

# The framework of clinical occupational medicine to provide new insight for workaholism

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**Abstract:** There is no single agreed definition of workaholism. Most interventions proposed for people suffering from workaholism target individuals. There is a paucity of descriptions of workplace risk factors. Our study examines case reports of patients suffering from workaholism with a focus on the role of the workplace. We describe case reports from patients of the Occupational Disease Centre in Brest, France between 2013 and 2016. Consultations were conducted within the framework of clinical occupational medicine with a focus on real work situations. Diagnoses of workaholism were made according to Goodman's criteria. The situations of four patients are reported. Three of these suffered from workaholism: a 41 yr-old sales representative, a 51 yr-old nurse in progressive care and a 30 yr-old saleswoman. The last case report concerns the situation of a 41 yr-old team leader who was first suspected to have workaholism, but later diagnosed with a bipolar disorder. Bipolar disorders and other addictive behaviours should be assessed. An exclusive variable remuneration and work organization that could induce confusion between the working and personal environment both constitute risk factors. Some patients were ambivalent to their condition and willing to go on working despite ill-health issues. These elements could be integrated into further research on workaholism.

**Key words:** Occupations, Addictive behavior, Occupational medicine, Workplace

## Introduction

Workaholism was first defined by Oates in 1971 as an “*addiction to work, the compulsive and uncontrollable need to work incessantly*”. Today, however, there is no consensus on how workaholism should be defined<sup>1)</sup>. The concept is considered vague by some authors<sup>2)</sup> and does not figure on international nosographic classifications such as DSM-5 or ICD-10<sup>3, 4)</sup>. Wojdylo *et al.*<sup>5)</sup> define

workaholics as people with a strong craving for work associating addictive and obsessive-compulsive elements. Taris *et al.*<sup>6)</sup> defined workaholism as the association of two components: spending many hours on one's work, and the inability to detach oneself from work. It is not solely related to the number of working hours<sup>7)</sup>. Some authors consider workaholism as an association between behavioural (i.e., working excessively) and cognitive (i.e., inner drive) components. Schaufeli *et al.*<sup>8)</sup> stated that workaholism was related to excess working time, poor quality of social relations, health problems (such as distress and psychosomatic complaints). In addition, these last authors showed an association between workaholism and a lack of job resources.

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Some authors have provided arguments to distinguish workaholism from work engagement. Wojdylo *et al.*<sup>5)</sup> differentiate workaholics who only feel worthy when working hard and work engagers who are working hard because they enjoy it. Taris, Schaufeli and Shimazu describe work engagement as the positive opposite of job burnout, characterized by vigor, dedication and absorption<sup>9)</sup>. These authors consider that workaholics are people for whom work is not fun, they are reluctant to disengage from work and they persistently and frequently think about work when they are not working<sup>10)</sup>. Engaged workers work because they like it; workaholics work because they are driven by an inner urge to do so.

Andreassen *et al.*<sup>11)</sup> have related psychiatric symptoms of ADHD (Attention-Deficit / Hyperactivity Disorder), OCD (Obsessive Compulsive Disorder) and anxiety to workaholism. Their cross-sectional analysis did not, however, allow them to test for causal relationships. These authors suggest that “organizational interventions should aim to prevent and help young adults and managers to suppress and inhibit workaholic tendencies and maintain a positive ‘work-life’ balance”. They state that relevant interventions could involve Cognitive Behavioural Therapy (CBT), Motivational Interviewing (MI), training in stress, using relaxation techniques and mindfulness meditation. They also propose the use of specific medications (BUPROPION, ESCITALOPRAM, METHYLPHENIDATE).

Some typologies of workaholics have been proposed (compulsive-dependant, perfectionists, achievement-oriented, bulimic, relentless, savouring, attention-deficit, enthusiastic or unenthusiastic). These are mainly based on individual characteristics (such as motivation, relaxation, engagement, etc.), focusing on inner drive, but rarely related to work determinants. This way to consider the question suggests that acting on these characteristics is a way to prevent workaholism.

Improvement of working conditions (e.g. decreasing the workload or helping workers to prioritize their tasks) is probably less taken into consideration as a way to reduce the risk of workaholism. Some epidemiologic studies have been recently published concerning the effects of working conditions on workaholism. Andreassen *et al.* have shown a positive association between job demands and workaholism and a negative association between social support and workaholism<sup>12)</sup> Molino *et al.*<sup>13)</sup> have shown a positive association between workaholism and workload, cognitive demands, emotional demands, and customer-related social stressors. These are epidemiologic studies based on the analysis of a large number of questionnaires. As the

concept of workaholism remains blur, clinical descriptions should be helpful to provide further pathways for research and for the management of patients.

