

tutor2u^{*}

AQA A LEVEL PSYCHOLOGY KEY TERM GLOSSARY

Every key term from the AQA A Level
Psychology specification defined.



www.tutor2u.net/psychology

CONTENTS

Social Influence	3
Memory	6
Attachment	9
Approaches in Psychology	12
Psychopathology	18
Research Methods	23
Biopsychology	35
Issues & Debates	40
Relationships	43
Gender	49
Cognition & Development	53
Schizophrenia	57
Eating Behaviour	62
Stress	69
Aggression	75
Forensic Psychology	80
Addiction	87

SOCIAL INFLUENCE	Social influence is a topic in psychology, which examines how a person's opinion, behaviour and emotions are affected by others. The social influence topic looks at four key areas including: conformity, obedience, minority influence and social change.
Agentic State	The agentic state is an explanation of obedience offered by Milgram and is where an individual carries out the orders of an authority figure, acting as their agent. The shift from autonomy to 'agency' is referred to as the 'agentic shift'.
Asch	Solomon Asch was an American Social Psychologist who conducted a series of studies in the 1950s to examine the extent to which people would conform to the opinions of others in an unambiguous situation.
Authoritarian Personality	The authoritarian personality was first identified by Adorno et al. (1950) and refers to a person who has extreme respect for authority and is more likely to be obedient to those who hold power over them.
Commitment: Social Influence	Commitment refers to the way that minority influence is more likely to occur if the minority shows dedication to their position. Commitment typically involves some form of personal sacrifice, which shows the majority that one is not just acting out of self-interest.
Compliance	Compliance is the lowest level of conformity. Here a person changes their public behaviour (the way they act) but not their private beliefs. This is usually a short-term change and often the result of normative social influence.
Conformity	Conformity occurs when someone changes their behaviour or beliefs due to real or imagined pressure from others.
Conformity to Social Roles	Social roles are the parts individuals play when they belong to social group, and conformity to social roles occurs when people behave in certain ways because they feel that is expected of them in that role.
Consistency	Consistency refers to the way in which minority influence is more likely to occur if the minority members share the same belief and retain it over time. This then draws the attention of the majority to the minority.
Dispositional Explanations: Obedience	Dispositional explanations of obedience focus on internal characteristics that lie within the individual (e.g. personality) that lead them to be more or less likely to follow the orders of an authority figure.
Flexibility	Flexibility refers to the way in which minority influence is more likely to occur if the minority is willing to compromise. This means they cannot be viewed as dogmatic and unreasonable.
Group Size	Asch identified group size as a variable that influences conformity. Asch found that as he increased the size of the majority, conformity levels increased. With two confederates, conformity occurred on 12.8% of trials, rising to 32% for trials with three confederates.

	However, after that group size did not make a significant difference to the rate of conformity.
Identification: Social Influence	Identification is the middle level of conformity. Here a person changes their public behaviour (the way they act) and their private beliefs, but only while they are in the presence of the group they are identifying with. This is usually a short-term change and is often the result of normative social influence.
Informational Social Influence	Informational Social Influence is where a person conforms to gain knowledge, or because they believe that someone else is 'right'.
Internalisation: Social Influence	Internalisation is the deepest level of conformity. Here a person changes both their public behaviour (the way they act) and their private beliefs. This is usually a long-term change and often the result of informational social influence.
Legitimacy of Authority	Legitimacy of authority is an explanation of obedience offered by Milgram. Milgram suggested that we are more likely to obey a person who has a higher position or status in a social hierarchy.
Location	Milgram found that location affected the level of obedience in his research. When he conducted a variation in a run-down office block he found that the percentage of participants who went to 450 volts on the 'electric shock' generator fell from 65% (at the prestigious Yale University) to 47.5%.
Locus of Control	Rotter (1966) proposed the idea of locus of control (LoC), which is the extent to which people believe they have control over their lives. People with an internal locus of control believe that what happens in their life is largely the result of their own behaviour, and are more likely to resist pressure to conform or obey.
Milgram	Stanley Milgram was an American social psychologist who conducted research into obedience.
Minority Influence	Minority influence occurs when an individual or small group influences the attitudes and behaviour of a larger group.
Normative Social Influence	Normative Social Influence is where a person conforms in order to be accepted and belong to a group. They do this because it is socially rewarding and/or to avoid social rejection (e.g. ridicule for not 'fitting in').
Proximity	Proximity is a situational variable affecting obedience and refers to how close you are to someone or something. In Milgram's experiment proximity worked on numerous levels: how close the teacher was to the learner, and how close the teacher was to the experimenter. Milgram found that proximity affected levels of obedience. When the teacher and learner were in the same room, the percentage of participants who administered the full 450-volt shock fell from 65% to 40%. He also found that when the experimenter left the room and gave the instructions over the telephone, obedience levels fell to 20.5%.

Situational Explanations: Obedience	Situational explanations for obedience focus on external factors that affect the likelihood that someone will obey orders. Examples of situational factors in Milgram's research are proximity, location and uniform.
Social Change	Social change refers to the ways in which a society (rather than an individual) develops over time to replace beliefs, attitudes and behaviour with new norms and expectations.
Social Support: Social Influence	One way in which people can resist the pressure to conform or obey is if they have an ally, someone supporting their point of view. Having an ally can build confidence and allow individuals to remain independent.
Task Difficulty	Asch identified task difficulty as a variable that affects conformity. He found that when he made the line judgement task more difficult, conformity levels increased, as the participant was more likely to believe that the confederates were right.
Unanimity	Unanimity refers to the extent that members of a majority agree with one another, and was identified by Asch as a variable that affects conformity. He found that if one of the confederates dissented and gave the correct answer, then conformity levels dropped from 32% to 5%. He also found that if one confederate gave a different incorrect answer from the other confederates, then conformity dropped to just 9%.
Uniform	Uniform is a situational variable affecting obedience. This is because authority figures often wear clothes that symbolise their position of authority. In Milgram's research, the percentage of participants who were fully obedient fell from 65% to 20% when the experimenter wore his own clothes, rather than the 'uniform' of a white lab coat.
Zimbardo	Zimbardo conducted the Stanford Prison Experiment. His aim was to examine whether people would conform to the social role of a prison guard or a prisoner, when placed in a mock prison environment.

NOTES

MEMORY	Memory is a topic in psychology which examines how humans process and store information; the factors that affect the accuracy and reliability of eyewitness testimony; and how information is lost/forgotten.
Anxiety	Anxiety is a factor that has been shown to affect the accuracy of eyewitness testimony. Loftus proposed the 'weapon focus effect', which suggests that the anxiety caused as a result of witnessing a weapon focuses the attention away from potential perpetrators and reduces the accuracy of eyewitness testimony.
Capacity	Capacity refers to the amount or quantity of information that can be stored in memory.
Central Executive	The central executive is the boss of the working memory model. It directs attention to the two slave systems: the phonological loop and the visuo-spatial sketchpad.
Coding	Coding refers to the way in which information is changed and stored in memory.
Cognitive Interview	Geiselman et al. (1985) developed the cognitive interview, in response to criticisms of the traditional police interview. Geiselman identified four key principles that he believed would enhance recall, including: Context reinstatement (CR), Report everything (RE), Recall from changed perspective (CP) and Recall in reverse order (RO).
Duration	Duration refers to the length of time information is held for in memory.
Episodic Memory	Episodic memories are personal memories, which have three specific elements: details of the event, the context, and the emotions experienced. Episodic memories are associated with a part of the brain called the hippocampus.
Episodic Buffer	The episodic buffer is one of the components of working memory model. It is a temporary store that integrates information from the other components and maintains a sense of time, so that events occur in a continuing sequence.
Eyewitness Testimony	An eyewitness testimony is the evidence given in court or a police investigation, by someone who has witnessed a crime or accident.
Forgetting	Forgetting is a failure to remember something. It can occur due to interference or retrieval failure.
Leading Questions	Leading questions are questions that are worded to suggest a particular answer. For example, if you say 'did you see the broken glass?' it implies that there was broken glass and therefore the witness is more likely to say 'yes'.
Long-Term Memory	Long-term memory (LTM) is a 'permanent' store that holds unlimited amounts of information for long periods of time. There are different types of LTM: episodic, semantic and procedural.

Misleading Information	Misleading information is a key factor that can affect the accuracy of eyewitness testimony. Misleading information is incorrect information given to an eyewitness following an event. This can be during post-event discussion or take the form of leading questions.
Multi-Store Model	Atkinson & Shiffrin (1968) proposed the multi-store model of memory (MSM), which has three components: sensory register (SR), short-term memory (STM) and long-term memory (LTM). Each of these stores has a different capacity, duration and coding.
Phonological Loop	The phonological loop is a component of working memory model that deals with auditory information. It is subdivided into the phonological store (which holds words we hear) and the articulatory process (which allows us to repeat words in a loop).
Post-Event Discussion	Post-event discussion is a potential source of misleading information where witnesses discuss what they saw after an event. This can then affect the accuracy of their accounts.
Proactive Interference	Proactive interference occurs when old information stored in long-term memory interferes with the learning of new information. This usually occurs when the new information is similar to the old information. An everyday example of proactive interference is when you try to remember a new mobile phone number and your memory for your old number disrupts your attempts to remember this new information.
Procedural Memory	Procedural memory includes our memory of performed motor tasks/skills. For example, swimming, writing, etc. Procedural memories are acquired through repetition and practice, and are associated with the cerebellum and motor cortex.
Retrieval Failure	Retrieval failure is an explanation for forgetting from long-term memory. It refers to difficulties in recall that are due to the absence of correct retrieval cues or triggers.
Retroactive Interference	Retroactive interference occurs when the learning of new information interferes with the recall of old information from long-term memory. For example, once you have learned a new mobile number, it is often very difficult to recall your old number.
Semantic Memory	Semantic memories include our knowledge of facts, concepts and meaning. For example, knowing that London is the capital of England is a semantic memory. Semantic memories are associated with a part of the brain known as the temporal lobe.
Sensory Register	The sensory register is the memory store where information enters through the senses. There are separate sensory registers for each sense: the iconic store codes visual information and the echoic store codes auditory information. Information only lasts for a brief moment unless attention is directed to that register, which then transfers the information to STM.

Short-Term Memory	Short-term memory is a temporary memory store that holds a limited amount of information for a short period. The multi-store model views STM as a unitary store, whereas the working memory model sees it as a number of components.
Visuo-spatial Sketchpad	The visuo-spatial sketchpad is the component of working memory that processes visual information (the visual cache) and spatial information (the inner scribe).
Working Memory Model	Baddeley & Hitch (1974) put forward the working memory model (WMM) to explain some of the research findings that could not be explained by the MSM. The WMM is a multi-component short-term memory system, which consists of a central executive, phonological loop and visuo-spatial sketchpad.

NOTES

Dotted lines for taking notes.

ATTACHMENT	Attachment is an emotional tie or bond between two people, usually a mother and a child. The relationship is reciprocal (shared), which means it is a two-way relationship. The attachment topic examines the formation of attachments, animal studies of attachment, the cross-cultural differences in attachment, and the influence of early attachment on later adult relationships.
Ainsworth's Strange Situation	Ainsworth's Strange Situation is a technique involving a controlled observation that is used to test a child's attachment patterns. It involves assessing the behaviour of an infant aged 12-18 months in a controlled setting through a two-way mirror. The child is assessed in terms of behaviour towards the mother, behaviour towards a stranger, separation anxiety and behaviour when reunited with the mother.
Animal Studies: Attachment	Animal studies of attachment have been carried out to help develop an understanding of the processes involved in human attachment. The two main examples are the research into imprinting by Konrad Lorenz and Harlow's research using rhesus monkeys.
Bowlby's Theory of Maternal Deprivation	John Bowlby's theory of maternal deprivation proposes that separation from the mother figure in early childhood has serious consequences for emotional and physical development.
Caregiver-Infant Interactions	Caregiver-infant interactions are the behaviours shown between a caregiver (typically a parent) and a child that help attachments to develop and be maintained.
Critical Period	Bowlby originally suggested that if a child does not form an attachment before the age of two and a half years (the critical period) then an attachment would never occur. He later revised his theory and proposed a sensitive period (where an attachment can still form, although it takes longer) of up to 5 years.
Cultural Variations in Attachment	Cultural variations in attachment are the differences in attachment patterns that exist between infants and their caregivers in different cultures. Attachment has been assessed in a range of cultures using the Strange Situation, and the proportions in each category (secure, insecure avoidant and insecure resistant) were examined in a meta-analysis conducted by van Ijzendoorn and Kroonenberg.
Explanations of Attachment: Bowlby's Theory	Bowlby's theory of attachment is an evolutionary explanation: attachment is seen as an innate mechanism that increases the survival chances of the infant and ensures that he/she remains close to the caregiver.
Explanations of Attachment: Learning Theory	The learning theory of attachment is a behaviourist explanation that suggests that attachments develop through classical and/or operant conditioning. It is sometimes referred to as a cupboard love theory, as the infant attaches to the caregiver who provides the food.
Harlow	Harry Harlow conducted research into attachment using rhesus monkeys. By removing the infant monkeys from their mothers and providing wire

	and/or cloth-covered surrogate mother, he was able to demonstrate the effects of maternal deprivation and the importance of contact comfort.
Influence of Early Attachment	According to Bowlby, early attachments influence the ability to form relationships later in adulthood. Bowlby suggested that the internal working model formed by a child becomes a template for future relationships and this predicts the continuity between early relationships with caregivers and later relationships in adulthood.
Insecure-Avoidant	Insecure-avoidant (also known as Type A) is an attachment pattern identified by Ainsworth using the Strange Situation. This attachment type is willing to explore but does not seek proximity to the caregiver. They show low separation anxiety and stranger anxiety and they do not make contact when reunited with the mother. 21% of children show this attachment pattern.
Insecure-Resistant	Insecure-resistant (also known as Type C) is an attachment pattern identified by Ainsworth using the Strange Situation. This attachment type is not willing to explore and seeks greater proximity to the caregiver than the other attachment types. They show both separation anxiety and stranger anxiety and they do seek contact when reunited with the mother, but then reject her. This is sometimes known as ambivalent attachment. 13% of children show this pattern.
Institutionalisation	Institutionalisation in the context of attachment refers to the effects of growing up in an orphanage or children's home. Children who are raised in these institutions often suffer from a lack of emotional care, which means that children are unable to form attachments.
Interactional Synchrony	Interactional synchrony is where an infant mirrors the actions of another person, for example, their facial expressions and body movements - moving their body in tune with the rhythm of their carer.
Internal Working Model	According to Bowlby, an internal working model is a mental representation of our relationship with our primary caregiver that becomes a template for future relationships and allows individuals to predict, control and manipulate their environment.
Lorenz	Konrad Lorenz was an ethologist who carried out research into imprinting, which is seen in ducklings and geese. With imprinting, offspring follow the first large moving object they see. Lorenz allowed goslings to imprint on him, and as a result they followed him around.
Multiple Attachments	Multiple attachments are attachments to two or more people. Research has shown that most babies are able to form multiple attachments once they have formed a specific attachment to their main caregiver.
Reciprocity	Reciprocity is where an infant responds to the actions of another person. With reciprocity the actions of one person (e.g. the mother) elicits a response from the other (e.g. the infant).

