A-Level Psychology
Revision notes 2015
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These notes cover the main areas of this subject. Please check the specific areas you need with your exam board. They are provided "as is" and S-cool do not guarantee the suitability, accuracy or completeness of this content and S-cool will not be liable for any losses you may incur as a result of your use or non-use of this content. By using these notes, you are accepting the standard terms and conditions of S-cool, as stated on the S-cool website (www.s-cool.co.uk).
Attachments

Development and variety of attachments

Attachment is the close emotional relationship between two people, which involves a feeling of well-being and a desire to be close. Although attachments occur throughout your life, the attachment made between an infant and caregiver is particularly important.

Development of attachments

Infants have an innate ability to seek interactions with other individuals. This is known as sociability and is integral to the phases in the development of attachment (Scaffer, 1996).

The table below summarises the four stages of this process:

<table>
<thead>
<tr>
<th>Phase of attachment:</th>
<th>Age range:</th>
<th>Characteristics of phase:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-attachment phase</td>
<td>0-3 months</td>
<td>At about 6 weeks, infants begin to treat other humans differently from objects by smiling and gurgle at them.</td>
</tr>
<tr>
<td>Indiscriminate attachment phase</td>
<td>3-7 months</td>
<td>Infant can distinguish between familiar and unfamiliar people but is quite happy to be comforted by anyone.</td>
</tr>
<tr>
<td>Discriminate attachment phase</td>
<td>7-9 months</td>
<td>Infant distinguishes between carers and strangers and exhibits distress or separation anxiety when left alone (they have developed object permanence) and may be fearful of the strangers.</td>
</tr>
<tr>
<td>Multiple attachment phase</td>
<td>9+ months</td>
<td>Attachments develop with other people (for example, grandparents or brothers and sisters), although the original attachment remains the strongest.</td>
</tr>
</tbody>
</table>

Cross-cultural variations in attachment

Different cultures have different social norms and accepted ways of doing things. Cross-culturing variations occur in many aspects of behaviour including child rearing. This difference may result in differences in attachments.

Infants raised in Japanese homes and in Israeli kibbutzim show high levels of insecure-resistant attachment. These being close environments with the primary caregiver always present and few strangers around could explain this.
German infants appear to be particularly insecure-avoidant in their attachments, although their parents were attentive to their children and sensitive to their needs. However, the parents considered some of the 'secure' behaviour to be too 'clingy' and discouraged it.

These findings suggest that the American criteria used in the 'Strange Situation' are not appropriate for other cultures: It would be wrong to suggest that the cultures with high levels of insecure attachments were raising children wrongly.

**Effects of deprivation and privation**

Attachments can be damaged if the relationship between the caregiver and infant is broken.

**The effects of separation**

Separation could be considered the same as short-term deprivation. Robertson and Bowlby (1952) investigated its effects on young children separated from their mothers. They found that the distress felt by the children fell into three categories called the protest-despair-detachment (PDD) model.

**The effects of deprivation**

*Short-term effects of deprivation are highlighted above but what are the long-term consequences of a lost attachment?*

Again, Bowlby has been very influential in this area. His maternal deprivation hypothesis states that long-term intellectual, social and emotional damage follows the deprivation of an attachment during a critical period in the child's development.

**The effects of privation**

Research into privation tends to involve carefully studying individuals who have experienced a privated infancy. These include case studies of tragically neglected children and longitudinal studies of institutionalised children, such as orphans.

The table below summarises two of the more important case studies:

<table>
<thead>
<tr>
<th>Study:</th>
<th>Description:</th>
<th>Evaluation:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Czech twins</td>
<td>Aged 2 - Identical twin boys locked in cellar and abused for 6 years leading to physical and linguistic problems. Aged 9 adopted into a loving family. Aged 14 - normal behaviour.</td>
<td>Cannot generalise findings to the whole population. Were able to bond emotionally with each other. Were able to recover once put into a loving home.</td>
</tr>
</tbody>
</table>
no language abilities. Education led to the recovery of much ability but language and social skills remained poor. Genie may have had innate psychological problems. A series of carers meant that Genie continued to lack a stable, loving home.

Aim...

To investigate the long-term effects of early institutional care.

Method...

Longitudinal study and natural experiment. Children aged younger than 4 months at start. Received good physical care but formation of attachments was discouraged.

Results...

Aged 16, relationships between adopted children and parents did not differ much from a control group of non-adopted families but were considerably better bonded than restored children and parents. Unlike non-adopted children, adopted and restored children had similar problems in forming relationships outside the family.

Conclusions...

- Adopted children form better relationships with their families than restored children (possibly owing to the greater desire of the adopting parents to make those relationships work).
- Adopted and restored children experience problems forming relationships outside the home (possibly owing to low self-esteem or poor emotional development caused by early experiences).

Evaluation...

The evidence suggests that early childhood experiences (including privation) can be overcome later in life, provided the conditions are right. This contradicts Bowlby's view of a critical period during which time children develop attachments that provide a model for future relationships and ensure healthy emotional and social development.

Effects of day care

As more and more mothers are entering or returning to the workforce, the demand for good quality crèches, nurseries and child minders is growing rapidly.

Day care and cognitive development

Cognitive development refers to the growth of cognitive functions, such as thinking, reasoning and linguistic skills.

It seems that day care can have a positive influence on the child's cognitive development provided it is good quality and provides intellectual stimulation.
Day care and social development

Social development refers to the growth of the child’s ability to form relationships with others and to acquire a level of independence.

On balance, the effect of day care on social development is seen to be positive. Children gain greater independence and become more competent at dealing with social interactions. However, this is only the case if the day care is of high quality, providing children with stimulating and well-organised experience.
Psychological Abnormality

Defining abnormality

What is abnormal psychology?

The distinction between 'normal' and 'abnormal' behaviour is not clear-cut. Psychologists have tried to define abnormality in several different ways:

<table>
<thead>
<tr>
<th>Type:</th>
<th>Definition:</th>
<th>Criticism:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Statistical infrequency</td>
<td>Deviation from the 'norm' or average population.</td>
<td>Does not account for social acceptability or type of behaviour. For example, very high intelligence is abnormal because it is rare. Also, eccentric behaviour that is rare but acceptable is also abnormal.</td>
</tr>
<tr>
<td>Deviation from social norms</td>
<td>Going against society's accepted codes of behaviour.</td>
<td>Social norms vary from one society to another and standards change. For example, in our society, it used to be considered far more abnormal to be an unmarried mother than it is now.</td>
</tr>
<tr>
<td>Failure to function adequately</td>
<td>Person cannot maintain social relationships or hold down a job.</td>
<td>Apart from social dysfunction, this also includes being in a disabling state of distress. Problems include the fact that some mental disorders do not cause distress and that sometimes it is normal to be distressed. Withdrawal from society may be mental disorder, but not necessarily.</td>
</tr>
<tr>
<td>Deviation from ideal mental health</td>
<td>Person does not meet all criteria considered necessary for 'normal', healthy functioning.</td>
<td>The standards for ideal mental health are generally difficult to measure and so demanding that most people fail to meet them anyway!</td>
</tr>
</tbody>
</table>

Cultural relativism

Cultural relativism: Some disorders are specific to some cultures, or found in some populations more than others. It is difficult to say whether the disorders are really less common amongst some people, possibly for genetic reasons, or whether there are differences in diagnosis.

For example: British African-Caribbean people are far more likely to be diagnosed with schizophrenia than other members of the population, the reasons could be genetic, to do with social conditions and stress, or bias and prejudice in the medical system.
### Assumptions on Causes: Treatments:

<table>
<thead>
<tr>
<th>Model</th>
<th>Assumptions on Causes</th>
<th>Treatments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biological (medical)</td>
<td>Physical causes, (genetics, biochemistry).</td>
<td>Somatic - drugs.</td>
</tr>
<tr>
<td>Psychodynamic</td>
<td>Unresolved emotional conflicts in early life, now repressed.</td>
<td>Talking to bring out and work through unconscious conflicts.</td>
</tr>
<tr>
<td>(psychoanalytical)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Behavioural</td>
<td>Abnormal behaviour is learned by association and reinforcement.</td>
<td>Focus on learning new responses to situations.</td>
</tr>
<tr>
<td>Cognitive</td>
<td>Faulty thinking distorts perception of things.</td>
<td>Challenging the way a person sees themselves.</td>
</tr>
</tbody>
</table>

### Eating disorders

Eating disorders are complex and can be life-threatening illnesses. They involve **biological** and **psychological** factors.

### Some statistics

- Over 90% of people diagnosed with eating disorders are adolescent or young women.
- Eating disorders are rare in boys but increasing. The rate is less than one tenth that of females.
- Approximately 1% of females aged 15-30 in the US and UK suffers from anorexia nervosa, although estimates vary.
- About 2-3% of young women develop bulimia nervosa, but it is harder to detect and may be many more.
- There are about fifty times more female sufferers of bulimia nervosa than male.
- About 10% of sufferers of anorexia nervosa, and about 3% of sufferers of bulimia nervosa, die through their illness, often by suicide due to severe depression.

### Clinical symptoms of Anorexia Nervosa
At least 15% below normal body weight. Person sees himself or herself as overweight even when extremely thin.

Person is terrified of weight gain. Food and weight are obsessions.

Compulsive behaviour around food. Amenorrhea in females (menstruation stops).

Impotence in males.

**Medical complications associated with Anorexia Nervosa**

Starvation causes damage to vital organs such as the brain and heart. The body slows down to try to protect itself: periods stop, even breathing rate, pulse and blood pressure drop.

Nails and hair become brittle and the skin dries, yellows and grows downy hair. Bones become brittle due to loss of calcium.

Excessive thirst and frequent urination. Dehydration and, consequently, constipation.

Inability to cope with the cold due to lack of body fat. Severe depression.

**Clinical symptoms of Bulimia Nervosa**

Consumption of large amounts of food (bingeing), followed by purging or exercising obsessively. Obsession with body weight and shape.

Bingeing and purging from once or twice a week to several times a day. Low self-esteem and fear of failure is typical (may not always be apparent).

Strong need for acceptance and reassurance.

**Medical complications associated with Bulimia Nervosa**

Risk of heart failure due to loss of nutrients, especially potassium; also when drugs used to stimulate vomiting, bowel movements and urination. Risk of stomach rupture.
Acid in vomit wears tooth enamel and teeth scar backs of hands.