According to Andreassen<sup>1)</sup>, numerous studies on workaholism have been carried out without any rigorous theoretical frameworks and without using validated questionnaires. However, the literature offers different scales by which to evaluate workaholism, according to different theoretical approaches to this concept (e.g. considered as a type A behaviour or an addictive disorder). The main scores used are the Workaholism Battery (WorkBAT)<sup>14)</sup>, Work Addiction Risk Test (WART)<sup>15)</sup>, Dutch Work Addiction Scale (DUWAS)<sup>16)</sup> and Bergen Work Addiction Scale (BWAS)<sup>17)</sup>. Wojdylo *et al.*<sup>5)</sup> also described a Work Craving Scale (WCS). According to Andreassen<sup>1)</sup>, only the WART is based on symptoms reported by clinicians. These questionnaires are related to very different concepts of workaholism. It may or may not be seen as a multidimensional concept, an attitude, a behaviour, a trait, a compulsion and/or an obsession or an addiction. In summary, workaholism is still a blurred concept that focuses on the individual rather than on the working conditions that might promote this disease. There are too many questionnaires and only one of these (DUWAS) has been translated into French with validated psychometric properties.

To provide new insight that could improve the management of patients suffering from workaholism, we describe a series of relevant case reports of patients among whom workaholism has been suspected or diagnosed using the theoretical framework of clinical occupational medicine.

## Patients and Methods

### Patients

In the French occupational health system, front line Occupational Health Services (OHS) provide an occupational medicine service for all paid workers. The work of this service particularly includes drawing up work histories of employees to look for previous occupational exposures, prevention and diagnosis of occupational diseases and assessment of fitness for a job and providing recommendations for employers to enable them to improve working conditions and the work environment. These recommendations may concern either technical (e.g. with the help of an ergonomist, asking to provide ergonomic seats for secretaries, or tailored mouse devices for the use of the computer) or organizational aspects of work (e.g. proposing a therapeutic adaptation of the working time by working on half-days). Occupational physicians working

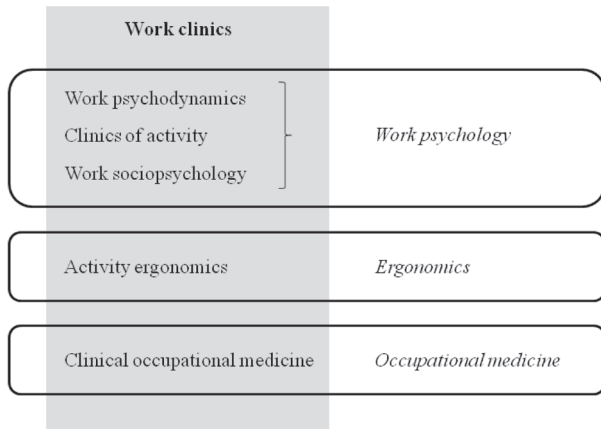


Fig. 1. Work clinics.

in such services can refer workers to an Occupational Diseases Centre (ODC). There are about 30 ODCs in France, all of which are members of a nationwide network (*Réseau National de Vigilance et de Prévention des Pathologies Professionnelles*, RNV3P), described elsewhere<sup>18-20</sup>). An ODC provides an expert opinion in specialized fields of occupational medicine. Each practitioner working in an ODC has his or her own field of expertise (e.g., occupational lung diseases, occupational skin diseases, work-related musculoskeletal disorders, etc.). Some of these practitioners provide expert opinions on work-related mental diseases. Description of practices in this specific field has been extensively published elsewhere<sup>21</sup>). In the present publication we describe relevant case reports of patients referred by occupational physicians working in OHS and for whom a diagnosis of workaholism has been made.

*Theoretical framework of clinical occupational medicine*

Performing a qualitative study does not mean performing a study without any theoretical framework. This part aims to describe the framework of Clinical occupational medicine, described by Davezies *et al.*<sup>22</sup>) as a way to practice occupational medicine. This approach allows both the patient and the occupational physician to work by referencing specific events located in both time and space in order to better understand the links between work and health<sup>23</sup>).

