicts being found among professionals from education and research-related fields.

MYTH 6: WORK ADDICTION ONLY OCCURS IN ADULTHOOD

Fact: This myth is only true if work is defined as an occupation [although research conducted by Atroszko (2010), Flowers and Robinson (2002), Robinson (1996), Spence and Robbins (1992), Sussman et al. (2014), Sussman, Pokhrel, Sun, Rohrbach, and Spruijt-Metz (2015), Tsai et al. (2016), and Villella et al. (2011), all reported work addiction in samples of emerging adults]. However, work appears to share many similarities to that of learning and studying. Both of these behaviors include efforts engaged in to achieve specific aims, frequently related to acquiring skills and knowledge, and both fulfill important social roles (Fischer, 2000). Taking these profound similarities and temporal stability of work addiction into account, study addiction has been defined within work addiction framework and hypothesized to be a precursor or an early form of work addiction (Atroszko, 2015; Atroszko et al., 2015). Measures based on addiction components have been developed and validated cross-culturally (Atroszko, 2015;

Atroszko et al., 2015). In a longitudinal cross-cultural survey, study addiction was shown to be both temporally stable (Atroszko et al., 2016a) and related to work addiction after students graduate and enter the labor market (Atroszko et al., 2016b).

When using polythetic cut-off point for scores on Study Addiction Scale (Andreassen et al., 2012), which is consistent with current diagnostic standards (DSM-5; American Psychiatric Association [APA], 2013), study addiction was found in a minority of teenage secondary school students (Bisht & Godiyal, 2016). This result is congruent with the fact that both substance and behavioral addictions tend to develop in youth (Chambers & Potenza, 2003). Importantly, in large-scale studies in Poland and Norway, study addiction has been associated with higher levels of both general and learning-related stress, deteriorated health (depression, anxiety, low general health, and low sleep quality), and impoverished academic performance (Atroszko, 2015; Atroszko et al., 2015).

These results open a potentially new and critical field of study, overlapping fields of education and health, possibly involving policymaking, and vital for both the well-being of students and their productivity in terms of academic development. While the former area warrants potential prevention to avoid long-term health burden for society, the latter may add new perspective to the debates on already pending need of optimization of educational systems (Sahlberg, 2014). The potential far-reaching implications of this line research may become more evident, if we take into consideration that improving the quality and efficiency of education and training, as well as making lifelong learning fact, are among the main objectives of strategic frameworks of policymaking institutions (e.g., European Commission, 2015). However, more data concerning study addiction are needed from different countries, cultures, and educational systems from all over the world as well as clinical validation as to whether it genuinely exists.

MYTH 7: SOME TYPES OF WORK ADDICTION ARE POSITIVE

Fact: In the psychological literature, workaholism is often described as something that is positive. For instance, scholars have depicted workaholics as “hyper-performers” (e.g., Korn, Pratt, & Lambrou, 1987; Peiperl & Jones, 2001) and “happy hard workers” who are “*strongly and intrinsically motivated, content with their style of working, enjoy their passionate involvement, are happy to exceed the demands of the job, and are typically professionally rewarded . . . [these] workaholics simply represent an extreme case of work commitment*” (Buelens & Poelmans, 2004, p. 443). Other researchers have differentiated between what they describe as positive and negative forms of workaholism (e.g., Bonebright, Clay, & Ankenmann, 2000; Killinger, 1992; Machlowitz, 1980; Spence & Robbins, 1992). For instance, Bonebright et al. (2000) carried out a study examining the differences between “enthusiastic workaholics,” “non-enthusiastic (i.e., compulsive) workaholics,” and groups of non-workaholics (i.e., “work enthusiasts,” “relaxed workers,” “unengaged workers,” and “disenchanted workers”). The six groups were compared in

relation to factors, such as life purpose, life satisfaction, and work–life conflict. Somewhat predictably, non-enthusiastic workaholics had significantly more work–life conflict and significantly less life purpose and life satisfaction than most of the other groups. The study found that non-enthusiastic workaholics had significantly less purpose in life and life satisfaction than enthusiastic workaholics.

If any activity (including work) is defined as a genuine addiction, the long-term consequences of excessive work will always outweigh any short-term benefits (Griffiths, 1996). Studies that highlight “happy” or “enthusiastic” workaholics are not really construing workaholism as an addiction but as an excessive and committed activity that the person enjoys. More recent research has shown that extreme work commitment and work engagement are different constructs to work addiction (Karanika-Murray, Duncan et al., 2015; Karanika-Murray, Pontes et al., 2015). Therefore, these “happy,” “committed,” and “enthusiastic” types of workaholic cannot be operationally defined as addicts and relates back to “Myth 4” that “workaholism” and “work addiction” are not the same.