Gullet (oesophagus) and cheeks become inflamed and swollen.

Irregular menstruation.

Loss of interest in sex.

Severe depression.

**Some causes of eating disorders**

1. Biochemistry
2. Genetics
3. Personality
4. Social and family environment
5. Media images and messages about food and dieting

**Schools thought on the causes of eating disorders**

**Behavioural**
Elaboration of basic idea that attention and praise that weight loss reinforces dieting and process continues.

**Psychoanalytic**
Repression of sexual impulses or childhood abuse leads to anxiety expressed as an eating disorder.

**Medical**
Malfunctions in brain chemistry, linked with distributed levels of neurotransmitters.

**Humanistic**
Way of gaining control over own life rather that parental control: high incidence in middle class, where lot of pressure to succeed.

**Cognitive**
Distorted body image and irrational thinking leads to fear of gaining weight.

*Note:* it is most likely that there is no one single, simple answer as to what causes eating disorders - all of the possible explanations outlined above may be part of the story. Individuals may have different reasons for developing the same symptoms.

Eating disorders are characterised by **very complex interactions of emotional and physical problems**. Because of this, eating disorders need to be treated by a **combination of approaches**.
Biochemistry

Eating disorders are often associated with chemical imbalances in the brain. These have been found to be similar to the chemical imbalances associated with depression and obsessive-compulsive disorder (OCD).

Low levels of some neurotransmitters, for example, serotonin and noradrenaline, are found in acutely ill anorexia and bulimia sufferers. Serotonin is associated with suppression of appetite and mood, low serotonin levels are linked to bingeing and depression.

Anorexia nervosa and depression feature high levels of cortisol, this is a hormone released by the brain in response to stress.

A hormone called CCK, found to be at low levels in people with bulimia nervosa, causes animals to feel full and stop eating.

Note: we do not know much detail about how these chemicals in the brain work, whether biochemical changes are the cause of disorders or effects of having the disorder.

Genetics

Eating disorders, especially anorexia nervosa, tend to run in families. This suggests that there might be a genetic factor.

Twin studies carried out on identical twins, brought up together, have shown a 50% concordance rate for anorexia nervosa, this suggests possible genetic factor.

The link is less clear for bulimia nervosa - studies of identical twins have shown concordance rates of 23%.

Genetic factors and social, environmental influences within a family are hard to separate. Some studies have shown evidence that family tensions may trigger eating disorders.

Anorexia and bulimia nervosa are most common in white people in western societies. How much this is due to genetic factors and how much it is due to social and cultural pressures is hard to tell.

A study in Fiji showed a sudden increase in eating disorders among young women since the arrival of television in 1995, (Fearn, 1999). This suggests a strong social and cultural component.

There may be a genetic component that makes some people more likely to develop an eating disorder in response to stress or other environmental factors.

Psychological and social explanations

Personality might play a part: sufferers of anorexia nervosa and bulimia nervosa tend to have perfectionist personalities. Sufferers desperately want to be accepted and valued and tend to feel that they are not.

The media create unrealistic, and for most people, unattainable 'ideal' images, especially of women. Most models are well below normal weight for their age and height. Successful women in films are almost always portrayed as thin.
Hamilton and Waller (1993) showed that women with eating disorders were more affected by fashion magazine photos, and overestimated their own size and shape after seeing them, than women not diagnosed with eating disorders.

Women in professions, or sports, which encourage thinness like long distance running, ballet and gymnastics, show a high proportion of eating disorders, especially anorexia nervosa. This supports the idea that eating disorders can be triggered by environmental pressures. Of course not all women in these professions develop eating disorders.

**Ways to help someone with an eating disorder**

1. Call a local help line or clinic for expert advice.

2. Understand possible causes of eating disorders, food alone is not the main issue.

3. Don't make judgements.

4. Try to offer, caring support and help the person feel valued for other qualities than looks.

5. A person with an eating disorder may not accept that they need help; family and friends will need to offer encouragement and information.

6. Find out as much as you can so that you understand what they are going through, but don't try to act an expert yourself.

7. Encourage the person to find something that they enjoy doing to channel their energy into.
Psychopathology

There are four main approaches. Each approach has different assumptions about the causes of mental disorders:

1. **Medical/biological:** Looks for genetic, biochemical or physical abnormalities.

2. **Cognitive:** Based on assumption that disorders are to do with 'faulty thinking'.

3. **Behavioural:** To do with learning responses to our environment and other people.

4. **Psychodynamic:** Based on Freud's ideas of unconscious conflicts in the mind.

*There are no simple explanations for mental disorders* - each approach has something useful to contribute to our understanding. Check the pros and cons of different approaches.

*Most mental disorders are due to a combination of biological and social factors* - check you know some of the research evidence.

*Cultural and gender differences* in rates of mental disorders may be due to differences in diagnosis, genetic differences or due to bias in the medical system.

*Mental disorders are generally misunderstood.* Many sufferers do not come forward for help and continue to suffer needlessly.

**Affective disorder**

A mood disorder in which sustained emotional state changes feelings and behaviour.

**Amphetamine psychosis**

Condition associated with high dose of amphetamine, similar to symptoms of schizophrenia.

**Auditory hallucination**

Hearing internal voices or other sounds.

**Cerebral ventricles**

Fluid-filled cavities in the brain, altered in some people with schizophrenia.

**Clinical depression**

Depression that is sustained and severe.

**Concordance rates**

Degree to which a characteristic is shared.

**Delusions**

False beliefs, in spite of evidence to contrary.

**Diathesis-stress model**

The idea that individuals have different tolerance levels to environmental stress, so that some people develop mental disorders when others do not.
<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dopamine</td>
<td>A type of neurotransmitter between some of the nerve cells in the brain.</td>
</tr>
<tr>
<td>Dopamine hypothesis</td>
<td>The idea that schizophrenia may be caused by over-activity in the dopamine system of the brain.</td>
</tr>
<tr>
<td>DZ twins - dizygotic twins</td>
<td>Non-identical twins, originating from two zygotes (fertilised egg cells).</td>
</tr>
<tr>
<td>Hallucinations</td>
<td>Sensory perception without normal external stimulus.</td>
</tr>
<tr>
<td>Inappropriate affect</td>
<td>Inappropriate emotional expression.</td>
</tr>
<tr>
<td>MZ twins - monozygotic twins</td>
<td>Identical twins, originating from one zygote (fertilised egg cell).</td>
</tr>
<tr>
<td>Neuroleptic drugs</td>
<td>Drugs which dampen the activity of certain neurotransmitters, for example, dopamine.</td>
</tr>
<tr>
<td>Neurotransmitters</td>
<td>Chemical messengers acting between nerve cells.</td>
</tr>
<tr>
<td>Obsessive-compulsive disorder</td>
<td>Anxiety disorder involving intrusive, repetitive and unwanted thoughts (obsessions) and compelling ritualistic, repetitive behaviours (compulsions).</td>
</tr>
<tr>
<td>Panic disorder</td>
<td>Sudden attacks of severe anxiety, terror and feelings of impending doom.</td>
</tr>
<tr>
<td>Paranoid anxiety</td>
<td>Fear of hostility or violence from others.</td>
</tr>
<tr>
<td>Phobia</td>
<td>Excessive, irrational fear of an object or situation.</td>
</tr>
<tr>
<td>Post-traumatic stress disorder</td>
<td>Disabling anxiety reaction after experiencing severely traumatic event.</td>
</tr>
<tr>
<td>Psychotic</td>
<td>Out of touch with external reality.</td>
</tr>
<tr>
<td>Receptors</td>
<td>Specialised parts of nerve cells that are sensitive to neurotransmitter substances.</td>
</tr>
<tr>
<td><strong>Schizophrenia</strong></td>
<td>Major disorder affecting thoughts, perceptions and behaviour, characterised by hallucinations and delusions.</td>
</tr>
<tr>
<td>------------------</td>
<td>--------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td><strong>Seasonal affective disorder</strong></td>
<td>(SAD), mood disorder associated with changing day length - particularly, winter depression.</td>
</tr>
<tr>
<td><strong>Serotonin</strong></td>
<td>A neurotransmitter in the brain linked with mood, especially presence or absence of depression.</td>
</tr>
<tr>
<td><strong>Social drift hypothesis</strong></td>
<td>Idea that schizophrenia causes someone to lose social status and 'drift' into lower socio-economic groups.</td>
</tr>
<tr>
<td><strong>Sociogenic hypothesis</strong></td>
<td>Idea that social and environmental stresses can trigger schizophrenia.</td>
</tr>
<tr>
<td><strong>Twin studies</strong></td>
<td>Examination of twins for common characteristics, likely to be genetic in identical twins.</td>
</tr>
</tbody>
</table>
### Biological Rhythms, Sleep and Dreaming

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adaptation</td>
<td>Characteristics of an organism that has survival value or increases reproductive potential.</td>
</tr>
<tr>
<td>Electroencephalogram</td>
<td>Graph revealing the electrical activity of the brain.</td>
</tr>
<tr>
<td>Endogenous pacemaker</td>
<td>Internal clocks controlling biological rhythms.</td>
</tr>
<tr>
<td>Exogenous zeitgeber</td>
<td>External cues (German; 'time-givers') moderating the activity of the endogenous pacemakers.</td>
</tr>
<tr>
<td>Free-running</td>
<td>Increased period of a bodily rhythm due to the removal of environmental cues.</td>
</tr>
<tr>
<td>Hypothalamus</td>
<td>Part of the forebrain with a role in motivation, Homeostasis and emotional response.</td>
</tr>
<tr>
<td>Latent content</td>
<td>Hidden meaning of dreams.</td>
</tr>
<tr>
<td>Lucid dreaming</td>
<td>Ability to control events in a dream.</td>
</tr>
<tr>
<td>Manifest content</td>
<td>Symbolic version of the true meaning of a dream.</td>
</tr>
<tr>
<td>Melatonin</td>
<td>Hormone regulating many circadian and circannual rhythms.</td>
</tr>
<tr>
<td>Neurotransmitter</td>
<td>Chemical messenger that crosses a synapse between a neurone and another cell.</td>
</tr>
<tr>
<td>Paradoxical sleep</td>
<td>Intense brain activity accompanied by paralysis during sleep (REM sleep).</td>
</tr>
<tr>
<td>Pheromones</td>
<td>Chemical messengers produced by one organism and having an effect on another.</td>
</tr>
<tr>
<td>Photoperiod</td>
<td>Duration of daylight in a 24 hour period.</td>
</tr>
<tr>
<td>Term</td>
<td>Description</td>
</tr>
<tr>
<td>----------------------------------</td>
<td>-------------</td>
</tr>
<tr>
<td>Pineal gland</td>
<td>Gland located in the forebrain responsible for melatonin production.</td>
</tr>
<tr>
<td>Psychodynamic approach</td>
<td>Pioneered by Freud, focusing on the conflicts within an individual’s psyche that motivates behaviour.</td>
</tr>
<tr>
<td>REM rebound</td>
<td>‘Catching up’ on lost REM sleep.</td>
</tr>
<tr>
<td>REM starvation</td>
<td>Deprivation of REM sleep.</td>
</tr>
<tr>
<td>Seasonal Affective Disorder (SAD)</td>
<td>Depression brought about by the onset of shortening days in autumn/winter.</td>
</tr>
<tr>
<td>Serotonin</td>
<td>Neurotransmitter with many roles in the brain, including the precursor to the hormone melatonin.</td>
</tr>
<tr>
<td>Sleep deprivation</td>
<td>Method of investigating the function of sleep by keeping participants awake.</td>
</tr>
<tr>
<td>Suprachiasmatic nucleus</td>
<td>Located in the hypothalamus; the site of the biological clock.</td>
</tr>
</tbody>
</table>
## Research Methods