Romanian Orphan Studies	Romanian orphan studies have been conducted to investigate the effects of institutionalisation on children who spent time in poor quality Romanian orphanages in the 1990s. For example, Rutter et al. examined a group of 165 Romanian orphans adopted by British families and compared them to a control group of 52 British children adopted at about the same time.
Secure	Secure attachment (also known as Type B) is an attachment pattern identified by Ainsworth using the Strange Situation. This attachment type is willing to explore, but also seeks proximity to the caregiver. They show moderate separation anxiety and stranger anxiety. They both make and require contact when reunited with the mother. 65% of children show this attachment pattern.
Stages of Attachment	Stages of attachment have been identified by a number of researchers. For example, Schaffer and Emerson suggested that attachments develop in four stages: asocial stage or pre-attachment (first few weeks), indiscriminate attachment (approximately 6 weeks to 7 months), specific attachment or discriminate attachment (approximately 7-9 months) and multiple attachment (approximately 10 months onwards).
The Role of the Father	The role of the father was not considered in early attachment theory and research, which tended to focus on mother-infant attachments. More recently researchers have focused on the importance of the father in infant development and whether they have a distinct role. One key finding is that fathers have a different role in attachment, one that is more to do with play and stimulation, rather than caregiving.
Van Ijzendoorn & Kroonenberg (1988)	Van Ijzendoorn & Kroonenberg (1988) conducted a meta-analysis to look at cultural variations in attachment. They compared the rates of secure, insecure avoidant and insecure resistant attachments in 32 studies that had been conducted in 8 different countries and found that although secure attachment was the most common in all cultures, there were cultural variations in attachment. Germany had the highest rate of insecure avoidant and Japan and Israel had the highest rates of insecure resistant.

NOTES

APPROACHES IN PSYCHOLOGY	The Approaches in Psychology topic considers the different beliefs of psychologists who make up the different approaches. These include behavioural psychologists, cognitive psychologists, social learning theorists, biological psychologists, psychodynamic psychologists and humanistic psychologists. Each of these different approaches has its own view of human behaviour and how to conduct psychological research.
Bandura	Albert Bandura developed Social Learning Theory and conducted experiments into observational learning using the Bobo doll. While agreeing that humans could learn through classical and operant conditioning, he also argued that they could learn through observation and imitation.
Behaviourist Approach	The behaviourist approach attempts to explain behaviour in terms of learning. Behaviourists study changes in behaviour that are caused by a person's direct experience of their environment, using the principles of classical and operant conditioning. They are determined to be scientific and therefore refuse to discuss mental processes that might be involved in learning, because they are not observable and cannot be studied objectively.
Biological Approach	The biological approach attempts to explain behaviour in terms of different biological processes, including genes, hormones, neurotransmitters, etc. According to the biological approach, the brain and the mind are identical, and brain physiology and biochemical imbalances can affect behaviour. Biological psychologists also believe that behaviour can be inherited, as it is determined by genetic information.
Biological Structures	In relation to the biological approach in psychology, biological structures are organs (such as the brain) and systems (such as the nervous system) that influence human behaviour.
Classical Conditioning: Approaches in Psychology	Classical conditioning is a type of learning discovered by Ivan Pavlov, in which an existing involuntary reflex response is associated with a new stimulus. The new stimulus is presented at the same time as another stimulus that already produces the response. After the two have been presented together a number of times, the new stimulus produces the same response, even in the absence of the original stimulus.
Cognitive Approach	The cognitive approach uses experimental research methods to study internal mental processes such as attention, perception, memory and decision-making. Cognitive psychologists assume that the mind actively processes information from our senses (touch, taste etc.) and that between stimulus and response is a series of complex mental processes, which can be studied scientifically. They also assume that humans can be viewed as data processing systems and that the workings of a computer and the human mind are alike – they encode and store information, they have outputs, etc.
Comparison of Approaches	Comparison of approaches involves identifying similarities and differences between the different approaches in psychology. They can be compared in

	terms of criteria such as the different issues and debates (e.g. determinism, reductionism, nature versus nurture).
Congruence	Congruence is a term used by Carl Rogers (a humanistic psychologist) to describe a state in which a person's ideal self and actual experience are consistent or very similar. However, Rogers felt that it was rare for a complete state of congruence to exist and that all people experience a certain amount of incongruence.
Counselling Psychology	Counselling psychology focuses on providing therapeutic treatments to clients who experience a wide variety of symptoms, to help people of all ages deal with emotional, social, developmental, and other life concerns. Humanistic psychology has provided several approaches to counselling and therapy. For example, person-centered therapy was developed by Carl Rogers. This is non-directive and the client is encouraged to discover their own solutions within a warm, supportive and non-judgemental environment.
Defence Mechanisms	Defence mechanisms are unconscious strategies used by the ego to manage anxiety by redirecting psychic energy. Examples include repression (burying an unpleasant thought or desire in the unconscious) and displacement (where emotions are directed away from their source or target, towards other things).
Denial	Denial is a defence mechanism where a threatening thought is ignored or treated as if it were not true. For example, a wife might find evidence that her husband is cheating on her, but dismiss it and provide other reasons/explanation for her husband's behaviour.
Displacement	Displacement is a defense mechanism where emotions are directed away from their source or target, towards something else. For example, a boss gives his employee a hard time at work and the employee goes home and shouts at his wife.
Ego	According to Sigmund Freud's tripartite theory of personality, the ego is the part of personality that acts rationally, balancing the id and the superego. It develops at 2-4 years old and acts according to the 'reality principle'.
Emergence of Cognitive Neuroscience	Cognitive neuroscience is an academic field that studies the influence of brain structures on mental processes. The emergence of cognitive neuroscience occurred due to advances in brain imaging techniques such as fMRI and PET scans, which allow scientists to study the neurobiological basis of mental processes like memory.
Emergence of Psychology as a Science	Psychology emerged as a science at the beginning of the 20th Century when the behaviourists began to question the scientific status and value of introspection. Watson argued that rather than focus on subjective 'private' mental processes, psychology should study objective phenomena that could be observed and measured. This was the starting point for both the behaviourist approach and psychology emerging as a scientific discipline.

Evolution	Evolution refers to gradual changes in an inherited characteristic of a species over many generations. Darwin explained this in terms of 'survival of the fittest' (i.e. the best adapted to the local environment), meaning that any characteristic or behaviour that increases the chance that an individual will survive and reproduce, would be passed onto future generations.
Focus on the Self	Humanistic ideas about behaviour often focus on the self, which is an individual's consciousness in relation to their own identity. Carl Rogers believed that people could only fulfil their potential for personal growth if they had positive self-regard.
Free Will	Humanistic psychologists believe that humans have free will. Humans are able to make their own decisions and are not determined by biological or environmental factors.
Genes	Genes are the biochemical units of heredity that make up chromosomes. Genes are segments of DNA molecules that code physical features (e.g. eye colour) and psychological features (e.g. intelligence).
Genetic Basis of Behaviour	The genetic basis of behaviour refers to the idea that genes can be responsible for behaviour (e.g. attachment), as well as for physical characteristics (e.g. eye colour). The genotype refers to the inherited genetic materials, whereas the phenotype is the expression of a person's genotype, produced by interaction of the genotype and the environment.
Genotype	The genotype is a person's unique genetic make-up that is coded in their chromosomes and fixed at conception. However, the expression of a genotype is influenced by environmental factors and becomes a person's phenotype.
Humanistic Psychology	Humanistic psychology is an approach that emphasises the study of the whole person and sees people as being active in their own development. It is a person-centred approach, which views every individual as unique and regards personal growth and fulfilment in life as a basic human motive.
Id	According to Sigmund Freud's tripartite theory of personality, the id is the part of personality that exists from birth and drives us. According to Freud, the id acts according to the 'pleasure principle'.
Identification: SLT	Identification involves internalising and adopting behaviours shown by a role model, because they have a quality the individual would like to possess. For example, they might be attractive or of high status.
Imitation	Imitation is a term used by social learning theorists to describe the way in which an individual copies the behaviour of a role model.
Inferences	Inferences are conclusions reached on the basis of evidence and reasoning. Cognitive psychologists use computer models to draw conclusions (make inferences) regarding mental processes.
Internal Mental Processes	According to the Cognitive Approach, internal mental processes are operations that occur in the mind, but can be studied scientifically. They are

	also known as mediational processes because they occur between the stimulus and the response. Examples include memory, attention and perception.
Introspection	Introspection refers to observing and examining your own conscious thoughts and emotions. Wundt first used this method in the earliest psychology laboratory, set up in Germany in 1879,
Maslow's Hierarchy of Needs	Maslow's hierarchy of needs is a theory of human motivation. The needs are presented in a five-level sequence, where basic needs (e.g. for food and shelter) have to be met before higher psychological needs (e.g. for esteem and self-actualisation).
Modelling: SLT	Modelling is a process that occurs during Social Learning. Modelling can occur when an observer imitates a role model, or when a person produces a specific behaviour (acting as a model) that may then be imitated.
Neurochemistry	Neurochemistry in the context of the biological approach refers to the chemical processes occurring in the nervous system. For example, the actions of neurotransmitters within the brain.
Operant Conditioning	Operant conditioning is a type of learning investigated by Skinner, in which a new voluntary behaviour is associated with a consequence. Reinforcement (positive or negative) makes the behaviour more likely to occur, whereas punishment makes it less likely to occur.
Pavlov	Ivan Pavlov was a Russian biologist who first demonstrated classical conditioning. He was able to show that dogs could learn to salivate to a bell or a buzzer, if it was paired with food.
Phenotype	The phenotype is the expression of a person's genetic make-up (genotype) that can be influenced by the environment.
Psychodynamic Approach	The psychodynamic approach is often associated with Sigmund Freud, who theorised that our mental activity is mostly unconscious, and that this unconscious activity shapes our behaviour. He explained that traumatic childhood experiences can lead to psychological disorders, and developed 'talking cures' (psychoanalysis, more generally termed psychotherapy) to help release problematic repressed memories and relieve symptoms.
Psychosexual Stages	Freud believed that humans progress through 'psychosexual stages', during the development of the psyche. He named five stages, each with a particular characteristic behaviour: oral behaviour (0-18 months); anal – holding or discarding faeces (18 months – 3.5 years); phallic – fixation on genitals (3.5 – 6 years); latency – repressed sexual urges (6 years - puberty); and genital – awakened sexual urges (puberty onwards). Freud claimed that, during development, a child could become fixated on one of these stages, which could lead to specific psychological disorders.

Repression	Repression is a defence mechanism, which involves burying an unpleasant thought or desire in the unconscious (e.g. traumatic childhood experiences may be repressed and so forgotten).
Role of Conditions of Worth	Humanistic psychologists focus on the role of conditions of worth in explaining behaviour. People very often believe that they will only be loved and valued if they meet certain conditions of worth (e.g. being good, passing exams). These conditions of worth can create incongruity between the real self (how the person is) and the ideal self (how they think they should be). The person is motivated to close the gap between the real and ideal self but may do this in ways that make them unhappy. For example, they may choose a career or university course to make their parents happy.
Schemas	Schemas are cognitive frameworks that help us to organise and interpret information. They are developed through experience and can affect our cognitive processing.
Self-Actualisation	Self-actualisation is the final level or stage of Maslow's hierarchy of needs. Maslow found that individuals who attained this level share certain characteristics. These individuals are typically creative and have an accurate perception of themselves and the world around them.
Skinner	Skinner developed the theory of Operant Conditioning and first introduced the term 'reinforcement' to explain how the consequences of a particular behaviour can make future behaviours more or less likely.
Social Learning Theory: Approaches	The social learning theory is concerned with how people learn when they observe and imitate others. It can be seen as a bridge between the Behaviourist Approach and the Cognitive Approach as like the Behaviourist Approach, it emphasises the importance of environment and reinforcement in learning. However, like the Cognitive Approach, it acknowledges the important role that internal mental processes play in interpreting the environment and planning new actions.
Superego	According to Sigmund Freud's tripartite theory of personality, the superego is the part of personality concerned with keeping to moral norms. It develops around 4-5 years old and acts according to the 'morality principle', attempting to control a powerful id with feelings of guilt.
Mediational Processes	Mediational processes are mental (cognitive) factors that intervene in the learning process to determine whether a new behaviour is acquired or not. The four mediational processes proposed by Bandura are attention (whether we notice the behaviour); retention (whether we remember the behaviour); reproduction (whether we are able to perform the behaviour); and motivation (whether the perceived rewards outweigh the perceived costs).
Theoretical & Computer Models	Theoretical and computer models are used by cognitive psychologists to study mental processes. Theoretical models are diagrammatic representations of the steps involved in internal mental processes, e.g. the information-processing model. Computer models are software simulations

	of internal mental processes that are created in collaboration with computer scientists.
Reinforcement: SLT	According to Social Learning Theory, reinforcement can be direct or indirect. Direct reinforcement occurs when you perform a certain behaviour and are rewarded (positive reinforcement), or it leads to the removal or avoidance of something unpleasant (negative reinforcement). Indirect reinforcement occurs when you observe someone else perform a certain behaviour and receive either positive or negative reinforcement.
Unconscious	The unconscious mind consists of mental processes that are inaccessible to consciousness but still influence us. Freud believed that the unconscious mind was the primary source of human behaviour and stated that like an iceberg, the most important part of the mind is the part you cannot see (beneath the surface of the water/consciousness).
Vicarious Reinforcement	Vicarious reinforcement occurs when learners observe role models receiving either positive or negative reinforcement. This means that because the learner has observed the consequences of the behaviour they are more (or less) likely to imitate it, depending on what those consequences were.
Wundt	William Wundt opened the first psychology laboratory in Germany in 1879 and used it to study the human mind, using a technique known as introspection.

