

APPLIED PSYCHOLOGY

Lecture 5 Stress at Work



What is STRESS?



Stress

A natural reaction
to excessive
pressure

No such thing as positive
stress – only positive
pressure. Stress is **always**
negative

Not a disease, but
excessive/prolonged stress
can lead to mental and
physical ill health

When perceived demands
exceed the individual's ability
to cope

HSE Definition

Work-stress is the process that arises where work demands of various types and combinations exceed the person's capacity and capability to cope

What is stress?

- Hinckle (1973) - External forces exerting pressure upon an individual, producing strain
- Cannon (1929) – defined stress in terms of the internal physiological state of people exposed to threatening or exciting situations
 - 'Fight' or 'Flight' occurs in stressful situations
- Selye (1946) provided a more elaborate model of the human response to stressors.
 - The General Adaptation Syndrome

What is stress?

1. Pressure caused by an outside stimulus

- Engineering model (physics)
- External forces exert pressure and produce strain
 - E.g., focus on daily hassle/stressful life events
- We can easily measure the stress a person is subjected to (Hinckle, 1973)
- Does not take account for individual differences!

What is stress?

2. Cannon (1929) – 'Fight' or 'Flight' occurs under stressful situations

- Defines stress in terms of the internal physiological state of people exposed to threatening or exciting situations
- Selye (1946) provided a more elaborate model of the human response to stressors.
 - The General Adaptation Syndrome

- Stress response involves three stages:

Selye's 1946 General Adaptation Syndrome

1) ALARM REACTION

- Lowered resistance initially, followed by the activation of defence mechanisms (e.g., adrenalin)

2) RESISTANCE

- Stage of max. adaptation and hopefully the successful return to equilibrium. This will not happen if the stress agent continues. They will move on to the next stage.

3) EXHAUSTION

- Failure of defence/adaptive mechanisms

Work-related stress

• Is not:

- High work load
- Work related absence

• IS:

- The negative emotional state that arises from pressures at work
 - E.g., high workload is a potential *cause* of stress
- Something that is *caused or made worse* by work

MODELS OF WORK-RELATED STRESS

Structural

Transactional

Structural approaches to work-related stress

- Focus on describing the aspects of work (and the interactions between them) that are thought to lead to the negative emotional state of stress and, in turn, poor employee well-being

- **The Demand-Control model (Karasek, 1979)**

- Demands of the work
- Control of the individual
 - Skill discretion
 - Decision latitude

Structural models of work-related stress

- Karasek (1979) devised the Demand-Control Model around two particularly important features of the work environment

1) DEMANDS

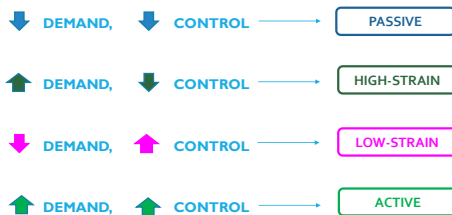
- Related to the amount of work a person does, but also factors such as time pressures and amount of mental/physical effort involved

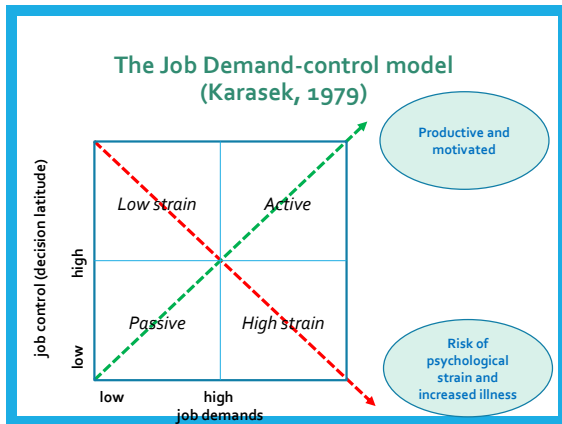
2) CONTROL

- Extent to which the job allows employee to use their skills/capabilities (skill discretion)
- Amount of control employee has over their work situation (decision latitude)

The Job Demand-control model (Karasek, 1979)

- Four categories of job were described through combining levels of demand and control:





What would these jobs be classified as?