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>A precise, testable statement or prediction about the expected outcome of an investigation.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Null hypothesis prediction</td>
<td>One that states results are due to chance and are not significant in terms of supporting the idea being investigated.</td>
</tr>
<tr>
<td>Research hypothesis prediction</td>
<td>One that states that results are not due to chance and that they are significant in terms of supporting the idea being investigated.</td>
</tr>
<tr>
<td>One-tailed hypothesis</td>
<td>A directional hypothesis.</td>
</tr>
<tr>
<td>Two-tailed hypothesis</td>
<td>One in which the direction of results is not predicted.</td>
</tr>
<tr>
<td>Random sampling</td>
<td>Everyone in the entire target population has an equal chance of being selected.</td>
</tr>
<tr>
<td>Opportunity sampling</td>
<td>Uses people from target population available at the time.</td>
</tr>
<tr>
<td>Systematic sampling</td>
<td>Chooses subjects in a systematic way.</td>
</tr>
<tr>
<td>Self-selected sample</td>
<td>Participants volunteer.</td>
</tr>
<tr>
<td>Stratified sampling</td>
<td>Divides target population into groups, people in sample from each group in same proportions as population.</td>
</tr>
<tr>
<td>Counterbalancing</td>
<td>Alternating the order in which participants perform in different conditions of an experiment.</td>
</tr>
<tr>
<td>Randomisation</td>
<td>Material for each condition in an experiment is presented in a random order; this is also to prevent order effects.</td>
</tr>
<tr>
<td>Single-blind design</td>
<td>Participants do not know which condition (experimental or control) they are in.</td>
</tr>
<tr>
<td>Double-blind design</td>
<td>Neither the participants nor the experimenter know which condition people are being treated to.</td>
</tr>
</tbody>
</table>
### Time sampling
- Observations may be made at regular time intervals and coded.

### Event sampling
- Keep a tally chart of each time a type of behaviour occurs.

### Point sampling
- Focus on one individual at a time for set period of time.

### Quantitative research
- Gathers data in numerical form and is concerned with making ‘scientific’ measurements. Quantitative data analysis uses a barrage of inferential statistical tests.

### Qualitative research
- Gathers information that is not in numerical form.

### Arithmetic mean
- All values in a set of data are added together and divided by the number of values (N).

### Median
- All values are arranged in order; the middle value is the median.

### Mode
- The most frequent value or score in a set of data.

### Range
- Simple measure of dispersion - shows the total spread of data.
Social Influence

Key Studies and what they showed

*Note:* Just because a study takes place in a natural setting it does not mean it is ecologically valid! (this is a common mistake - be warned!) For example, Hofling’s study in a natural setting was not ecologically valid, while Milgram’s studies in a laboratory probably were.

1. **Key Study: Sherif - Conformity and the Autokinetic Effect (1935)** - people change their opinions when in a group - increasing agreement amongst the group.

2. **Key Study: Asch and the Visual Judgement Experiment (1951)** - showed how easily people agree with others in a group even when it is obvious the others are wrong. Also demonstrated effects of various factors on conformity, e.g. size of majority, presence of an ally.

3. **Key Study: Phil Zimbardo’s Prison Simulation Experiment (1971)** - showed how people are influenced by the situation and social role expectations. Normal people quickly became sadistic ‘guards’ and others became their passive, depressed prisoners. Behaviour became so extreme that the experiment had to be stopped.

4. **Stanley Milgram: ‘electric shock’ experiments (1963)** - also showed the power of the situation in influencing behaviour. 65% of people could be easily induced into giving a stranger an electric shock of 450V (enough to kill someone). 100% of people could be influenced into giving a 275V shock.

5. **Hofling et al: testing nurses’ obedience in a natural setting (1966)** - again, showed power of situation and of ‘authority’ figure, even when instructions were against hospital rules and dosage nurses were asked to administer may have been dangerous.

6. **Moscivici et al. influence of a minority (1976)** - if something is ambiguous (e.g. blue-green colour) a consistent minority, who appears sure of themselves (e.g. who always say ‘green’), may influence others in a group. The effect of such a minority tends to remain even after they have left the group.

**Key points to remember**

Conformity and obedience both involve the ‘...abdication of individual judgement in the face of some external social pressure...’ (Milgram, 1990).

You must still be sure of the distinction between ‘conformity’ and ‘obedience’- basically, that obedience involves instructions or orders from ‘authority’, conformity does not.

**Two processes operate in conformity:** normative influence and informational influence.

**People are more likely to conform if:**

- Other people can see what they are doing
- There are three or more others in the group
- All the others agree with each other
**People are less likely to conform** when there is just one other person who disagrees with the **majority** - even if their views are different from the participant's.

In obedience situations people accept authority and deny responsibility for their own actions.

**Obedience levels tend to be increased when the 'authority' figure is nearby** - what a surprise - a bit obvious really - all children, parents and teachers know this! (Could have saved Milgram an experiment). Note though that we are only talking about obedience to do **something a 'normal' person does not really want to do** (e.g. homework on your most hated subject, giving people electric shocks).

**Don't forget the 35% in Milgram's original study who did not obey** - as Zimbardo says, they were the real heroes of the experiment.

**Agentic theory** An explanation for obedience, individuals see themselves as 'agents' of a higher authority and therefore not responsible for their own actions.

**Ambiguous task** A task in which it is not clear what the correct response is.

**Asch paradigm** The method, pioneered by Asch, in which stooges are used to test the behaviour of an innocent participant (who believes the others are participants).

**Autokinetic effect** An optical illusion in which a still point of light seems to move in the dark.

**Conformity** Various definitions - basically change in belief or behaviour to fit in with others in a group (no instructions or orders to change).

**Demand characteristics** People may try to interpret a situation and do what they think a researcher wants them to do - demand characteristics are aspects of situations, which lead people to do this (e.g. prestigious location - Yale University - of Milgram's original obedience studies).

**Ecologically valid** A study has 'ecological validity' if it can be generalised to other settings away from the original study.

**Group norm** Beliefs or behaviour established as the common ones for a group.

**Informational Influence** Pressure to conform through belief that others know better or are more expert.
<table>
<thead>
<tr>
<th><strong>Membership group</strong></th>
<th>Group to which a person belongs e.g. family, religious group or ethnic group.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Normative influence</strong></td>
<td>Pressure to conform to a 'group norm' (see above) through fear of rejection (or worse, e.g. bullying, violence).</td>
</tr>
<tr>
<td><strong>Obedience</strong></td>
<td>Following someone else's instructions or orders to do something. (instructions usually from someone with authority).</td>
</tr>
<tr>
<td><strong>Reference group</strong></td>
<td>Group to which a person does not belong but to which they aspire to or admire and so may be influenced by (e.g. pop group, film stars, sports heroes, rich and famous etc.).</td>
</tr>
</tbody>
</table>
### Pro- and Anti-Social Behaviour

<table>
<thead>
<tr>
<th><strong>Aggression</strong></th>
<th>Behaviour intended to cause unwelcome harm to another person.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Altruism</strong></td>
<td>Behaviour benefiting another person at a cost to the helper.</td>
</tr>
<tr>
<td><strong>Antisocial behaviour</strong></td>
<td>Behaviour showing a lack of concern for the welfare of others</td>
</tr>
<tr>
<td><strong>Demand characteristics</strong></td>
<td>Participants work out the purpose of a study and modify their behaviour accordingly.</td>
</tr>
<tr>
<td><strong>Ecological validity</strong></td>
<td>Method measures naturally occurring behaviour.</td>
</tr>
<tr>
<td><strong>Empathic concern</strong></td>
<td>Emotional feelings for another person, such as sympathy and compassion.</td>
</tr>
<tr>
<td><strong>Imitation</strong></td>
<td>Copying an observed behaviour.</td>
</tr>
<tr>
<td><strong>Media</strong></td>
<td>Ways of communicating information to people, such as television and film.</td>
</tr>
<tr>
<td><strong>Prosocial behaviour</strong></td>
<td>Behaviour benefiting another person.</td>
</tr>
<tr>
<td>------------------------</td>
<td>--------------------------------------</td>
</tr>
<tr>
<td><strong>Reinforcement</strong></td>
<td>Strengthening of behaviours through rewards.</td>
</tr>
<tr>
<td><strong>Social conformity</strong></td>
<td>Change in behaviour as a result of perceived social pressure.</td>
</tr>
<tr>
<td><strong>Vicarious reinforcement</strong></td>
<td>Reinforcement of ones own behaviour through observing the reinforcement of another's behaviour.</td>
</tr>
</tbody>
</table>
**Stress**

**What is 'stress'?**

*Stress* is a type of alarm reaction, involving heightened mental and bodily states - it is both a psychological and a physiological response to the environment. Your brain produces a *stress reaction* when you are in a situation that is physically or mentally demanding.