Clinical occupational medicine belongs to a cluster of similar approaches in the fields of work psychology and ergonomics known as Work Clinics (*“Cliniques du Travail”*)<sup>24</sup>) (Fig.1). All of these approaches put real work (*“le travail réel”*) at their centre, as opposed to prescribed

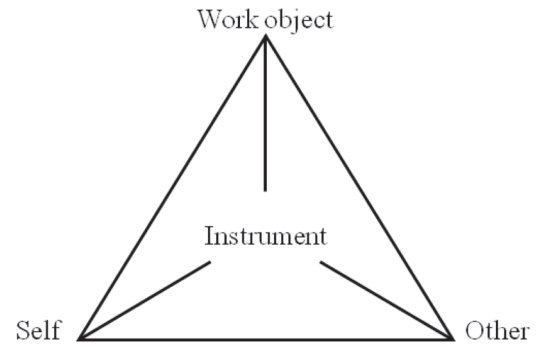


Fig. 2. Directed activity triangle.

work (*“le travail prescrit”*). These are qualitative fine-scaled approaches, based fundamentally on examples from the real world of work and on what people actually do at the workplace. During consultations, the physician is performing an in-depth interview with practical examples, he or she can situate in both time and space, provided by the worker himself or herself (e.g. the exact moment of a precise argument with the supervisor). In this approach, the clinician avoids talking with generalities (e.g. “everyday” arguments with the supervisor). Focusing on precise events, rather than general speeches, is a way to investigate real work.

Our way to consider clinical occupational medicine is linked to our clinical practice. In this approach, we consider it important to make links to work psychology, especially while dealing with work-related mental disorders<sup>25</sup>). Thus, we also use the “Clinics of Activity” theoretical framework proposed by Clot and Kostulski<sup>26</sup>). One key issue in this approach is its singular conception of *activity* (Fig. 2). In *directed activity theory*, activity is performed by a person (*self*) with their own history and reasons to act the way they do, and is directed towards another person (*other*), engaged in an interpersonal relation. But the specificity of the activity is the third term linking both: the *work object*. The activity of both the self and the other is directed toward a common object by the means of technical or symbolic *instruments* (e.g., language, a computer, an industrial machine...). A well-conceived workplace is a place in which two people who hate each other would be able to work together. At the workplace, we are present not as simple persons but as *professionals*, i.e., correctly trained, carrying the history of our profession (what Clot calls the *transpersonal* dimension of work<sup>26</sup>) and focus on the work objects.

Interpersonal tensions (i.e. between *self* and *other*, regarding the directed activity theory) at the workplace

should be first seen as possible consequences of troubles in work organisation, causing arguments between workers. In particular, we consider arguments between workers as a way to investigate problems at the workplace by understanding the reasons for the argument and switching from a pure interpersonal relationship (between *self* and *other*) to a triangulation (between *self*, *other* and the *work object*). Real work therefore occupies a central position in this kind of approach.

Considering this principal, we use a specific way to analyze workers' discourse in the clinical occupational medicine framework. There is no direct relationship between real work, what the worker knows about his or her work and what he or she spontaneously says about it. Workers do not always feel they can tell an OHS physician everything that happens in the workplace. The physician can often be seen as checking up on employees (even though they are not) and social desirability induces bias, meaning that people tend to adapt what they say to what is expected by the situation. In sum, one of the main consequences of workers viewing a physician as a checking up on them is that they might not feel free to admit when they transgress work rules.

Additionally, when a worker talks spontaneously about his or her work, this differs from the real work itself. Real work is ever-changing, differing from one day to the next, even though these differences may only be slight. Workers speaking spontaneously about their work make an overall mean. One element confirming this idea is that after letting workers speak about their work, we ask "what were you doing at work yesterday? Yesterday exactly, not the day before or any other day." the answer is often "Doctor, yesterday was a special day." It is necessary to understand and capture the nature of our work to generalize about what happens at the workplace and tell this to another person but, by doing this, we lose the details and lose our focus on real work.

A practical way to get back to real work is to focus on precise events (a precise day, a meeting with one's boss, an argument with a colleague, etc.). For such situations, the worker stops talking using the present, which indicates a generalization, and switches to the past tense. With the help of calendars, he/she progressively stops generalizing ("The boss is always bad, he is evil.", "The colleague is always bothering me, he is a bully."...) and instead focuses on the event and what exactly happened at work (What was this meeting with the boss about? What was the reason for this argument with the colleague?). Thus allows us to analyze work with by switching from a pure interper-

sonal relationship to the triangular conception as proposed in directed activity theory.