NOTES

PSYCHO-PATHOLOGY	Psychopathology is the scientific study of mental/psychological disorders. The Psychopathology Topic considers different explanations for various psychological disorders (e.g. depression, phobias and obsessive compulsive disorder), including biological, psychological and social explanations.
Beck's Negative Triad	According to Beck, sufferers of depression experience cognitive distortions. Beck said that people with depression draw irrational conclusions about themselves (nobody loves me), their world (the world is an unfair place) and their future (I will always be a failure). These three distortions form Beck's negative triad.
Behavioural Explanations: Phobias	Behavioural explanations view phobias as a learned behaviour, acquired through classical conditioning and maintained through operant conditioning.
Behavioural Treatments: Phobias	Behavioural treatments are based on the assumption that if a behaviour (e.g. a phobia) is learned, then it can also be unlearned. Behavioural treatments, such as systematic desensitisation and flooding, are based on classical conditioning and the concept of extinction.
Biological Explanations: OCD	Biological explanations for OCD suggest that an individual's genes and/or brain functioning make them vulnerable to developing this disorder.
Biological Treatments: OCD	Biological treatments for OCD are based on the assumption that drugs can be used to rebalance neurochemical imbalances in sufferers. For example, as low levels of serotonin are associated with OCD, SSRIs have been used to try to address this imbalance.
Classical Conditioning: Phobias	The process of classical conditioning can explain how we acquire phobias. For example, we learn to associate something we do not fear, such as a dog (neutral stimulus), with something that triggers a fear response, such as being bitten (unconditioned stimulus). After an association has formed, the dog (now a conditioned stimulus) causes a response of fear (conditioned response) and consequently, we develop a phobia.
Clinical Characteristics: Depression	The clinical characteristics of depression include behavioural, emotional and cognitive symptoms. Behavioural characteristics include loss of energy, disturbances with sleep and changes in appetite. Emotional characteristics include depressed mood, feelings of sadness, and feelings of worthlessness. Cognitive characteristics include a diminished ability to concentrate and difficulties with attention. In addition, cognitive characteristics also include focusing on the negative aspects of the situation, while ignoring the positives and in some cases thoughts of self-harm, death or suicide.
Clinical Characteristics: OCD	The clinical characteristics of OCD include behavioural, emotional and cognitive symptoms. Behavioural characteristics include compulsions (e.g. excessive hand washing). Emotional characteristics include anxiety and distress caused by obsessions, which consist of persistent and/or forbidden thoughts. Cognitive characteristics include obsessive thoughts (obsessions), which are the main cognitive feature of OCD.

	Sufferers of OCD know that their obsessions and compulsions are irrational, and experience selective attention directed towards the anxiety-generating stimuli.
Clinical Characteristics: Phobias	The clinical characteristics of phobias include behavioural, emotional and cognitive symptoms. Behavioural characteristics of phobias include avoidance. However, if a person is unable to avoid their phobia, this causes panic, which may result in crying, screaming or running away. The key emotional characteristic of phobias is excessive and unreasonable fear and anxiety. Cognitive characteristics include selective attention and irrational beliefs. The person will find it difficult to direct their attention away from the feared object or situation, and their belief about the object or situation is irrational, e.g. all spiders are dangerous/deadly.
Cognitive Behavioural Therapy: Depression	Cognitive Behavioural Therapy is based on both cognitive and behavioural techniques. There are two different strands of CBT, based on Beck's and Ellis's theories. All CBT starts with an initial assessment, in which the patient and therapist identify the patient's problems. Thereafter, the patient and therapist agree on a set of goals, and plan of action to achieve these goals. Both forms of CBT then aim to identify the negative and irrational thoughts; however their approaches are slightly different. Beck's cognitive therapy will help the patient to identify negative thoughts in relation to themselves, their world and their future, using Beck's negative triad. Ellis's Rational-Emotive Behaviour Therapy (REBT) will involve techniques such as empirical argument and logical argument. The patient and therapist will then work together to challenge these irrational thoughts, by discussing evidence for and against them. The patient will be encouraged to test the validity of their negative thoughts and may be set homework, to challenge and test their negative thoughts.
Cognitive Explanations: Depression	Cognitive explanations for depression suggest that faulty thinking/thought processes make a person vulnerable to depression. People with depression often show cognitive distortions, faulty information processing and negative thinking. Cognitive psychologists, such as Beck and Ellis, believe that these thinking patterns are the cause rather than symptoms of depression.
Cognitive Treatments: Depression	Cognitive treatments for depression are based on the assumption that faulty thinking/thought processes make a person vulnerable to depression. Therefore cognitive treatments, such as CBT and REBT, aim to challenge irrational thoughts and replace them with more rational ones.
Definitions of Abnormality	Definitions of abnormality are different methods of defining and diagnosing psychological illnesses. Examples include statistical infrequency, deviation from social norms, failure to function adequately and deviation from ideal mental health.
Deviation from Ideal Mental Health	Deviation from ideal mental health is a definition of abnormality, which suggests that abnormal behaviour should be defined by the absence of particular (ideal) characteristics. Jahoda proposed six principles of ideal

	mental health, including having a positive view of yourself and being resistant to stress. Therefore, if an individual does not demonstrate Jahoda's criteria, they would be classified as abnormal.
Deviation from Social Norms	Deviation from social norms is a definition of abnormality where a behaviour is seen as abnormal if it violates unwritten rules (social norms) about what is acceptable in a particular society.
Drug Therapies: OCD	Drug therapies are based on the assumption that drugs can cure a neurochemical imbalance, which is seen as the cause of OCD. Two types of drug are used for the treatment of OCD: antidepressants and anti-anxiety drugs. SSRIs (antidepressants) increase the level of serotonin in the synapse and result in more serotonin being received by the receiving cell, thus reducing the symptoms of OCD. Benzodiazepines (BZs) are a range of anti-anxiety drugs, which include trade names like Valium and Diazepam. BZs work by enhancing the action of the neurotransmitter GABA. GABA tells neurons in the brain to 'slow down' and 'stop firing' which means that BZs have a general quietening influence on the brain and consequently reduce anxiety experienced as a result of the obsessive thoughts.
Ellis's ABC Model	Ellis proposed the A-B-C three stage model, to explain how irrational thoughts could lead to depression. The A stands for an activating event (e.g. you pass a friend in the corridor at school, and he/she ignores you, despite the fact you said 'hello'). The B stands for beliefs, which can be either rational or irrational (e.g. an irrational interpretation of the event might be that you think your friend dislikes you and never wants to talk to you again). The C stands for consequences, and according to Ellis, irrational beliefs lead to unhealthy emotional outcomes, including depression (e.g. I will ignore my friend and delete their mobile number, as they clearly don't want to talk to me).
Failure to Function Adequately	Failure to function adequately is a definition of abnormality where a person is considered abnormal if they are unable to cope with the demands of everyday life and live independently in society.
Fear Hierarchy	A fear hierarchy is a process used in systematic desensitization (a behavioural treatment for phobias). The client and therapist work together to develop the hierarchy, where they rank a list of situations relevant to the phobic stimulus from least to most terrifying. After that, the individual is taught relaxation techniques and is then exposed to each situation in the hierarchy while trying to remain relaxed.
Flooding	Flooding is a behavioural therapy of phobias that is based on the idea of extinction. Rather than exposing a person to their phobic stimulus gradually, a person is exposed to the most frightening situation immediately. For example, a person with a phobia of dogs would be placed in a room with a dog and asked to stroke the dog straight away. With flooding, a person is unable to avoid (negatively reinforce) their phobia and through continuous exposure, anxiety levels decrease (extinguish).

Genetic Explanations: OCD	Genetic explanations for OCD suggest that individuals inherit specific genes that cause OCD. Two genes that have been linked to OCD are the COMT gene and SERT gene. The SERT gene (also known as the 5-HTT gene) affects the transport of serotonin and can cause lower levels of serotonin, which is also associated with OCD. COMT is responsible for clearing dopamine from synapses and low activity of the COMT gene is also associated with OCD. It is also believed that OCD is a polygenic condition, which means that several genes are involved.
Irrational Thoughts	According to Ellis, irrational thoughts are patterns of thinking that are illogical, distort reality and prevent you from reaching your goals. They also lead to unhealthy emotions and self-defeating behaviour. Ellis used the ABC model to explain how irrational thoughts affect our behaviour and emotional state, and devised REBT, where the main technique is to identify and dispute such thinking.
Neural Explanations: OCD	Neural explanations for OCD focus on neurotransmitters and brain structures. The neurotransmitter serotonin is believed to play a role in OCD. Lower levels of serotonin (possibly caused by the SERT gene) are associated with OCD. In terms of brain structures, the basal ganglia is involved in multiple processes, including the coordination of movement. Patients who suffer head injuries in this region often develop OCD-like symptoms, following their recovery.
Operant Conditioning: Phobias	Although classical conditioning can explain why we develop a phobia, it struggles to explain why our phobias do not decay (extinguish) over time. According to operant conditioning, phobias can be negatively reinforced. This is where a behaviour is strengthened, because an unpleasant consequence is removed. For example, if a person with a phobia of dogs sees a dog whilst out walking, they might try to avoid the dog by crossing over the road. This avoidance reduces the person's feelings of anxiety and negatively reinforces their behaviour, making the person more likely to repeat this behaviour (avoidance) in the future.
Relaxation	Relaxation is one of the processes involved in systematic desensitization. The client and therapist work together to develop a fear hierarchy and then the client is taught relaxation techniques, such as breathing techniques. The final component of systematic desensitisation involves exposing the patient to their phobic situation (starting at the bottom of the hierarchy and moving up) while remaining relaxed. The idea is that the relaxation should overtake the fear (reciprocal inhibition).
Statistical Infrequency	Statistical Infrequency is a definition of abnormality. According to this definition, a behaviour is seen as abnormal if it is statistically uncommon, or not seen very often in society.

Systematic Desensitisation	Systematic desensitisation uses counter-conditioning to unlearn a maladaptive response to a situation/object, by eliciting another response. There are three critical components to systematic desensitisation: 1) Fear hierarchy; 2) Relaxation training; 3) Reciprocal inhibition.
Two-Process Model	According to the two-process model, phobias are initiated through classical conditioning (learning through association) and maintained through operant conditioning (negative reinforcement).

NOTES

A series of horizontal dotted lines for taking notes.

RESEARCH METHODS	Research Methods are the different tools/methods psychologists used to conduct psychological research, analyse data and draw conclusions.
Abstract	The abstract is the first section in a psychological report or journal. It includes a summary of the aims, hypothesis, method, results and conclusions, and thus provides an overview of the entire report.
Aim	The aim of a study is a general statement that explains the purpose of the research.
Bar Chart	A bar chart is used to show frequency data for discrete (separate) variables. For example, bar charts are used to plot mean scores for conditions A & B separately.
Behavioural Categories	When conducting structured observations, psychologists have to decide which specific behaviours should be examined. They need to operationalise the behaviour through the use of behavioural categories. This involves breaking the target behaviour (e.g. aggression) into components that can be observed and measured (e.g. hitting, kicking).
Bias	Bias means to influence, typically in an unfair direction. In the context of sampling, it means that certain groups may be under- or over-represented in the sample. This then limits the extent to which the findings of the study can be generalised.
BPS Code of Ethics	The BPS Code of Ethics is a document produced by the British Psychological Society, which details the general principles that apply to the use of human participants in all research contexts. It focuses on four major principles: respect, competence, responsibility and integrity.
Case Studies	Case studies are very detailed investigations of an individual or small group of people, usually regarding an unusual phenomenon or biographical event of interest to a research field. Due to a small sample, researchers using the case study method can conduct an in-depth analysis of the individual/group under examination.
Chi-Squared	The chi-squared test is a non-parametric statistical test of difference or association that allows researchers to see if their results are significant. It is used for studies that have an independent groups design, where the data collected is nominal (in categories).
Closed Questions	Closed questions, in a questionnaire or interview, restrict the participant to a predetermined set of responses and generate quantitative data.
Coding: Content Analysis	Coding is when the researcher places qualitative data into categories. For example, if the researcher wanted to examine how males and females are portrayed in TV advertisements, they could create a list of categories (e.g. product user, product voice-over) and then count how many occurrences there were, for each gender in each category.

Concurrent Validity	Assessing concurrent validity involves comparing a new test with an existing test (of the same nature) to see if they produce similar results. If both tests produce similar results, then the new test is said to have concurrent validity.
Content Analysis	Content analysis is a method used to analyse qualitative data (non-numerical data). In its most common form, it is a technique that allows a researcher to take qualitative data and to transform it into quantitative data (numerical data). The technique can be used for data in many different formats, for example, interview transcripts, film, and audio recordings.
Correlation Co-Efficient	Psychologists use a statistic called a correlation co-efficient to measure the strength of a correlation (the relationship between two or more variables). A correlation coefficient can range between -1.0 (perfect negative) and +1.0 (perfect positive).
Correlational Study	A correlational study is a non-experimental method used to measure how strong the relationship is between two or more variables. There are two types of correlation: positive correlation (as one variable increases/decreases, so the other variable increases/decreases); and negative correlation (as one variable increases, so the other variable decreases). Psychologists use a statistic called a correlation coefficient to measure this strength.
Counterbalancing	Counterbalancing is a technique used to deal with order effects when using a repeated measures design. With counterbalancing, the participant sample is divided in half, with one half completing the two conditions in one order and the other half completing the conditions in the reverse order. E.g., the first 10 participants would complete condition A followed by condition B, and the remaining 10 participants would complete condition B and then A. Any order effects should be balanced out by this technique.
Critical Values	Critical values are a numerical value which researchers use to determine whether or not their calculated value (from a statistical test) is significant. Some tests are significant when the observed (calculated) value is equal to or greater than the critical value, and for some tests the observed value needs to be less than or equal to the critical value.
Demand Characteristics	Demand characteristics occur when the participants try to make sense of the research and act accordingly to support the aim of the research. Demand characteristics are a issue, as the participants may behave in a way to support the hypothesis, making the results less valid. Conversely, the participant may deliberately try to disrupt the results, a phenomenon known as the 'screw-you' effect.
Dependent Variable	In an experiment, the dependent variable (DV) is the variable that the researcher measures. It is the variable that is affected by the manipulation of the independent variable (IV).

Descriptive Statistics	Descriptive statistics analyse data to help describe, show or summarise it in a meaningful way. Examples are measures of central tendency and measures of dispersion.
Directional Hypothesis	A directional hypothesis is a one-tailed hypothesis that states the direction of the difference or relationship (e.g. boys are more helpful than girls).
Discussion	The discussion is the section in a report of an investigation where the researcher interprets the results of the study; makes criticism of the methodology used; considers the implications of the results for future research, and suggests real-world applications.
Ecological Validity	Ecological validity is a type of external validity that refers to the extent to which the findings can be generalized to a real-life setting.
Empirical Method	An empirical method involves the use of objective, quantitative observation in a systematically controlled, replicable situation, in order to test or refine a theory.
Event Sampling	Event sampling is used to sample behaviour in observational research. It is where an observer records the number of times a certain behaviour occurs.
Experimental Design	Experimental design describes the way participants are allocated to experimental groups. Types of experimental design include repeated measures, independent groups, and matched pairs designs.
Extraneous Variable	Extraneous variable (EV) is a general term for any variable, other than the IV, that might affect the results (the DV). Where EVs are important enough to cause a change in the DV, they become confounding variables.
Face Validity	Face validity is a simple way of assessing whether or not something measures what it claims to measure, which is concerned with its face value. e.g. does an IQ test look like it tests intelligence? This is often assessed by consulting specialists within that particular area.
Falsifiability	Falsifiability is an important feature of science. It is the principle that a proposition or theory could only be considered scientific if in principle it was possible to establish it as false. One of the criticisms of some branches of psychology, e.g. Freud's theory, is that they lack falsifiability.
Field Experiment	Field experiments are carried out in natural conditions, in which the researcher manipulates the independent variable (IV) to measure the effect on the dependent variable (DV).
Generalisation	Generalisation is the application of the results from a study, to the wider target population. It is based on the assumption that the findings from the original sample will be the same for everyone else in the target population.
Histogram	Histograms are a type of graph used for continuous data (e.g. age). There should be no space between the bars, because the data is continuous (e.g. 1-9, 10-19, 20-29, etc.)