**Your body's reaction to stress**

Your brain is on the lookout for anything that threatens to upset its equilibrium - if there are serious *stressors* 'around, it triggers off an *alarm reaction*. The alarm reaction prepares your body for action - sometimes known simply as the *fight or flight reaction*. Stress hormones and the action of the sympathetic nervous system prepare your body for vigorous muscular activity as follows:

1. Breathing rate increases
2. Blood flow to skeletal muscles increases
3. Heart rate increases
4. Blood sugar levels increase
5. Blood pressure in arteries increases
6. Pupils dilate
7. Intestinal muscles relax

**So, what if you are not in a situation in which it's OK to suddenly get up and run a four-minute mile round the block?**

Well, that's when various unpleasant effects may set in, such as throbbing headaches, irritability, tense neck and shoulders, dried up mouth and butterflies in the stomach. Sound familiar? Most people experience this sort of stress sometimes.

**The flow diagram below shows what goes on in the body when the brain detects a potentially harmful 'stressor':**
All the **stress hormones** circulating in the bloodstream and the neural effects of the sympathetic nervous system combine to create the 'fight-or-flight' response.

The **hypothalamus** plays a key role in the control of the endocrine system. There is a complex feedback system between the hypothalamus, sympathetic nervous system, the pituitary gland and the secretions of the adrenal glands.

The **adrenal glands** are found on top of your kidneys - they secrete epinephrine (otherwise known as **adrenaline**) and other 'stress hormones'. The activity of your adrenal glands is crucial to your mood, energy levels and ability to cope with stress.

In extreme cases of stress your adrenal glands may become enlarged, the spleen and thymus glands may shrink and deep bleeding stomach ulcers may occur. (Not very nice!)

Selye pioneered stress research in the 1950s - he came up with the idea of the **general adaptation syndrome**. This is a collection of symptoms shown by the body in response to any stress - physical illness such as infection or injury, or stress due to psychological factors. The key thing is that it is *general* - a non-specific response to any illness.

**Here are the three main phases of the 'general adaptation syndrome'.**

1. **Alarm reaction:**

   Shock phase - response to stressor. Hypothalamus, sympathetic nervous system (heart rate and blood pressure increases), pituitary gland and hormones (e.g. adrenaline and corticosteroids) activated.

2. **Reaction:**

   High level of arousal maintained. Prolonged release of corticosteroids reduces the efficiency of the immune system. High blood sugar levels are maintained in this phase.

3. **Exhaustion:**

   Psychosomatic illnesses develop. Body's reserves of energy run down. Enlarged adrenal glands, muscle fatigue, warn out tissues, kidney damage, ulcers, heart damage.

The idea of the *general adaptation syndrome* was drawn from very early research on stress.

It has been criticised because it was based on work with animals and tells us nothing about psychological or emotional factors.

Physiologists have also argued that there may well be different physiological responses to different stressors and not just one 'general' syndrome.

In other words, Selye's model to explain stress is too simple - in reality, the process is more complex.

**Stress and illness**
Research has shown strong links between prolonged stress and many disorders, mentally and physically. The immune system is easily affected by stress...

1. Asthma
2. Colds and flu
3. Cancer
4. Depression
5. Eczema and other skin disorders
6. Post-traumatic stress disorder
7. Stomach ulcers
8. Heart disease

You should be aware that stress might lead to behaviour, such as smoking or overeating, which increases the risk of serious illness - so the link with the original source of stress is indirect.

The incidence of cancer has been correlated with high stress levels.

Jacobs and Charles (1980) found that cancer patients - for example, child cancer patients, often suffered high levels of stress before the diagnosis of their illness.

Tache et al (1979) found the incidence of cancer to be higher in those with a poor 'social support network' such as the widowed, divorced or separated.

It is difficult to rule out that undetected, developing cancer might cause stress, rather than stress due to external factors leading to cancer.

**Stress and heart disease**

The 'risk factors' linked with cardiovascular disease include diet, smoking, obesity, lack of exercise (or over-exercise) and stress. Indeed, stress may well be a cause of other behavioural factors.

Men are more susceptible to heart disease than women, even when diets are matched. Could it be that men have more stressful lives than women such as more job-related stress?

For example, it was found that among 40 male tax accountants, blood cholesterol and clotting speeds were at dangerous levels in April (The end of the financial year!)

Perhaps women in this type of work would also show similar signs of stress. There have not been many studies into women's stress levels, but it is worth noting that the incidence of stress-related behaviour such as smoking is increasingly amongst women.
Here's how stress might lead to heart disease: Stress-related behaviour such as smoking or eating lots of fatty foods will speed up the hardening of the blood vessels stage...

Resting - Stress - Pulse increases - Increased blood flow - Blood vessels 'harden' and wear out - Heart strain.

**Causes of Stress**

So, what causes the stress that can be so bad for you?

1. Events in the environment and life changes
2. Perception of situation - degree of control
3. Individuality physiology
4. Individuality personality

Some people may have a nervous system that goes into a stress reaction more readily than others. This could be due to individual differences in genetics and brain chemistry.

To try to understand stress better, we need to consider the psychological factors involved - emotional and cognitive (thinking) factors. Research has suggested that major stressors in our lives are life changes - for example, moving house, marriage or relationship breakdown. Work-related factors, including unemployment and boredom, are also common causes of stress. Differences in personality may also play a part.

A stress reaction is a response to a perceived threat. Different people perceive things in different ways, so a situation that one person finds very stressful might not be to someone else.

**Life events and stress**

In 1967, Holmes and Rahe came up with the idea of a 'social readjustment rating scale' (or SRRS for short). This was an attempt to quantify life change - any change in your life that might cause stress. Scores are calculated for a person's experiences over the past year. Studies using the scale have found that high life change scores (300+) are related to relatively high frequency of illness, accidents and athletic injuries.

You might be surprised to see Christmas and holidays in there, but they can really be seriously stressful for many people.

Other research in the 1990's showed a correlation between high levels of negative life events with increased vulnerability to colds.

The trouble with this 'social readjustment rating scale' is that it does not account for the fact that some people will find the same sort of event less stressful than others - for example, divorce could be perceived as a relief or a disaster. We cannot give reliable predictions about risks of stress-related illness based on this scale.
Lazarus and colleagues in the 1980s came up with a different stress measurement scale called the 'hassles and uplifts scale'. They claimed that, rather than major life changes, it is day-to-day hassles or small uplifts that determine our overall levels of stress.

Personality and stress

In the 1970s, Friedman and Rosenman carried out a nine-year study of 1000 people to try to find out if personality type affected stress levels.

They came up with the idea of the 'Type A' personality - illustrated below:

The typical 'type A' person is competitive, time-conscious, 'workaholic' and easily frustrated with others. Researchers have suggested that this sort of person would be likely to show more risky behaviour such as smoking, poor diet and so on.

257 men in their study died from heart attacks - 70% of those who died had been judged as having 'type A' personalities.

Critics have argued that it is very difficult to decide if someone has a 'type A' personality or not.

They also say that the connection between personality and heart disease is weak, maintaining that negative emotions such as anger and frustration are more linked to stress-related illness than 'workaholic' lifestyles. These emotions may not be fixed aspects of someone's personality.

In the late 1970's, Kobasa came up with a theory of why some people suffer stress more easily than others, suggesting that some people are 'hardy personality types'.

These people have a sense of personal control over their lives, a sense of purpose and they view life events as challenges rather than stresses. Such people report less stress-related illness.

Stress and control of situations

Other research suggests that 'type A' people are not more vulnerable to stress than others, so other factors must play a part, for example:

Does being in control mean more stress or less?

Brady carried out a notorious experiment in the 1950s called 'the executive monkey experiment' to see how 'executive stress' was related to control of a situation. Stress was measured by the amount of stomach ulcers suffered by the monkeys when placed in conditions in which they were given repeated electric shocks at regular intervals. He found that 'executive monkeys', who had the power to turn off the electric shocks, developed greater ulceration than 'passive monkeys' who were dependent on their 'executive' partners to stop the shocks for them.

Weiss, however, repeated this study with rats using a warning bell to let them know when a shock was about to arrive - giving them an extra level of control - this was found to reduce stress-related symptoms.
Think a bit - what would you conclude from these 'executive stress' experiments?

In the 1970s, Seligman carried out another control-related study and came up with the idea of 'learned helplessness'. Seligman found that when animals had experienced inescapable electric shocks, they did not escape later even when they were given the chance to.

This phenomenon also occurs in humans in response to loud noise. Seligman's work suggested that if life seems uncontrollable, it could lead to symptoms of depression - and depression is often stress-related.

**Coping with Stress**

*Remember: Stress is a normal part of life - it is only a problem when it causes long-term disruption or illness.*

Normal stress levels can energise and motivate us, directing our behaviour in useful ways. However, in most modern lifestyles, the pressures on people are immense and most people find themselves having to find ways of coping with stressful situations in their everyday lives.

- Physiological arousal system
- Perception of situation

The two major components of stress shown in the diagram above, suggest two ways to reduce stress: a biological approach or a psychological approach.

A biological approach might involve drugs or biofeedback, for example.

A psychological approach involves psychotherapy to change cognitive and emotional responses to situations.

It has been found that women tend to use more emotional strategies - changing the way they think about a situation - to try to cope with stress, while men tend to focus more on changing the situation they see as a problem.

Coping with stress can be difficult. It takes time and effort to find new strategies and it can be very hard to overcome the effects of past experience - but a wide range of successful therapies for the treatment of stress is now open to people.

On top of this, the problems of being overloaded at work and stress-related illnesses are now far better understood.

**Coping with stress - biological approaches**

These methods of dealing with stress focus on ways to minimize and control the body's alarm reactions by direct intervention in the body's chemistry.

These methods are appropriate for people in acute stress states or those who need rapid treatment because they may be vulnerable to heart attack, stroke or blood pressure problems.

**Drug treatments** may include the use of anti-anxiety drugs, such as benzodiazepines (BZs). Benzodiazepines are also known as 'tranquillizers'; examples are Valium, Librium and Mogadon. These drugs can
reduce general arousal and anxiety levels and also help to treat insomnia. There is a danger that people may develop dependence on these drugs.

Other drugs used to treat symptoms of stress include **beta-blockers**. These can reduce levels of physiological arousal, heart rate and blood pressure.

Another biological approach is **biofeedback**. The person holds a monitor to measure pulse and blood pressure - they then practice meditation and relaxation techniques to reduce their level of arousal. The results are fed back to them by computer so that they can see how well they are doing. In this way, a person can learn to control their level of physiological arousal, reducing the effects of stress.

