

# Chapter 2.6 Effects of work on health: psychosocial risk factors

Dr. K Nieuwenhuijsen, Coronel Institute of Occupational Health, Academic Medical Center/University of Amsterdam, The Netherlands, last updated 29/08/2012

K.Nieuwenhuijsen@amc.nl

## Objectives

Distinguish two types of objectives:

*Knowledge objectives (take care that in these objectives, the specific knowledge element is defined and what a student has to be able to do with this knowledge component; e.g., explain, give examples, clarify, structure, order, compare, identify, ...):*

- Students can present the prevalence and incidence of work-related mental disorders in the working population
- Students can describe psychosocial work conditions relevant in relation to mental health
- Students can give examples of relevant psychosocial risk factors

*Skills related objectives (take care that in these objectives, the actions are well described):*

- Students can take an occupational history in workers with mental disorders focused on psychosocial risk factors
- Students can inventory the psychosocial risk factors of any given work situation based on this occupational history
- Students can give advice on actions to prevent and manage work-related mental disorders

## Concept Map

First three mental disorders that are potentially work-related are described: (1) Post Traumatic Stress Disorders, (2) Stress-related Disorders, and (3) Depressive Disorders are the most common work-related mental disorders. Next, psychosocial risk factors that are relevant in relation to mental disorders are described. Most psychosocial risk factors that are described stem from three influential theoretical concepts. These concepts include: (1) Karasek's Job Demand-Control theory, (2) the Effort-Reward Imbalance Model by Siegrist, and (3) the concept of Organizational Justice. In addition, the psychosocial risk factor "workplace bullying" is highlighted.

In the Action plan, the work-relatedness of the mental problems of Mrs. W, a 48 year old woman is evaluated based on an assessment of her exposure to psychosocial risk factors.

## Advance organizer

### France Telecom worker kills himself in office car park

A France Telecom-Orange worker has died after setting himself alight outside his office, the latest in a wave of suicides at the company. The 57-year-old married father of four, described as a sociable member of staff, set himself on fire in the car park of a site at Merignac, near Bordeaux, after arriving for a morning shift.

He had worked for the company for 30 years, most recently at a call centre dealing with company accounts, and was a trade union member who monitored safety and work conditions. Paramedics could do nothing to save him.

France Telecom is Europe's third largest mobile phone operator and biggest provider of broadband internet services. But in recent years it has become synonymous with death and despair in what management called a "suicide contagion effect".

At least 23 of its employees killed themselves last year, and there were more than 30 reported suicides in 2008 and 2009, as well as many more attempts.

Among those who were found dead at their homes, some had left notes explicitly linking their suicide to their jobs. Unions complained of a climate of bullying, extreme pressure, poor management methods and restructuring cuts that forced people to repeatedly change jobs.

A 52-year-old employee killed himself in Marseille, leaving a note blaming "overwork" and "management by terror". He wrote: "I am committing suicide because of my work at France Telecom. That's the only reason."

Other deaths included that of a 51-year-old who threw himself off a bridge in the Alps after being moved from a back-office job to one in a call centre.

Staff said the climate had worsened since privatisation. Some staff complained of divorce, family breakdown and being forced to sell homes due to random job changes.

Last October an official report found that the plan, begun in 2006, to slim down the company and scrap 22,000 jobs in three months was behind the feeling of distress among staff. In recent months, the company has increased the presence of psychological support workers and pledged to reduce workplace stress and staff difficulties.

Source: <http://www.guardian.co.uk/world/2011/apr/26/france-telecom-worker-kills-himself>

#### Questions:

- Which mental disorders can be caused by work?

*This question will be answered in chapter 1.2 work-related mental disorders*

- What work characteristics can cause mental health problems?

*This question will be answered in chapter 1.3 Psychosocial risk factors*

- How can we establish the work-relatedness of a mental disorder?

*This question will be dealt with in chapter 2, Action Plan*

## **Body of the chapter**

### **1. Psychosocial risk factors**

Work is viewed as an important aspect of quality of life. Conversely, being unemployed is associated with a higher risk of common mental disorders. In spite of this beneficial effect of work, an unfavourable psychosocial work environment may also pose a threat to the mental health of workers. Trends such as increased work pace, more high-skilled jobs, and the increased use of Information and Communication Technology (ICT) have been placing increasingly higher demands on the mental functions of workers. Not surprisingly, high levels of psychological stress symptoms are widespread in the working population. A recent study estimated the prevalence of high level of psychological symptoms (likely mental disorder) at 4.5% and that of moderate levels (mental disorder possible) at 9.6% in a sample of 60,556 employees of large employers in the US. {1}

#### **1.1 Definitions**

##### Stressor at work

A condition or circumstance in a workplace (or other setting) that elicits a stress response from workers.