- Call centre phone call handler
- Lifeguard at a swimming pool
- Elite team-sports athlete
- Car salesman
- Qualified medical doctor
- Supermarket checkout operator
- Shopping centre security guard

Support at work

Johnson and Hall (1988) – The Demand-Control-Support Model

- In this model, high levels of support are thought to act as a buffer against negative effects of work demands
- Jobs with higher levels of support, but equal levels of demands, tend to be healthier

Support at work

- Two hypotheses:

1) The Strain Hypothesis:

- Employees working in a high strain job (high D, low C) experience the lowest well-being / highest stress
- The strain hypothesis – emotional/practical support can help reduce the impact of high work demands (Daniels et al., 2009)

2) The Learning Hypothesis:

- High C, high D plus support can lead to improved motivation and satisfaction at work (De Witte et al., 2007).

Evaluation?

- Lots of support for the strain hypothesis
 - Low control and high demands interaction
- Moderating influence of social support is less consistent
- Measures are broad (responsibility pressure, quality concern, role conflict, work overload and job control)
- Certain people are more vulnerable to strain and others benefit more from control

TRANSACTIONAL APPROACHES

Transactional approaches to work-related stress

- Psychological emphasis – Stress exists when the person FEELS they cannot cope with the demands of the environment
- Interaction of person and environment
- Transactional model of stress and coping (Lazarus & Folkman, 1984).
 - Importance of *cognitive appraisals*

The transactional model of stress and coping (Lazarus & Folkman, 1984)

- According to the transactional model, the stress and coping process involves two main elements:

an **evaluation** of a situation that produces negative emotions

coping efforts which attempt to reduce these negative emotions

This process of evaluation is known as **Cognitive Appraisal**

- an individual's evaluation of the meaning of a particular encounter for well-being

The Transactional model of stress and coping (Lazarus & Folkman, 1984)

- Stress is a result of an interaction between an individual's characteristics and appraisals, the external or internal event (stressor) environment, and the internal or external resources a person has available to them.

Lazarus's initial model maintained that when individuals confront a new or changing environment they engage in a process of **appraisal**, which is of two types: Primary and Secondary

The transactional model of stress and coping (Lazarus & Folkman, 1984)

1) Primary Appraisal

- a) What is at stake in this encounter?
- b) Motivational relevance
- c) Motivational congruence

Three kinds of stressor:

- 1) Pose harm
- 2) Threaten
- 3) Challenge

2) Secondary Appraisal

- a) What can I do to cope and how effective will this be?
- b) Emotion-focused coping potential
- c) Problem-focused coping potential

The transactional model of stress and coping (Lazarus & Folkman, 1984)

• Stress experienced when harm or threat is **HIGH** and perceived coping ability is **LOW**

• If perceived coping ability appraised to be HIGH, stress is likely to be minimal

STRESS ARISES FROM A MISMATCH BETWEEN PERCEIVED
DEMANDS AND RESOURCES
(Both of which can change over time)

What is coping?

- A response to negative events or emotions, and involves cognitive and/or behavioural efforts to manage to adapt to the stressful situation
- Psychological theories of coping attempt to identify the mechanisms through which individuals cope with events that are **perceived** to be stressful or threatening
- Emotions and coping are often considered to be part of the same adaptational system
 - E.g., Lazarus and Folkman (1984); Folkman and Lazarus (1988)

Dimensions of coping

1) Problem focused coping

- a) targets the causes of stress in practical ways which tackles the problem or stressful situation that is causing stress, consequently directly reducing the stress
- b) aim to remove or reduce the cause of the stressor

Examples of problem-focused coping:

- **Taking control:** Changing or escaping from the stress/removing the stress
- **Information seeking:** Rational action. Trying to understand the situation and putting cognitive strategies into place to avoid it in the future.
- **Evaluating pros and cons** of different options for dealing with the stressor.

Dimensions of coping

2) Emotion focused coping

- a) involves trying to reduce the negative emotional responses associated with stress.
- b) sometimes the only realistic option when the source of stress is outside the person's control
- c) drug therapy can be seen as emotion focused coping

Examples of emotion-focused coping:

- Keeping busy
- Letting off steam
- Distraction techniques
- Building oneself up to expect the worst

Dimensions of coping

Avoidant coping: Can putting your head in the sand ever be a good thing??