As it was already described in “Myths 1 and 4,” there was a fairly long period of confusion concerning conceptualization of work addiction and its relation to workaholism and engagement in work or passion for work. Studies that highlight “happy workaholics” are not really construing workaholism as an addiction but as an excessive activity that the person enjoys. While typologies of workaholics (Spence & Robbins, 1992), distinguishing “engaged workaholics” or “enthusiastic workaholics” who do not experience burnout and are well adjusted, were popular for some period, currently there is an increasingly clear delineation between passionate worker and workaholic (see “Myth 1”). Alternatively, we are critically lacking data on the stages of development of work addiction, which might shed some more light on the distinction between engaged and work-addicted person. Furthermore, such data could provide some insights into the specificity of the transition to addiction in case of workaholism, and its relation to known mechanisms in substance use disorders (George, Koob, & Vendruscolo, 2014; Koob & Volkow, 2010). The underpinnings for one direction in such research have been laid with the conceptualization of study addiction and linking it to work addiction in longitudinal research (Atroszko, 2015; Atroszko et al., 2015, 2016a, 2016b). One area of research that might be critical in illuminating the overall confusion about “happy workaholics” is the fact that all addictive behaviors, related or not to any substance, start with initial pleasure derived from the performed activity. The mechanisms, especially related to neurobiological changes, of the transition from the enjoyment of work into compulsion and loss of control are almost completely unstudied in the case of work addiction.

MYTH 8: WORK ADDICTION IS A TRANSIENT BEHAVIORAL PATTERN RELATED TO SITUATIONAL FACTORS

Fact: There is compelling evidence for the persistence of work addiction in a minority of individuals. Some argue that for the majority of people, problematic overinvolvement

occurs only for one behavior and a single time period (Thege, Woodin, Hodgins, & Williams, 2015). While some individuals engage excessively in intense work tasks during periods of high demands from their job and/or due to high expectancies from the employer, work addiction is driven by inner compulsion, which is a fairly stable characteristic, and in some cases, lasts throughout adult life (Robinson, 2014). Persistence or temporal stability of work addiction has been observed in case studies, clinical cases, and qualitative research, including reports of decades of compulsive overworking (Oates, 1971; Robinson, 2014), as well as in the significant number of longitudinal empirical studies (Atroszko et al., 2016a; Andreassen, Bjorvatn, et al., 2016; Quinones et al., 2016; Rantanen et al., 2015; Shimazu et al., 2015), including time span as long as 7 years (Hakanen & Peeters, 2015), and link between study and work addiction (Atroszko et al., 2016b).

In addition, Workaholics Anonymous groups, operating in several countries internationally for more than 30 years, point directly to the existence of self-identified work addicts actively seeking help (Robinson, 2014). While excessive overinvolvement in work may be fairly common, strongly dependent on situational factors, and relatively innocuous, for a minority of individuals work addiction is a seriously harming long-lasting problem. In the light of lack of consensus as to how to diagnose work addiction, there is no reliable estimate of the problem. However, based on the cut-off scores derived from clinical standards for diagnosis (DSM-5; APA, 2013) studies on representative samples have reported prevalence of rates of 7.3%–8.3% (Andreassen, Griffiths et al., 2014, Andreassen et al., in press), congruent with a review of estimates from previous studies on work addiction (Sussman et al., 2011). These estimates are paralleled by the results from investigations into study addiction (Atroszko, 2015). The question is not whether there are individuals who persistently engage for a long time in an excessive work which may lead to harm, but how many work addicts are there?

MYTH 9: WORK ADDICTION IS A FUNCTION OF THE TIME SPENT ENGAGING IN WORK

Fact: While the time spent engaging in an activity (particularly excessive time) is correlated with those addicted (see for example definition and measurement by Snir & Harpaz, 2004), time in and off itself is not a core component of addiction (e.g., Király, Tóth, Urbán, Demetrovics, & Maraz, 2017) and some scholars have failed to find a correlation between the number of hours worked and the extent of work addiction (Buelens & Poelmans, 2004; Griffiths, 2011). Griffiths (2011) presented two case studies based on an amalgam of real people known to the author to demonstrate that content and context of the behavior are far more important in determining addictive behavior than time. Table 2 highlights the similarities and differences in these two case studies in relation to core components of addiction (Griffiths, 2005b).

Griffiths argued that these two cases were behaviorally identical (because both individuals were working for up to 14 hr a day), yet their psychological motivations and life context were totally different leading the author to conclude that only “Michael” was addicted to work and that time

spent working is a poor criterion for establishing whether someone is addicted to work. Griffiths argued that “Michael” fulfilled his six criteria for addiction (Table 2). These case studies highlight the importance of context rather than time in establishing whether an individual might be addicted to work. The core issue is the extent to which work impacts negatively on the rest of the individual’s non-working life. As Griffiths (2005b) has noted, the real difference between healthy excessive behaviors and addictions is that the healthy behaviors add to life whereas addictions take away from it (Griffiths, 2005b). In short, excessive activity and addictive activity are two very different (albeit often overlapping) behaviors (Griffiths & Karanika-Murray, 2012).