##### Psychosocial work environment

The content of work and work demands, the social relationships at work, the organization of work and the work culture which can each affect the mental and physical well-being of workers. All these work aspects are sometimes referred to as workplace stressors, which may have cognitive, emotional, physical, or motivational effects on workers.

##### Work Stress

Subjective feelings and physiological responses that result from the psychosocial work environment that put an individual in a position of being unable to cope or respond appropriately to demands being made upon him or her.

#### **1.2 Work related Mental Disorders**

Post Traumatic Stress Disorders, Stress-related Disorders, and Depressive Disorders are the most common work-related mental disorders.

##### **1.2.1 Post Traumatic Stress Disorder**

##### Clinical

PTSD is defined as a pathological anxiety that occurs after a person experiences or witnesses severe trauma. Trauma constitutes a threat to the physical integrity or life of the individual or of another person. Initial responses include intense fear, helplessness, or horror. The person later develops a

response to the event that is characterized by persistently re-experiencing the event, with resultant symptoms of numbness, avoidance, and hyperarousal. These symptoms result in clinically significant distress or functional impairment. To meet the full criteria for PTSD, these symptoms should be present for a minimum of 1 month following the initial traumatic event.

#### Prevalence/incidence

Studies on the prevalence of PTSD in the working population mostly focus on specific occupations and not on the general working population. Community-based studies, however, reveal a lifetime prevalence for Posttraumatic Stress Disorder of approximately 8% of the adult population in the United States.<sup>{2}</sup> Information is not currently available with regard to the general population prevalence in other countries.

#### Relation with work

Workers can have traumatic experiences in any occupation. However, in certain occupations, the exposure is structurally present: for example in police officers who can encounter both violent (eg, shootings) and very sad (suicides, accidents) events, in workers employed in financial institutions, such as office staff and drivers of cash circulation (robbery), in firefighters and train drivers (accidents and suicides), in bus drivers and train conductors (aggression and vandalism), and in military personnel (deployment and combat).

#### **1.2.2 Stress-related disorders**

##### Clinical

Stress-related disorder is a heterogeneously defined term that refers to unpleasant subjective stress responses. The (nonspecific) complaints can be classified into three categories: distress-symptoms, depressive symptoms and anxiety symptoms. In distress, it is a melee of different symptoms: fatigue is almost always present, but there are other symptoms such as lethargy, irritability, emotional instability, gastrointestinal upset, or worrying. Depressive symptoms include depressed feelings, trouble sleeping, lack of self-esteem, decreased appetite and a decreased need for sexuality. When stress symptoms reach the level of clinical relevancy it may be described as a Stress-Related Disorder (SRD). This term can be applied to many overlapping stress-related concepts and diagnoses such as neurasthenia, adjustment disorders, and burnout. The symptoms of stress-related disorders include anxiety and depressive feelings. However, if the severity and duration threshold for anxiety or depressive disorder is reached, that diagnosis takes precedence over a stress-related disorder.

##### Prevalence/incidence

Prevalence figures of stress related disorders vary due to their heterogeneous nature. In Europe, the prevalence of fatigue has been found to be as high as 25% of the working population. However, burnout prevalences are usually lower (8%)<sup>{3}</sup>, which is more close to the 9% prevalence of moderate levels of psychological symptoms reported in the large US sample.<sup>{1}</sup> Stress-related disorders do represent a significant part of the work-related common mental disorders in both self-report surveys and in reporting schemes by occupational physicians in Europe (80% in the Netherlands and 39% in the UK,<sup>{4,5}</sup>).

### Relation with work

It has been shown that psychosocial risk factors at work can contribute to the onset of stress-related disorders. {6} The strength of the relationships found between the risk factors and the onset of stress-related disorders suggests that exposure to multiple stressors at work is more likely to be the cause of a stress-related disorder than exposure to one stressor alone.