#### *Diagnosis of workaholism*

Substance and behavioural addictions present common phenomena, such as dependence, tolerance and craving<sup>27</sup>). Craving is a symptom of substance-use disorders, such as alcohol, tobacco or cocaine<sup>28</sup>). Some authors, like Wojdylo *et al.*<sup>5</sup>) have defined workaholics as people with a craving for work. According to Andreassen, the addiction approach for workaholism has recently been given credence<sup>1</sup>). We considered workaholism as a behavioural addiction to work. But workaholism is not included in the DSM-5 or in the ICD-10. Consequently, as proposed by Guiho-Bailly and Goguet in their clinical practice<sup>29</sup>), we decided to use the Goodman's criteria for addiction to diagnose workaholism<sup>30</sup>).

*A. Recurrent failure to resist impulses to engage in a specified behaviour*

*B. Increasing sense of tension immediately prior to initiating the behaviour*

*C. Pleasure or relief at the time of engaging in the behaviour*

*D. A feeling of lack of control while engaging in the behaviour*

*E. At least five of the following: (1) frequent preoccupation with the behaviour or with activity that is preparatory to the behaviour; (2) frequent engaging in the behaviour to a greater extent or over a longer period than intended, (3) repeated efforts to reduce, control or stop the behaviour; (4) a great deal of time spent in activities necessary for the behaviour; engaging in the behaviour or recovering from its effects, (5) frequent engaging in the behaviour when expected to fulfil academic, domestic or social obligations, (6), important social or recreational activities given up or reduced because of the behaviour, (7) continuation of the behaviour despite knowledge of having a persistent or recurrent social, financial, psychological or physical problem that is caused or exacerbated by the behaviour, (8) tolerance: need to increase the intensity of frequency of the behaviour in order to achieve the desired effect or diminished effect with continued behaviour of the same intensity, (9) restlessness or irritability if unable to engage in the behaviour.*

*F. Some symptoms of the disturbance have persisted for at least one month, or have occurred repeatedly over a longer period of time.*

When workaholism was suspected, we used psychometric scales and questionnaires (WART and/or BWAS) in

order to better document each situation. However, at the time we conducted the patient interviews, these scales did not have any validated French translations. We took into consideration these unvalidated translations as supplementary elements to assess workaholism. The WART comprises 25 items with a 4-points Likert scale. A score between 57 and 66 reflects a moderate workaholism, and a score between 67 and 100 reflects a high workaholism<sup>15</sup>). The BWAS comprises 7 items with a 5-points Likert scale. Having at least 4 positive answers (i.e. with either “often” or “always”) indicates a risk of workaholism<sup>17</sup>).

Psychometric validation of the DUWAS (Dutch Work Addiction Scale) has been available since 2016. To the best of our knowledge, this is the only validated scale of workaholism presently available in French<sup>31</sup>).

### *Ethical concerns*

Information concerning patients consulting in a French Occupational Disease Centre, member of the French National Occupational Surveillance and Prevention Network (Réseau National de Vigilance et de Prévention des Pathologies Professionnelles, rnv3p) are collected in a secured database. Patients are informed and give their consent to this data collection. The database has been approved by French authorities (Commission Nationale Informatique et Libertés (CNIL)) on June 16, 2011.

## **Results**

### *Case #1*

A man of 41 was a sales representative selling furniture door-to-door for professionals such as plumbers and electricians. He was referred to the Occupational Diseases Centre by his occupational physician in June 2016 in order to evaluate his fitness for work. He had been complaining of general symptoms included musculo-skeletal pain and digestive symptoms for which he had a gastroscopy and a colonoscopy that showed he was healthy. He suffered from sleep disorders and had difficulty falling asleep. He was depressed. He was unmotivated to go out or see his friends and had been on sick leave for two months before coming to the ODC. He had had a depressive syndrome 11 yr previously related to a break-up with his girlfriend.

When he came to the ODC, he was on antidepressant (PAROXETINE) and anxiolytic medication (BROMAZEPAM) with follow-up by a clinical psychologist.

He smoked half a packet of cigarettes and drank two glasses of whisky and two glasses of wine each day. He used alcoholic drinks with the aim of getting drunk and as

a way to relax after work. He described feeling a loss of control with alcohol, being unable to drink just one glass. He also reported using cannabis, which he did alone, also in order to relax. He did not report the use of any other psychoactive substances.