Dimensions of coping

Avoidant coping:

- May be adaptive at an early stage in a stressful encounter, when we lack the resources to engage in problem-focused coping
- However, in the longer term, and if faced with an ongoing stressor, avoidance will prevent adaptation to and mastery over the situation
- Some types of avoidance (e.g., drug or alcohol misuse) are more dangerous and less adaptive than other types of avoidance (e.g., distraction)

CONSEQUENCES AND COSTS OF WORK STRESS

What outcomes can be observed due to work related stress??

Physical symptoms

Lack of appetite
Craving food when under pressure
Constant tiredness
Nail-biting
Nervous twitches
Nausea
Frequent crying or desire to cry
Inability to sit still
Sweating
Constipation/diarrhoea
Headaches
Cramps

Behavioural symptoms

Irritability with people
Unable to cope
Difficulty making decisions
Dread of the future
Difficulty concentrating
Inability to finish any tasks
Feeling of being a failure
Loss of interest in other people
Loss of sense of humour
Self-hatred

Ailments

Hypertension: HBP
Heart attack
Migraine
Intense itching (pruritus)
Constipation
Colitis
Rheumatoid arthritis
Menstrual difficulties
Flatulence & indigestion
Skin disorders
depression

WHAT ABOUT INDIVIDUAL DIFFERENCES IN PEOPLE?



Individual differences and occupational stress

- Why are some people more vulnerable to stress than others??
- Individual differences in personality, cognitions and emotions can have **direct** and **indirect** effects on stress outcomes

Individual differences and occupational stress

- Individual differences that are often investigated in work-related stress research:
 - Neuroticism/emotional instability
 - Type A personality
 - Locus of control; self-efficacy and self-esteem
 - Coping styles

Type A behaviour pattern

• 'Stress-prone behaviour pattern'

- Type A Behaviour is a multidimensional concept combining action and emotion and manifests in individuals showing the following:
 - Competitiveness
 - Time-urgent behaviours (trying to do too much in too little time)
 - Easily annoyed/aroused hostility and anger
 - Impatience
 - Achievement-oriented behaviour
 - Exhibit a vigorous speech pattern

Type a behaviour pattern

- Furnham (1990)
- Type A's respond more quickly to stress and in a more emotional way
- Exhibit a greater need for control than Type B's (more relaxed, reflective)
- Show greater physiological responses to stress

Locus of control

- Locus of control: an expectancy concerning the degree of personal control we have in our lives
- Internal**
 - Life outcomes are under our personal control
- External**
 - Outcomes have less to do with one's own efforts than with the influence of external factors

Locus of control

- A generalised expectancy (Rotter, 1966)
- People with an **internal** locus of control:
 - Behave in a more self-determined fashion
 - Achieve better grades
 - Are more resistant to social influence
 - Engage in more health-promoting behaviours; experience less depression and anxiety



AT WHAT POINT DOES STRESS BECOME *ABNORMAL*?

Stress to abnormality

- When individuals perceive they do not have the ability to cope with a stressful situation/event, they can experience feelings of stress and distress.
- When stress develops into anxiety, this is where organisational interventions are unlikely to be effective
- Clinical psychologists work to help alleviate symptoms of stress, distress, or of being overwhelmed in some way
- Help people by getting them to understand their thoughts and behaviours

The domain of clinical psychology

- Clinical psychology involves:
 - Understanding how we identify and define mental health
 - Using theoretical frameworks to understand how mental illness is caused
 - How mental illnesses are classified and diagnosed

CLASSIFYING MENTAL HEALTH PROBLEMS



Classifying mental health problems

- Two separate methods of classifying mental health problems
 - The World Health Organisation developed the International Causes of Death (ICD) which is currently in its 10th version (ICD-10)
 - The American Psychological Association developed the Diagnostic and Statistical Manual (DSM) which is currently in its 5th version (DSM-5)

Why do we need these systems?