### **1.2.3 Depressive disorders**

#### Clinical

A major depressive episode is defined in the classification system of mental disorders of the American Psychiatric Association (DSM-IV-TR) as a syndrome in which at least 5 of the following symptoms have been present during the same 2-week period including either A or B:

A Depressed mood

B Diminished interest or loss of pleasure in almost all activities (anhedonia)

- Significant weight change or appetite disturbance
- Sleep disturbance (insomnia or hypersomnia)
- Psychomotor agitation or retardation
- Fatigue or loss of energy

- Feelings of worthlessness
- Diminished ability to think or concentrate; indecisiveness
- Recurrent thoughts of death, suicidal
- A pattern of long-standing interpersonal rejection ideation, suicide attempt, or specific plan for suicide

#### Prevalence/incidence

In Europe, the 12-month prevalence of major depression has been reported to be 6.9%. [2] In 2010, the US prevalence of current depression among adults from 2006-2008 was estimated. Among 235,067 adults, 3.4% met the criteria for major depression. {7} Internationally reported adult prevalence rates of depression generally mirror those of the United States. In a sample of 3579 Canadian employees, the 12-month prevalence of major depression rose from 5.1 before the global financial crisis to 7.6% in the end of 2009. {8}

#### Relation with work

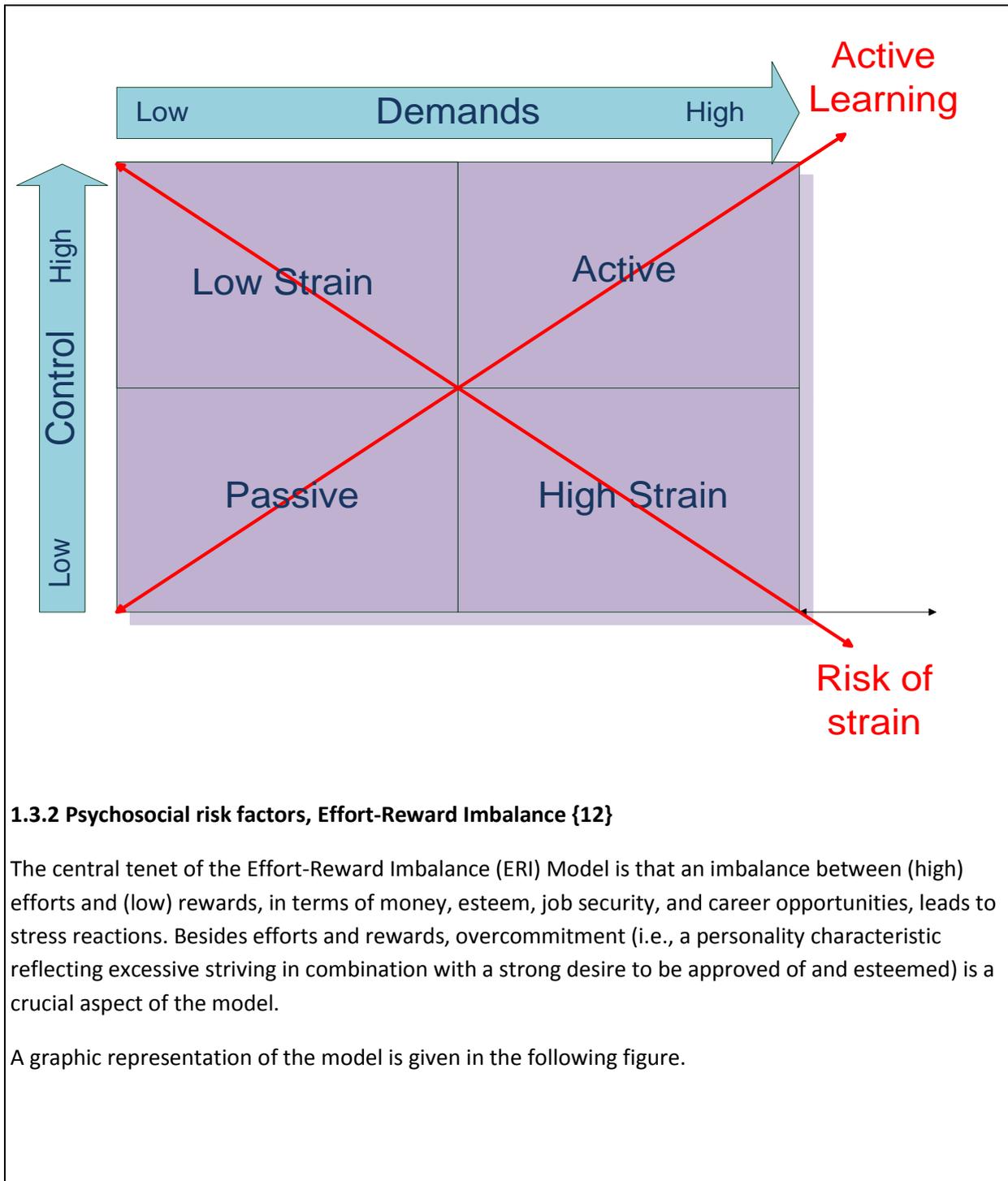
Major depressive disorder appears to be multi-factorial in its origin. A review in 2008 provided consistent findings that psychosocial risk factors in the workplace are related to an elevated risk of subsequent depressive symptoms or major depressive episode. {9}