He had graduated from high school—passing a *baccalauréat*—in 1994, but did not complete a subsequent qualification in sales. He had then worked as a sales representative for different companies (a book shop and a frozen foods shop). In 2005, he started to work for a company selling professional furniture for plumbers and electricians. The company catalogue comprises over 30,000 different products to sell (nails, wood, ceiling rails...). He had to travel over a geographic area of over 50 km of diameter, visiting about 140 customers. His company provided him with a service vehicle and telephone, which he was authorized to use for his personal needs. Thus he owned neither his own personal vehicle nor a telephone. Customers regularly called him during his holidays or weekends. He did not have any professional office. All of the samples were stocked at his home, occupying over a quarter of his basement.

He described himself as being passionate, loving his work and being convinced about the good quality of the products he was selling. He had not had any conflicts with his boss with whom he had a good relationship.

Nevertheless, he explained that he had some problems with discrepancies between his sales and the targets he had to achieve. As a sales representative, he was asked to reach a sufficient volume of sales to satisfy his supervisor but, in order to maintain or to increase his salary, he had to increase his margin coefficient. It was not possible to achieve both. For example, he often had to sell ceiling rails. This is a basic product for which competition is high; many shops and representatives sell such products. In order to increase the volume of sales (and to satisfy his supervisor), he had to decrease his margin coefficient. He was thus able to sell this product for a lower price. Because this strategy decreased his margin coefficient, he did not meet the criteria that allowed him to maintain his salary. Consequently, despite the increase in sales volume, his salary decreased. In addition, the company organized commercial challenges between salaries, e.g., offering bonuses to the person who sold the largest amount of certain product types.

Clinically, this patient met the criteria for addiction, especially the pleasure or relief at the time of engaging in the behaviour, and the continuation of the behaviour despite knowledge of its negative consequences. His WART

scale result was 59/100 (moderate risk of workaholism) and the BWAS scale gave 4 positive answers out of 7. He explained that recently, the relationship with his wife had degraded because she accused him of never being at home.

This patient was declared unfit for jobs with this kind of remuneration and was referred to an addiction medicine physician.

#### Case #2

A woman, aged 51, was a nurse in a progressive care service in a medium-sized hospital. She was referred to the Occupational Diseases Centre in December 2015 by her occupational physician to assess her fitness for work. The problem was that she was feeling bad, had suicidal thoughts and made serious mistakes at her workplace. She had been on sick leave for 6 months when she came to the outpatient clinic. During this period, she started to go to the gym for over 6 h a week.

Her medical history showed that she had suffered from anxiety in 2006, and anorexia and hyperactivity since she was 18 yr old. She said she took medication to control her weight but has refused to weigh herself since 2003. Her medication associated PROPRANOLOL, ESCITALOPRAM, CYAMEMAZINE, BROMAZEPAM and LOR-METAZEPAM. She reported no consumption of tobacco, alcoholic beverages or other psychoactive substances. She divorced in 2012 after living with a man that she described as violent, saying she had been beaten and forbidden to go out.

She graduated from nursing school in 1986 and had spent most of her career in resuscitation wards. In 2002, she joined the hospital in which she was currently working. In 2014, she started working in the progressive care ward.

In June 2015 she made a professional mistake that she admitted. She decided to remove the non-invasive ventilation of a patient by herself and without being instructed to do so by a doctor. She was unable to explain why she had done this. She then had a meeting with the head of the progressive care service. She had a very bad subjective experience of her meeting with this man that echoed her own experience of abuse.

She obviously presented an over-commitment to work. She cumulated over 600 additional hours and was always volunteering to replace missing nurses. She was well known and had a good reputation as a nurse, but recently this had degraded due to several mistakes like the one we mentioned above. During the consultation she had in the Occupational Diseases Centre, she said: “*the harder my*

*job, the better I feel*”. She evidently loves her job.

However, she was also ambivalent, admitting to feeling really bad at the workplace but at the same time threatening to commit suicide if she were declared unfit for work. She explained she had everything she needed to do this in her workplace.

This patient clinically met criteria for addiction, especially continuation of the behaviour despite knowledge of having a persistent psychological problem exacerbated by the behaviour. On the WART scale she was at 72/100 (high risk of workaholism).

