



Workaholism: A Review

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Abstract

In this review, I examine the definition, etiology, measurement, prevention and treatment of workaholism, based on a systematic search of the literature. While there is some debate regarding the parameters of the concept, viewed as a negative consequential addiction, workaholism involves excessive time spent working, preoccupation with work to the exclusion of other life domains, loss of control over the parameters of one's work and disenchantment with work, and negative social, emotional, and health consequences. The etiology of workaholism is not clear but may pertain to persons with compulsive personality traits, who are driven to work harder than that demanded from work contexts, and who have learned to place work as a main means of gratification compared to other lifestyle alternatives. Most measurement approaches rely on self-report questionnaires, tested primarily with convenience samples. Refinement of current assessments is ongoing. Prevention and treatment implications are discussed, which include intra- and extra-personal level approaches. Finally, limitations of the work completed in this arena are mentioned and needed future research directions are suggested.

Keywords: Workaholism; Addiction; Consequences

Among several popularized potentially addictive behaviors (e.g., gambling, sex, drug use), addiction to work is one that has been the topic of much debate and confusion [1-7]. Varying definitions of "workaholism" exist, and several typologies of workaholics have been identified (e.g., job-involved and compulsive [8,9]; enthusiastic and non-enthusiastic [10,11]; compulsive-dependent, perfectionist, and achievement-oriented [12]; relentless, bulimic, attention deficit, and savoring [13]), leading to inconsistent operationalizations [1,7,12-17]. Of particular difficulty, the concept of "engagement in work" (extensive involvement with work; e.g., working at least 50 hours per week [2,15,17-19]) often has been considered to be prosocial behavior. In fact, not only has work engagement been found to be related to excellent job performance, but it also is related to feelings of empowerment, positive affect, and good health [20,21], assuming minimal disregard for recreation and exercise protective factors [22]. However, several researchers have argued that "workaholism" refers to a somewhat different phenomenon from work engagement *per se*; as being self-injurious and other-injurious [23].

Both work engagement and workaholism involve immersion in work, and likely involve attempting to achieve appetitive effects (e.g., a "rush", "loss of sense of time") through entrenchment in work activity [10,24,25]. (In addition, Holan [25] suggests that workaholism attempts to alleviate psychic pain but subsequently generates pain for self and others, a self-medication motive). However, work engagement and workaholism diverge as per accumulation of negative impacts. Of potentially central importance, workaholism may be associated with not only working excessively, but working to the point of not enjoying work (e.g., no longer finding the job interesting), but still feeling driven to work, potentially without being a reaction to complying with work organizational demands [8,10,18,26]. That is, the compulsive nature of workaholism ("wanting" to keep working without "liking" it [6]), and the lifestyle imbalance it creates [18], as opposed to the extensive time commitment involved, may be the central maladaptive feature. In fact, persons most likely to label themselves as "workaholic", or be labeled as "workaholic" by acquaintances, have been found to be those who were compulsively involved with work but did not like it, and experienced lower life satisfaction and greater work-home imbalance than "positively engaged workers" or "unengaged workers" [18]. In the present brief review, I describe in more detail the concept of workaholism, provide current knowledge regarding

its prevalence, measurement, etiology, prevention and cessation, and make suggestions for future research.

Method

Literature search

Looking under the key words "workaholism addiction" 6080 web pages were indicated on Google Scholar (accessed 10-1-2011). Since 1995, 4960 engines were indicated (an average of 310 articles per year); since 2000, 4350 engines were indicated (an average of 396 per year); and since 2005, 3070 were indicated (an average of 512 per year). That is, the number of articles on this topic appears to be increasing exponentially.

I was interested in including peer reviewed papers (both empirical and theoretical), but not books or chapters, except as historical sources or as part of a conference proceedings. I used the search terms "workaholism addiction" in each search. If fewer than 10 entries came up under these search key words, I used the term "workaholism" only. I searched only studies that appeared in the English language. I retained studies that provided information on how workaholism was defined, its prevalence, its measurement, its etiology, and its prevention or treatment. To create a literature base for this review, I first completed a Google Scholar search (on 10-1-2011). I used the search terms "workaholism addiction" and examined the first 500 of 6080 web pages. From this search, I was able to retrieve 73 peer-reviewed articles that pertained directly to workaholism. I completed additional searches using OVID Medline (1948 to Week 3 Sept 2011). I located no articles under "workaholism addiction" and

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under “workaholism” I located only 39 entries, which resulted in 6 more peer-reviewed articles for inclusion. Finally, in PsycINFO (1887 to October 1, 2011), using “workaholism addiction” 7 entries were located, of which 4 were added. Using only “workaholism”, there were 569 entries. I examined the 409 peer reviewed journal entries and located 24 more that were directly relevant, nonredundant entries. Thus, I located a total of 103 peer-reviewed articles. All of these were examined when composing this paper, though some articles reported partially redundant topics (generally by the same authors) and were not discussed.