### **1.3 Psychosocial risk factors and their origin**

A variety of psychosocial risk factors has been studied in relation to the onset of mental disorders. Some of these factors stem from stress theories, such as the influential Job Demand-Control theory by Karasek and the Effort-Reward Imbalance Model by Siegrist. Over the last decade the concept of Organizational Justice, a concept from industrial/organizational psychology where it was used to study outcomes such as motivation or commitment, has also been studied in relation to the onset of mental health problems. A single psychosocial risk factor that has been subject of studies in relation to the onset of mental health problems is workplace bullying.

#### **1.3.1 Psychosocial risk factors, Job Demand Control(-Support) {10}**

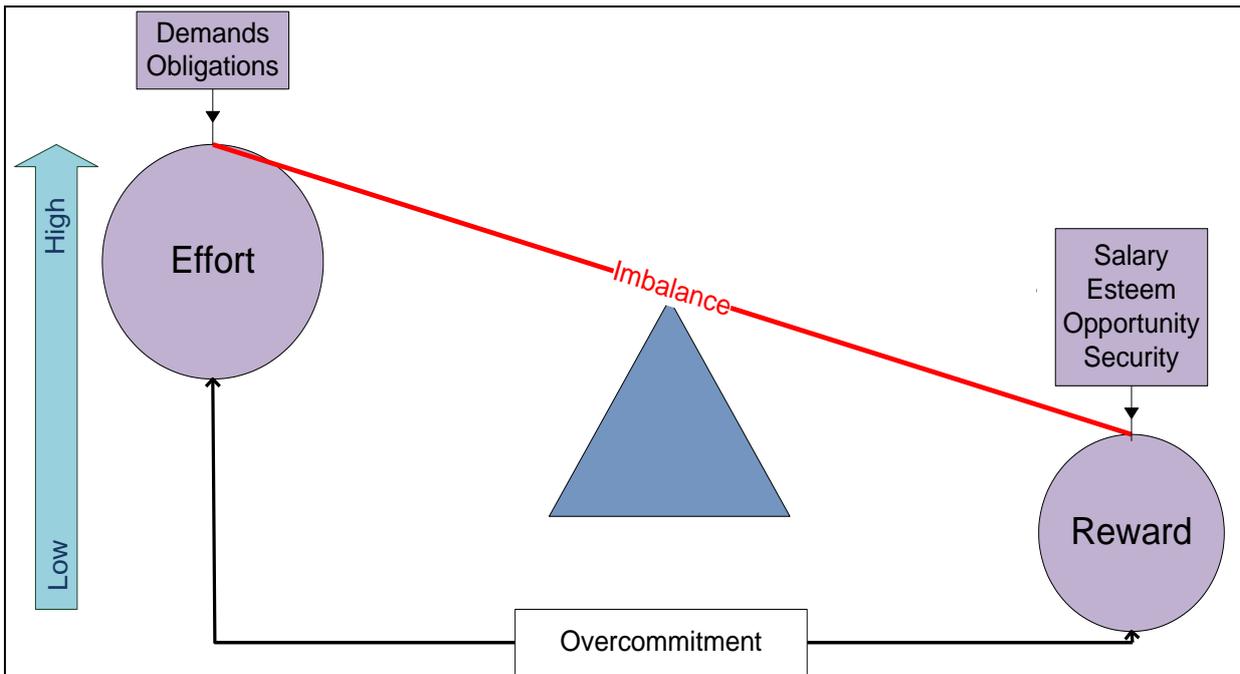
One of the most influential models in research on the relationship between psychosocial risk factors and health is the Job Demand-Control (JDC) model {10}, and its successor the Job Demand-Control-Support (JDCS) model{11}. The JDC model focuses on two aspects of the work environment: job demands and job control. Job demands refer to the work load or work pressure. Job control, which is sometimes called decision latitude, refers to the person's ability to control his or her work activities. Stress reactions are expected in a 'high-strain' job, that is the high demands + low control job. A second hypothesis states that high demands in combination with high control lead to increased learning, motivation and development of skills, so-called 'active jobs'. According to a third hypothesis, control can buffer the potentially negative effects of high demands. The buffer hypothesis of the expanded JDCS model states that social support from colleagues or supervisors moderates the negative impact of high strain.