The Occupational Diseases Centre recommended maintaining this patient on sick leave and referred her to an addiction medicine specialist. She went to the addiction medicine centre one month later (in January 2016). Diagnosis of workaholism was clinically confirmed, as were eating disorders. Six months after the consultation, she was admitted to a psychiatric hospital.

#### Case #3

A woman, aged 30, worked as a saleswoman in a specialized shop for farmers. She was referred to the Occupational Diseases Centre by her occupational physician in September 2015 to assess her fitness for work after being on sick leave for 18 months.

In her medical history, she reported having deep vein thrombosis in 2004 but no personal or family history of psychiatric disorders. She was smoking 15 cigarettes a day and regularly consumed alcoholic beverages, with an AUDIT score at 13 (among women, a score over 11 suggests there could be alcohol dependence). She only drank at the weekends with her friends, but admitted to drinking too much. She did not report the use of any other psychoactive substances. From the beginning of her sick leave, she reported a significant use of Smartphone applications such as Candy Crush Saga. She divorced in 2012 and has no children. She and her ex-husband were still living in the same house.

She had graduated from high school in 2007 with a specialization in agriculture and then studied technical sales. She started work in a specialized shop for farmers in 2008 where she remained until 2015, selling goods to professional customers, doing shelving, and answering incoming phone calls.

At the same time, she was helping her grandmother on her farm. Her grandmother owned about 130 beef cattle. Our patient took over this family farm in 2010 when the grandmother retired. Thereafter she had two jobs—at the shop and on the farm—. Consequently, she worked from

7 am to 11 pm. From 8.30 am to noon, and from 1.30 pm to 6 pm, she worked in the shop. Before and after these hours, she worked on the farm. The patient explained that this farm was very important for both of them because it was her grandmother who had raised her. The two women still have a special relationship. They talk together on the phone three times a day.

The problem started in February 2014. Before that, it was possible for her to arrange her schedule with her colleagues when she had to provide veterinary care to the cattle or be present for calving—which does not necessarily happen out of the office hours. Then, a new manager decided to place her in another shop with new colleagues. It was impossible for her to make the same kind of arrangements. Moreover, the work was slightly different. In this second shop, because it had a different kind of customer, she had to sell more building products. She found this less interesting as she describes herself as being passionate about farming. This possibility of arranging her schedule was the *sine qua non* condition for her to cumulate both activities. A short time after the change of shop, she was placed on sick leave. Her general practitioner prescribed her an antidepressant (VENLAFAXINE). The medical adviser of her health insurance organisation asked her to see her occupational physician because of the long duration of her sick leave. Both wanted to know if it was possible for her to go back to work.

After 18 months, when we met in the Occupational Diseases Centre, she said she was feeling much better. She admitted she had never had any holidays and got stressed when she had to leave the farm for some days because she worried about the cattle. Her WART scale result was at 73/100 (high risk of workaholism). She was already planning to work full-time on the farm and drop the job at the shop.

The Occupational Diseases Centre confirmed this and proposed to declare her as unfit for the job at the shop, and recommended her to be cautious regarding other addictive behaviours.

#### Case #4

A man, aged 41, was working as a team leader in a milk-powder factory. He was first referred to the Occupational Diseases Centre in October 2014 to assess his fitness for his job and for night work.

This patient reported a single acute psychotic disorder in 2012 when he had a paranoid episode, believing his wife to be having an affair. He then started seeing a psychiatrist. He was taking RISPERIDONE 4 mg daily

with a good clinical tolerance but was feeling a bit slowed down. He had no other psychiatric incidents between 2012 and 2014. He was smoking 1 pack of cigarettes a day but reported no use of other psychoactive substances.

He was on sick leave between January and October 2014 because of a work injury to his calf. He had worked as a team leader in the milk-powder factory on a shift work schedule since 1995. There he supervised four workers, monitoring levels of steam, electricity and pressurized air. His role was to prevent incidents such as milk powder blockage in the equipment.

He had no problem at the workplace and was in good terms with his own supervisor. Nobody complained about the quality of his work. He loved his work and having responsibilities. When he suffered his work injury, he was put on sick leave for 3 wk, but the injury continued to be painful. As he was feeling guilty for being on sick leave, he decided to take a 2-wk holiday and then a period of unpaid leave. After one month, his general practitioner has prescribed a new regular sick leave. His own supervisor encouraged him to stay on sick leave, as his calf had still not recovered.