The authors of two of the papers uncovered during this search mentioned in passing in their papers that they too had completed literature searches on workaholism. Ng, Sorensen, & Feldman [22] located 131 papers but only 40 peer-reviewed articles when examining the Business Source Premier research database (1987-2007), and they noted a paucity of rigorous empirical work on the topic. Schaufeli, Bakker, Heijden, & Prins [27] located 209 papers in PsycINFO using the keyword “workholism” (February, 2009), but did not indicate the number of peer-reviewed papers located. To be maximally informative on the breadth of the field, and given the current paucity of empirical studies on the topic, a qualitative approach was taken in the present review.

Does Workaholism Fulfill the Criteria for an Addiction?

Wayne E. Oates created the term “workaholism” in his 1971 text to describe the “uncontrollable need to work incessantly,” and he identified workaholism as an addiction very similar to alcoholism [28]. He was influenced by the work of Howard Clinebell, a pastoral counselor, who discussed overwork as an imbalance in lifestyle [29]. Oates further defined a workaholic as a “person whose need for work has become so excessive that it creates noticeable disturbance or interference with his bodily health, personal happiness, and interpersonal relations, and with his smooth social functioning” [28]. Thus, while there are several perspectives regarding workaholism, some which might suggest a productive involvement with and enjoyment of work, workaholism at least initially was coined to refer to an addictive process.

Sussman & Sussman [30] examined elements of “addiction” (as applied to substance use or other behavioral addictive behaviors, such as gambling, binge eating, sex, or workaholism) derived from an exhaustive literature search (n=52 articles located). Based on that search, these authors asserted that addiction includes: (a) engagement in the behavior to achieve appetitive effects, (b) preoccupation with the behavior (which subsume aspects of tolerance and withdrawal as examples of behavioral preoccupation [31]), (c) temporary satiation, (d) loss of control, and (e) suffering negative consequences. Assuming agreement with these constituents, for one to be considered addicted to work one should observe that work (at least at first) induces pleasure or another appetitive effect. Concurrently, or later on, engagement in work would be observed to limit one’s social life through preoccupation with work (need to work, excessive working, less interest in non-work activities [5,31]), alternating in brief periods of satiation, reveal a loss of control regarding time spent working, and lead to negative life consequences. Negative consequences of workaholism (which are discussed in more detail in the next two subsections of this paper) may include subjective emotional pain or feeling “burned out” [22], restriction of social activity and/or complaints from significant others, and may even lead to dangerous action (e.g., driving while preoccupied with work matters, driving and mobile telephone use, driving while being sleep deprived [6,30]). Of course, workaholics

may also continue to receive ongoing social and financial rewards such as job promotions, salary increases, and/or praise from employers and work colleagues [3] while, at the same time, they suffer these numerous other consequences, and may use work affirmations to discount objections of significant others (“denial” [31]).

Certainly, workaholism is rather different from substance abuse and dependence. Physical danger, and legal and role consequences are very unlikely to occur in workaholism relative to substance abuse disorder [6,30]. Also, the pathways to substance addiction may differ greatly from workaholism. As evidence, workaholism may cluster with some types of addictive behaviors and not others. As was found among a sample of 543 mostly adult consecutive admissions to an addictions treatment center, addiction clusters appeared to divide most generally into “hedonistic” (excitement/dominance motives, such as drug use, sex, love/relationship, gambling) or “nurturance” (providing for self or others motives, such as food, shopping, work, exercise) types of motives [32]. This finding was replicated in a sample of 948 college youth [33]. That is, workaholism, may be considered more of a self-nurturing type of addiction as opposed to one aimed at sensation seeking. Strangely enough, though, about a third of persons in treatment for sex addiction have been found to be workaholics [34]. This co-occurrence might suggest either subject selection biases, or perhaps that some workaholics may compensate for lack of time to have normal relationships through engagement in non-committal sexual behavior (which leads to negative outcomes). Alternatively, it is possible that workaholism provides a means of sensation seeking/excitement for some persons, in addition to self-nurturance.

Carroll and Robinson [35] studied 207 undergraduate students, who were children of workaholics, alcoholics, or from a general population. They found that children of workaholics and alcoholics reported being relatively likely to take on parental roles prematurely. These youth attributed this behavior to their parents’ workaholism or alcoholism. These authors noted the similarity between the “addiction groups” in terms of impact on the youth, though children of workaholics were relatively depressed. This study provided more support for viewing workaholism as an addiction. Likewise, Chamberlin and Zhang [36] studied 347 college youth and found an association between perceived parental workaholism and their own workaholism, and children who reported greater perceptions of parental workaholism (on a summed measure of their reports of parents’ work habits) reported lower self-acceptance, well-being, and more physical complaints (e.g., reporting getting sick often), which the authors interpreted as being consistent with the children of alcoholics literature.

Workaholism as an Addiction with Negative consequences

Workaholism, then, as a “negative addiction”, involves (a) excessive time spent working and, importantly, (b) difficulty disengaging from work, way beyond the call of the job, which often elicits negative emotions during and after a work episode; (c) frustration and agitation when prevented from working (e.g., when with family); (d) association with an inflexible or compulsive working style, leading potentially to poor relationships with others at work and at home [5,37-40], though both enthusiastic workaholics and non-enthusiastic workaholics experience relatively high work-family conflict [41]; and (e) negative life outcomes including high perceived stress, low self-esteem, low life satisfaction, difficulties sleeping [24,42-45], career dissatisfaction and poor performance [25,46], delay of planned retirement [47], work “burnout” [26,48-52] and ill-health [11,14,21,47,53-56].