- Classification systems allow us to separate out different illnesses
- We can then look at the causes of these mental health problems and provide appropriate treatment



CHARACTERISTICS OF ANXIETY BASED PROBLEMS

Anxiety based problems

- Everyone will feel anxious at some point but persistent anxiety can constitute a mental health problem (Lepine, 2002)
- An anxiety disorder is an excessive or aroused state characterised by feelings of apprehension, uncertainty and fear

Anxiety based problems

- Anxiety involves many physical symptoms as well as some significant cognitive characteristics
- Frightening intrusive thoughts, apprehension and obsession with potential threats
- When these problems are persistent and disrupt every day life they represent an anxiety disorder

Anxiety based problems

- The five most common anxiety disorders are:

- Specific phobias
- Panic disorder
 - GAD
 - OCD
 - PTSD

Anxiety based problems

- Around 20-40% of individuals in Western societies will develop an anxiety-based problem at some point (Shepherd et al., 1996)
- The most common disorders are estimated to have the following rates of prevalence:
 - Specific phobias (7.2%-11.3%)
 - Panic Disorder (1.5%-3.5%)
 - GAD (5%)
 - OCD (2.5%)
 - PTSD (3%-8%)

PANIC DISORDER

Panic disorder

- Characterised by repeated panic or anxiety attacks
- These attacks are associated with a variety of symptoms, including heart palpitations, perspiring, dizziness, hyperventilating, nausea and trembling
- In addition, the individual may experience real feelings of terror or severe apprehension and depersonalisation

Panic disorder

- Panic disorder is diagnosed when recurrent, unexpected panic attacks keep occurring, and are followed by at least one month of persistent concerns about having a further attack
- Frequency varies considerably from one attack per week to frequent daily attacks

Panic disorder

Biological Theories

- The effect of Hyperventilation. Ley (1987) suggests that dysfunctional breathing patterns may trigger a series of autonomic reactions that precipitate a full-blown panic attack
- Hyperventilation = shortage of O₂ = symptoms of panic attacks = recognised as anxiety (Zvolensky & Eifert, 2001).

Panic disorder

Supporting Evidence

- Ley and Walker (1973): Panic attacks can be induced by increasing CO₂ levels/encouraging hyperventilation
- Papp, Klein and Gorman (1993): Sensitivity to increases in CO₂ have been suggested as a risk factor for panic disorder. Suffocation alarm theories

Evidence Against

- Roth, Wilhelm and Trabert (1998): Panic disorder patients don't report higher levels of anxiety after holding breath than non-anxious control
- Margraf, Ehlers and Roth (1986): Artificially inducing symptoms of hyperventilation only increases symptoms of anxiety in those with a history of panic disorders

Panic disorder

Psychological Theories: Classical Conditioning

- Goldstein and Chambless (1978): 'Fear of fear'



Internal conditioned stimulus (ICS)



Panic Attack

Unconditioned stimulus (UCS)

Panic disorder

- But, unclear as to what is the CS and the UCS??
- Bouton, Mineka and Barlow (2001): anxiety is the learned reaction called a conditioned response, to the detection of cues of a conditioned stimulus (CS)

Panic disorder

Psychological Theories: Catastrophic Misinterpretation of Bodily Sensations

- Clark (1986; 1988): panic disorder is caused by the misinterpretation of bodily sensations as threatening

Panic disorder

Summary

- Evidence suggests important psychological component of panic disorder
- The negative evaluation of bodily sensations as threatening can induce anxiety

GENERALISED ANXIETY DISORDER (GAD)

Generalised anxiety disorder (GAD)

- Twice as likely to affect women
- Characterised by persistent, excessive, and unrealistic worry about everyday things
- GAD is diagnosed when a person worries excessively about a variety of everyday problems for at least 6 months

Generalised anxiety disorder (GAD)

- Risk is highest between childhood and middle age
- Exact cause is unknown – biological factors, family background and life experiences have been implicated
- People with mild GAD can function socially and be gainfully employed

Generalised anxiety disorder (GAD)

- GAD is typified by a constant chronic non-specific worry and anxiety



- Why do those with more stressful lifestyles worry LESS than those with GAD??

