

## HEALTH

Course outline:

Topic	Content	Studies
Determinants of health	1. The biopsychosocial model of health	<ul style="list-style-type: none"> <li>- Brady</li> <li>- Jobin et al.</li> <li>- DeLongis et al.</li> </ul>
	2. Dispositional factors and health beliefs	<ul style="list-style-type: none"> <li>- Jobin et al.</li> <li>- Friedman and Rosenman</li> <li>- Schuckit</li> </ul>
	3. Risk and protective factors	Personality <ul style="list-style-type: none"> <li>- Jobin et al.</li> </ul> 5HTT <ul style="list-style-type: none"> <li>- Schuckit</li> </ul> Mindfulness-based stress reduction (Coping strategies) <ul style="list-style-type: none"> <li>- Aikens et al.</li> </ul>
Health problems	4. Explanations of health problems	Biological <ul style="list-style-type: none"> <li>- Brady</li> <li>- Kiecolt and Glaser</li> <li>- Steptoe and Marmot &gt; Social</li> </ul> Cognitive <ul style="list-style-type: none"> <li>- Jobin et al.</li> <li>- Newcomer et al.</li> <li>- Kiecolt and Glaser &gt; Biological</li> </ul> Social <ul style="list-style-type: none"> <li>- DeLongis et al.</li> <li>- Steptoe and Marmot</li> <li>- Jobin et al. &gt; Cognitive</li> </ul> Bio/Cog/Soc <ul style="list-style-type: none"> <li>- Brady</li> <li>- Jobin et al.</li> <li>- DeLongis et al.</li> </ul>
	5. Prevalence rates of health problems	SKIP LOL
Promoting health	6. Health promotion	<ul style="list-style-type: none"> <li>- Health belief model</li> <li>- Bardsley et al.</li> <li>- Florida State University: Healthy Campus</li> </ul>
	7. The effectiveness of health programmes	<ul style="list-style-type: none"> <li>- Florida State University: Healthy Campus</li> </ul>

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|  | <ul style="list-style-type: none"> <li>- <b>Testability:</b> Operationalisation of factors</li> <li>- <b>Predictability:</b> Allows psychologists to estimate one's vulnerability to a health problem</li> </ul> |
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## Health problems

### 4. Explanations of health problems

#### **General introduction:**

I: There are significant implications to an individual's health and economic implications to societies as people seek treatment for stress-related illnesses

- Models built for explaining stress should lead to better care surrounding illness, including early prevention of illness, reduction of cost and reduction of negative implications of illness on societies

P: Stress must be studied holistically, as the physiological effects of stress are influenced by biological, social and cognitive factors

- Diagnosis of health problems is complex
- A multitude of factors that can lead to health problems
- Need to consider through three levels of analysis (Bio/Soc/Cog) > Biopsychosocial model

**Stress:** A pattern of negative physiological states and psychological responses occurring in situations where people perceive threats to their well-being which they are unable to meet (Defined by Lazarus and Folkman) [Elevated heart rate, anxiety, sweat glands, memory loss]

Health problems can be explained and treated by creating models

- The **biopsychosocial model** considers the three aspects (Bio/Soc/Cog) and how they interact in order to explain health problems

Originally built upon the biomedical model

**Biomedical model:** Believes disease is as a result of biological processes in the body, such as biochemical imbalances

- The limited approach only regards one aspect of the issue

#### **Biological:**

The fight or flight response is the body's natural reaction to stressful stimuli. The sympathetic adrenal medullary system secretes hormones such as epinephrine to provide the body with oxygen and energy. However, this response is only short term. The hypothalamic-pituitary-adrenocortical axis aids in the coping of long-term stress by producing cortisol.

#### **General adaptive syndrome (G.A.S model) by Selye**

- Alarm stage: Physiological response triggered by stressful stimuli
  - Fight or flight
- Resistance stage: Suppression of the immune system to produce cortisol
- Exhaustion stage: Eventual continued high arousal levels exhaust bodily resources, producing negative physiological and psychological effects
  - Eg. Reduced resistance to infection and depression

#### **BLOA explaining stress assumes...**

- Human behaviour is to some extent of a biological origin

#### **Stress response**

- Cortisol: Steroid hormone produced by the adrenal cortex in response to stress
  - Diverts energy to muscles involved in the fight or flight response, suppressing the activity of the hippocampus and therefore affecting memory

#### **Brady**

The G.A.S model is an example of a biomedical model which outlines how the body responds to high levels of stress. Brady (1958) investigates the relationship between prolonged high levels of stress and the release of cortisol. This prolonged exposure to stress represents the third stage of the G.A.S model: The exhaustion stage.