Indeed, workaholics report relatively greater marital estrangement [38], perceive less effective family problem solving and communication [40], report strained relations with children (more so with children than with spouse [5]), and female workaholics report being relatively unlikely to get married [37]. Furthermore, Robinson and Kelley [39] found that children of workaholics reported greater depression and external locus of control relative to children of nonworkaholics.

“Burnout” is a major purported ill-health outcome of workaholism. Ackerley, Burnell, Holder & Kurdek [48] included subjective lack of control, overcommitment, emotional exhaustion, and depersonalization as constituents of burnout in their study of licensed psychologists. These types of work burnout symptoms have been found to occur as a function of (a) work spilling over into other spheres of life [51], and (b) being driven to work “to the wall” (i.e., energy resource exhaustion [26]). In particular, workplaces that apply extraordinary job demands but provide few supportive resources will tend to lead to work burnout [57]. Thus, burnout may indicate something about job demands regardless of workaholism status. One other apparent determinant of work burnout is “role conflict”. Using cross-sectional structural modeling, role conflict (as doctor versus trainee, work versus home life) was found to fully mediate the relations of workaholism and job demands with well-being and burnout among 2,115 medical residents [58].

Other ill-health effects of workaholism include: sleep problems and exhaustion (particularly insufficient sleep [14,45]); weight gain [47]; slightly worse social and role function [53]; taking sick-leave [54]; high blood pressure [11]; anxiety and depression [14,55,56]; and physical pain [53,55,56]. While more research is needed on workaholism consequences, this list indicates a notable problem in living resulting from extended addiction to work.

Workaholism outcomes are delineated differentially by socio-environmental context

Socio-environmental context is a rather important moderating influence on negative outcomes of workaholic-like behavior [5,21]. One example is how age of the workaholic may interact with context. That is, a young worker with no family is likely to feel a sense of accomplishment and receive relatively few social criticisms relative to an older person with a spouse and children who exhibits the same behavior [3]. As a second example, working long hours to help a family survive in a relatively poor economy may be viewed as courageous rather than as workaholic. On the other hand, as economic downturns occur, the lack of enjoyment aspect of workaholism tends to worsen among those who are all ready highly driven [59]. Thus, workaholism-related consequences may occur in many economic conditions. As a third example, in dual earner couples, to the extent that partners provide social support to each other (listening, boost self-esteem), they may create a context that minimizes work-family conflict which otherwise would ensue due to workaholism [60].

As a final example, a workplace that exerts a great deal of work pressure has been found to be associated with relatively higher levels of work drive and lower levels of work enjoyment, particularly found in business services versus social services occupations [61]. Conversely, a system in which supervisors provide flexible scheduling at work is associated with relatively low work-family conflict among enthusiastic workaholics but not non-enthusiastic (compulsive) workaholics [41]. That is, compulsive workaholics appear relatively unlikely to be impacted by work context. Compulsive (driven but unenjoyable) working also fails to vary as a function of self-employment or working

for others [8], although salaried employees who work compulsively will tend to be relatively likely to go out of their way to help others and the organization [8].

Prevalence of Workaholism

Self-identified workaholism may be as high as a third of a working population [5,47], generally defined as excessive hours working [e.g., in a report of Canadian employees, 5]. Rates, of course depend on the population being (a) between the ages of approximately 18 and 64 (“the working years”), which is 62% in the U.S. [62] and (b) employed (which is approximately 90% in the U.S. [63]). If a third of the working population self-identifies as workaholic, this could translate to 18% of the total population being workaholic (33% workaholic times 62% of working age times 90% employed).

Prima facie, this estimate appears reasonable in the purview of other data. Workaholism shows a prevalence of approximately 8% to 17.5% [33,64-67] among college educated persons and estimates as high as 23%-25% have been provided among female attorneys, physicians, and psychologists/therapists [37,68]. On the other hand, other researchers have estimated that only 5% of the U.S. population was workaholic [4]. Tentatively, considering the midpoint of the range of estimates made on the few such studies that provide such estimates (most of which were estimated outside of the U.S.) my colleagues and I previously estimated a prevalence of workaholism as 10% of the U.S. adult population [6]. Along with a relative paucity in number of prevalence studies, inconsistency in the measurement of workaholism certainly leads to variability in prevalence estimates. Also, as noted previously in this paper, excessive working may be a necessary but not sufficient criterion of workaholism. Thus, a conservative estimate such as 10% may be more realistic also taking into account such characteristics as being hard driven and losing enjoyment of work.

Of course, even a 10% estimate may be high if one considers those at the relative extreme who are the most likely candidates for treatment; that is, in which the costs of workaholism rise much higher than benefits. While this 10% estimate may seem inflated, still it is lower than several others [5,37,47,68], and is approximately as high but no higher than estimates of addiction to cigarettes or alcohol [6]. Future work is needed to define the “extent” of workaholism really mandating treatment, or otherwise not resolving itself on its own.