This distinction is crucial in terms of psychometric assessment of work addiction, as well as any other addiction, because it is sometimes very difficult to differentiate high time and energy investment in an activity from compulsive engagement in work. For example, such items as “How often do you think of how you can free up more time to work” (salience) and “How often do you spend much more time working than initially intended” (tolerance) from the Bergen Work Addiction Scale (Andreassen et al., 2012) may have significant residuals’ covariance, conceivably attributable to this general involvement factor and different from compulsion/addiction which is assessed by the whole scale (Atroszko et al., 2017). Furthermore, other associated behaviors, such as lack of delegation, reporting working harder and harder with fewer and fewer rewards, and burnout, might also be taken into account when developing work addiction-specific diagnostic criteria and related psychometric measures. Consequently, more researches on this problem, including more in-depth psychometric approach, are needed.

MYTH 10: WORK ADDICTION IS AN EXAMPLE OF OVERPATHOLOGIZING EVERYDAY BEHAVIOR AND IT WILL NEVER BE CLASSIFIED AS A MENTAL DISORDER IN THE DSM

Fact: Work is one of very few of hundreds of everyday behaviors that has been pathologized (Griffiths, 2017b). If there are agreed criteria for work addiction and an individual meets those criteria, they should be classed as a work addict. Similar to the confusion between “work addiction” and “workaholism” (“Myth 4”), these all depend on how mental disorders are defined in the first place. One of the reasons why work addiction will not be in the DSM anytime soon is the paucity of large-scale epidemiological studies and a complete lack of neurobiological research. Another almost unaddressed problem is the reluctance of the society to acknowledge that work addiction might be a problem, which may be related to the conviction that if work addiction is considered a disorder, some may use it as an excuse and do not work, or that it will affect productivity, and in general will destabilize economy and society. However, an increasing amount of data shows that productivity is not hindered by the balanced engagement into work, and it may benefit from improved employee physical and psychological health (Bloom, Kretschmer, & Van Reenan, 2009; Lerner & Henke, 2008). One notable example of practical application

Table 2. Similarities and differences between passion for work and work addiction based on case studies (Griffiths, 2011, p. 744)

	Case 1 ("Leon")	Case 2 ("Michael")	Addiction components
Background	Leon, a single male, aged 25 years with no current partner or children	Michael, a married male, aged 43 years with three children (one of whom was with a previous relationship)	–
Working time	He works for up to 14 hr every day and work is the most important thing in his life	He works for up to 14 hr every day	Salience
Psychological motivations and attitudes	(No evidence – he has been constantly working these long hours for a year or so since he first got the job) He is "buzzed up" about his work and it brings him nothing but what he views as highly rewarding experiences. He loves his job, has high self-esteem, and he has nothing but good things happen to him as a consequence of his excessive workload (No evidence) (No evidence) (No evidence)	Over the last 2 years his daily working hours have got longer and longer (i.e., going from approximately 6- to 8-hr a day to 14 hr a day over a 24-month period) He has come to hate his job although ironically his excessive work helps him forget about all the problems he has in his personal life. He has low self-esteem and he keeps himself so busy just so he does not have time for any self-reflection He also feels highly moody, depressed, anxious, and/or irritable, if he is not working He spends almost no time with his family. His wife has threatened to divorce him and he only ever sees his children briefly at weekends as they are always in bed by the time he gets back from work during the week. Despite the threats of his wife, he cannot stop himself working at such a stressful pace When he takes a family holiday, his first thoughts are always about work. He is unable to leave his mobile phone and laptop at home and after a few hours of not being in touch with colleagues and clients, he has an irresistible urge to log on or check voice mail messages	Tolerance Mood modification Withdrawal Conflict Relapse

of this knowledge includes recent innovations in Swedish companies, which have reduced time at work (to 6 hr) without loss of productivity (and in some cases may even increase) (Alderman, 2016). To sum up, significant changes in the approach to work can be observed in the western world, especially in Europe, following a growing literature on the benefits of maintaining work–life balance. In some respects, the concept of work itself is undergoing fundamental metamorphoses; therefore, it appears as it is a timely moment to initiate further scientific debate on work addiction as a serious candidate to formal recognition as a mental disorder, and to delineate future research directions.

CONCLUSIONS

This paper briefly reviewed 10 myths that have appeared in the psychological literature concerning work addiction. Using empirical data, existing theory, and in a few cases speculation on behalf of the authors, it is demonstrated that there is evidence to counter each of the 10 myths. It is concluded that (a) work addiction is not a new behavioral addiction, (b) work addiction in some respects is dissimilar to other behavioral addictions, (c) the consequences of work addiction are not just psychosocial, (d) "work addiction" is a

psychological construct while "workaholism" is a more generic term, (e) work addiction is more than a consequence of individual personality factors, (f) work addiction or its antecedents signs might occur during adolescence, (g) "positive" work addiction does not exist, (h) work addiction is not a transient behavioral pattern related to situational factors, (i) work addiction is not a function of the time spent engaging in work, and (j) work addiction is not an example of overpathologizing everyday behavior. Based on these findings, it appears that the field is far from unified and that there are different theoretical constructs underpinning different strands of research.

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