Hypothesis	A hypothesis is a testable prediction about the variables in a study. The hypothesis should always contain the independent variable (IV) and the dependent variable (DV). A hypothesis can be directional (one-tailed) or non-directional (two-tailed).
Hypothesis Testing	Hypothesis testing is an important feature of science, as this is how theories are developed and modified. A good theory should generate testable predictions (hypotheses), and if research fails to support the hypotheses, then this suggests that the theory needs to be modified in some way.
Independent Groups	Independent groups design is an experimental design where different participants are used in each condition of the experiment. Random allocation should be used to decide to which condition each participant should be allocated, as this ensures that each participant has an equal chance of being assigned to one group or another.
Independent Variable	In an experiment, the independent variable (IV) is the variable that the researcher manipulates and is assumed to have a direct effect on the dependent variable (DV).
Inter-Observer Reliability	It is very important to establish inter-observer reliability when conducting observational research. It refers to the extent to which two or more observers are observing and recording behaviour in the same way.
Interval	Interval level data is data measured in fixed units with equal distance between points on the scale. For example, temperature measured in centigrade.
Interviews	Interviews are a type of self-report technique that involve an interviewer asking questions (generally on a one-to-one basis) and recording responses. There are different types of interview: structured (where the interviewer has a set list of questions with which to lead the conversation and a framework which will be rigidly adhered to); semi-structured (where the interviewer may have a list of topics or questions, but has extra flexibility to develop the conversation further, should participant responses lead to deeper/more detailed discussion); and unstructured (which are more like a conversation with no set questions).
Introduction	The introduction is the section in a report/journal where the researcher reviews previous research (theories and studies) to provide background information and a rationale for the current research. It should be structured like a funnel (moving from the general to the specific) so that it leads logically to the aims and hypotheses of the current study.
Investigator Effects	Investigator effects are where a researcher (consciously or unconsciously) acts in a way to support their prediction. This can be a particular problem when observing events that can be interpreted in more than one way. (For example, one researcher might interpret children fighting as an act of violence, while another might interpret this as rough and tumble play).

Laboratory Experiment	Laboratory experiments are conducted under controlled conditions, in which the researcher manipulates the independent variable (IV) to measure the effect on the dependent variable (DV).
Levels of Measurement	In psychology, there are different ways that variables can be measured and psychologists typically group measurements into one of four scales: nominal, ordinal, interval or ratio. The simplest level of measurement is nominal data (frequency count data), followed by ordinal (scores in rank order), then interval (a continuous scale with no absolute zero) and finally, ratio (a continuous scale with an absolute zero).
Mann-Whitney	The Mann-Whitney test is a non-parametric statistical test of difference that allows psychologists to determine if their results are significant. It is used in studies that have an independent groups design, where the data collected is at least ordinal.
Matched Pairs	Matched pairs design is an experimental design where pairs of participants are matched in terms of key variables, such as age and IQ. One member of each pair is then placed into the experimental group and the other member into the control group.
Mean	The mean is a measure of central tendency that is calculated by adding all of the scores in a data set and dividing by the total number of scores. It is the most sensitive measure of central tendency as it includes all of the scores in its calculation. However, it is easily distorted by extreme values.
Measures of Central Tendency	Measures of central tendency are descriptive statistics that depict the overall 'central' trend of a set of data. There are three key measures: mean, median and mode.
Measures of Dispersion	Measures of dispersion describe the spread of data around a central value (mean, median or mode). They tell us how much variability there is in the data. There are two measures of dispersion: range (where you subtract the lowest score from the highest score) and standard deviation (SD) – which calculates the spread of scores around the mean.
Median	The median is a measure of central tendency that is calculated by finding the middle score when the data set is placed in numerical order. If there is an even number of data, then the median is the sum of the two middle numbers, divided by two. The median is not affected by extreme scores but is less sensitive than the mean, as not all scores are included in the calculation.
Meta-Analysis	A meta-analysis is where researchers combine the findings from multiple studies to draw an overall conclusion.
Method	The method is the section of a report/journal that contains a detailed description of the methodology. This needs to be detailed enough to allow someone else to replicate the study, and includes details of the design, participants, apparatus/materials, procedure and ethical considerations.

Mode	The mode is a measure of central tendency which is calculated by reporting the most frequently occurring number in a data set. While it is easy to calculate, it is of little use where the data set includes many different values of the same frequency, i.e. there are many modes.
Natural Experiment	Natural experiments are carried out in natural conditions, however the research is unable to manipulate the IV and therefore examines the effect of a naturally occurring variable on the dependent variable (DV).
Negative Correlation	A negative correlation occurs when two variables are related and as one variable increases the other decreases. For example, you might expect to find a negative correlation between the school performance of high school students and the amount of time they are absent from school.
Nominal	Nominal level data is frequency or count data that consists of the number of participants falling into categories. (e.g. 7 people passed their driving test the first time and 6 people didn't.)
Non-Directional Hypothesis	A non-directional hypothesis is a two-tailed hypothesis that does not predict the direction of the difference or relationship (e.g. girls and boys are different in terms of helpfulness).
Normal Distribution	A normal distribution is an arrangement of data that is symmetrical and forms a bell-shaped pattern where the mean, median and/or mode falls in the centre at the highest peak.
Objectivity	Objectivity is a feature of science, and if something is objective it is not affected by the personal feelings and experiences of the researcher. The researcher should remain value-free and unbiased when conducting their investigations.
Observational Study	An observational study is one that involves observing (watching) actual behaviours, which are subsequently scored. There are many types of observations, such as naturalistic and controlled observations; covert and overt observations; participant and non-participant and structured and unstructured observations.
Open Questions	Open questions are used in questionnaires and interviews. They do not have fixed responses, and so they allow the participant to answer however he/she wishes. They generate qualitative data.
Operationalisation	Operationalisation is the term used to describe how a variable is clearly defined by the researcher. The term operationalisation can be applied to independent variables (IV), dependent variables (DV) or co-variables (in a correlational design).
Opportunity Sampling	Opportunity sampling is a sampling technique used to select participants from a target group to take part in a research study. It consists of the researcher selecting anyone who is available and willing to take part in the study.

Ordinal	Ordinal level data is data that is presented in rank order (e.g. places in a beauty contest, or ratings for attractiveness).
Paradigm	A paradigm consists of the basic assumptions, ways of thinking, and methods of study that are commonly accepted by members of a discipline or group.
Paradigm Shift	A paradigm shift, as identified Thomas Kuhn (1962), is an important change in the basic concepts and experimental practices of a scientific discipline. It is a change from one way of thinking to another and is also referred to as 'scientific revolution'. Examples of paradigm shifts are the movement of scientific theory from the Ptolemaic system (the earth at the centre of the universe) to the Copernican system (the sun at the centre of the universe), and the movement from Newtonian physics to the theory of relativity and to quantum physics.
Pearson's r	The Pearson's r test is a parametric statistical test of correlation that allows a psychologist to determine significance. It is used in correlational research, where the data meets the requirements for a parametric test (level of measurement is interval or better, data is drawn from a population that has a normal distribution, and the variances of the two samples is not significantly different).
Peer Review	Peer review is a process that takes place before a study is published to check the quality and validity of the research, and to ensure that the research contributes to its field. The process is carried out by experts in that particular field of psychology.
Percentages	Percentages are a way of summarising nominal level data (frequencies in categories). A percentage is a portion of a whole expressed as a number between 0 and 100 (instead of as a fraction).
Pilot Studies	Pilot studies are small-scale prototypes of investigations to find out if there are any problems with the experimental design; instructions for participants; and measuring instruments (including the behavioural categories in observational research and questions when using questionnaires). After conducting a pilot study, the researcher is able to make any necessary modifications before the actual study is carried out.
Positive Correlation	A positive correlation occurs when two variables are related and as one variable increases/decreases the other also increases/decreases (i.e. they both move in the same direction). For example, you might expect to find a positive correlation between height and shoe size.
Primary Data	Primary data refers to data that has been collected directly by the researcher, solely for the purpose of their investigation.
Probability	Probability and significance are very important in relation to statistical testing. Probability refers to the likelihood of an event occurring. It can be expressed as a number (0.5) or a percentage (50%). Statistical tests allow psychologists to work out the probability that their results could have

	occurred by chance, and in general psychologists use a probability level of 0.05. This means that there is a 5% probability that the results occurred by chance.
Psychology and the Economy	The implications of psychological research for the economy are concerned with how the knowledge and understanding gained from psychological research (theories and studies) may contribute towards our economic prosperity. For example, if more effective treatments can be developed for psychological health problems then this means that people will be able to return to work and this reduces the burden on the employers, NHS and tax payer.
Qualitative Data	Qualitative data is non-numerical language-based data collected through interviews, open questions and content analysis. It allows researchers to develop insights into the nature of subjective experiences, opinions and feelings.
Quantitative Data	Quantitative data is numerical data that can be statistically analysed. Experiments, observations, correlations and closed/rating scale questions from questionnaires all produce quantitative data.
Quasi Experiment	Quasi-experiments contain a naturally occurring IV. However, in a quasi-experiment the naturally occurring IV is a difference between people that already exists (i.e. gender, age). The researcher examines the effect of this variable on the dependent variable (DV).
Questionnaire	Questionnaires are a type of 'self-report' technique, where participants fill in the answers for themselves, providing information on their thoughts, feelings and behaviours.
Random Allocation	Random allocation of participants to experimental and control conditions is an extremely important process in research. Random allocation greatly decreases systematic error, so individual differences in responses or ability are far less likely to affect the results.
Random Sampling	Random sampling is a sampling technique where every member of the target population has an equal chance of being selected. This involves identifying everyone in the target population and then selecting the number of participants you need, in a way that gives everyone an equal chance of being selected (e.g. pulling names from a hat).
Randomisation	Randomisation is used in the presentation of trials in an experiment to avoid any systematic errors that might occur as a result of the order in which the trials take place.
Range	The range is a measure of dispersion. It is the distance between the lowest and the highest value in a set of scores.
Referencing	Referencing is an important aspect of psychological reports/journals. The reference section of a journal includes full details of any sources, such as journal articles or books, that are used when writing a report. There is a set

	format depending on whether the information comes from a book, journal article etc. and there are different conventions for references (e.g. Harvard, APA, etc.)
Related t-test	The related t-test is a parametric statistical test of difference that allows psychologists to assess significance. It is used in studies with a repeated measures or a matched pairs design, where the data meets the requirements for a parametric test (level of measurement is interval or better, data is drawn from a population that has a normal distribution, the variances of the two samples are not significantly different).
Reliability	Reliability refers to the consistency of research study or measuring test. Reliability can be divided into two categories: internal and external reliability. Internal reliability describes the internal consistency of a measure, such as whether the different questions (known as 'items') in a questionnaire are all measuring the same construct. External reliability assesses consistency of a measure from one use to another. For example, if a participant took an IQ test one year, and then took the same test a year later and gained a very similar score, this would show external reliability.
Repeated Measures	Repeated measures design is an experimental design where the same participants take part in each condition of the experiment. This means that each condition of the experiment uses the same group of participants.
Replicability	Replicability is an important feature of science. It means that a study should produce the same results if repeated exactly, either by the same researcher or by another.
Results	The results are a section in a report of an investigation where the researcher includes details about what they found in their investigation. It includes descriptive statistics (e.g. summary tables, graphs, measures of central tendency and dispersion) and inferential statistics (e.g. results of statistical tests, including calculated values and significance levels). If qualitative research has been conducted, the results section would involve description of the categories and themes, along with examples.
Sampling	Sampling involves selecting participants from a target group/population. The target group/population is the desired population subgroup to be studied, and to which the research findings will be generalised. A target population is usually too large to study in its entirety, so sampling techniques are used to choose a representative sample from the target group.
Scattergram	A scattergraph is a graphical display that shows the correlation or relationship between two sets of data (or co-variables) by plotting dots to represent each pair of scores. A scattergraph indicates the strength and direction of the correlation between the co-variables.
Secondary Data	Secondary data is information that someone else has collected e.g. the work of other psychologists that has been published in journals or government statistics. They are sometimes used by other researchers, as

	they are often cheaper and more convenient than gathering one's own primary data.
Semi-Structured Interview	Semi-structured interviews contain mostly prepared questions that can be supplemented with additional questions. The interviewer can deviate from the original questions and therefore this type of interview typically produces rich qualitative data.
Sign Test	The sign test is a non-parametric statistical test of difference that allows a researcher to determine the significance of their investigation. It is used in studies that have used a repeated measures design, where the data collected is nominal.
Significance	<p>If the statistical tests show that there is a less than a 5%, 2.5%, 1% (whatever level has been chosen) probability that the results were obtained by chance, then these results are said to be significant, and show a significant difference, or correlation, depending on what was being tested. The null hypothesis is then rejected.</p> <p>If the statistical tests show that there is more than this probability that the results were obtained by chance, then they are said to be not significant, and there is no significant difference or correlation. In this case the null hypothesis is rejected.</p>
Skewed Distribution	A skewed distribution is one where frequency data is not spread evenly (i.e. normally distributed); the data is clustered at one end. Data that is positively skewed has a long tail that extends to the right. Data that is negatively skewed have a long tail that extends to the left. As a general rule, when data is skewed to the right (positively skewed), the mean will be greater than the median and when data is skewed to the left (negatively skewed), the median will typically be greater than the mean.
Spearman's rho	Spearman's rho is a non-parametric statistical test of correlation that allows a researcher to determine the significance of their investigation. It is used in studies that are looking for a relationship, where the data is at least ordinal.
Standard Deviation	Standard deviation is a measure of dispersion that shows the spread of scores around the mean. The greater the standard deviation the great the spread of scores around the mean.
Standardisation	Standardisation refers to the process in which procedures used in research are kept the same. Great attention is taken to keep all elements of a procedure identical. Under these circumstances, changes in data can be attributed to the IV. In addition, it is far more likely that results will be successfully replicated on subsequent occasions.
Statistical Tables	Statistical tables provide information to help psychologists make decisions in relation to the significance of their results. Statistical tables contain 'critical values' that are used when assessing significance.