#### **Kiecolt and Glaser**

T cell lymphocyte counts in the body can show the effects of health. As our body continues to

	<ul style="list-style-type: none"> <li>- Low-loneliness had a higher NK activity</li> </ul>
<b>Evaluation</b>	<ul style="list-style-type: none"> <li>+ <b>Supports the G.A.S model:</b> As our body continues to copy with stressors, it eventually becomes "exhausted". This is when we are most likely to become ill.</li> <li>+ <b>Repeated measures design:</b> Reduces participant variability so can directly measure the change in T cell count</li> <li>+ <b>High ecological validity:</b> Effects of stress and changes in T cell count is realistic</li> <li>- <b>Natural experiment:</b> Difficult to control factors, such as coping strategies <ul style="list-style-type: none"> <li>- Possible that their response to stress, rather than the actual levels of stress, could determine their T cell count</li> </ul> </li> <li>- <b>T cell count as a determinant of health:</b> Implies that a high T cell count could lead to a higher susceptibility to illness <ul style="list-style-type: none"> <li>- Can argue that T cell count cannot be a determinant of health</li> </ul> </li> <li>- <b>Nature of the stressor:</b> The stress of exams is an acute stressor, unlike poverty or chronic stressors <ul style="list-style-type: none"> <li>- More research needs to be done</li> </ul> </li> </ul>

Study 3: **Stephoe and Marmot: Holistic approach**

<b>Signpost</b>	Holistic approach to explaining stress > How multiple different factors affect stress
<b>APRC</b>	<p>A: Investigate the interaction between social, psychological and physiological aspects of stress  P: Used seven questionnaires, each related to a different social stressor (Eg. Job stress, environmental stress, economic issues, etc.)</p> <ul style="list-style-type: none"> <li>- To provide a physiological measure of stress, blood samples were taken to measure the level of cortisol</li> <li>- Analysed cortisol in relation to health problems</li> </ul> <p>R: Found that an individual scoring high on one stressor did not necessarily have a high score on another</p> <ul style="list-style-type: none"> <li>- Participants who had a high mean score on all seven stressors had blood tests indicating they were in a high-risk group for developing heart problem</li> </ul> <p>C: A combination of daily stressors may put an individual in risk for health problems</p>
<b>Evaluation</b>	<ul style="list-style-type: none"> <li>+ <b>Close ended questions:</b> Provides objective results which limits researcher bias <ul style="list-style-type: none"> <li>- However, does not give in depth results</li> </ul> </li> <li>+ Questionnaires: Allows comparison on a direct scale</li> <li>- Subjectivity: Perceptions of stress differs between individuals <ul style="list-style-type: none"> <li>- Biases associated with self-reported data <ul style="list-style-type: none"> <li>- <b>Social desirability bias:</b> Results may be influenced in order to present the participant as more socially acceptable</li> </ul> </li> </ul> </li> </ul> <p>Exposure to social stressors can lead to an increase in blood cortisol levels, indicating that one's environment and nurture can influence their susceptibility to stress related illness. Knowing which factors are implicated in illnesses, such as heart disease, can help to design interventions.</p>
<b>Overall evaluation</b>	<ul style="list-style-type: none"> <li>- Biological factors do not work in isolation</li> <li>- Biological factors can be physically observed and measured, providing empirical evidence <ul style="list-style-type: none"> <li>- However, the dependent variable measured is not an indicator of stress and can only be correlated with it</li> </ul> </li> <li>- <b>Complexity</b> of understanding health must consider the <b>social, psychological and biological</b> factors <ul style="list-style-type: none"> <li>- Difficult to study</li> </ul> </li> <li>- Utilizes a <b>reductionist approach</b> to study these factors in isolation</li> <li>- <b>Research methods</b> <ul style="list-style-type: none"> <li>- Research methods when studying health trade off between the <b>high level of control in laboratory</b> experiments and the <b>ecological validity of natural</b> experiments <ul style="list-style-type: none"> <li>- <b>Natural experiments</b> rely on the occurrence of stressful events and struggle to</li> </ul> </li> </ul> </li> </ul>