**Coping with stress - psychological approaches**

The simplest psychological approaches to reducing the symptoms of stress are **relaxation** and **meditation** techniques.

Progressive muscle relaxation can reduce physical tension and meditation can reduce anxieties. The effects of these techniques tend to be pretty short-lived though, so to be effective they need to become a regular part of a person’s lifestyle.

Other psychological approaches - **cognitive-behavioural approaches** - focus on training a person in new ways of thinking and behaving.

In the 1980s, Meichenbaum came up with the idea of *stress inoculation training* (SIT). The difference with this approach is that it is meant to be a preventative measure to reduce levels of stress in the first place.

The approaches outlined above aim to reduce stress by **reducing the gap between the demands placed on a person and their perception of their ability to cope**. By closing that gap, a person’s confidence increases and the stress they feel is reduced. With the cognitive-behavioural approach to dealing with stress, the therapist helps the person to be **objective** about the sources of stress and to develop new ways of dealing with stressful situations. Psychological approaches have also been applied in ‘anger management’ courses since anger has been found to increase vulnerability to heart disease. These courses challenge a person’s views of themselves and others.
Human Memory

Introduction to short and long-term memory

What is memory?

...a cognitive (thinking) process.

...a way of retaining information.

...a number of connected stores.

...actual information retained.

According to Reber (1985), possibly all of the above. Memory has not yet been defined as a single process or fact and several theories exist about its nature, character and structure.

Memory is generally thought to be made up of three parts:

1. Sensory Register (your senses)
2. Short-term memory
3. Long-term memory

Both short-term memory (STM) and long-term memory (LTM) are studied in terms of their ability to encode (make sense of) information, capacity (how much information) and duration (how long information can be stored).

Short-term memory - Encoding

Conrad (1964) suggested that short-term memory codes all information acoustically, that is, according to sound. Visual information is encoded (transformed) to its acoustic (sound/language) codes.

Shulman (1970) disagreed and thought that short-term memory also coded information visually and according to semantics (meaning).

Heyer and Barrett (1974) suggested that visual images that are difficult to acoustically code may also be stored briefly in short term memory.

Research into encoding in short term memory - Shulman (1970)

This research suggests that Conrad was incorrect in proposing that all encoding in short term memory was acoustic.

Shulman presented participants visually with lists of 10 words. Recall was then tested using cue or probe words which were one of three types.
Firstly, some of the probe words used were homonyms (words which sound the same but have different meanings, for example: ball and bawl).

Secondly, some probe words were synonyms (different words with same/similar meaning, for example: talk and speak).

Thirdly, some of the probe words used were identical to the ones on the original stimulus list.

Similar numbers of errors of recall from the stimulus list was made for homonym and synonym probes. This suggests that the semantic encoding (meaning) as well as acoustic encoding occurs in the short-term memory.

Both the Conrad and Shulman research were laboratory experiments. They therefore lack ecological validity due to controlled artificial environments. Participants were undergraduate students and therefore unrepresentative of the general population. They may have exhibited demand characteristics and experimenter bias may have occurred, as the experiment did not employ blind conditions.

The results may also have been influenced by individual differences or participant variables. The research has good reliability.

**Capacity of short-term memory**

Capacity refers to the amount of information that can be stored in the short-term memory.

Miller (1956) suggested that most people store about seven independent or discrete items in short term memory. These items may be numbers, letters or words, etc. Miller referred to each of these items as 'chunks'.

For example: 7 6 5 4 3 2 1 = Seven discrete chunks.

Miller further suggested that the capacity of the short-term memory may be enlarged by grouping items together by associations/links they have with each other.

For example: 1+1 2+2 3+3 4+4 5+5 6+6 7+7 = Seven discrete chunks but combined according to same numbers therefore increasing capacity of short-term memory. Items are chunked according to the meanings they have in long-term memory.

Miller therefore suggested that about seven chunks of information may be stored in short term memory whether in single or combined forms give or take one or two chunks, “The magical number seven plus or minus two” _________ 7 +/- 2.

**Research into capacity in short term memory Miller (1956)**

Participants were given 'sentences' of varying lengths that approximated 'true' English. They were asked to recall words in the correct order given in the sentence.

The more sense the sentence made, in terms of grammar, the better the recall. This suggests that the semantic (meaning) and grammatical structure, which is probably stored in LTM, is used to help increase amount of information stored in STM by combining items to create larger chunks.
Participants still recalled about seven pieces of information.

Criticisms of this laboratory experiment include ecological validity, demand characteristics, experimenter bias and participant variables/individual differences. The experiment has good reliability. The research is dated.

**Research into capacity in short term memory Bower & Springton (1970)**

Participants were presented with one of two letter sequences. The first sequence was made up of well-known groups of letters - for example; mfi, plc, aeb. The second sequence contained the same letters but not in the well-known order: imf, lcp, eba. The first sequence was better recalled suggesting that chunking according to meaning increases the capacity of the short-term memory.

Criticisms of this laboratory experiment are as above for Millers research.

**Duration of short term memory**

Brown & Peterson & Peterson (1959) devised a technique that prevents information from being continually repeated in the STM in order to test how long information will be retained. This continual repetition of information in order to hold on to it is referred to as Maintenance Rehearsal. Brown & Peterson suggested that the short-term memory can store information for approximately 15 to 30 seconds if maintenance rehearsal is prevented.

Reitman (1974) suggested that this short duration is due to displacement; as new information is coming into the short-term memory it is kicking out the previous information due to its limited capacity (7 +/- 2 chunks).

Peterson & Peterson suggest that information decays (fades away) rapidly in short term memory unless rehearsal of that information occurs.

**Research into Duration in STM: The Brown-Peterson Technique (1959)**

This experiment involving remembering sequences of letters whilst counting backwards shows that in the absence of rehearsal, the short-term memory can only hold on to information for about 15 to 30 seconds. This illustrates what Brown & Peterson referred to as a Distractor Task or Interpolated Task and should have prevented you from rehearsing the information - the trigrams.

Brown & Peterson suggested that where information is continually rehearsed, it can be stored in the short-term memory indefinitely, but is lost as soon as interference blocks rehearsal. Ever been given a telephone number and had to keep repeating it avoiding all distractions until you wrote it down to prevent forgetting it? Then you were experiencing Maintenance Rehearsal.

**Long-term memory - Capacity**

Capacity (amount of information which may be stored) of the long-term memory is unknown. It is impossible to measure and may be limitless. The brains ability to store information is greater than the world's most powerful computer memory.
Duration in long-term memory

Information is thought to be stored permanently - for your entire lifetime. It is now thought possible that some memories may be genetically inherited and therefore last longer than a lifetime. The issue with duration in long-term memory relates to recall and forgetting.

Encoding in LTM

Two types of encoding are thought to operate in LTM.

Research into semantic encoding in long-term memory - Baddeley (1966)

Baddeley presented participants with four lists to remember:

List 1: man map can cap
List 2: try pig hut pen
List 3: great big huge wide
List 4: run easy tug end

Participants had to recall as many words as possible immediately after presentation of lists and then try again 20 minutes later.

Baddeley found that the immediate recall was better for list 2 than for list 1 and with little difference in recall between lists 3 and 4.
List 1 contains similar sounding words and list 2 contains non-similar sounding words. When participants were then asked to recall words after twenty minutes they recalled list 4 better than list 3, list 4 contains words with non-similar meaning words and list 3 contains words with similar meanings.

There was little difference in recall for lists 1 and 2. This shows that the short-term memory tends to store information according to sounds rather than meaning and that the long-term memory tends to store information according to semantics (meaning) rather than simply sound.

Baddeley used a laboratory experiment and can therefore be criticised in terms of ecological validity, demand characteristics, participant variables/individual differences, experimenter bias and representativeness (Baddeley used undergraduate students as participants). Although it has good reliability.

The following table is a summary of what you have learnt about encoding, duration and capacity in the STM and LTM:

<table>
<thead>
<tr>
<th>Capacity:</th>
<th>Duration:</th>
<th>Encoding:</th>
</tr>
</thead>
<tbody>
<tr>
<td>STM</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Miller's</td>
<td>Brown &amp; Peterson suggest 15 to 30 seconds</td>
<td>Conrad suggested only acoustic process. Shulman suggested also visual and semantic processes.</td>
</tr>
<tr>
<td>S 7 +/- 2 Chunks</td>
<td>The magical number seven plus or minus two.</td>
<td></td>
</tr>
<tr>
<td>L Unknown and impossible to measure. Maybe limitless.</td>
<td>Relatively permanent. Relates to theories of recall and forgetting.</td>
<td>Declarative and/or Procedural. Declarative may be Semantic and/or Episodic (Tulvig). Baddeley showed process was largely semantic.</td>
</tr>
<tr>
<td>L T M</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Multistore Model - Atkinson and Shiffrin (1968)**

Atkinson and Shiffrin suggested that memory was comprised of three separate stores, the Sensory Memory Store, the short-term memory and the long-term memory. Each store had a specific and relatively inflexible function. Information is simply rehearsed in the STM and if rehearsed sufficiently is transferred to LTM. Information to be recalled from LTM passes back through STM producing the associated response.

**Evidence for Multi-store Model:**

1. **Primacy - Recency Effect - Atkinson (1970):** When presented with lists to remember we recall first and last items best. First items rehearsed into LTM and last items recalled from STM. Ones in middle less likely to be recalled. This is evidence for existence of several stores.
2. **Brown - Peterson Technique:** Suggests that if rehearsal of items is prevented then information does not enter LTM.

3. Amnesiacs caused by **Korsakoffs Syndrome** brought on by chronic alcoholism display sound STM functioning but impaired LTM. This suggests separate and distinct memory stores.


   **Evidence against Multi-store Model:**

1. **De Groot (1966):** Showed how expert chess players had phenomenal STM for chess positions as long as they fitted in with known rules. When pieces were randomly arranged their recall was no better than non-chess players therefore STM and LTM may not be so separate and distinct. Multi-store model is basic and limited in explaining such a complex phenomena as memory.

**Working Memory - Baddeley & Hitch (1974)**

An alternative to the Multi-store Model. Emphasises workings of STM. It is a far more complex explanation of STM. Rather than the STM being a single inflexible store, Baddeley and Hitch suggested that the STM was made up of several subsystems, each having a specialised function. They suggested that these subsystems were involved in complex cognitions/thought processes, including analysis and judgements about information input. Baddeley and Hitch provide evidence for this by people being able to carry out more than one task at once where both tasks involve STM functions.