Measurement of Workaholism

Besides records of number of hours worked per week (e.g., 50 or more [17]), and collaborative reports, currently there are no alternative, commonly used measures of workaholism other than that assessed through self-report. A couple of studies have examined simple self-reported identification as a workaholic as being the single item measure [64,67]. However, such subjective measures are of questionable content validity. There exist three main tested self-report questionnaire measures of workaholism that provide multiple studies of reliability and validity: (1) Work Addiction Risk Test (WART [69,70]), (2) Workaholism Battery (WorkBAT [11,24]), and (3) Dutch Work Addiction Scale (DUWAS [55,56]).

The WART is composed of 25 items and consists of five dimensions (compulsive tendencies [e.g., “I seem to be in a hurry and racing against the clock”], control [e.g., “I get impatient when I have to wait for someone else or when something takes too long”], self-absorption/ impaired communication [e.g., “I forget, ignore, or minimize birthdays, reunions, anniversaries, or holidays”], inability to delegate [e.g., “I prefer to do most things myself rather than ask for help”], and self-worth [e.g., “It is important that I see the concrete results

of what I do”). Collapsed across the five dimensions, the internal consistency of the measure is reasonable (coefficient alpha=.88 [71]), as is its two-week test-retest reliability ($r=.83$ [72]). However, the first three factors demonstrate the greatest number of item-factor loadings and discriminant validity for separating workaholics from non-workaholics [73]. The WART shows some evidence of content validity (item relevance to workaholism completed by 20 psychotherapists [74]), and concurrent validity (with Type A measures [71]).

The WorkBAT is composed of 25 items (there also exists a 14-item short scale [11] and a 20-item short scale [75]) and consists of three dimensions (high work involvement [e.g., “I spend my free time on projects and other activities”], high work drive [e.g., “I seem to have an inner compulsion to work hard”], and work enjoyment [e.g., “Sometimes I enjoy my work so much I have a hard time stopping”]), though in several studies only two dimensions (i.e., work drive and enjoyment) have been identified [22,41,75-77]), and in a recent Chinese assessment five dimensions have been identified ($n=1235$; 24-item scale after factor analysis; enjoyment, work involvement-enjoyment, drive-work involvement, drive-3, work involvement-3 [78]). Internal consistency for the drive and enjoyment subscales is reasonable (coefficient alpha=.75 or .85 and .85 or .88, respectively [41,77]), and less consistently internally consistent for the involvement subscale (coefficient alpha=.65 [41] or .80 [77]). There is also some evidence of convergent validity [77], with moderate correlations of (a) the drive subscale with an intrinsic job motivation measure ($r=.39$), (b) the enjoyment subscale with a job satisfaction measure ($r=.48$), and (c) both subscales with the Schedule for Nonadaptive and Adaptive Personality-Workaholism scale (SNAP-W; $r_s=.61$ and .27, respectively). However, criterion validity of these subscales with number of hours worked ($r_s=.22$ and .16, with drive and enjoyment subscales, respectively) is weak [77].

Schaufeli and colleagues [23,27,55,58,79] developed a newer measure, the Dutch Work Addiction Scale (DUWAS), derived from WART and WorkBAT items, which consists of two dimensions (working excessively [e.g., “I seem to be in a hurry and racing against the clock”] and working compulsively [e.g., “It’s important for me to work hard even when I don’t enjoy what I am doing”]). The working excessively subscale shows marginal internal consistency (coefficient alpha=.67 [58]), whereas the working compulsively subscale shows adequate internal consistency (coefficient alpha=.77 [58]). There are 17-item and 10-item versions of this measure, and both dimensions have shown some concurrent validity, with negative relations with perceived health and happiness [23] among large, heterogeneous samples of Dutch and Spanish employees (collapsed across version and sample, mean r_s between working excessively with perceived health and happiness are -.21 and -.20, respectively, and between working compulsively with perceived health and happiness are -.28 and -.28, respectively).

Using the DUWAS, Schaufeli, Bakker, Heijden, & Prins [27] found that the combination of working excessively and working compulsively (16% of the sample) was related to the most unfavorable conditions in terms of medical residents’ ($n=2111$) self-reported job demands (i.e., work overload, work-home conflict, overwork, role conflict, mental demands, emotional demands, and organizational demands), job resources (i.e., in terms of perceived lack of social support from colleagues, participation in decision making, feedback, supervisory coaching, and opportunities to learn), well-being (i.e., burnout, happiness, recovery after the workday), and organizational behavior (i.e., “presenteeism” [going to work despite feeling sick] and

medical performance [making errors that impact patients]). Thus, the DUWAS demonstrates reasonable concurrent validity, at least among medical residents.

Two other self-report measures of workaholism were located in the literature, though relatively less work has been completed using these measures. The SNAP-Work is an 18-item, forced-choice (true/false) instrument containing 13 work items and a further five items shared with an Obsessive-Compulsive subscale [77,80,81]. (The full SNAP measure, which taps various personality constructs, is much longer, consisting of 375 total items). The SNAP-Work has a good split half reliability ($r=.82$ [77]). As just mentioned above, it shows convergent validity with the WorkBAT [77]. Typical items concern neglecting important aspects of life due to work (e.g., “I enjoy work more than play.”, “People say I neglect other important parts of my life because I work so hard.”), putting work ahead of people (e.g., “I never get so caught up in my work that I neglect my family or friends.”), and perfectionism (“I don’t consider a task finished until it’s perfect.”).