Stratified Sampling	Stratified sampling is a sampling technique where the researcher divides or 'stratifies' the target group into sections, each representing a key group (or characteristic) that should be present in the final sample. For example, if a class has 20 students, 18 male and 2 female, and a researcher wanted a sample of 10, the sample would consist of 9 randomly chosen males and 1 randomly chosen female, to represent this population.
Structured Interview	Structured interviews are a type of interview where the questions are decided in advance and asked in the same order for each interviewee.
Systematic Sampling	Systematic sampling is a sampling technique that uses a predetermined system to select the participants from a target group. For example, every fourth person in a list could be used in the sample. It differs from random sampling in that it does not give an equal chance of selection to each individual in the target group.
Tables	Tables are a way of presenting quantitative data in a summary format. When tables appear in the results section of a report they normally do not show raw scores, but instead show descriptive statistics (e.g. measures of central tendency, measures of dispersion).
Temporal Validity	Temporal validity is a type of external validity that refers to the validity of the findings in relation to the progression of time. For example, do the findings of conformity research (e.g. Asch, 1951) still apply today?
Test-Retest	Test-retest is a way of assessing the external reliability of a research tool. It involves presenting the same participants with the same test or questionnaire on two separate occasions, and seeing whether there is a positive correlation between the two.
Thematic Analysis	Thematic analysis is a method for analysing qualitative data that involves identifying and reporting patterns within the material to be analysed. The material to be analysed might be a diary, TV advertisements, or interview transcripts.
Theory Construction	Theory construction is an important feature of any science. In psychology, a theory is a proposed explanation for the causes of behaviour. To be scientific, a theory needs to be a logically organized set of propositions that defines events, describes relationships among events, and explains and predicts the occurrence of events. A scientific theory should also guide research by offering testable hypotheses that can be rigorously tested.
Time Sampling	Time sampling is a method of sampling behaviour in an observation study and is where an observer records behaviour at prescribed intervals. For example, every 10 seconds.
Type I Error	A type I error is a false positive. It is where you accept the alternative/experimental hypothesis when it is false (e.g. you believe the building is on fire, and run outside, but it is not).

Type II Error	A type II error is a false negative. It is where you accept the null hypothesis when it is false (e.g. you think the building is not on fire, and stay inside, but it is burning).
Unrelated t-test	The unrelated t-test is a parametric statistical test of difference that allows a researcher to determine the significance of their findings. It is used in studies that have an independent groups design, where the data meets the requirements for a parametric test (level of measurement is interval or better, data is drawn from a population that has a normal distribution, the variances of the two samples are not significantly different).
Unstructured Interview	Unstructured interviews are more like a conversation and the interviewer only facilitates the discussion. Very little is decided in advance (only the topic and some of the questions) and therefore this type of interview typically produces rich qualitative data.
Validity	Validity refers to whether something is true or legitimate. Internal validity is a measure of whether results obtained are solely affected by changes in the variable being manipulated (i.e. by the independent variable) in a cause-and-effect relationship. External validity is a measure of whether data can be generalised to other situations outside of the research environment.
Volunteer Sampling	Volunteer sampling is a sampling technique where participants self-select to become part of a study because they volunteer when asked, or respond to an advert.
Wilcoxon	The Wilcoxon test is a non-parametric statistical test of difference that allows a researcher to determine the significance of their findings. It is used in studies that have a repeated measures or matched pairs design, where the data collected is at least ordinal.
Zero Correlation	Zero correlation means that there is no relationship between the co-variables in a correlation study.

NOTES

BIOPSYCHOLOGY	Biopsychology is a branch of psychology concerned with physiology and biology influence behaviour, thoughts and feeling. The biopsychology topic examines: the nervous system; endocrine system; fight-or-flight; localisation of function; plasticity and functional recovery; ways of studying the brain; and biological rhythms.
Adrenaline	The adrenal medulla is responsible for releasing adrenaline and noradrenaline, which play a key role in the fight or flight response. Adrenaline causes a number of physiological changes to prepare the body for fight or flight (e.g. increased heart rate, pupil dilation, etc.)
Auditory Area	The auditory area is responsible for analysing and processing acoustic information.
Autonomic Nervous System	The autonomic nervous system plays an important role in homeostasis, which maintains in balance internal processes like body temperature, heart rate and blood pressure. The autonomic nervous system consists of motor pathways only, and has two components: 1) the sympathetic nervous system and 2) the parasympathetic nervous system.
Biological Rhythms	Biological rhythms are cyclical patterns within biological systems that have evolved in response to environmental influences, e.g. day and night. There are two key factors that govern biological rhythms: endogenous pacemakers (internal), the body's biological clocks, and exogenous zeitgebers (external), which are changes in the environment.
Broca's Area	The Broca's area is found in the left frontal lobe and is thought to be involved in language production.
Central Nervous System	The CNS consists of the brain and the spinal cord. The brain provides conscious awareness and is involved in all psychological processes. The brain consists of many regions, which are responsible for different functions.
Circadian Rhythm	One biological rhythm is the 24-hour circadian rhythm (often known as the 'body clock'), which is reset by levels of light. The word circadian is from the Latin 'circa' which means about, and 'dian' which means day. Examples of circadian rhythms include the sleep-wave cycle and body temperature.
Electroencephalogram (EEG)	An electroencephalogram (EEG) works on the premise that information is processed in the brain as electrical activity in the form of action potentials or nerve impulses, transmitted along neurons. EEG scanners measure this electrical activity through electrodes attached to the scalp. Small electrical charges are detected by the electrodes, and are graphed over a period of time, indicating the level of activity in the brain.
Endocrine System	The endocrine system works alongside the nervous system. It is a network of glands across the body that secrete chemical messages called hormones. Instead of using nerves to transmit information, this system uses blood vessels. Different hormones produce different effects (behaviours).

Endogenous Pacemakers	Endogenous pacemakers are internal mechanisms that govern biological rhythms, in particular the circadian sleep/wake cycle. Although endogenous pacemakers are internal biological clocks, they can be affected by the environment. The most important endogenous pacemaker is the suprachiasmatic nucleus which is closely linked to the pineal gland, both of which are influential in maintaining the circadian sleep-wake cycle.
Event-Related Potentials (ERP)	Event-Related Potentials (ERP) use electrodes that are attached to the scalp, as with EEG. However, the key difference is that a stimulus is presented to a participant (for example a picture/sound) and the researcher looks for activity related to that stimulus.
Excitation	Excitatory neurotransmitters (e.g. noradrenaline) make the post-synaptic cell more likely to fire: if an excitatory neurotransmitter like noradrenaline binds to the post-synaptic receptors it will cause an electrical charge in the cell membrane which results in an excitatory post-synaptic potential (EPSP), which makes the post-synaptic cell more likely to fire.
Exogenous Zeitgebers	Exogenous zeitgebers influence biological rhythms: these can be described as environmental events that are responsible for resetting the biological clock of an organism. They can include social cues such as meal times and social activities, but the most important zeitgeber is light, which is responsible for resetting the body clock each day, keeping it on a 24-hour cycle.
Fight or Flight	When someone enters a potentially stressful situation, the amygdala (part of the limbic system) is activated. The amygdala responds to sensory input (what we see, hear, smell, etc.) and connects sensory input with emotions associated with the fight or flight response (e.g. fear and anger).
Function Magnetic Resonance Imaging (fMRI)	Functional magnetic resonance imaging (fMRI) is a brain-scanning technique that measures blood flow in the brain when a person performs a task. fMRI works on the premise that neurons in the brain that are the most active (during a task) use the most energy. An fMRI creates a dynamic (moving) 3D map of the brain, highlighting which areas are involved in different neural activities.
Functional Recovery	Functional recovery is the transfer of functions from a damaged area of the brain after trauma, to other undamaged areas. Functional recovery can take place through a process termed neuronal unmasking, where 'dormant' synapses (which have not received enough input to be active), open connections to compensate for a damaged area of the brain.
Glands	<p>The endocrine system is a network of glands across the body that secretes chemical messages called hormones. The pituitary gland is sometimes known as the master gland, because the hormones released by the pituitary gland control and stimulate the release of hormones from other glands in the endocrine system.</p> <p>Other examples include: the testes, which release androgens, which include the main hormone testosterone; the ovaries, which release oestrogen that</p>

	controls the regulation of the female reproductive system, including the menstrual cycle and pregnancy.
Hemispheric Lateralisation	Lateralisation is the fact that the two halves of the brain are functionally different and that each hemisphere has functional specialisations, e.g. the left is dominant for language, and the right excels at visual motor tasks.
Hormones	Each gland produces a different hormone. The word 'hormone' comes from the Greek work 'hormao' which means 'excite', as hormones excite (stimulate) a particular part of the body.
Infradian Rhythm	Another important biological rhythm is infradian rhythms that last longer than 24 hours and can be weekly, monthly or annually. A monthly infradian rhythm is the female menstrual cycle, which is regulated by hormones that either promote ovulation or stimulate the uterus for fertilisation.
Inhibition	Inhibitory neurotransmitters (e.g. GABA) make the post synaptic cell less likely to fire: if an inhibitory neurotransmitter like GABA binds to the post-synaptic receptors it will result in an inhibitory post-synaptic potential (IPSP), which makes the post-synaptic cell less likely to fire.
Localisation of Function	Localisation of function is the idea that certain functions (e.g. language, memory, etc.) are correlated with certain locations within the brain.
Motor Area	The motor area is responsible for voluntary movements by sending signals to the muscles in the body.
Motor Neuron	Motor neurons are found in the central nervous system (CNS) and control muscle movements. When motor neurons are stimulated they release neurotransmitters that bind to the receptors on muscles to trigger a response, which lead to movement.
Nervous System	The nervous system is divided into the two main components: 1) the central nervous system (CNS) and 2) the peripheral nervous system (PNS). The nervous system is a network of nerves cells that transmit messages between different parts of the body, allowing communication to take place.
Neurotransmitters	Neurotransmitters are electrochemical messengers that transmit nerve impulses across the synaptic gap during the process of synaptic transmission. Some neurotransmitters are excitatory and some are inhibitory. Excitatory neurotransmitters (e.g. noradrenaline) make the post synaptic cell more likely to fire, whereas inhibitory neurotransmitters (e.g. GABA) make them less likely to fire. For example, if an excitatory neurotransmitter like noradrenaline binds to the postsynaptic receptors it will cause an electrical charge in the cell membrane which results in an excitatory post-synaptic potential (EPSP), which makes the post-synaptic cell more likely to fire. Whereas, if an inhibitory neurotransmitter like GABA binds to the post-synaptic receptors it will result in an inhibitory post-synaptic potential (IPSP), which makes the post-synaptic cell less likely to fire.

Parasympathetic Nervous System	The role of the parasympathetic nervous system is to relax the body, and return us to our 'normal' resting state. Consequently, the parasympathetic nervous system slows down our heart rate and breathing rate, and reduces our blood pressure. Furthermore, any functions that were previously slowed down during a fight or flight reaction are started again (e.g. digestion).
Peripheral Nervous System	The role of the peripheral nervous system (PNS) is to relay messages (nerve impulses) from the CNS (brain and spinal cord) to the rest of the body. The PNS consists of two main components: 1) the somatic nervous system and 2) the autonomic nervous system.
Plasticity	Brain plasticity refers to the brain's ability to change and adapt in reaction to the environment and through experience. An example of this is when learning a new skill develops neuronal connections in the related area of the brain.
Post-Mortem Examination	A post-mortem examination is when researchers study the physical brain of a person who displayed a particular behaviour while they were alive that suggested possible brain damage. An example of this technique is the work of Broca, who examined the brain of a man who displayed speech problems when he was alive. It was subsequently discovered that he had a lesion in the area of the brain important for speech production that later became known as the Broca's area.
Relay Neuron	Relay neurons are found between sensory input neurons and motor output/response neurons. Relay neurons are found in the brain and spinal cord and allow sensory and motor neurons to communicate.
Sensory Neuron	Sensory neurons are found in receptors such as the eyes, ears, tongue and skin, and carry nerve impulses to the spinal cord and brain. When these nerve impulses reach the brain they are translated into 'sensations', such as vision, hearing, taste and touch. However, not all sensory neurons reach the brain, as some neurons stop at the spinal cord, allowing for quick reflex actions.
Somatic Nervous System	The somatic nervous system maintains communication between the CNS and the outside world. The somatic nervous system is made up of sensory receptors that carry information to the spinal cord and brain, and motor pathways that allow the brain to control movement. Therefore, the role of the somatic nervous system is to carry sensory information from the outside world to the brain and provide muscle responses via the motor pathways.
Somatosensory Area	The somatosensory area receives incoming sensory information from the skin to produce sensations related to pressure, pain, temperature, etc.

Split Brain Research	Split-brain patients are individuals who have undergone a surgical procedure where the corpus callosum bundle of nerve fibres that connects the two hemispheres is cut. This was usually carried out in order to reduce the symptoms of severe epilepsy.
Sympathetic Nervous System	The sympathetic nervous system is typically involved in responses that prepare the body for fight or flight. Impulses travel from the sympathetic nervous system to organs in the body to help us prepare for action when we are faced with a dangerous situation. For example, our heart rate, blood pressure and breathing rate increase, while less important functions such as digestion, salivation and urination.
Synaptic Transmission	Synaptic transmission is the process by which one neuron communicates with another. Information is passed down the axon of the neuron as an electrical impulse known as action potential. Once the action potential reaches the end of the axon it needs to be transferred to another neuron or tissue. It must cross over the synaptic gap between the presynaptic neuron and post-synaptic neuron. At the end of the neuron (in the axon terminal) are the synaptic vesicles, which contain chemical messengers, known as neurotransmitters. When the electrical impulse (action potential) reaches these synaptic vesicles, they release their contents of neurotransmitters. Neurotransmitters then carry the signal across the synaptic gap. They bind to receptor sites on the post-synaptic cell, thereby completing the process of synaptic transmission.
Ultradian Rhythm	Ultradian rhythms last fewer than 24 hours and can be found in the pattern of human sleep. This cycle alternates between REM (rapid eye movement) and NREM (non-rapid movement) sleep and consists of five stages. The cycle starts at light sleep, progressing to deep sleep then into REM sleep, where brain waves speed up and dreaming occurs. This repeats itself about every 90 minutes throughout the night and a person can experience up to five complete sleep cycles each night.
Visual Area	The visual area receives and processes visual information. The visual area contains different parts that process different types of information including colour, shape or movement.
Wernicke's Area	The Wernicke's area is found in the left temporal lobe and is thought to be involved in language processing/comprehension.

ISSUES & DEBATES	The issues and debates in psychology consider some of the important arguments in relation to conducting research and explaining behaviour. The key issues and debates include gender and culture in psychology; free will and determinism; the nature-nurture debates; idiographic and nomothetic approaches and ethical issues and social sensitivity.
Alpha Bias	An alpha bias refers to theories that exaggerate the differences between males and females.
Androcentrism	Androcentrism refers to theories that are centred on, or focused on males.
Beta Bias	A beta bias refers to theories that ignore or minimise sex differences. These theories often assume that the findings from studies using males can apply equally to females.
Biological Determinism	Biological determinism refers to the idea that all human behaviour is innate and determined by genes.
Biological Reductionism	Biological reductionism refers to the way that biological psychologists try to reduce behaviour to a physical level and explain it in terms of neurons, neurotransmitters, hormones, brain structure, etc.
Causal Explanations	Science is heavily deterministic in its search for causal relationships (explanations) as it seeks to discover whether X causes Y, or whether the independent variable causes changes in the dependent variable.
Cultural Relativism	Cultural relativism insists that behaviour can be properly understood only if the cultural context is taken into consideration.
Culture Bias	A cultural bias is the tendency to judge people in terms of one's own cultural assumptions.
Determinism	Determinism is the view that free will is an illusion, and that our behaviour is governed by internal or external forces over which we have no control.
Environment	The environment is seen as everything outside the body, which can include people, events and the physical world.
Environmental Determinism	Environmental determinism is the view that behaviour is determined or caused by forces outside the individual. Environmental determinism posits that our behaviour is caused by previous experience learned through classical and operant conditioning.
Environmental Reductionism	Environmental reductionism is also known as stimulus-response reductionism. Behaviourists assume that all behaviour can be reduced to the simple building blocks of S-R (stimulus-response) associations and that complex behaviours are a series of S-R chains.
Ethical Implications	Ethical implications consider the impact or consequences that psychological research has on the rights of other people in a wider context, not just the participants taking part in the research.