<b>Theory</b>	<p><b>Health promotion:</b> The process of enabling people to increase control over, and to improve health The Health Belief Model is used to explain and predict individual's preventive health behaviour and compliance with medical advice</p> <p><b>Health beliefs:</b> Individuals' attitudes towards healthy behaviour and their thought process when making a decision whether to commit to this behaviour or not</p> <p><b>Health belief model</b> states that there are two sets of attitudes and beliefs that affect health related behaviour</p> <ul style="list-style-type: none"> <li>- Readiness to take action: The perceived severity and susceptibility of the illness</li> <li>- The evaluation of the proposed action: Perceived benefits and costs</li> </ul> <p>This is based on 5 factors, including an individual's cue to actions, differences on an individual and social level, and differences in beliefs regarding both the threat of illness and preventative action</p> <ul style="list-style-type: none"> <li>- Likelihood that an individual would take action upon their health issue</li> <li>- Thus can be used to investigate health promotion</li> </ul> <p>The effectiveness of health promotion relies on individual's health beliefs</p>
Study 1: <b>Bardsley et al.:</b> Alcoholism	
<b>Signpost</b>	The HBM was used to study alcoholism treatment utilization.
<b>APRC</b>	<p>A: To investigate alcoholism treatment using the Health Belief Model (HBM)</p> <p>P: Matched participants who were in treatment and not-in treatment for alcoholism</p> <ul style="list-style-type: none"> <li>- Personal interviews and questionnaires were administered</li> <li>- Components of the health belief model were applied</li> <li>- Assessed background characteristics</li> </ul> <p>R: Two of the five health belief model components (Perceived severity and cue to action) showed strong, consistent relationships with the decision to enter treatment</p> <ul style="list-style-type: none"> <li>- Participants in treatment had higher perceived illness severity than those not in treatment</li> </ul> <p>C: Suggests that awareness of a health problem strengthens an individual's readiness to go into treatment</p> <ul style="list-style-type: none"> <li>- Those more aware of their issues tend to be in treatment</li> </ul>
<b>Evaluation</b>	<ul style="list-style-type: none"> <li>- <b>Retrospective study:</b> Participants' perceptions of the HBM's components may have been altered by entering treatment</li> <li>- Operationalization of the components in the questionnaire:</li> </ul> <p><b>Evaluating the health belief model</b></p> <ul style="list-style-type: none"> <li>+ <b>Framework:</b> Can be applied to fit a wide range of health problems, providing a basic understanding of how an individual's perception can deter them</li> <li>- <b>Assumption that individuals are rational when given knowledge surrounding their health problem</b> <ul style="list-style-type: none"> <li>- Cognitive dissonance theory: Reducing evidence to confirm or maintain their own belief</li> </ul> </li> <li>- <b>Ignores social factors</b>, such as peer pressure and cultural norms <ul style="list-style-type: none"> <li>- Bardsley et al. (1988): All participants were caucasian and likely to share similar attitudes towards drinking</li> </ul> </li> <li>- <b>Ignores psychological determinism:</b> The chemical dependence of substances</li> </ul>
Study 2: <b>Florida State University: Healthy campus</b>	
<b>Signpost</b>	Health promotion program in America called 'Healthy Campus', conducted in order to reduce binge drinking in Florida State University.
<b>APRC</b>	<ul style="list-style-type: none"> <li>- Conducted multiple questionnaires <ul style="list-style-type: none"> <li>- Questionnaire 1: Asked 4500 randomly selected students on their perceptions of binge drinking in the school <ul style="list-style-type: none"> <li>- Student perceptions of drinking at FSU were different from actual reported behaviour</li> </ul> </li> </ul> </li> </ul>

	<ul style="list-style-type: none"> <li>+ Reliability and validity analysis carried out <ul style="list-style-type: none"> <li>+ Compared relevant percentages with nationally representative databases</li> <li>+ Conducting construct validity analysis in order to operationalise health beliefs</li> </ul> </li> <li>- Lacks internal validity: Does not prove that health beliefs were the sole factor in the reduction of drinking <ul style="list-style-type: none"> <li>- Longitudinal study could have many extraneous factors involved</li> </ul> </li> </ul>
Study 2: <b>Bardsley et al.</b> : Health belief model	
<b>Signpost</b>	The HBM was applied to those who receive alcohol treatment, in order to investigate their perceptions of alcohol.
<b>APRC</b>	<p>A: To investigate alcoholism treatment using the Health Belief Model (HBM)</p> <p>P: Matched participants who were in treatment and not-in treatment for alcoholism</p> <ul style="list-style-type: none"> <li>- Personal interviews and questionnaires were administered</li> <li>- Components of the health belief model were applied</li> <li>- Assessed background characteristics</li> </ul> <p>R: Two of the five health belief model components (Perceived severity and cue to action) showed strong, consistent relationships with the decision to enter treatment</p> <ul style="list-style-type: none"> <li>- Participants in treatment had higher perceived illness severity than those not in treatment</li> </ul> <p>C: Suggests that awareness of a health problem strengthens an individual's readiness to go into treatment</p> <ul style="list-style-type: none"> <li>- Those more aware of their issues tend to be in treatment</li> </ul>
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Study 3: <b>Schuckit et al.</b> : Shorter study	
<b>Signpost</b>	Another way in which health promotion programmes can be built is through using knowledge of genetic vulnerability to the effects of alcohol in order to shape specific health promotion programmes.
<b>APRC</b>	<p>A: Investigate if there is a correlation between a low response to alcohol and an allele of the serotonin transporter gene, 5-HTT</p> <p>T: Hypothesised that individuals with a lower response to alcohol has a higher tolerance, thus drink more heavily to achieve the effects of alcohol and increases the risk of alcoholism</p> <p>P: Method and data triangulation</p> <ul style="list-style-type: none"> <li>- Questionnaire about habits and response to alcohol</li> <li>- Genotyping</li> <li>- Assesses cognitive and motor abilities at different levels of alcohol consumption</li> </ul> <p>R: The long allele of 5-HTT is correlated with a lower response to alcohol</p> <ul style="list-style-type: none"> <li>- Causes a faster reuptake of serotonin at synapses</li> </ul> <p>C: Low levels of serotonin at synapses may contribute to a larger amount of alcohol intake</p>