Second, a “workaholism behavior measure” was developed and examined by Mudrack and colleagues [82]. This measure consists of two scales, each containing four items. Three items in the four-item Non-Required Work scale asks respondents how much time and energy they spend on thinking about ways to improve their work (e.g., “Thinking of ways to improve the quality of work provided to customers and/or co-workers”), and the fourth item asks about time and energy spent on initiating projects (“Thinking of ways to be more productive. Taking responsibility for initiating assignments and projects.”). The four items designed to assess Control of Others reflects the interpersonal and intrusive nature of workaholism (e.g., “Checking on the accuracy of other people’s work. Taking responsibility for the work of other people.”). Both scales show adequate internal consistency (coefficient alpha=.74 and .82, respectively [82,83]). This measure showed some convergent and discriminant validity [82,83]. Its two scales were correlated with each other ($r=.25$). Also, the Non-Required Work and Control of Others scales correlated positively with hours worked ($r_s=.20$ and .14, respectively), job involvement ($r_s=.18$ and .31, respectively), and work-nonwork conflict ($r_s=.19$ and .38, respectively). However, only the Non-Required Work scale correlated with needs for autonomy ($r=.23$) and affiliation ($r=.26$), and only the Control of Others scale correlated positively with self-monitoring ($r=.32$) and role ambiguity ($r=.18$), among a heterogeneous sample of 278 U.S. employees [82].

These measures overlap in conceptual contents of workaholism though there are a few differences, such as in wording of items. The main substantive difference is that the “workaholism behavior measure” emphasizes responsibility more than do the other measures. However, all measures appear to tap some aspect of lack of conscientiousness such as forgetting birthdays of significant others due to work. Also, work enjoyment and a sense of compulsive involvement with work are tapped by all measures. Of course, all of these measures are of a self-report type. Behavioral observation of work behavior is needed to more completely understand how well each of these measures tap workaholism behavior as it transpires.

Etiology

There have been a few multi-variable integrative theoretical statements on the acquisition of workaholism. Piotrowski and Vodanovich [83] suggested that workaholic behaviors develop from a combination of individual factors (e.g., personality traits), home/family characteristics (e.g. roles, responsibilities), and internal and external stressors, which do not typically interfere with everyday

functioning (e.g., praise and more money are appreciated at work and home at first). Nevertheless, as time progresses, the combination of various individual and work-related factors combine and lead to more frequent and intense workaholic behaviors. Reinforcement of workaholic behavior leads to work-home life imbalance over time.

Ng, Sorensen, & Feldman [22] developed a more refined theoretical model. They suggested somewhat similarly that dispositions, socio-cultural experiences, and behavioral reinforcements lead to immediate precursors of workaholism. Dispositions they mentioned include achievement orientation and desire for higher self-esteem. Socio-cultural experiences include a stressful childhood (from which work can be an escape), vicarious learning at home and work (of workaholism), experience of peer competition at work, and deriving self-efficacy more at work than in other contexts. Behavioral reinforcements include tangible and intangible rewards, experience of a winner-takes-all system, and an organizational environment that drives overwork. Immediate precursors include: joy in working, guilt and anxiety when not working, obsession with working, and working (self-imposed) long hours which spill into personal life.

Influenced by the work of Ng and colleagues [22], Liang & Chu [85] proposed that obsessive compulsion, achievement orientation, perfectionism, and conscientiousness are key personality traits leading to workaholism; intrinsic work values and vicarious learning in the family are two components of personal inducements; and putting work ahead of family commitments, peer competition, and vicarious learning at the workplace constitute three organizational inducements.

There are a few empirical studies that discern etiology of workaholism. These provide some support the Piotrowski and Vodanovich [83], Ng and colleagues [22], and Liang & Chu [85] (overlapping) models of workaholism development. Regarding the disposition etiological perspective, a tendency to be overcontrolling is a prime example. Overcontrolling behavior and associated impaired communication are related to marital dissatisfaction stemming from workaholism [31,37,86]. Overcontrolling behavior likewise has been found to be associated positively with job involvement, stress, and work-nonwork conflict [81]. Thus, a tendency to overcontrol self and others appears to be a central characteristic of workaholism [87]. One may speculate that this behavioral tendency precedes the development of full-blown workaholism. Controllingness is consistent with a trait perspective of workaholism. Workaholism also includes positive traits such as high energy and achievement orientation; but also additional negative traits such as narcissism (grandiose sense of self), discrepancy perfectionism (not measuring up to one's own self-standards of performance, or viewing co-workers as not measuring up to one's own standards of performance), tendency to blame others for work mistakes, neuroticism (insecurity), lower level of extraversion, and obsessiveness [16,31,56,88,89].

Libano, Llorens, Salanova, & Schaufeli [90] calculated a cross-sectional structural model with university administrative staff as subjects (n=386). They suggested that their data supported a trait-like model of enthusiastic-type workaholism in which high self-efficacy leads to high autonomy (independent, self-controlled work output), high mental competence (capacity to do many tasks), and emotional competence (approaching work tasks objectively) which, in turn leads to subsequent workaholism. Mudrack [82] found that two aspects of obsessive-compulsive personality (being highly responsible and stubborn) were predictive of workaholism. To summarize the dispositional etiological perspective of workaholism, what appear to

be both positive (e.g., high energy, responsible, capable) and negative (e.g., narcissism, controllingness, obsessive) traits are predictive of workaholism. I assume that the negative addictive features are associated with the negative traits.