Ethnocentrism	Ethnocentrism means seeing the world only from one's own cultural perspective, and believing that this one perspective is both normal and correct.
Free Will	Free will is the idea that we can play an active role and have choice in how we behave. The assumption is that individuals are free to choose their behaviour and are self-determined.
Gender Bias	A gender bias is the differential treatment and/or representation of males and females, based on stereotypes and not on real differences.
Hard Determinism	Hard determinism is the view that forces outside of our control (e.g. biology or past experience) shape our behaviour. Hard determinism is seen as incompatible with free will.
Heredity	Heredity is the process in which traits are passed down genetically from one generation to the next.
Holism	Holism comes from the Greek word 'holos', which means 'all', 'whole' or 'entire' and is the idea that human behaviour should be viewed as a whole integrated experience, and not as separate parts.
Idiographic Approach	The term 'idiographic' comes from the Greek word 'idios', which means 'own' or 'private'. Psychologists who take an idiographic approach focus on the individual and emphasise the unique personal experience of human nature.
Interactionist Approach	An interactionist approach argues that several levels of explanation are necessary to explain a particular behaviour, ranging from lower (biological) to higher levels (social and cultural).
Levels of Explanation	The reductionist approach suggests that behaviour can be explained at different levels (e.g. social and cultural, psychological or biological).
Nature-Nurture Debate	The nature versus nurture debate is one of the oldest debates in psychology. It centres on the relative contributions of genetic inheritance and environmental factors to human development and behaviour.
Nomothetic Approach	The term 'nomothetic' comes from the Greek word 'nomos' which means 'law'. Psychologists who take a nomothetic approach are concerned with establishing general laws, based on the study of large groups of people, and the use of statistical (quantitative) techniques to analyse data.
Psychic Determinism	Psychic determinism claims that human behaviour is the result of childhood experiences and innate drives (id, ego and superego), as in Freud's model of psychological development.
Reductionism	Reductionism is the belief that human behaviour can be explained by breaking it down into simpler component parts.

RELATIONSHIPS	Relationships is a topic in psychology which examines evolutionary explanations for partner preference, the factors that affect the initiation, maintenance and breakdown of romantic relationships, virtual relationships and parasocial relationships.
Absence of Gating	Absence of gating refers to the way that virtual relationships are relatively anonymous. People are unable to use physical features such as attractiveness or age when considering whether or not they wish to form a relationship with someone else online. Therefore, the 'gates', which are potential barriers that might limit the opportunities for shy or less attractive individuals, are removed (absent) online.
Absorption Addiction Model	The Absorption Addiction Model was proposed by McCutcheon et al. (2002) and suggests that people pursue parasocial relationships due to deficits within their real life. Relationships with celebrities are seen as an attempt to cope with or escape from reality. People may follow celebrities to gain a sense of personal identity and achieve a sense of fulfilment.
Attachment Theory: Parasocial Relationships	The attachment theory of parasocial relationships suggests that some people are more likely to form parasocial relationships due to their attachment style. Cole and Leets (1999) found that individuals with an insecure-resistant attachment style were more likely to engage in parasocial relationships with their favourite TV personality, and insecure-avoidant individuals were less likely to engage in parasocial relationships.
Comparison with Alternatives	Comparison with alternatives is part of Rusbult's investment model of relationships. Rusbult proposed that if there is a more attractive alternative (e.g. being alone or with another possible partner), then an individual might end their current relationship. However, if a better alternative is not available, then they may remain in their current relationship.
Complementarity	Complementarity is a factor which affects attraction in romantic relationships. It is also referred to as 'complementarity of needs' and is the final stage of filter theory. It refers to how well two people fit together (complement one another) and meet each other's needs. For example, young women may feel attracted to older men who have more economic resources and can provide for them. In return, the older men are able to go out with a younger woman, which demonstrates their virility in attracting such a good 'catch'.
Duck's Phase Model	Duck's phase model is a model of relationship breakdown that suggests that breakdown occurs in a series of steps or phases: intra-psychic, dyadic, social, and grave-dressing.
Dyadic	The dyadic phase is the second phase in Duck's phase model of relationship breakdown, and it is where a person who is unhappy in their relationship confronts their partner and explains why they are dissatisfied. This phase may also involve feelings of anger and guilt.
Equity Theory	Equity theory is a theory of romantic relationships proposed by Hatfield et al., who view it as an extension of social exchange theory. It suggests

	people are content in their relationship if the benefits are roughly equal to the costs. Relationships that lack equity (where someone is putting in more than they are getting out of it) are more likely to be associated with dissatisfaction.
Evolutionary Explanations: Partner Preferences	Evolutionary explanations for partner preferences focus on sexual selection as the driving force of human reproductive behaviour, as those who manage to reproduce successfully will pass on their genes. Sexual selection operates in two main ways: 1) intra-sexual selection, where members of one sex have to compete with other members of their sex in order to gain mates and reproduce; 2) intersexual selection, where members of one sex evolve with preferences for particular characteristics in the opposite sex, because these characteristics will increase the chance of passing on genes. For example, males will be attracted to females who display signs of fertility and females will be attracted to males who can provide resources and protection.
Filter Theory	Filter theory is an explanation of attraction proposed by Kerchoff and Davies (1962). This theory suggests that people develop relationships by applying a series of filters, such as similarity of social demographic factors and attitudes and complementarity of needs to narrow down the pool of available candidates.
Gating	In face-to-face relationships, individuals rely on easily discernible physical features such as attractiveness or age to help them decide who would be a suitable partner. These features are referred to as 'gates' and often prevent those who are less attractive or socially skilled from forming relationships. Because virtual relationships are relatively anonymous there is often an absence of gating in these relationships
Grave Dressing	Grave-dressing is the final phase in Duck's phase model of relationship breakdown and takes place when a person who has left their relationship attempts to justify their actions. This is often because they are attempting to present themselves in a positive light in order to attract a new partner.
Human Reproductive Behaviour	Human reproductive behaviour is a term used by evolutionary psychologists to refer to the different behaviours that humans exhibit in order to increase their reproductive success. Examples include competing with other members of the same sex for access to the best possible mate (intra-sexual competition), and selecting the best possible mate from the opposite sex (inter-sexual competition).
Intra-Psychic	The intra-psychic phase is the first phase in Duck's phase model of relationship breakdown. This is where a person starts to feel dissatisfied and under-benefited in their relationship, but they don't say anything to their partner.
Investment	Investment refers to anything that a person has put into a relationship that would be lost if they left the relationship. This can include possessions, children, time and even emotional energy.

Levels of Parasocial Relationships	Giles and Maltby (2006) identified three levels of parasocial relationships that a person might have with a celebrity. The first level is the entertainment-social level, where the person keeps up with their celebrity and finds out information about them for the purpose of entertainment. The second level is the intense-personal level, where the person has intensive feelings for the celebrity and might appear obsessed. The third level is borderline-pathological, and this is where the person has over-identified with the celebrity and their fantasies and behaviour may have become uncontrollable; their absorption is more like an addiction.
Matching Hypothesis	The matching hypothesis is a theory of interpersonal attraction which argues that relationships are formed between two people who are equal or very similar in terms of social desirability. This is often examined in the form of level of physical attraction. The theory suggests that people assess their own value and then make 'realistic choices' by selecting the best available potential partners who are also likely to share this same level of attraction.
Parasocial Relationships	Parasocial relationships are one-sided, interpersonal relationships in which an individual knows a great deal about another person (usually a celebrity), while the other person is unaware of their existence. The most common form of such parasocial relationships is between a fan and a celebrity.
Physical Attractiveness	Physical attractiveness is a key factor that influences attraction in romantic relationships. Evolutionary theorists claim that men are more likely to value physical attractiveness as important, as it is a cue that a female is healthy and able to reproduce.
Rusbult's Investment Model of Commitment	Rusbult's investment model of commitment is a theory of romantic relationships that was developed to explain why some people might remain in a relationship while others might not. It is based on four factors: satisfaction, investment, comparison with alternatives, and commitment.
Satisfaction	Satisfaction is one of the factors included in Rusbult's investment model of commitment. It refers to the positive versus negative emotions experienced within a relationship and how much one partner satisfies another partner's needs.
Self-Disclosure	Self-disclosure is a factor affecting attraction in romantic relationships. It refers to the sharing of personal information. Greater self-disclosure tends to lead to greater levels of intimacy, and research has found that individuals tend to prefer people who are prepared to disclose intimate details about themselves, compared to those who are unwilling to disclose.
Sexual Selection	According to Charles Darwin, sexual selection is a type of natural selection and competition for mates along with the development of characteristics that aid reproductive success drive evolution. Intra-sexual selection (mate competition) is one type of sexual selection, where members of the same sex compete with one other for members of the opposite sex. Those who 'win' are able to mate and pass on their genes to the next generation.

	Intersexual selection (mate choice) involves one sex having preferences for members of the opposite sex who possess certain qualities.
Similarity in Attitudes	Similarity in attitudes is a factor affecting attraction in romantic relationships; if two people share similar views and beliefs they will be able to communicate more easily which will help a relationship to form. Similarity of attitudes is the second filter in Kerckhoff and Davis's filter theory of attraction, and they found similarity of attitudes to be important at the beginning of a relationship and a good predictor of whether a relationship is likely to become stable. They also found that people with dissimilar attitudes are more likely to be 'filtered out' from the 'field of availables'.
Social Demography	Social demography is the first filter in Kerckhoff and Davis's filter theory of attraction. It refers to variables such as age, social background and proximity (where someone lives in relation to us). People with whom we do not come into contact due to these variables, are 'filtered out' from the 'field of availables'.
Social Exchange Theory	Social exchange theory is a theory of romantic relationships that proposes that individuals initiate and maintain relationships that minimise costs (e.g. effort, time, financial investment) and maximise rewards (e.g. companionship, sex, being cared for). According to social exchange theory, humans are self-centered and not concerned with equality.
Social	The social phase is the third phase in Duck's phase model of relationship breakdown. This is where the person begins to make their dissatisfaction public by telling family and friends about their discontent. These may take sides, offer support or help try and mend the relationship.
Virtual Relationships	Virtual relationships are relationships where people are not physically present but communicate exclusively using online methods such as e-mails, social media, or even by texting.
Gender	Gender is the term used to describe the psychological sense of being male or female. While 'sex' refers to the biological aspects of being male (XY) and female (XX), the term gender includes the social and psychological aspects. It is a person's sense of being male or female.
Androgyny	The term Androgyny is made up of two Greek words - 'andro', meaning male, and 'gyny', meaning female. Sandra Bem first introduced the concept of psychological androgyny, arguing that a person can show both masculine and feminine traits. Bem also argued that androgyny is a psychologically healthy position, as people avoid fixed sex-role stereotypes.
Atypical Gender Development	Atypical means irregular or abnormal, therefore atypical gender development means that a person has not developed gender in the 'normal' way. This could be due to abnormal chromosomes and/or abnormal hormone exposure in the womb, which results in a mismatch between gender identity and biological sex. Such conditions are referred to as intersex. The term is also used to refer to people with gender identity

	disorder (GID), which is a psychiatric condition where a person feels uncomfortable with the gender assigned to them at birth. GID is now known as gender dysphoria.
Atypical Sex Chromosome Patterns	Inheriting too many or not enough copies of sex chromosomes leads to atypical chromosome patterns, which can cause serious developmental complications. For example, males with an additional X chromosome (XXY) develop Klinefelter's syndrome, which is a condition characterised by tall stature and, often, impaired fertility. Turner syndrome is another syndrome caused by an atypical chromosome pattern. Women with Turner syndrome have one X chromosome (X0), and are often very short, and do not undergo puberty. Some people with Turner syndrome also have kidney or heart problems.
Bem Sex Role Inventory	Sandra Bem tested her ideas about androgyny by creating a psychological test, which is known as the Bem Sex Role Inventory (BSRI). The test includes 20 masculine traits, 20 feminine traits, and 20 neutral items (distractors). When completing the inventory, an individual has to rate themselves on each trait using a 7-point Likert scale, where 1 means never or almost never true and 7 means almost always true. The scores for masculine and feminine traits calculated provide a score for femininity, masculinity and androgyny.
Chromosomes	Chromosomes are thread-like structures located inside the nucleus of animal and plant cells. Each chromosome is made up of protein and a single molecule of DNA contains the specific instructions that make each type of living creature unique. Males and females differ in a pair of chromosomes known as the sex chromosomes. Females have two X chromosomes (XX) in their cells, while males have one X and one Y chromosome (XY).
Culture Influences: Gender	Culture can be defined as the ideas, behaviours, attitudes, and traditions that exist within a large group of people. These are passed down from one generation to the next and are often resistant to change. In relation to gender, the effects of cultural influences can be seen by examining the differences in male/female from one culture to another. Margaret Mead (1935) conducted a classic study of cultural differences in Papua New Guinea. She examined three different tribes and found the Arapesh men and women to be gentle, responsive and cooperative; the Mundugumor men and women were violent and aggressive, seeking power and position; and the Tchambuli showed the opposite gender-role behaviours to those seen in most cultures, as the women were dominant, impersonal and managerial and the men were more emotionally dependent. Mead originally concluded that these differences highlight the impact of culture on gender.
Electra Complex	The Electra complex was proposed by Carl Jung (a neo-Freudian). It is similar to what Freud originally termed the feminine Oedipus attitude. During the phallic stage, a little girl desires her father and realises that she does not have a penis. This leads to the development of penis envy and the

	desire to be a boy. This is resolved by the girl repressing her desire for her father and substituting the wish for a penis with the wish for a baby. Freud claimed that little girls blame their mothers for their 'castrated state', which creates great tension. However, these feelings are repressed in order to remove the tension, and instead a little girl identifies with her mother and internalises her mother's gender identity, so that it becomes her own.
Freud's Psychoanalytic Theory: Gender Development	Freud's psychoanalytic theory of gender development suggests that gender development takes place during the third stage of his psychosexual theory of personality development. He called this the phallic stage, which occurs between three and six years old. During this stage, the child's libido is focused on his or her genitals. Development of gender in psychoanalytic theory is different for boys and for girls: boys experience the Oedipus complex and identify with their father and take on a male gender role; girls experience the Electra complex (see Jung) and identify with their mother and take on a female gender role.