When the patient came to the Occupational Disease Centre in 2014, he had no delusional symptoms, but we noticed other elements indicating over-commitment. Parallel to his professional activity, he had personally built sold four houses. He created a company in the field of building. At this point, workaholism was suspected but not confirmed. His WART scale rating was 56/100 (mean risk of workaholism).

In 2014, the Occupational Diseases Centre stated he was fit to his job, but a follow-up with his Occupational Physician in the Occupational Health Service was necessary. He returned to work, but was again on sick leave between October and November 2015 due to sleep disorders. This time, the occupational physician decided to forbid him from doing night shifts. He then became technical assistant to the production manager, without any shift work. He was hospitalized in a psychiatric hospital in November 2016 for 10 d with another acute psychotic episode. A bipolar disorder has been diagnosed and his medication was switched to LITHIUM 1,200 mg daily. After that, his mental health improved, but his psychiatrist considered that the job change was not beneficial for the patient. He was stressed in this job, and preferred his previous job as team leader. Considering his good tolerance of the treatment, the psychiatrist considered he would be able to go back to being team leader.

In order to get another point of view, the occupational

physician again referred the patient to the Occupational Diseases Centre in June 2017. He still has a follow-up every 2 wk with his psychiatrist. He stopped his tobacco consumption in January 2015 and has stopped building new houses.

We considered that the patient was fit to do his previous job as a team leader, on day shifts to start with and with a follow-up by the occupational physician after one month and then the possibility to return to shift work if the tolerance was good.

## Discussion

To date, workaholism is not included in nosographic classifications such as the DSM-5 or the ICD-10<sup>3, 4)</sup>. Despite abundant literature, the definition of this concept remains blurred. Meanwhile, very few authentic case reports have been described. We therefore presented some relevant case reports in order to provide clinical elements that could contribute to the definition of workaholism.

The way workers get paid could constitute a risk factor for workaholism, especially when the whole salary is related to the worker's personal performance. Due to company growth targets, some workers are asked to continuously increase their performance in order to maintain their incomes. In addition, we should ask whether this way of remunerating workers, which potentially causes ill health, also raises ethical issues: is it acceptable to pay workers solely on the basis of their results, without any consideration for the efforts they make, even when unsuccessful?

The existence of company mobile phones and vehicles, as well as the use of the worker's own home promotes the confusion between the personal and the professional lives. Able to use their professional devices during leisure time, workers are also more likely to be bothered by customers using professional phone numbers during their leisure time (i.e., in the evenings, the weekends or holidays). The presence of work-related materials at home impedes workers from having a real break. These work situations could be compared to telework. For teleworkers, there is also no separation between the professional and the personal environment. Some qualitative studies among teleworkers have shown that this kind of work organization may paradoxically increase the total working hours due to the freedom of being at home<sup>32)</sup>. Steward<sup>33)</sup> has shown that teleworkers are more likely to work longer into illness and sooner during convalescence. Thus it is plausible that teleworking or having confusion between the work environment and the personal environment could increase

the numbers of working hours and be responsible for some ill-health issues. Further research on the relationships between telework and workaholism is needed, including empirical studies with larger samples.

Workaholism situations are work-related mental disorders occurring in situations in which relationships between workers and their supervisors can remain good. These workers can be particularly appreciated because of their behaviour: they are not reluctant to do additional hours and do not want to take holidays. However, taking care of workers also means encouraging them to have breaks in order for them to work better and prevent ill-health.

We noticed that over-commitment could be generalized and not limited to regular jobs: we described the situation of a worker who was also building houses during his free time, or a saleswoman working both in a shop and in a family farm. This over-commitment could be related to bipolar disorders. Although studies on the relationships between bipolar disorders and workaholism are lacking, occupational issues of workers suffering from bipolar disorders have been investigated. Laxman *et al.*<sup>34)</sup> pointed out that bipolar disorders are often misdiagnosed and patients with such conditions are less likely to seek help because of the associated stigmatization. Confusion with workaholism might be another risk factor for misdiagnosis of bipolar disorders. Contrary to workaholism, however, bipolar disorders are well described in the international nosographic classifications. Consequently, looking for bipolar disorders should be a priority issue when workaholism is suspected because a specific psychotropic medication and adequate psychotherapeutic support should be provided.