There are a few empirical studies that provide support for the socio-cultural etiological perspective of workaholism. Some socio-cultural variables that promote perfectionism, such as social modeling of workaholic behavior, or being instructed in the importance of the work ethic, are relatively likely to lead to workaholism, although workplace demands including high work intensity (large scope of responsibility, unpredictable flow of work) are separate from, and not predicted by workaholism [91]. In addition, some demographic variables may reflect socio-cultural experiences which facilitate or deter workaholism. For example, workaholism appears relatively less common among younger blue collar employees; that is, within a blue collar sample, work overload has been found to be associated with being driven but not with enjoyment of work [92]. Some authors have suggested that workaholism is more prevalent or impactful among females than males, in that females, at least in a sample of 211 journalists, were found to report feeling relatively driven to work but also feeling more exhausted [14]. Similar gender difference results were found by other researchers among varied professionals [11,93]. In addition, in another study, the authors found that workaholism impacted work-to-family conflict among husbands of workaholic wives, but not wives of workaholic husbands (994 Japanese dual-earner couples [94]). On the other hand, males are relatively likely to work longer hours, interpreted by other researchers as thus being more workaholic [15]. Yet, one other study [16] failed to find a difference in work motives as a function of gender, age, race or age (n=297).

Finally, one study examined a behavioral reinforcement etiological perspective of workaholism [95]. Working style was examined. A tendency to stop working when one has "had enough" versus an evaluation of continuing to work if it is still enjoyable was found to be associated with workaholism [95]. That is, a tendency to work up to the point in which the job becomes punishing or working under a negative reinforcement contingency, may lead to workaholism. Working up to the point in which work is no longer enjoyable or under a positive reinforcement contingency is associated with work contentment or enthusiastic workaholism.

As one becomes more and more absorbed in work, a course of workaholism may unfold. Diane Fossel [96] suggests three phases of workaholism, based on her clinical-research work. In the early stage, the worker takes on more work than can be accomplished and is constantly busy, sometimes neglecting significant others. In the middle stage, the worker distances from personal relationships and experiences some physical consequences such as loss of sleep and weight changes. In the late stage, the worker suffers more serious emotional and physical consequences. There is no longitudinal empirical work, to my knowledge, that demonstrates a progressive nature of workaholism. Future research should examine whether or not there exists empirical nomothetic support for the existence of stages of workaholism, with unique predictors of each stage, and different outcomes stemming from each stage.

Another model that may suggest a process of acquisition of workaholism is the PACE model of addiction specificity [97]. Addiction specificity pertains to how different addictive behaviors may develop as a function of four variables: pragmatics, attraction, communication, and expectations (the "PACE model"). Regarding pragmatics, for one to become workaholic, one first needs to be employed. One also needs

to work in a setting within one has the opportunity to work long hours. Contrary to substance misuse, one does not need to engage in a transaction such as to exchange money for the drug. Conversely, one may receive extra money for working extra hard. One self-nurtures in this sense [32,33]. Regarding attraction, it is possible that there are persons relatively vulnerable who derive more of a “rush” from working than others [28]. They may or may not derive a similar rush if presented with the opportunity for other addictions (e.g., sex [34]). Regarding communication, it is likely that a vocabulary develops pertaining specifically to working that identifies a workaholic lifestyle (e.g., “burning the midnight oil”, “doing an all-nighter”, “stickler”, “taskmaster”). Contrary to drug use, there likely is no need for use of code words to hide intent to engage in the addiction from others [97]. On the other hand, there may be a tendency for workaholics to hide their intent from significant others by downplaying what they are about to do (e.g., saying: “I just have to drop by the office for a moment or two.”) Finally, regarding expectations, even while not enjoying work anymore, the workaholic may still obtain moments of an addictive rush, perhaps when beginning a new assignment, or after being paid. Also, it is likely that the reinforcement value of alternative behaviors has diminished, as is the case with other addictions, and which makes controlling this behavior difficult [97]. Thus, one can envision the acquisition of workaholism along a PACE model pathway, which illustrates similarities and differences from other addictions.

In summary, the etiology of workaholism may be similar to other addictions in that certain traits such as a tendency to be compulsive and low self-esteem, socio-environmental variables such as a stressful childhood and vicarious learning, and a search for appetitive or behavioral reinforcement effects may lead to workaholism. Also, entrapment in and negative consequences of workaholism may be progressive, involving preoccupation, loss of control, with perhaps temporary satiation features [30]. Some variables such as high achievement orientation, do not fit nicely with some other addictions, such as drug addiction; thus, workaholism may demonstrate addiction specificity [97].

Prevention and Treatment of Workaholism

Prevention of workaholism could be considered from the level of society, the level of the organization or organizational roles, or at an individual level. From the level of society, a shift in cultural emphasis to the importance of work-personal life balance, making use of work closings during National holidays to promote the importance of recreational and family interests, and mass media campaigns that attempt to counteract workaholism could be completed (e.g., development of a “work smarter, not harder” campaign [55]). Little such work has been discussed in the academic literature, and no empirical studies are available.

