S13.2

Job stress-related depression – a Swedish epidemic?

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The relation between illness and job conditions is often discussed. Access to medical diagnosis is a prerequisite for optimal treatment and prevention of job stress related disorders. Since 1997, the number of individuals on sick-leave for 3 months or more has increased dramatically in Sweden, and the costs to society have more than doubled in two years. Databases kept by the two Swedish insurance companies who together insure the majority of employed Swedes (about 3 million people) suggest that the increase is mainly due to depressive illness, which is particularly prevalent among middle management employees and school and health care personnel.

Epidemiological studies including structured diagnostic interviews with 250 individuals on sick-leave for any affective disorder confirmed that about 80 per cent fulfilled DSM-IV criteria for major depressive disorder. In about 50 per cent of the cases, no other cause for the depressive illness could be identified except job stress (particularly repeated reorganizations at the workplace, and an increased workload). The majority of the subjects also had physical symptoms, most commonly low back pain.

In 30686 instances of long-term sick-leave among health care personnel, a diagnosis of depression accounted for about 40 per cent of all cases of long-term sick-leave among doctors and registered nurses, while a diagnosis of musculoskeletal disorder was more common in assistant nurses. While the frequencies of depression and musculoskeletal disorders differed between different professions, together they accounted for about 70 per cent of all long-term sick-leave in all the professions studied, suggesting that job stress may be important in both types of conditions.

S13.3

Burnout links to corporate culture and work group climate

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Burnout is a stress related phenomenon that generally is regarded as dependent upon the coping ability of the individual. It is however a possibility that certain psychosocial working environment factors play an important role in the development of the stress syndrome.

Our study group is 68 persons with a sick-leave for at least one year with the diagnosis depression/burnout. They have answered two questionnaires – Sandberg & Lindell Organization Test, SLOT M and G – which describe their Working Group Climate, their Corporate Culture, the experienced change regarding different psychosocial environmental matters and their experienced Health status. The questionnaires were formerly analyzed by means of a multilevel Structural Equation Modelling program (AMOS) in large reference populations which defined factors on the inter-individual as well as on the between groups level. The latter indexes may be interpreted as more indicative of the impact of environmental psychosocial factors and the former of a more individual kind.

The results shows that there are great discrepancies between this study group and the reference populations – 17 out of 22 variables in SLOT G and 22 out of 24 in SLOT M show strongly significant deviations.

In SLOT M the Health status variables show the biggest deviations from the reference population but nearly as big deviations are found in a set of indexes under the heading Appreciation – Personal Resources, Pride and Appreciation. The group level indexes Shared Values and Change Past Present also deviates highly significant. Regarding the Corporate Culture 33% give a description of their organisation as being a Heavy Bureaucracy – the reference population having 15% in this category.

In SLOT G regarding Work Group Climate the Health status deviates still more than in the SLOT M. The change regarding Work group Climate and in Organisational climate from past until today is experienced as negative. Other strongly significant deviations were found in the indexes Self-Efficacy, Social Support, Codetermination, Feedback, Social Climate, and Cooperation.

The study highlights the strong correlation of perceived work group climate and organisational culture with burnout symptoms. The impact of those factors in the development of those symptoms should be measured in a study of longitudinal data.

S13.4

Pathophysiological aspects on stress related depression and ischemic heart disease

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In this lecture a theoretical framework for mental stress and depression as a risk factor for the development of ischemic heart disease is offered. This development can be described as dependent on the interaction between the following factors: 1) The presence of stressors, 2) activation of a receptor and transformation system (i.e. the central nervous system) and 3) physiological effector systems. A prerequisite for the psychological stress reaction is the existence of a central nervous system where stimuli are perceived interpreted and responded to. The interaction between neocortex and paleocortex is discussed as well as the initiation of the cerebral stress reaction.

Two physiological effector systems, related to mental stress will be discussed: the autonomic nervous system (ANS), and the limbic-hypothalamic-pituitary-adrenal (LHPA) axis.

Two archetypes of physiological stress reactions are described, the aggressive stress reaction (ASR) and the submissive stress reaction (SSR). The ASR is associated with an increased sympatho-adreno-medullary activity with release of catecholamines from sympathetic nerve endings as well as from the adrenal medulla. The myocardial activity following an increased activity in this system is an elevation in chronotropic, inotropic, dromotropic and bathmotropic functioning resulting in an increased cardiac output and an elevation of the mean arterial pressure. Catecholamines, released from the sympatho-adreno-medullary system, are deleterious to endothelial cell functioning, promoting uptake of light proteins to the intimal wall and are thereby an atherogenic mediator. The presence of increased amounts of vascular catecholamines is also of importance for the formation of thrombosis, spontaneous or in the case of plaque rupture.

The submissive stress reaction is related to an increased activity in the parasympathetic nervous system and also in the LHPA axis. The resulting physiological effects are storage of fat to central, visceral adipose tissue depots, decreased insulin sensitivity and responsiveness, decreased HDL cholesterol and increased triglycerides. This cluster of metabolic abnormalities is often referred to as "the metabolic syndrome". The behaviour associated with the physiological changes described above is often frustration/aggression, which later develops to self-destructive

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