Generalised anxiety disorder (GAD)

Biological Theories

- Noyes et al, (1992): some evidence for a genetic component to the illness which suggests GAD is inherited
- However, Hettema, Neale and Kendler (2001) suggest that while GAD may run in families, the actual evidence for genetic influence is only modest
- Most likely GAD sufferers are not "born worriers"

Generalised anxiety disorder (GAD)

Psychological Theories: Information Processing Bias

- Individuals with GAD are in a state of constant hypervigilance.
- More likely to allocate more attention to threatening stimuli and information (Mathews & MacLeod, 2002; Mogg & Bradley, 1998)
- GAD sufferers more likely to focus on anxiety provoking stimuli, to actively search for them and interpret other stimuli and threatening

Generalised anxiety disorder (GAD)

Cognitions, beliefs and the function of worrying

- GAD sufferers continue to worry despite the disruption this worrying causes in day to day life
- Does worry also have a particular positive function that may outweigh the negative??

Wells (1999) - GAD sufferers strongly believe that worrying protects them from negative outcomes

Generalised anxiety disorder (GAD)

GAD sufferers have a lot of established psychological features:

Intolerant of uncertainty
(Ladouceur, Talbot & Dugas, 1997)

Poor problem-solving confidence
(Davey, 1994)

High on perfectionism
(Pratt, Tallis & Eysenck, 1997)

Feel responsible for negative outcomes
(Startup & Davey, 2003)

Do these factors make them **more inclined to worry?**

Generalised anxiety disorder (GAD)

Summary

- Evidence suggests that GAD sufferers may have developed a number of cognitive biases which leave the individual more prone to chronic worrying, including:
 - Information processing biases
 - Dysfunctional beliefs
 - Dispositional characteristics

OBSESSIVE COMPULSIVE DISORDER (OCD)

Obsessive Compulsive Disorder (OCD)

Obsessions

- Intrusive and recurring thought that the individual finds disturbing and uncontrollable

Compulsions

- Repetitive or ritualised behaviour that the individual feels they must do to prevent something negative occurring

Contemporary thoughts regarding OCD highlights the involvement of cognitive factors

Obsessive Compulsive Disorder (OCD)

Cognitive Factors: Inflated Responsibility

- Rachman and DeSilva (1978) - everyone experiences uncontrollable intrusive thoughts almost daily, but OCD sufferers are more likely to find these thoughts distressing
- More likely to feel responsible for having "bad thoughts", fear the consequences of these thoughts and have inflated thoughts about their own role in preventing harm.

Obsessive Compulsive Disorder (OCD)

Cognitive Factors: Inflated Responsibility

- Develop dysfunctional thoughts about the consequences of their thoughts
- Shafran and Rachman (2004): OCD sufferers may believe that thinking about something is the same as doing it.
- Rachman (2002): Their belief that they are strongly responsible for preventing harm may be the cause of such characteristic OCD behaviour as compulsive checking

Obsessive Compulsive Disorder (OCD)

Cognitive Factors: Thought Suppression

- Individuals with OCD may try to suppress thoughts they find distressing
- However trying to suppress a thought will actually cause it to occur more frequently (known as the rebound effect)
- This may explain why OCD sufferers have significantly more intrusions than nonclinical populations (Wenzlaff & Wegner, 2000)
- Wenzlaff, Klein and Wegner (1991) also argued that suppressing thoughts induces a negative emotional state, which is then associated with the thought. When the thought reoccurs it's seen as even more negative

Obsessive Compulsive Disorder (OCD)

Summary

- Clear that cognitive factors have a role in the development of an anxiety disorder
- Intrusive thoughts are a natural occurrence for all, but the interpretation of them becomes distorted in OCD sufferers
- The perception of stimuli is key the development of a mental health problem

POST-TRAUMATIC STRESS DISORDER (PTSD)

Post-traumatic stress disorder (PTSD)

- PTSD is a set of persistent symptoms that occur after experiencing or witnessing an extremely traumatic event
- The symptoms of PTSD can be grouped into three main categories:
 - Increased arousal
 - Exaggerated startle response (Shalev et al., 2000), difficulty sleeping
 - Avoidance and numbing of emotions
 - Avoid all situations that could trigger memories of event
 - Re-experiencing
 - Vivid flashbacks of the traumatic event