From the level of the organization, use of Employee Assistance Programs, enforced vacations, development opportunities for better engagement or flexible roles [51,60], and management training to facilitate enjoyment in the job [46] may be of assistance to prevent as well as treat workaholism. Periodic assessments of work enjoyment at the workplace may assist in determining if workload needs to be decreased.

From the level of the individual, attempts to address characteristics of individuals that promote workaholism, or promoting opportunities for recreation that restrict work-personal life overlap may be helpful. For example, cognitive approaches such as instruction and practice of self-statements to assist in helping individuals decrease their tendency to try to control other workers (e.g., focusing on “keeping one’s

own side of the street clean”) may assist in decreasing workaholism tendencies. Discount tickets to recreational events provided through the workplace also may provide a preventive function for individuals.

More targeted prevention also might be considered. For example, children of workaholics might be involved in group discussions, or might be taught how to monitor themselves for signs of developing workaholism (e.g., a tendency to work to achieve a “high”, a tendency toward perfectionism, and favoring instrumental activity over relationships). Planning recreational time on a weekly calendar might be guided by a facilitator. Addressing issues pertaining to working to achieve a sense of normalcy might be discussed, possibly using an approach such as motivational interviewing (i.e., the person may need to realize a sense of normalcy regardless of work role). Providing peer norms on work patterns might help persons to decrease work hours (through realizing that their own behavior is non-normative). In addition, career selection methods might assist in matching cases of potential workaholism to jobs that might maximize enjoyment while permitting a healthy outlet for being hard-driving [10]. Finally, education on the progressive nature of workaholism-related consequences might help curb a developing pattern of workaholism (e.g., through use of a “talk show” curriculum activity format [98]).

To be able to treat workaholism, first clinical assessments might be completed. Robinson [69] suggested 10 warning signs of workaholism that might be used by clinicians to screen persons for treatment, which were synthesized from clinical case studies. These warning signs include: (a) hurrying and staying busy, (b) need to control, (c) perfectionism, (d) difficulty with relationships (e) work binges, (f) difficulty relaxing and having fun, (g) brownouts or memory losses of conversations or trips to and from a destination because of exhaustion and mental preoccupation with planning and work effects of tuning out the present, (h) impatience and irritability, (i) self-inadequacy, and (j) self-neglect. Input from family and friends may be essential to validate clinical assessment of workaholism, particularly if the worker tends to deny difficulties with work that may stand out to others [31,69].

There are several potential means of treatment that could be used, that mirror those used with other addictions. For example, 12-step programming might be applied to persons suffering from workaholism. In 1983, one of the first formal efforts to create a fellowship around workaholism recovery began in New York when a corporate financial planner and a schoolteacher met. They formed Workaholics Anonymous (W.A.), using the Alcoholics Anonymous model, including perceiving workaholism as a disease. In their first meetings, spouses joined them and in retrospect was the first Work-Anon group, analogous to Al-Anon; in which family members of workaholics could seek recovery. On March 31, 1990, after a countrywide exchange of letters among several of the first W.A. groups, four W.A. members and two of their “Work-Anon” spouses converged to meet for the first time in St. John’s Presbyterian Church in West Los Angeles. Having come from fellowships in New York, Los Angeles and San Diego, they titled their meeting the “Workaholics Anonymous First World Service Conference.” The Workaholics Anonymous Book of Recovery [99], modeled after the Alcoholics Anonymous 12-step framework, was published in 2005.

As with other addictions, further treatment strategies that can or have been utilized with workaholics include use of one-on-one cognitive-behavioral treatment [25], motivational interviewing, holistic approaches, group therapy, family therapy [25,35,69], or even inpatient treatment that removes workaholics from a work

environment for some period of time. Relevant cognitive-behavioral strategies might include instruction in environmental advocacy (how to get one's needs met within systems: setting realistic goals, seeking enjoyment with work, decision making for work-personal life balance), self-instructional training and cognitive restructuring (to help one better direct their purposeful thinking), and problem solving (considering the benefits and costs of alternatives to solving a problem, to assist in time management [45,98]). These cognitive-behavioral techniques could be utilized to help (a) reduce or redirect tendencies to be hard-driven in a relatively healthy, balanced direction, (b) select or control the tempo of work tasks so as to maximize enjoyment, and (c) modify organizational inputs to assist with drive and enjoyment tendencies.

Motivational Interviewing or MI [100] involves a series of procedures for therapists to help clients clarify goals and follow through with their efforts to change behavior. Motivation for change fluctuates over time, and addressing ambivalence to change is considered a key for facilitating behavioral change. It is most likely that this approach would be used with workaholics who are asked to seek out assistance due to negative consequences experienced by self or others. A key aspect of MI may involve providing accurate feedback on the workaholics's behavior and outcomes as an aid in altering self-and-other destructive work habits, which might also involve exploring the client's reinforcement history [35].

Holland [25] summarizes a variety of clinical therapy approaches (e.g., group, family) with the central assumption that the restoration of life balance is critical in healing workaholism. He asserts that a comprehensive (holistic) approach is important, which includes diet, exercise, sleep, relaxation techniques, stress management, assertiveness training, and inclusion of spiritual or existential issues, to assist emotional and physical damage due to overwork. Thus, health promotion as well as intra-psychoic treatment may be important to counteract tendencies toward continuation of addiction to work.