**Levels of Processing Model Craik & Lockhart (1972)**

This model of memory concentrates on the LTM and the semantic processing occurring there.

It presents another alternative to the Multi-store model, which suggests information is transferred to LTM through rehearsal (repetition).

This model suggests that the **depth or level** at which we process information determines its place in LTM and also how well we recall that information.
So: the greater we think about information for whatever reason the more likely it will be remembered for longer.

Craik & Lockhart accepted Atkinson & Shiffrins separate stores but suggested that encoding and processing of information in LTM was more complex. They suggested that information could be processed or encoded at **Shallow, Deeper and Deepest** levels.

**The deeper the processing the stronger and more durable the memory.**

Craik & Lockhart suggested that semantic processing can operate at different depths of analysis, some being more complex than others which they referred to as Elaborate Semantic Processing. They used the laboratory experiment, which can be criticised in terms of validity and representativeness.

The variables identified may be difficult to operationalise as ‘depth of processing’ may be seen as a highly individual - deep for one person may be shallow to another. This makes generalisations difficult.

Bransford (1979) suggested that processing in LTM is even more complex than that proposed by Craik & Lockhart.

**Forgetting in short-term memory - Decay in STM**

**Trace decay theory** in STM relates to theories of Duration in STM.

The theory suggests STM can only hold information for between 15 and 30 seconds unless it is rehearsed Brown & Peterson (1959). After this time the information Decays (fades away). Waugh & Norman (1965) used the Serial Probe Technique to test the theory...

Participants were given a series of numbers to learn. They were then given one of the numbers and asked which number followed it. For example, participants were given the Probe word 7 and asked what followed it, the answer is 3.

The numbers were presented at different speeds therefore the faster the numbers presented the better the recall if Trace Decay theory is correct as the more likely the information is to remain in the STM.

The results did not support the theory. This research employed the laboratory experiment and its validity can therefore be questioned.

**Displacement in STM**

The idea of displacement in STM causing forgetting relates to the Capacity of STM as proposed by Miller (1956). It simply suggests that if the capacity of STM is limited to 7 plus or minus 2 items or chunks of information then STM is full then some of that information must be kicked out or displaced in order for new information to enter.

**Retrieval Failure in LTM**

This theory suggests that all information received is stored in LTM but that some information is difficult or impossible to access.
This idea is characterised by the **Tip-of-the-Tongue Effect (TOT)** where we know something but just cannot recall it. Retrieval of such information is thought to be dependent on three factors:

1. Firstly, **Context-Dependent Retrieval** suggests that recall of information depends on replicating the situation or context in which that information was originally encoded.

2. Secondly, **State-Dependent Retrieval** suggests that recall is improved if the individual is in the same physical and/or psychological state as when they first learnt the information.

3. Thirdly, recall may be by the presence of cues or probes, clues or associations.

### Interference in LTM

This idea suggests that information in LTM may become confused or combined with other information during encoding thus distorting or disrupting memories.

Interference in LTM is thought to be either proactive where old memories disrupt new memories or retroactive where new memories disrupt old memories. Both Proactive and Retroactive Interference is thought to be more likely to occur where the memories are similar - for example, confusing old and new telephone numbers.

**McGeoch (1932)** tested these ideas using laboratory experiments involving lists of single words or binary associations. The findings therefore can be criticised for their ecological validity including demand characteristics and representativeness thus making generalisations impossible.

**Flashbulb memories** involve the vivid recall of what individuals were doing when a major event occurred.

**Source:** Method:

**Brown & Kulik (1977)**

- Asked people a series of questions about 10 major events. Participants remembered where they were, what they were doing and the emotional impact it had. These memories may be seen as 'special' and are thought to involve special brain mechanisms.

**Rubin & Kozin (1984)**

- Showed that flashbulb memories are particularly powerful for personal events, such as love at first sight.

**McCloskey (1988)**

- Suggested that flashbulb memories are as prone to forgetting as ordinary memories.

**Bohannon (1988)**

- Suggested that flashbulb memories are not prone to forgetting when the event produced strong emotional reactions.

### Repression (Freud)
Repression, according to Freud (1800s), is the unconscious forgetting of traumatic events, feelings, thoughts because they are too painful to remember.

These memories are said to be repressed or ‘pushed out’ of consciousness into the unconscious and are very difficult to recall. These repressed memories may be the cause of mental abnormality as they express themselves in some other way.

Source: Findings:

Williams (1994) Examined records of young women who had been treated for sexual abuse as children and seventeen years later 38% of them had no conscious recall of the abuse.

Zimbardo (1995) Reported the case of Eileen. In 1989, Eileen suddenly remembered the reason for her childhood friend, Susan's, disappearance twenty years earlier. Eileen's father had raped and murdered her. Eileen had repressed this memory due to threats from her father and the understandable trauma it caused. Her father was sentenced to life imprisonment.

False Memory Syndrome - Pynoos & Nader (1989) Recall of so-called repressed memories may be false although real to the person remembering them.

Repression as a theory of forgetting is based on Case Study evidence and therefore is impossible to generalise from or replicate. Case studies are highly subjective and tend to personal and subjective interpretations.

Critical Issue: Eyewitness Testimony

Reconstructive Memory - Bartlett (1932)

Bartlett’s theory of Reconstructive Memory is crucial to an understanding of the reliability of eye witness testimony (EWT) as he suggested that recall is subject to personal interpretation dependent on our learnt or cultural norms and values - the way we make sense of our world.

In other words, we tend to see and in particular interpret and recall what we see according to what we expect and assume is 'normal' in a given situation.

Bartlett referred to these complete mental pictures of how things are expected to be as Schemas. These schemas may, in part, be determined by social values and therefore prejudice.

Reconstructive Memory The work of Loftus in this area, (1974)

Loftus drew on the ideas of Barlett and conducted research, illustrating factors, which lead to inaccurate recall of eyewitness testimony. Loftus & Palmer conducted two laboratory experiments to illustrate this reconstructive memory and how questioning techniques used by the police influences this.
**Experiment One:**

45 participants involved using an independent measures design. Participants were shown films of traffic accidents. They were then given a general account of what they had just seen and asked a series of questions about it. The critical question asked was *About how fast were the cars going when they HIT each other?*

Or the word 'HIT' was replaced by either 'SMASHED', 'COLLIDED', 'BUMPED' or 'CONTACTED'.

The results suggested that participants recall was influenced by the word used - the independent variable. The word 'smashed' led to the fastest speed estimate and the word 'contacted' the slowest.

**Experiment Two:**

The experiment above could be explained by response bias - pressure from interrogator or a change in a participant’s recall of the event because of word used in question.

Loftus & Palmer conducted this experiment in order to test which explanation was accurate.

150 students were tested using independent measures design. Participants were shown a short film of a traffic accident. They were then given a general account of what they had seen. They were then divided into groups of 50.

The first group was asked *How fast were the cars going when they hit each other?*

The second group were asked *How fast were the cars going when they smashed into each other?*

The third group were not asked the question at all and acted as a control group.

One week later they were asked a series of questions about the road traffic accident, one of which was the critical question, 'Did you see any broken glass? Yes or No?'

There was no broken glass in the film itself. The results suggested that the word ‘SMASHED’ not only led to estimates of faster speeds but also increased the likelihood of the participants recalling seeing broken glass when none was in the film.

This research suggests that memory is easily distorted by questioning technique and information acquired after the event can merge with original memory causing inaccurate recall or reconstructive memory. The addition of false details to a memory of an event is referred to as confabulation.

The Loftus & Palmer experiment can be criticised for lacking ecological validity.

**Face Recognition**
The work of **Loftus & Palmer** can be applied to face recognition. This area of EWT has however been studied directly to order to avoid false accusations.

**Source:**  

**Findings:**

**Cohen (1966)**  

cross-race identification bias: Showed how faces are not seen in isolation but that they are perceived or influenced both by the event itself and by people's schema, social norms and values and therefore stereotyped images. Cohen referred to this as. He suggested that people find it easier to identify people from their own race than people from a different race.

**Young**  

Showed how we are more likely to wrongly identify someone the less we know them.

**Dood & Kirschenbaum (1973)**  

Illustrate the problem of facial recognition by their *Case Study of Ron Shatford*.

**Well (1993)**  

Showed how the witness assumes the suspect to be present in an identity parade, which again may lead to false recognition.

**Lindsay (1991)**  

Suggested that suspects in an identity parade should be viewed one at a time rather in a line-up in order to avoid functional size (fair number of feasible suspects to chose from) and reduce possibility of mistaken identity.

**Bull & Rumsey**  

Proposed that we judge people to be criminal on their appearance.
## Determinants of Animal Behaviour

<table>
<thead>
<tr>
<th>Study:</th>
<th>Carried out by:</th>
<th>Criticised by:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chimpanzees have a theory of mind as they can deceive their keepers.</td>
<td>Woodruff &amp; Premack.</td>
<td>Heyes.</td>
</tr>
<tr>
<td>Chimpanzees can solve problems at the first attempt.</td>
<td>Köhler.</td>
<td>Epstein.</td>
</tr>
<tr>
<td>Chimpanzees can recognise themselves in a mirror.</td>
<td>Gallup.</td>
<td>Bard.</td>
</tr>
</tbody>
</table>

### Adaptation
Characteristic of an organism that has survival value or increases reproductive potential.

### Behaviourism
Approach to psychology focusing on the study of observable behaviour.

### Contagion
Triggering of a pre-existing behaviour pattern in one animal by another.

### Evolutionarily stable strategy
A strategy that cannot be bettered if it is used by most members of the population.

### Group selection
Term used by Wynee-Edwards to explain the evolution of behaviour for the good of the group.

### Imitation
Learning of a novel behaviour through the observation of the modelling of that behaviour in another animal.