NOTES

Dotted lines for notes

GENDER	The term gender describes the characteristics that a society or culture defines as being masculine or feminine. It is also an individual's sense of being male or female.
Gender Constancy	This is the third and final stage in Kohlberg's cognitive explanation of gender development. It begins at around six or seven years old, when a child start to understand that gender remains the same across situations (e.g. if a man puts on a dress he is still a man). Kohlberg claimed that it is only when children have reached the gender consistency stage that they begin to learn about gender-appropriate behaviours.
Gender Identity	Gender identity is the first stage in Kohlberg's cognitive explanation of gender development. A child typically reaches the gender identity stage by the age of 2, when they recognize that they are male or female and can correctly label their own and other peoples' gender. Children base these judgements on outward appearance only: hairstyle, clothing, etc. Children also lack realisation that gender is fixed, so a little boy might think that he will grow up to be a 'mummy'.
Gender Identity Disorder	Gender identity disorder is also known as gender dysphoria and is where a person has strong, persistent feelings of identification with the opposite gender and discomfort with their biological sex; this often results in significant distress. People with gender dysphoria want to live as members of the opposite sex and often dress and use mannerisms associated with that gender. For instance, a person identified as a boy may feel and act like a girl.
Gender Roles	Gender roles are societal norms that dictate the types of behaviour that are generally considered appropriate for individuals based on their biological sex. Gender roles are usually based on stereotypes regarding masculine and feminine behaviour.
Gender Schema Theory	Gender schema theory proposes that children begin to form gender schemas (sometimes termed sex-related schemas) as soon as they notice that people are organised into categories of male and female. These schemas are developed through their interactions with other children and adults, as well as the media. They allow children to organise and structure information and to learn about which toys are appropriate for each gender and which clothes are appropriate. Martin and Halverson (1981) describe two types of sex-related schemas: in-group schemas (the group with which a person identifies); and out-group schemas (the opposite group). Once a child has identified with their in-group, they begin to positively evaluate their own group and negatively evaluate the out-group. Children then begin to ignore any information that is not consistent with their in-group schema and this means that gender schemas have very strong effects on what children remember and how they perceive the world.
Gender Stability	This is the second stage in Kohlberg's cognitive explanation of gender development. It occurs at around 4 years old and continues until a child is approximately 7. In this stage, children recognise that gender is consistent

	<p>over time, and that boys grow into men, and girls grow into women. However, they still fail to understand that gender is also consistent across situations, and therefore believe that if a man wears a dress, he becomes a woman.</p>
Hormones: Gender	<p>Hormones are the body's chemical messengers that travel through the bloodstream and influence many different processes. The same sex hormones exist in both males and females, but they differ in terms of quantity and the effect that they have upon different parts of the body. The main sex hormones are testosterone, oestrogen and oxytocin. These hormones can affect development and behaviour both before and after birth.</p>
Identification: Psychodynamic explanation of gender development	<p>Identification occurs when a person adopts an attitude or behaviour due to a desire to associate with a particular person or group. This is an important concept in Freud's psychodynamic explanation of gender development: the Oedipus complex is resolved when a boy identifies with his father and then internalises his father's gender identity. Similarly, the Electra complex (see Jung) is resolved when a girl identifies with her mother and internalises her mother's gender identity.</p>
Internalisation: Gender	<p>Internalisation occurs when a person accepts the attitudes or behaviour of another person. This is an important part of Freud's psychodynamic explanation of gender development; the Oedipus complex is resolved when a boy identifies with his father and then internalises his father's gender identity. Similarly, the Electra complex is resolved when a girl identifies with her mother and internalises her mother's gender identity.</p>
Jung	<p>Carl Gustav Jung was a Swiss psychiatrist and psychologist who lived at the same time as Sigmund Freud, and initially agreed with his psychoanalytic theory in many respects. However, it was Jung who in 1913 renamed Freud's Oedipus complex as the "Electra complex" when it was applied to girls. This name is after the Greek myth of Electra, who plotted the death of her mother as revenge for the murder of her father.</p>
Klinefelter's Syndrome	<p>Klinefelter's syndrome occurs due to an atypical sex chromosome pattern which affects the development of males who have an extra X chromosome (XXY). Klinefelter's syndrome is found in around 1 in 1,000 males. The most common symptom is infertility, but males with Klinefelter's syndrome may also have small, firm testes, a small penis, sparse pubic, armpit and facial hair, enlarged breasts (called gynecomastia), tall stature, and abnormal body proportions (long legs, short trunk).</p>
Kohlberg's Theory	<p>Kohlberg's theory (1966) is an example of a cognitive developmental approach which emphasises the role of thinking or cognition in the development of gender. The basic principle of Kohlberg's theory is that a child's understanding of gender develops with age (due to maturation). As part of the theory, Kohlberg identified three stages in gender development: gender identity; gender stability; and gender constancy.</p>

Media Influences: Gender	Media influences are changes in behaviour that are attributed to exposure to media, such as film, TV, books and magazines. The media tends to portray males and females in stereotypical ways (e.g. males as independent and directive, and females as unambitious and emotional) and some research has shown that people who experience higher exposure to these gender representations in the media tend to hold stronger gender stereotypes than those who experience less exposure.
Oedipus Complex	Freud proposed that during the genital stage of personality development, boys experience the Oedipus complex. At around age 3 or 4, the young boy begins to desire his mother and wants her complete attention. This means he sees his father as a rival and wishes he was dead. This then creates anxiety and the repressed fear that his father will castrate him. The complex is eventually resolved by the boy's identification with his father. It is at this point that the superego is formed.
Oestrogen	Females do not need hormones to direct prenatal genital development in the same way that males do; all fetuses start off female. However, there is some evidence to suggest that oestrogen might have prenatal effects, such as causing a smaller brain size (Shi et al., 2015). However, oestrogen does play a major role from puberty onwards, as it promotes the development of secondary sexual characteristics (such as breast development) and directs the menstrual cycle.
Oxytocin	Females have higher levels of oxytocin than men, as oestrogen has been found to increase oxytocin secretion. Some researchers have linked this oxytocin to increased sociability and the formation of bonds and attachments between people. Oxytocin is often called the 'love' hormone because it promotes feelings of bonding/attachment in both men and women. Oxytocin is produced in the pituitary gland and produces feelings of contentment and calmness. It is released into the bloodstream during labour and also when the nipples are stimulated during breastfeeding. This helps the mother to bond with her baby and to produce milk. At times of stress, oxytocin dampens the fight-or-flight response and triggers the 'tend and befriend' response in females to ensure that they look after their young and form protective alliances with other women.
Sex	In the context of gender, sex refers to biological differences between males and females. These are, for example, differences between the female/male chromosomes (female XX, male XY) and the reproductive organs (ovaries, testes). Gender, however, refers to the cultural differences expected (by society /culture) of men and women according to their sex. This means that while sex is a biological fact that is the consistent across culture, what sex means in terms of gender roles can be different.
Sex-Role Stereotypes	Sex-role stereotypes are the shared expectations within a society or social group regarding what is appropriate behaviour for men and women. Stereotypes are fixed beliefs about a particular group of people (e.g. men are strong; women are caring) and roles are the behaviours individuals

	show in a particular situation, which are affected by expectations (e.g. males being heroic; females caring for children or elderly relatives). Sex-role stereotypes are learned from birth, as children are exposed to the attitudes of their parents and others in society.
Social Learning Theory: Gender Development	Social Learning Theory states that individuals develop gender by imitating role models. SLT states that observational learning takes place, and that this learning is reinforced vicariously. Vicarious reinforcement occurs when a person witnesses a model being rewarded for behaving in a gender-appropriate way (e.g. a girl being praised for playing quietly with her dolls). Vicarious reinforcement makes it more likely that the model's behaviour will be imitated in the future. According to Bandura, four mediational processes must occur for imitation of behaviour to take place: attention (an individual must pay attention to the model's behaviour (e.g. boys must pay attention to male's behavior and girls must pay attention to female's behaviour); retention (individuals must code and store the observed gender-appropriate behaviour in long-term memory); reproduction (individuals must be capable of imitating the gender-appropriate behaviour); and motivation (individuals must have good reason for reproducing the gender-appropriate behaviour).
Testosterone: Gender	Testosterone is a sex hormone that is present in larger quantities in males than in females, and it affects development and behavior both before and after birth. If testosterone is released in the womb at 7 weeks (when 'maleness' is switched on by the SRY gene on the Y chromosome) it causes the development of male sex organs and also acts on the hypothalamus, resulting in the masculinisation of the brain. It has been found that an area of the hypothalamus at the base of the brain, called the sexually dimorphic nucleus, is much larger in male than in females. Testosterone is believed to be responsible for typically male behaviors, such as aggression, competitiveness and superior visuo-spatial abilities. Males also have a surge of testosterone during puberty, and this is responsible for secondary sexual characteristics such as facial hair and deepening voice.
Turner's Syndrome	Turner syndrome occurs due to atypical sex chromosome patterns and affects development in females who only have one X chromosome (XO); it occurs in 1 in 2,000 females. The most common feature is short stature, which becomes evident by about age 5. An early loss of ovarian function is also very common, so many affected girls do not undergo puberty unless they receive hormone therapy, and most are unable to conceive. One third to one half of those with Turner syndrome are born with a heart defect. There are also a wide range of other symptoms such as small lower jaw, webbed neck, narrow hips, and misshapen internal organs.

COGNITION AND DEVELOPMENT	Cognition means thinking and the cognition and development topic in Psychology involves looking at how children's thinking changes (develops) as they mature.
Accommodation	Accommodation involves the modification of an existing schema to understand (accommodate) new information. It may involve creating a new schema altogether, for example, a child may have a schema for birds (feathers, flying, etc.) and then they see a plane, which also flies, but would not fit into their bird schema. They would therefore need to accommodate this information and form a new schema for planes.
Assimilation	Assimilation involves fitting a new experience into an existing schema. For example, once a child has a schema for birds based on the types of birds they have seen in their garden, they are able to incorporate new types of birds (e.g. parrots, seagulls) into their existing bird schema.
Autism	Autism is a mental condition, typically present from early childhood, where an individual has great difficulty in communicating and forming relationships with other people. People with autism also have problems with language and understanding abstract concepts.
Baillargeon's Explanation: Early Infant Abilities	Baillargeon was a researcher who developed inventive research methods in order to provide explanations for early infant abilities, such as knowledge of the physical world and violation of expectations. Baillargeon used inventive methods as it is very difficult to assess what young infants know and do not know, due to their inability to coherently explain their thoughts. In addition, infants cannot always demonstrate their knowledge and understanding in their behavior, because their motor skills are not developed sufficiently.
Class Inclusion	Class inclusion refers to the ability to classify objects into two or more categories simultaneously. For example, the ability to recognise that large categories such as 'cars' includes smaller sub-categories such as 'blue cars' or 'red cars' or different manufacturers. Piaget demonstrated that children in the pre-operational stage of intellectual development had difficulty answering questions like 'are there more blue cars or more cars?' due to their inability to understand class inclusion.
Conservation	Conservation, in the context of cognitive development, refers to the ability to understand that a certain property of an object remains the same, despite any transformation that has changed the appearance of the object. For example, children in the pre-operational stage of intellectual development often struggle to distinguish between reality and appearance. According to Piaget, they will fail to understand that if water is poured from a short and wide glass into a tall and thin glass that nothing has changed apart from the appearance. They do not understand that the quantity of water remains the same. This means that they make errors in the conservation tasks.

Egocentrism	Egocentrism refers to only viewing things from your own perspective or viewpoint. Piaget argued that children in the preoperational stage of intellectual development are egocentric and tested this using the 'three mountains task' where the child was asked to identify the photograph that represented what the doll would see from another point of view/perspective. At age 4 (still in the preoperational stage), a child would choose the photo that showed their own view of the mountains, but by age 7-8 (concrete operational stage) they could choose the photograph that represented the doll's view, showing that they could take another's viewpoint.
Equilibration	Piaget developed the concept of equilibration to describe how new information is balanced with existing knowledge. It involves the processes of assimilation (fitting new information into existing mental schemas) and accommodation (adjusting or changing a schema to fit new information).
Mirror Neurons	Mirror neurons are neurons that fire when an animal performs an action and when the animal observes the same action performed by another. They are known as mirror neurons, as the neuron 'mirrors' the behavior that has been observed. Many psychologists are agreed that a similar procedure also occurs in humans.
Object Permanence	Object permanence involves being aware that objects continue to exist when they are no longer in view. According to Piaget, objective permanence develops at around 8 months of age, which is during the sensorimotor stage of intellectual development. Prior to that age, an infant will lose interest in an object if it is hidden, and Piaget claimed that this was because they assume it no longer exists ('out of sight, out of mind').
Physical World	The physical world refers to things that are actually present that an individual can see, hear, smell, touch or taste. Baillargeon conducted research to explain what infants understand about their physical world. She believed that infants have a mechanism that allows them to interpret and learn from experience and called this the physical reasoning system.
Piaget's Theory: Cognitive Development	Piaget's theory of cognitive development proposes discrete stages in the development of a child's thinking. Piaget viewed cognitive development as a progressive reorganisation of mental processes that occurs as a result of both biological maturation and environmental experience.
Sally-Anne Study	The Sally-Anne study was conducted by Simon Baron-Cohen to test for theory of mind in three groups of children: those with autism, those with Down's syndrome and a control group with no developmental disorder. The study involved showing the children a story involving two dolls called Sally and Anne. They were shown Sally putting her ball in a basket and leaving the room. While she was out of the room, Anne moved the ball from the basket to her box. When Sally came back, the child was asked where Sally would look for her ball and if they had developed theory of mind, they would say in the basket because that is where Sally left it and she did not know it has been moved. Most of the control group and most of the

	children with Down's syndrome gave the correct answer, but only 20% of those with autism provided the right answer.
Scaffolding	Scaffolding is a term introduced by Wood et al. (1976) to describe how an adult, or more knowledgeable peer, might assist a child to learn something within their zone of proximal development (ZPD). They provide the scaffolding (e.g. temporary support) and then take it down (reduce the support), as the child becomes competent.
Schemas	Piaget viewed schemas as the basic unit or building block of intelligent behavior. He described them as mental structures that help to organise past experiences and provide a way of understanding future experiences. For Piaget, a schema can be a physical action or skill, an idea, or a piece of knowledge.
Selman's Levels of Perspective Taking	Robert Selman gave children scenarios along with questions that required them to take the perspective of others. Based on their answers, he developed a stage theory to explain the way in which children develop their ability to take different perspectives. He proposed five stages or levels: undifferentiated perspective-taking; social-informational perspective-taking; self-reflective perspective-taking; mutual perspective-taking; and societal perspective-taking.
Social Cognition	Social cognition refers to the internal (mental) processes which are used to manage information about the self and other people. Every time an individual interacts with another person, or thinks about themselves, they process new information from their senses and draw on existing information from memory. Based on this information people constantly make judgements and decisions that influence their social behaviours.
Stages of Intellectual Development	Piaget proposed four stages of intellectual development. The first is the sensorimotor stage (0-2 years), where the infant learns by moving around and manipulating objects. The second is the pre-operational stage (2-7 years), where thinking is dominated by perception (the evidence of your senses) and egocentricity. The third is the concrete operational stage (7-11 years), which involves an increasing independence of thought from perception (the evidence from senses) and children are able to conserve (see conservation). However, logical reasoning can only be applied to objects that are real (concrete) or that can be seen. The final stage is the formal operational stage (11+ years), and here the child is able to think logically about potential events or abstract ideas; they are no longer tied to perceptions and/or concrete reality.
Theory of Mind	Theory of mind is not a theory itself (e.g. like Piaget's theory), instead it refers to our ability to 'mind-read', in other words understand what other people think, feel and know. We have a theory of mind when we have a belief (i.e. a theory) about what is in someone else's mind.
Violation of Expectation Research	Violation of expectation research was conducted by Baillargeon in order to see whether young infants actually have object permanence (i.e. they know