### 1.3.2 Psychosocial risk factors, Effort-Reward Imbalance {12}

The central tenet of the Effort-Reward Imbalance (ERI) Model is that an imbalance between (high) efforts and (low) rewards, in terms of money, esteem, job security, and career opportunities, leads to stress reactions. Besides efforts and rewards, overcommitment (i.e., a personality characteristic reflecting excessive striving in combination with a strong desire to be approved of and esteemed) is a crucial aspect of the model.

A graphic representation of the model is given in the following figure.



The following three hypotheses are derived from the ERI model:

1. An imbalance between high effort and low reward (non-reciprocity) increases the risk of reduced health over and above the risk associated with each one of the components.
2. Overcommitted people are at increased risk of reduced health (whether or not this pattern of coping is reinforced by work characteristics).
3. The highest risks of reduced health are expected in people who are characterized by conditions (1) and (2).

### 1.3.3 Psychosocial risk factors, Organizational Justice {13}

Organizational injustice at work can be viewed as a psychosocial risk factor. Organizational justice is a construct defining the quality of social interaction at work. It refers to employees' perceptions of fairness in organizations. Three important categories of organizational justice are: (1) procedural justice: fairness of the decision-making procedures; whether decision-making procedures include input from affected parties, are consistently applied, accurate and ethical, (2) distributive justice: fairness of outcomes, and (3) relational justice: whether the treatment of workers by supervisors is fair, polite, and considerate. Low perceived justice has been shown to be associated with stress reactions.

### 1.3.4 Psychosocial risk factors, workplace bullying

Negative social interactions at work can be labeled as workplace bullying if a targeted individual is systematically and repeatedly exposed to aggressive behavior from other organizational members

{14}. Exposure to workplace bullying has been shown to be related to the onset of mental health problems. {15}

## **1.4 Interventions**

### **1.4.1 Preventing mental disorders**

Interventions to prevent work-related mental disorders are often a combination of individual interventions, such as cognitive behavioural interventions and relaxation to improve coping with stressors, and group and organization level interventions, such as managerial improvement programs, or improving the psychosocial work environment through a participatory approach. These components can bring positive and significant results with regard to work and mental health outcomes to workers. {16}

### **1.4.2. Management of mental disorders in the workplace**

Workplace-based interventions could improve work disability outcomes for workers with depression, anxiety or stress-related disorders. Facilitation of access to clinical treatment, and workplace-based high-intensity psychological intervention are effective in improving work functioning and facilitation of navigation through the disability management system can improve work absence duration outcomes.{17}

## **2. Action plan: Five step procedure**

Action plans consider what a student as a future physician will do. In cases where a disease/health condition is the starting point, this is a five-step procedure: (1) disease; (2) exposure; (3) other possible causes; (4) judgment as to the disease is work related or not; (5) intervention.

In this subchapter, the 5-step procedure will be applied to the case of a 48-year-old woman who consults her general physician because of emotional problems.

## **Back to the general framework**

Any physician should always ask these three questions while taking the history of adult patients with mental disorders:

**Do you have a job; if yes what kind of job, what are your work tasks?**

**Are you still able to work with your current health problem?**

**Do you feel your work may have contributed to developing or aggravating your health complaints?**

An indication that work has contributed to the onset or aggravation of the mental disorder should be followed by an occupational history taken the psychosocial risk factors into account. This enables the assessment of work-relatedness, which has implications for prevention on the individual and organizational level. The inability to (fully) work with a mental disorder requires attention as well, this is further elaborated on in chapter 3 “Fitness for work”.

## Summary

- Post Traumatic Stress Disorder, Stress-related Disorder, and Depressive Disorder are the most common work-related mental disorders.
- The etiology of mental disorders is multi-factorial in nature.
- Psychosocial risk factors at the workplace can contribute to the onset of mental disorders.
- Psychosocial risk factors from two stress theories and the concept of organizational justice are described. Along with workplace bullying.
- Interventions to prevent or manage mental health in the workplace are described

## Key words

Post Traumatic Stress Disorder

Stress-related disorders

Depressive disorders

Psychosocial risk factors

Job Demands

Control

Social support

Effort-Reward Imbalance

Organizational Justice

Procedural Justice

Relational Justice