### Inclusive fitness
The measure of the ability of an individual to pass genes on to the next generation.

### Insight learning
The ability to solve a problem or perform an appropriate behaviour at the first attempt.

### Kin selection
Term used by Hamilton to explain the evolution of behaviour for the good of genetic relatives.

### Mimicry
The copying of an unrewarding behaviour observed in another animal.
<table>
<thead>
<tr>
<th>Term</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Natural selection</strong></td>
<td>Term used by Darwin to explain the mechanism by which organisms are selected by environmental factors for survival and reproduction.</td>
</tr>
<tr>
<td><strong>Operant</strong></td>
<td>The behaviour performed by an animal in operant conditioning which results in a consequence.</td>
</tr>
<tr>
<td><strong>Palaeontology</strong></td>
<td>The study of past geological periods and fossils.</td>
</tr>
<tr>
<td><strong>Population</strong></td>
<td>A group of organisms of the same species living in the same habitat.</td>
</tr>
<tr>
<td><strong>Punishment</strong></td>
<td>Weakens behaviours in operant conditioning.</td>
</tr>
<tr>
<td><strong>Reciprocal altruism</strong></td>
<td>Stable strategy of 'tit-for-tat' cooperation involving related or unrelated individuals.</td>
</tr>
<tr>
<td><strong>Reinforcement</strong></td>
<td>Strengthens behaviours in operant conditioning.</td>
</tr>
<tr>
<td><strong>Schedules reinforcement</strong></td>
<td>Patterns of reinforcement used in operant conditioning involving different frequencies and timings of reinforcing events.</td>
</tr>
<tr>
<td><strong>Self-recognition</strong></td>
<td>The ability to recognise oneself in a reflection.</td>
</tr>
<tr>
<td><strong>Sexual selection</strong></td>
<td>Selection for traits that increases mating success.</td>
</tr>
<tr>
<td><strong>Shaping</strong></td>
<td>Learning of a new behaviour by the reinforcement of successive approximations to the desired behaviour.</td>
</tr>
<tr>
<td><strong>Social facilitation</strong></td>
<td>The ability to perform a task better in the presence of conspecifics.</td>
</tr>
<tr>
<td><strong>Stimulus enhancement</strong></td>
<td>Increased attractiveness of an object following conspecific’s interest in that object.</td>
</tr>
<tr>
<td><strong>Theory of mind</strong></td>
<td>The ability to attribute mental states to the self and others.</td>
</tr>
<tr>
<td><strong>Tutoring</strong></td>
<td>The investment of time and energy into the teaching of a behaviour to a conspecific.</td>
</tr>
</tbody>
</table>
Treatment

Introduction

Self-treatment and medication can be very dangerous.

Not all mental disorders are serious or long lasting - many are mild and short-term.

Most mental disorders can be treated effectively.

Therapy - a course of treatment aimed at changing the way a person thinks, feels or behaves. It is used to try to reduce mental distress or make their behaviour more socially acceptable.

Psychologists have developed many different therapies depending on what they believe to be the causes of various disorders.

It is difficult to identify causes of mental illnesses - there are no simple answers, often there are complex interactions between different factors - the search for the most appropriate and effective treatments goes on.

Appropriate means which therapies are suitable for various different types of disorder.

Effectiveness means how well a therapy works.

There are four psychological approaches used in treating illnesses:

1. Biological: therapies of this type include psychosurgery, ECT and drug therapy.
2. Behavioural: therapies of this type include token economy, flooding and aversion therapy.
3. Cognitive-behavioural (CBT): therapies of this type include rational emotive therapy.
4. Psychodynamic therapy: therapies of this type include psychodrama and psychoanalysis.

5. If a mental disorder has a biological cause (for example, chemical imbalance in the brain) it may be possible to treat it by changing the way the body functions. Such methods are also known as physiological treatments or somatic treatments ('soma' means 'body').

Biological treatments interfere with, and change, the body's physiology (biological processes) and, because of this, they can be described as invasive treatments. Such treatments include drug therapies (chemotherapy), electro-convulsive therapy (ECT) and psychosurgery (surgical procedures).

Drug treatments

Drug treatments are known as chemotherapy - using chemicals to change the way the brain or body works.

Drug treatments for mental disorders were first introduced in the 1950s - reducing by thousands the number of people permanently in hospitals.

Drugs that change the way a person thinks or behaves are called psychoactive drugs.
Drugs used to treat mental disorders - psychotherapeutic drugs - alter the chemical functioning of the brain by affecting the action of neurotransmitters.

Neurotransmitters: Chemicals that transmit impulses across the microscopic gaps between nerve cells called synapses. Changes in the brain's neurotransmitter systems lead to changes in moods, feelings, perception and behaviour.

How do psychotherapeutic drugs affect neurotransmitters?

A drug might be so similar to a neurotransmitter that it can imitate it and interfere with its activity by moving into the receptor sites.

Other drugs might block receptor sites so that the effects of a neurotransmitter are dampened down. Some neuroleptic (or 'antipsychotic') drugs, used to treat schizophrenia work in this way.

Other drugs work by slowing down the re-uptake of neurotransmitters so they hang around in synapses affecting receptor sites for longer. Antidepressant drugs called SSRI's work in this way (selective serotonin re-uptake inhibitors).

What are the main types of drugs used to treat mental disorders?

**Anti-psychotic drugs** (neuroleptics) - Used to treat schizophrenia. These dampen down 'psychotic' symptoms such as delusions and hallucinations - for example, chlorpromazine and clozapine.

**Anti-depressants** - Used mainly for depression, sometimes used for panic disorder, some phobias and obsessive-compulsive disorder. For example: tricyclic drugs, MAOI's and SSRI's (for example, Prozac).

**Anti-anxiety drugs** (anxiolytic drugs) - Help reduce the disabling symptoms of anxiety disorders - for example, Valium.

**Anti-manic drugs** - Used to treat states of mania. Also used for 'bipolar disorder' ('manic-depression') involving extreme mood cycles from highs (mania) to deep lows (depression) - for example, lithium.

In the 1950s the anti-psychotic drug chlorpromazine heralded dramatic changes in the treatment of mental disorders.

Do you remember the names of some anxiety disorders?

1. Generalised anxiety disorder (GAD)
2. Panic disorder (PD)
3. Obsessive-compulsive disorder (OCD)
4. Post-traumatic stress disorder (PTSD)
5. Phobias

**Do drug treatments work?**

Yes. Most drug treatments are very effective in relieving frightening and distressing symptoms for many people, enabling them to manage day-to-day life more easily. Drug treatments do not work for everybody though, and individuals can respond differently to the same drug treatments.

**What about side effects?**

Unfortunately, most psychotherapeutic drugs have some unwanted side effects.

Side effects vary between individuals and dosages taken.

A drug treatment is still effective if the improvements to an individual’s life outweigh the side effects.

<table>
<thead>
<tr>
<th>Medication:</th>
<th>Some possible side effects:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Anti-psychotic medication</strong></td>
<td>Can be fairly mild (tiredness, sleepiness) or more serious spasms, shuffling gait, slow speech and tardive dyskinesia. More severe side effects are associated with long-term, high dose medication.</td>
</tr>
<tr>
<td><strong>Tricylic drugs</strong> (Anti-depressant medication)</td>
<td>Common side effects are blurred vision, dry mouth, weight gain, constipation and decreased interest in sex.</td>
</tr>
<tr>
<td><strong>SSRIs (selective serotonin re-uptake inhibitors)</strong> (Anti-depressant medication)</td>
<td>Digestive problems, headaches, insomnia and vivid dreams.</td>
</tr>
<tr>
<td><strong>MAOIs (monamine oxidase inhibitors)</strong> (Anti-depressant medication)</td>
<td>React very badly with some other drugs and foods - for example, cold remedies, cheese, 'Marmite' and red wine. This reaction can be life-threatening - special dietary rules have to be followed.</td>
</tr>
</tbody>
</table>

**Anti-anxiety medications**

Serious and possibly life-threatening reactions if mixing benzodiazepines with alcohol or some other medicines. Possible dependence if used long-term and withdrawal reactions if stopped suddenly.

*Always Remember: Never take prescription drugs that have not been prescribed for you!*
Introduction to Electro-Convulsive Therapy

A very controversial treatment, first used in 1938 to treat schizophrenia and widespread during the 1940s.

Psychiatrists used ECT for all sorts of disorders including alcoholism, personality disorders, and eating disorders. It is now considered inappropriate for these disorders and schizophrenia.

ECT is used very rarely now. Successful drug treatments have emerged since the 1950s.

What happens in ECT?

A weak current is passed across the temples for 0.5 - 4 seconds. The patient's body goes into convulsions that are reduced by muscle relaxants and anaesthetic (a mouth gag prevents the tongue being bitten). Oxygen is given before and after treatment to aid recovery. Therapy usually consists of a series of shock treatments over several weeks.

Does ECT work?

ECT may seem brutal but it seems to benefit some people with acute depression when other treatments have not worked.

No one really knows what ECT does to the brain or why it sometimes has a positive effect on severely depressed people.

ECT might work by altering the person's memory or by chemically changing their brain's functioning.

The side effects of ECT are not fully understood. Not surprisingly, the patient suffers confusion and muscular aches afterwards. Memory can also be affected.

When it was first used, some patients died in ECT due to undetected heart defects - patients are now screened carefully before the treatment is allowed.

Many people have objected to the use of ECT because we do not fully understand the effects of it. Critics have said it's a bit like kicking a television, or hitting a computer, to make it work.

What is Psychosurgery?

Psychosurgery is another very controversial type of treatment.

Psychosurgery has been used since prehistoric times and means surgical procedures carried out on the brain to treat mental disorders.

What were the effects of the pre-frontal lobotomy?

Here are some of them:

1. Calmer, apathetic patients.
2. Partial paralysis.
3. Reduced intellectual functioning and inability to learn.
4. Loss of emotional response to others.
5. Loss of memory.
6. Childlike and slovenly behaviour.
7. The procedures often destroyed individual personalities and, in some cases, caused death.

**Why was it used?**

The pre-frontal lobotomy became a common surgical procedure - psychiatrists used it in desperate attempts to find treatments for people. Tens of thousands of people had these operations for many different mental disorders.

**Does psychosurgery work?**

Moniz claimed that he had a 70% success rate in curing schizophrenia, compulsions and anxiety disorders.

Many people have expressed grave doubts about these claims. The techniques might have reduced 'psychotic' symptoms, but the after effects could be so severe that they probably did more harm than good. The techniques did not have a thorough scientific basis - no one really knew what they were doing. Surgery was often forced upon people and the results - all irreversible - varied tremendously, from mild changes in memory or intellectual ability to fatalities.

In 1949, Moniz won a Nobel Prize for his contribution to medicine. (Unfortunately, he was later paralysed when he was shot by one of his former patients!)

**Are these techniques still used?**

The techniques described above are no longer in use. In the 1950s, drug therapies meant that such desperate remedies no longer needed to be attempted.