Limitations, Needs for Future Research and Conclusions

There are numerous limitations in the state of research in this arena. First, there appears to be, at least *prima facie*, a lack of consensus on the definition or constituents of workaholism. From the lens of a negative consequential addiction, it would seem that feeling driven beyond the stated demands of the job to attempt to obtain an appetitive effect, a sense of lack of control over working, and suffering negative consequences as a result would qualify as a reasonable consensual definition, consistent with a generalized addiction model [30]. Second, assuming that there is a consensual understanding of what constitutes workaholism, prevalence data on general population samples (most previous and ongoing work involves convenience samples) using multiple measures [35] is needed to assist in gauging an accurate estimate of the extent of the problem. Current general population studies tend to rely on hours per week of working as a proxy measure [5]. Multiple types of data needed include self-report, collateral reports of family and coworkers, and company health system utilization [66].

Third, and related to the second limitation, almost all empirical studies rely on a cross-sectional questionnaire, interview, or one-shot case study methodology of different working populations [8,15,21,66]. Thus, order of precedence among workaholism and variables associated with it can't be well-established. As an example, it becomes unclear to what extent that workaholism leads to marital estrangement, or marital estrangement leads someone to want to place a greater focus on work to achieve life satisfaction and stay away from the source of

discomfort [101,102]. One exception to this methodology is a study by Snir & Zohar [17]. This study employed a self-report experience-sampling method (ESM), using a sample of full-time employees who completed the ESM forms at four random times during the day for one week. Results indicated that workaholism (defined as working 11.5 hours/day as the cut-off criterion; n=19 workaholics of 65 employees) was associated with continued cognitive engagement with work, accompanied by a preference for work over leisure activity and higher positive affect during work activity than during leisure activity. No significant differences were found between workaholics and non-workaholics with regard to the likelihood of performing work-related activities during leisure activity, or in the levels of physical discomfort and negative affect during the weekend. This study suggested the depiction of the enthusiastic workaholic. The sample size was small, and it would have been preferable to have included other measures of workaholism. Other future research studies might extend on this ESM approach.

Fourth, there has been little research examining workaholism in the context of details of free time activities [65]. That is, it is not clear what workaholics do when they are not working. Some engage in other types of addictions, perhaps as a short-hand to recreation, distraction, or release (e.g., sex addiction [34]). One may conjecture that concurrent addictions operate. Even if such negative behaviors as sex addiction are not operative, research may reveal that one may engage in recreational activities workaholically. For example, one may practice playing chess two hours per day to become an advanced player-possibly placed on top of a workaholic occupation schedule, which could compound difficulties. Thus, investigation of the daily cycle of activity among workaholics is an important direction of research and a clear limitation in current research.

Fifth, there exists relatively little research on the etiology of workaholism [66], or the impact of workaholism throughout the lifespan [36]. Personality, socio-environmental factors, and learning/reinforcement mechanisms need much examination. In particular, a better understanding of the impact of situational factors on feeling driven to work and enjoyment of work would be desirable. For example, feeling driven to work might be exacerbated when societal (e.g., a high unemployment rate makes it difficult to find another job), cultural (e.g., if the culture values achievement over nurturing), or organizational factors (e.g., the organization values work over family) increase the focus on work [59]. Studies of etiology within different contexts may help provide inputs into advancements in workaholism prevention and treatment. One other future research need regarding the etiology of workaholism is to study how the different "subtypes" may be related to each other and to the construct. It might be possible, for example, that enthusiastic workaholism precedes subsequent negative consequences. That is, possibly for some individuals, at first workaholism "does something for" the employee and then later "does something to" the employee, as with other addictions. Retrospective, cross-sectional studies may not be able to best study this intra-individual "progression". Longitudinal work could suggest that these different subtypes fall along a time-dependent progression model. Alternatively, it is possible that these different subtypes reflect different phenomena with different etiologic pathways. Again, for prevention and treatment purposes, a workaholism concept that refers to a negative consequential process would appear important to understand.

Finally, outcomes research on prevention and treatment of workaholism would appear an important topic of future work. Current case study examples [69] provide some direction. Of course,

advancement in applications depends in part on advancement in conceptual clarity, understanding of prevalence in different contexts, good measurement, and etiology with nomothetic empirical support.

It is hoped that this review provides a comprehensive look at the current status of workaholism derived from an exhaustive search of the peer reviewed literature. I believe that an addictions model would be an appropriate one in which to achieve consensus because it has important implications for assessment, prevention, and treatment applications. In addition, it was the original observation and intent when the concept was coined [28]. Furthermore, such a framing will permit comparisons of workaholism with the massive research engaged in on some other addictions, particularly substance abuse and gambling [6]. It is feasible that similar neurobiological mechanisms (e.g., insufficient mesolimbic dopamine turnover), cognitive misperceptions (e.g., prevalence overestimates of the addictive behavior), micro-social processes (e.g., shared behavioral excess), and large social and physical environmental features (e.g., promotion by the mass media) operate for workaholism as with other addictions [98]. There is much “work” ahead; hopefully guided with some adequate personal time balance.

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