TREATING ANXIETY BASED PROBLEMS

Treating anxiety based problems

- Traditionally, therapies are developed around a relatively small number of important theoretical approaches



- 1) Psychodynamic
- 2) Behaviour Therapy
- 3) Cognitive Therapies



1) Psychodynamic approaches to treatment

- Aim:** *reveal unconscious conflicts that may be causing symptoms*
- Assumption that unconscious conflicts develop early in life
- Therapy designed to identify any life events that may have cause these unconscious conflicts and bring them into awareness

1) Psychodynamic approaches to treatment

- Types of treatment:

- Psychoanalysis*

- Free association
- Transference
- Dream analysis



2) Behavioural Therapy

Largely either based upon the principles of classical conditioning or operant conditioning

Therapies based on classical conditioning principles:

- **Flooding:** form of desensitisation for the treatment of phobias and related disorders where the patient is repeatedly exposed to highly distressing stimuli
- Counterconditioning and systematic desensitisation also form part of the same group known as **exposure therapies**

2) Behavioural Therapy

Therapies based on operant conditioning principles:

- Used in three specific ways:
 - To understand what is reinforcing certain behaviours
 - To use reinforcers and rewards to try and establish more adaptive behaviours
 - To use negative consequences to punish maladaptive behaviours

3) Cognitive Therapies

- Cognitive therapies involve tackling dysfunctional 'ways of thinking' - either about the self or the world
- Many anxiety disorders are characterised by a bias towards processing threatening or anxiety-related information (GAD) or interpreting ambiguous information negatively (panic disorder)
- If cognitive factors are maintaining symptoms, then developing treatments that try and address and change these dysfunctional cognitive features is important

3) Cognitive Therapies

Beck's Cognitive Therapy

- A form of therapy that considers depression is maintained by 'negative schema' leading depressed individuals to hold negative views about themselves, their future and the world.
- Beck argues that successful therapy must challenge the biased, irrational and over generalised thoughts.

3) Cognitive Therapies

Cognitive Behaviour Therapy

- An intervention for changing both thoughts and behaviour
- Usually possesses most of the following characteristics:
 - Keeping a diary of events and associated feelings, moods and thoughts
 - Identify and challenge irrational, dysfunctional or biased thoughts or assumptions
 - With the help of the therapist
 - Homework of behavioural experiments
 - Test whether thoughts are accurate and rational
 - Develop new more adaptive ways of thinking
 - Mainly in ways that may evoke their psychopathology

3) Cognitive Therapies

CBT is generally perceived as an evidence-based, cost-effective form of treatment that can be successfully applied to a very broad range of psychopathologies (Butler et al., 2006)

ADDITIONAL EVIDENCE

Evidence for Treatments

- Borkovec, Hazlett-Stevens and Diaz (1999): Beliefs about worry may play a significant role in the maintenance of GAD; interventions should be designed to modify these beliefs. CBT emerged as the most effective therapy for GAD
- Cuijpers et al. (2014): [meta-analysis] CBT is effective in the treatment of GAD and also has considerable effects on depression in GAD

Evidence for Treatments

- Cukor et al. (2009): Technological based treatments have the strongest evidence in the effectiveness for treating sufferers of PTSD. Virtual reality enhanced exposure therapy seems a promising intervention, especially for military populations.
- Ehlers et al. (2010): Recommend further research into the active mechanisms of therapeutic change. Trauma-focused psychological treatments (CBT, desensitization, etc) are first-line treatments for PTSD.

Evidence for Treatments

- Fairfax (2008): If applied properly, mindfulness not only complements traditional CBT interventions for OCD, but could also increase their efficacy and perhaps prevent relapse.
- Tarrier, Liversidge and Gregg (2006): Cognitive therapy and exposure therapies are highly preferred by PTSD sufferers, despite the anticipated discomfort with exposure therapy. Any treatments involving new technologies or psychodynamic psychotherapy were rated the lowest in preference.

Evidence for Treatments

- Zoellner et al. (2003): Women suffering with chronic PTSD are more likely to choose CBT or exposure therapies than pharmacological treatments. More willing to directly confront the trauma memory in therapy and talk through the problem than receive medication with potential side effects to 'hide' the problem, not solve it.



Any questions??