**Is Psychosurgery still used?**

Yes, but the techniques are different. It is sometimes used to alleviate extreme depression or obsessive-compulsive disorder, when other treatments have failed to help. In today's methods, only very small amounts of brain tissue are destroyed by heat or radioactivity. The risks of side effects are lower, and the person appears normal after the surgery. Patients must give fully informed consent for treatment.

**Do today's techniques work?**

Today's techniques seem to be successful for some people. Psychiatrists have said that if the risk of suicide is reduced and some lives are saved in this way, then that is enough to justify the treatment.

**How does psychosurgery work?**

The short answer to that is that no one really knows. Further research might tell us more about it in the future. In spite of all our sophisticated technology, we still don't know much about our own brains - probably the most complicated things in the universe!
Introduction to Behavioural Therapies

Behavioural therapies are based on the idea that abnormal behaviour can be learned.

According to this approach, successful training can alter a person's behaviour by teaching new responses. Unwanted or distressing behaviour can be 'extinguished'.

Changing behaviour through a training programme is called **conditioning**. Classical conditioning means learning by direct association.

**Remember Pavlov's classic experiments with dogs?**

Pavlov noticed that his laboratory dogs salivated before their food arrived - he devised an experiment to see if he could make them salivate to different stimuli. He called his training method 'conditioning'. Pavlov started with the natural, unconditioned response of salivating to the natural, unconditioned stimulus of food. Salivation is a reflex response - it happens automatically without the need for thought. The light bulb is at first a meaningless, unconditioned stimulus to the dog. After repeated trials, the dog learns by association that the light means food. Eventually, the light is flashed without food, and the dog salivates; the light became a conditioned stimulus. Salivating at the flashing light was a conditioned response.

**Operant conditioning** means learning to perform certain actions to receive rewards or avoid punishment.

The principles of classical and operant conditioning theory have been applied to humans in various types of behavioural therapy for mental disorders.

### Summary of Behavioural Therapies

<table>
<thead>
<tr>
<th>Behavioural Therapy:</th>
<th>What happens?</th>
<th>Disorders treated:</th>
<th>Ethical issues and effectiveness:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Flooding</strong></td>
<td>Maximum Exposure to most feared situation until fear subsides.</td>
<td>Some types of specific phobia, for example, fear of heights.</td>
<td>Successful for many phobias. If not completed, anxiety may be made worse!</td>
</tr>
<tr>
<td><strong>Systematic Desensitisation</strong></td>
<td>Gradual exposure to feared situation or object while relaxed.</td>
<td>Specific phobias and anxieties such as unrealistic fear of criticism or failure.</td>
<td>‘Homework’ tasks, in situations person feel anxious in, essential if situation cannot be recreated.</td>
</tr>
<tr>
<td><strong>Aversion Therapy</strong></td>
<td>Unwanted behaviour is associated with unpleasant stimulus - feeling sick or electric shock.</td>
<td>Some types of addiction, for example, smoking, overeating, alcoholism. Small pic of alcohol bottle?</td>
<td>Deliberate pain and discomfort inflicted. Most notoriously, used in past to try to change sexuality of homosexuals and transvestites.</td>
</tr>
</tbody>
</table>
Token Economy

Tokens given for 'good' behaviour. Tokens saved up and exchanged for reward later.

Used to shape behaviour of patients in mental hospitals.

Successful in socialising disturbed patients. Can break down outside institutional setting.

Modelling

Person gradually learns from others who are relaxed in situations that normally make them feel anxious.

Some phobias, for example, of snakes or dogs, and some other anxieties, for example, used in sex therapy.

Successful in treating phobias and socialising disturbed patients both inside and outside hospital environments - therapists modelling behaviour.

Introduction to Psychodynamic Therapies

Psychodynamic therapies are 'talking therapies' derived from the work of Sigmund Freud in the early 20th Century.

Freud developed a therapy called psychoanalysis.

Freud's original ideas have since been modified to produce many related but different therapies, collectively known as 'psychodynamic' therapies.

Psychoanalysis

Here is an outline of the basics of psychoanalysis:

Freud compared the mind to an iceberg. Most of the things going on in our minds are in our 'unconscious' so we are not aware of them. Conflicts going on in the unconscious mind can cause disorders of thought and behaviour.

To treat someone for disturbed behaviour it is necessary to try to find out what unconscious conflicts they may have.

Traumatic events in our childhood are highly likely to cause unconscious conflicts and 'repression' of unpleasant memories that create anxiety disorders later in life.

In psychoanalysis, Freud would have a patient lie on a couch to relax, and he would sit behind them taking notes while they told him about their dreams and childhood memories.

Sometimes Freud used 'free association' - a technique in which the patient would respond to prompts by saying whatever came into their minds. Patients would be encouraged to say anything no matter how bizarre or embarrassing it might seem. Freud would analyse what they said for clues to unconscious conflicts.

Once a traumatic event in the past, or source of conflict had been brought to the surface in this way the patient might feel very emotional. Transference might occur - in which the patient would transfer emotional feelings onto the therapist.
The next stage was 'working through' the previously unconscious source of conflict to come to terms with it and find ways of dealing with it.

**Psychoanalysis** would be a lengthy process, involving many sessions with the psychoanalyst. For Freud, just trying to cure a phobia of horses by gradual exposure to horses would not be a 'cure'. The underlying unconscious conflicts would need to be resolved.

In the case of 'little Hans', Freud's only child patient, a phobia of horses was related to Hans' fear of castration - in spite of the fact that Hans had seen an accident involving a horse and been afraid.

Freud's ideas have been very fiercely criticised but he did introduce a new way of dealing with psychological problems - just talking about them!

**Introduction to Cognitive-Behavioural Therapies**

CBT is based on cognitive theories that some mental disorders may involve 'faulty' or irrational thinking or perception. For example, someone suffering from anorexia nervosa may not be able to see himself or herself as too thin, even when they are extremely underweight. A person suffering from depression may blame themselves unnecessarily for things that have gone wrong.

Treatment, known as cognitive restructuring aims to train a person to think differently and, by doing this, to change their behaviour for the better.

The focus is on how the person thinks rather than acting directly on their behaviour (as with behavioural therapies).

**There are several types of CBT:**

**The two most important ones to know about are:**

1. Rational emotive therapy.
2. Stress inoculation therapy.

**Rational Emotive Therapy (RET)**

Ellis developed RET in the 1950s.

It is assumed that the person has persistent self-defeating thoughts that are unrealistic.

RET aims to challenge these thoughts by helping the client to recognise them and discuss them.

Clients are then taught to replace their 'irrational' thoughts with new, more constructive and realistic ones.

RET can involve very tough and challenging conversations between client and therapist.

'Homework' assignments for the clients to test themselves out between sessions are part of this approach.
RET seems to be successful in treating some types of social anxiety. Research suggests that it could be used for the management of anger and depression. It might even be useful in helping 'normal' people manage stress.

A major difficulty with evaluating RET is that it is difficult to define 'irrational thinking'. Psychologists cannot agree on this and RET therapists and their clients decide which thought patterns should be changed.

**Stress Inoculation Therapy (SIT)**

Meichenbaum developed SIT in the 1970s.

Like RET, this therapy aims to teach clients to replace self-defeating thoughts with more positive ones, and to practice this until it becomes a habit.

As it is called stress inoculation therapy you can see that it is intended as a way of training people to be able to cope with stress before it has become a serious problem.

SIT is used in many workplace situations to help people manage their jobs better.

In SIT clients are encouraged to think differently and taught new skills for dealing with various situations that they might find stressful. Clients then practice those skills to be prepared for them when a real situation arises in the future.

SIT is a sort of preventative treatment for stress-related mental disorders that have seriously damaging effects on people’s lives. In this way it is an unusual therapy.
**Attention**

**Glossary**

**Action slips**  Performing unintended actions, particularly during automatic processes

**cell content**  cell content

**Automatic processing**  Processing that does not require any focused attention

**Bottom-up processing**  Pattern recognition based on features of the stimulus

**Closed loop**  Slow processing involving conscious and deliberate attention for learning and switching tasks

**Configuration**  Arrangement of features with respect to each other

**Controlled processing**  Processing that requires focused attention

**Dichotic listening task**  Method for investigating focused attention involving listening to two messages simultaneously

**Divided attention**  Attending to more than one stimulus simultaneously

**Feature detection model**  Pattern recognition based breaking down the stimulus into its component features

**Feature detectors**  Cells in the visual cortex that respond to lines or edges

**Focused attention**  Ability to selectively attend to some information stimuli whilst ignoring the rest

**Galvanic skin response**  Changes in skin resistance in response to changes in arousal

**Identikit**  Drawings of facial features combined to construct a face
<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Open loop</td>
<td>Fast processing involving no attentional control for well-practised tasks</td>
</tr>
<tr>
<td>Parallel processing</td>
<td>Ability to process more than one stimulus simultaneously</td>
</tr>
<tr>
<td>Pattern recognition</td>
<td>Making sense of and identifying perceived objects</td>
</tr>
<tr>
<td>Perception</td>
<td>Process of making sensory inputs meaningful</td>
</tr>
<tr>
<td>Schemata</td>
<td>Memory sets for whole processes, things and events</td>
</tr>
<tr>
<td>Serial processing</td>
<td>Focusing attention on one stimulus at a time</td>
</tr>
<tr>
<td>Shadowing</td>
<td>Repetition of a message during a dichotic listening task</td>
</tr>
<tr>
<td>Split-span procedure</td>
<td>Method for investigating focused attention involving listening to different information in each ear and writing it down</td>
</tr>
<tr>
<td>Stroop effect</td>
<td>Demonstration of how automatic processes can interfere with tasks requiring controlled processing</td>
</tr>
<tr>
<td>Template matching hypothesis</td>
<td>Incoming stimuli are compared with templates in the long term memory</td>
</tr>
<tr>
<td>Threshold level of intensity</td>
<td>According to Triesman, this is reached if an attenuated channel is selected for attention</td>
</tr>
<tr>
<td>Top-down processing</td>
<td>Expectations and knowledge of a particular context influence the perception of patterns</td>
</tr>
</tbody>
</table>
Essay Writing

A good essay on a topic within Psychology has many positive attributes.

1. Relevance
2. Structure
3. Literary Form
4. Use of Evidence
5. Critical Analysis
6. References
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