Over-commitment in the professional life is also sometimes a way to flee from personal problems. The cases we report include the situation of a woman who had suffered physical abuse from her partner, and a divorced woman who continued to share the same house with her ex-husband. In general, though, some workers find their job a useful way to meet other people and get away from personal problems. Some epidemiologic studies have investigated the links between workaholism and work-family conflict. Andreassen reported that obsessive work drive was linked to negative spillover between work and family<sup>1)</sup>. Hakanen and Peeters have shown that workaholism predicts work-family conflicts, but not the reverse<sup>35)</sup>. Our case-reports emphasize these links between workaholism and work-family conflicts.

A key issue of workaholism is the ambivalent behaviour of workers. They know their relation to their job leads to health issues. They know they consequently face



problems. Although they could develop suicidal ideation and plan to act on this at the workplace, they could still be willing to continue going to work. Some do not go on sick leave when their general practitioner prescribes this. Ambivalence is the E7 Goodman's criterion for addictions (*continuation of the behaviour despite knowledge of having a persistent or recurrent social, financial, psychological or physical problem that is caused or exacerbated by the behaviour*)<sup>30</sup>). Thus, it favours the hypothesis of a real addictive behaviour for workaholism. In these situations, it could be necessary to force workers to take such breaks for the sake of their health, even if they are unwilling. Another element is the coexistence of other addictive behaviours. Such workers could have tobacco consumption, problems with alcohol or eating disorders. The model in which workaholism could be related to an inner drive toward a specific behaviour (i.e., working excessively) has also been described for other addictions. This is the basis for cognitive behavioural therapies in the field of addiction medicine<sup>36</sup>). All of these elements support the hypothesis that workaholism can be considered as an authentic addictive behaviour. Consequently, other addictive behaviours should be assessed when workaholism is suspected.

Workaholism is related to both personal and environmental factors. Some personality traits (e.g. being compulsive-obsessive) may favour the development of workaholism. But in our opinion, workaholism cannot be considered only as the result of inner drive problems. We need to take into consideration more than just the psychogenetic part of the pathologic process (i.e., the personal factors). In specific work environments, some characteristics may promote workaholism. This is also the position of Taris *et al.* who stated in 2008<sup>6</sup>) that '*workers may possess the workaholic tendency without actually becoming a workaholic, e.g., because environmental characteristics prevent this disposition from manifesting itself*'. It can also happen to workers without any personal psychiatric history. Occupational health professionals should target these environmental issues and advise stakeholders in order to improve workplaces. It could be counterproductive to propose only solutions aimed at individuals, such as coping strategies for them to use alone, without any assessment of the workplace. The EU Occupational Safety and Health Framework Directive (Directive 89/391/EEC) states (in Article 6 related to general obligations on employers), that employers should adapt '*the work to the individual, especially as regards the design of work places, the choice of work equipment and the choice of working and production methods, with a view, in particular, to alleviating monotonous work and work at*

*a predetermined work rate and to reducing their effect on health.*' Adapting the work to the individual also means not adapting the individual to the work. In the daily practice of the workplace, intervening with regard to the individual does not equate with intervening with regard to the working conditions. Collective interventions and adaptation of the workplace must be done before starting individual interventions. Meanwhile, there is a paucity information about practical interventions related to workaholism situations in the literature, which could provide ideas for practical interventions in real work situations.

Although this study is merely a collection of case reports, which means it is not without limitations and bias, these elements could constitute raw preliminary data for further *ad hoc* studies with a stronger methodological framework. At this stage, we cannot claim to have been exhaustive; our aim was solely to describe clinical elements from daily routine practice in a French Occupational Disease Centre. We consider it very important to maintain a relationship between epidemiologic studies based on questionnaires on the one hand and practical issues on the other, in order to improve the usefulness of scientific literature for daily practice.

## Conclusion

These case reports were presented in order to provide clinical elements that could contribute to a better diagnosis of workaholism. When workaholism is suspected, looking for bipolar disorders should also be a priority in order to provide adequate treatment for these patients. As well as considering workaholism as a behavioural addiction, other addictive disorders should also be assessed, including substance-related and behavioural ones. Occupational health professionals should look for occupational risk factors such as an exclusive variable remuneration and the presence of company-owned devices (vehicles or telephones) or forms of organization (storage of professional stock or equipment at home) that induce a confusion between the working and the personal environment. Workaholic patients can have ambivalent behaviour: knowing their behaviour is responsible for health issues but willing to go on working. In these situations, we consider that sick leave should be prescribed. Workaholic situations are one of the rare types of situation in which a work-related mental disorder can still exist for a patient who is passionate about their work and who maintains a good relationship with their supervisor.

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