	<p>that objects out of sight still exist), but are unable to search for them because they do not have the necessary motor abilities. The violation of expectation technique is based on the idea that infants will show surprise when witnessing an impossible event. For example, in one study, infants were shown a large or small carrot moving along a track and passing behind a screen with a window in it. It should have been possible to see the large carrot pass by the window, but not the small one. Infants as young as three months old showed surprise when they saw the impossible event (e.g. the large carrot did not appear in the window) but not when they saw the possible event (small carrot did not appear).</p>
Vygotsky's Theory: Cognitive Development	<p>Lev Vygotsky produced a theory of cognitive development that emphasises the important role that cultural forces play in development. He argued that human history consists of the development of new 'cultural tools' for dealing with the world. By 'cultural tools' he meant new ways of co-operating, organising, planning, communicating and calculating, which then determine people's thinking. Vygotsky believed that cognitive development is influenced by biological maturation and the child's interactions with others.</p>
Zone of Proximal Development	<p>According to Vygotsky, a child's zone of proximal development is where development takes place: it is the gap between the child's current competence level (what they can already do independently) and their potential development level (what they could do with guidance from someone else).</p>

NOTES

SCHIZOPHRENIA	Schizophrenia is a serious mental illness characterised by disturbances in thought, perception, emotion and behaviour; it is not a 'split personality' or 'multiple personality' disorder as commonly thought. It affects approximately 1% of people worldwide and the first onset commonly occurs in adolescence or early adulthood, although it can also occur later in life.
Atypical Antipsychotics	Atypical antipsychotics (e.g. clozapine) are second-generation (later developed) drugs used to treat schizophrenia. They are known as 'atypical' because they work in a slightly different way from the first-generation 'typical' antipsychotics, though both concentrate on blocking the uptake of dopamine. First generation antipsychotic drugs are used mainly for the treatment of schizophrenia and other psychotic disorders. Their use has declined in recent years, as the more expensive, but generally more effective, second-generation 'atypical' antipsychotic drugs have replaced them. These carry a lower risk of side effects; have greater beneficial effects on negative symptoms; and are suitable for patients that are treatment-resistant. Although atypical antipsychotics act on the dopamine system by blocking the D2 receptors (as do typical antipsychotics), they only do this temporarily and then they dissolve, thereby allowing normal dopamine transmission.
Avolition	Avolition is a negative symptom of schizophrenia and refers to a reduction in motivation to initiate and perform self-directed purposeful activities. For example, the patient might sit in the house for days at a time, doing nothing.
Biological Explanations: Schizophrenia	Biological explanations for schizophrenia view the cause of schizophrenia as physiological in nature. This could be due to genetic factors, or neural correlates, such as dopamine transmission. Sometimes the genetic transmission and neurotransmitter imbalances are linked, as when the imbalance is the result of a genetic abnormality.
Cognitive Behavioural Therapy: Schizophrenia	Cognitive behavioural therapy (CBT) for schizophrenia was developed to provide treatment for the 'residual' symptoms of schizophrenia – those that remained even while the patient is taking antipsychotic drugs. CBT is now recognised as an effective intervention for schizophrenia and helps people to establish links between their thoughts and their symptoms and general level of functioning. This can allow them to develop better coping strategies.
Cognitive Explanations: Schizophrenia	Cognitive explanations for schizophrenia are psychological explanations which suggest that dysfunctional thought processing is the cause rather than a consequence of schizophrenia. For example, Frith (1992) set out to explain schizophrenia in terms of difficulties in information processing (particularly selective attention) and Hemsley (1993) suggested that the central deficit in schizophrenia is a breakdown in the relationship between information that has already been stored in memory and new, incoming sensory information.

Co-Morbidity	Co-morbidity is when two (or more) conditions or illnesses occur at the same time. This can lead to problems in making a valid diagnosis of schizophrenia, as it is often co-morbid with depression, substance use and anxiety disorders such as OCD.
Culture Bias: Schizophrenia	Culture bias can be an issue in the diagnosis of schizophrenia. Both DSM and ICD were developed in the West and may not be valid diagnostic tools in other cultures. Furthermore, the use of DSM and ICD can lead to errors in diagnosis, as there are significant cultural influences on psychopathology. For example, Davison and Neale (1994) explain that in Asian cultures, a person experiencing some emotional turmoil is praised and rewarded if they show no emotion, whereas in certain Arab cultures the outpouring of public emotion is understood and even encouraged. Both of these could be viewed as being symptomatic of schizophrenia, if the person making the diagnosis had no understanding of the cultural norms of their patients.
Delusions	Delusions are a positive symptom of schizophrenia which are false and often bizarre personal beliefs held with very strong conviction, in spite of clear evidence to the contrary. (Note that the term 'positive symptom' does not imply that delusions are good, just that they are an 'add-on' – an extra behaviour). Delusions can be paranoid (e.g. the person believes they are being persecuted in some way) or can involve inflated beliefs about power and importance (e.g. delusions of grandeur).
Diathesis-Stress Model	The diathesis-stress model suggests that stressful life events might act as a trigger for schizophrenia in individuals who are already biologically vulnerable to develop the disorder (e.g. due to genetic factors). This is seen as a valuable approach because it integrates psychological and biological factors.
Dopamine Hypothesis	The original version of the dopamine hypothesis proposed that an excess of dopamine in particular areas of the brain (e.g. the limbic system) was responsible for the positive symptoms of schizophrenia. This was thought to occur because people with schizophrenia had an abnormally high number of D2 receptors on the receiving neurons, which meant that more neurons would fire.
Drug Therapies: Schizophrenia	Drug therapies for schizophrenia include antipsychotic drugs, which were first developed in the 1950s following the discovery of dopamine. There are two main groups of antipsychotic drugs: first-generation typical antipsychotics (e.g. chlorpromazine) and second-generation atypical antipsychotics (e.g. clozapine).
Dysfunctional Thought Processing	Dysfunctional thought processing is a cognitive explanation for schizophrenia. The assumption is that a breakdown in a person's self-monitoring makes it difficult for them to interpret their own thoughts and perceptions accurately.
Family Dysfunction	Family dysfunction is a psychological explanation for schizophrenia. These explanations suggest that problems within a family can either cause

	schizophrenia (e.g. double-bind theory) or contribute to relapse rates (e.g. families rated high in expressed emotion).
Family Therapy: Schizophrenia	Family therapy is the term used to describe a range of interventions that are aimed at the family of someone with schizophrenia, particularly where the symptoms are persistent or there is a high risk of relapse. Research has shown that patients whose families express high levels of expressed emotion (e.g. criticism, hostility, over-involvement) are more likely to relapse. This means that interventions which help family members (parents, siblings, and partners) react more positively towards the individual with schizophrenia can help prevent relapse. Family therapy normally involves providing family members with information about schizophrenia, helping them to support the family member with schizophrenia and generally improving relationships within the household.
Gender Bias: Schizophrenia	Gender bias in the diagnosis of schizophrenia describes a situation where the validity of diagnosis is affected by a person's gender. This could occur because the diagnostic criteria are gender-biased or because clinicians base their judgements on male and female stereotypes. For example, Broverman et al. (1970) found that clinicians in the US equated mentally healthy 'adult' behaviour with mentally healthy 'male' behaviour, illustrating a form of androcentrism. As a result, there was a tendency for women to be perceived as less mentally healthy when they did not show 'male' behavior (i.e. when they did not control their expression of emotion in the same way as a man might).
Genetic Factors: Schizophrenia	Genetic factors are believed to be involved in schizophrenia, as research suggests that schizophrenia runs in the family. The likelihood of developing schizophrenia is 1% in the general population. However, Gottesman found that this increases to 13% if you have one parent with schizophrenia and 46% if you have two parents with schizophrenia. Schizophrenia is not believed to be caused by a single gene; instead it is more likely that combinations of gene actions make someone more vulnerable to develop schizophrenia.
Hallucinations	Hallucinations are a positive symptom of schizophrenia and are unusual or unexplained sensations, which are most commonly heard (auditory, and typically voices), but can be seen, smelt, touched or tasted. Auditory hallucinations occur in 50% of people with schizophrenia.
Interactionist Approach	Psychologists who use an interactionist approach to explain schizophrenia suggest that it is caused by a combination of psychological and biological influences. For example, the diathesis-stress model is an example of an interactionist approach, as it suggests that stressful life events might act as a trigger for schizophrenia in individuals who are biologically vulnerable to develop the disorder (e.g. due to genetic factors). This model is able to explain why not everyone with a genetic vulnerability to schizophrenia goes on to develop the disorder.

Negative Symptoms: Schizophrenia	Negative symptoms of schizophrenia reflect loss of previous feelings and abilities. Examples include avolition (reduction in the motivation to initiate and perform self-directed purposeful activities) and speech poverty (the amount of speech is greatly reduced and may sometimes be vague or repetitious).
Neural Correlates: Schizophrenia	Neural correlates are changes in neuronal events and mechanisms that result in someone exhibiting the symptoms of a particular disorder (e.g. schizophrenia). The main neural correlates of schizophrenia are related to dopamine activity. For example, the revised dopamine hypothesis proposed by Davis and Kahn (1991) suggests that the positive symptoms of schizophrenia are caused by an excess of dopamine in subcortical areas of the brain (mainly in the mesolimbic pathway). In contrast, the negative and cognitive symptoms of schizophrenia are believed to occur because there is too much dopamine in areas of the prefrontal cortex (mesocortical pathway).
Positive Symptoms: Schizophrenia	Positive symptoms of schizophrenia reflect new or unusual forms of thought and behaviour. Examples include delusions (false and often bizarre personal beliefs held with very strong conviction) and hallucinations (unusual or unexplained sensations).
Psychological Explanations: Schizophrenia	Psychological explanations for schizophrenia focus on explaining how it might be caused by either family dysfunction (e.g. double-bind theory) or by cognitive factors (e.g. faulty information processing).
Reliability in Diagnosis: Schizophrenia	Reliability in the diagnosis of schizophrenia refers to the consistency in diagnosis. A diagnostic system is reliable if people using it consistently arrive at the same diagnosis. One way of testing reliability, involves seeing whether different clinicians agree on the same diagnosis for the same patient. For example, Beck et al. (1962) reported a 54% correlation between experienced practitioners' diagnosis when assessing 153 patients using DSM. Another way to assess reliability is to examine the same patient two or more times, and see whether they consistently receive the same diagnosis. This is called test-retest reliability. This type of reliability is calculated mathematically, and one measure is known as the PPV. This is simply the proportion of people that retain the same diagnosis over time and is expressed as a percentage. For example, Baca-Garcia et al. (2007) looked at 2,322 patients assessed at a Spanish psychiatric hospital between 1992 and 2004, initially assessed as having schizophrenia. All patients in this study were assessed at least 10 times. The PPV for schizophrenia was 69.6%.
Speech Poverty	Speech poverty is a negative symptom of schizophrenia. With speech poverty the amount of speech is greatly reduced and sometimes it can be vague or repetitious.
Symptom Overlap	System overlap refers to the fact that many of the symptoms (positive and negative) shown by people suffering from schizophrenia are also shown by people suffering from other disorders, such as depression and bipolar

	<p>disorder. For example, schizophrenia and bipolar disorder both share positive symptoms like delusions, and negative symptoms like avolition. This lack of distinction calls into question the validity of both the classification and the diagnosis of schizophrenia. For example, Ellason and Ross (1995) found that people with dissociative identity disorder (DID) actually had more symptoms of schizophrenia than people diagnosed with schizophrenia. This makes it difficult to make a valid diagnosis of schizophrenia, as most people who are diagnosed with schizophrenia have sufficient symptoms of other disorders that they could also receive at least one other diagnosis. Some people have argued that the system overlap between schizophrenia and bipolar disorder may mean they are not two different conditions, but in fact one and the same.</p>
<p>Token Economies: Schizophrenia</p>	<p>According to the principles of operant conditioning, token economies can be used to manage the symptoms of schizophrenia. In the first stage of the treatment, individuals with schizophrenia would be rewarded for not displaying any behaviour that would be considered strange or bizarre. As the treatment progresses, they are rewarded for performing actions which society would consider 'normal'. Such behaviours might include making their bed, combing their hair or washing. They are positively reinforced for their 'normal' behaviour with 'tokens' that allow them to (for example) watch a film; buy special types of food like chocolate; sleep in a private room or listen to music. This 'reward' should make the individual more likely to repeat the behaviour in the future.</p>
<p>Typical Antipsychotics</p>	<p>Typical antipsychotics (e.g. chlorpromazine) are first-generation (earlier developed) drugs used to treat schizophrenia. They reduce neurotransmission by attaching to dopamine receptors and thereby blocking dopamine from binding to the receptors. Therefore, they reduce the dopamine activity at the synapse and help alleviate the positive symptoms of schizophrenia, as well as helping cognitive functioning and behaviour. However, chlorpromazine in particular has been linked with unwelcome side-effects, such as slowing of movement, emotional 'numbness' and a flatness of feeling (affective indifference).</p>
<p>Validity in Diagnosis: Schizophrenia</p>	<p>Validity in the diagnosis of schizophrenia refers to whether the diagnosis is accurate or not. Factors such as co-morbidity (person having more than one disorder), symptom overlap (symptoms of schizophrenia are also the symptoms of other disorders), gender bias (diagnosis based on gender stereotypes) and culture bias (lack of understanding of cultural norms) can all affect the validity of a diagnosis.</p>

EATING BEHAVIOUR	The eating behaviour topic examines behaviours related to eating. This includes normal behaviours (e.g. explanations for food preferences, neural and hormonal mechanisms involved in controlling eating) or abnormal behaviours (e.g. eating disorders, such as anorexia nervosa and obesity).
Anorexia Nervosa	Anorexia nervosa comes from two Latin words that mean nervous and inability to eat. It is an eating disorder that is characterised by an unrealistic fear of weight gain, self-starvation, and distortion of body image.
Autonomy	Autonomy refers to a state of independence and self-determination. Minuchin argued that in enmeshed families the members are over-involved with one other and consequently children are not allowed to develop autonomy. This may lead to anorexia nervosa as the child exerts control over their eating.
Biological Explanations: Anorexia Nervosa	Biological explanations for anorexia nervosa focus on physiological factors such as genes, brain structure or faulty neurotransmitters.
Biological Explanations: Obesity	Biological explanations for obesity focus on physiological factors such as genes, brain structure or faulty neurotransmitters.
Boundary Model	The boundary model was proposed by Herman and Polivy (1984) to explain how restrained eating can lead to unsuccessful dieting (and potentially obesity). It suggests that many diets fail due to the disinhibition of restraint effect (also known as the 'what the hell' effect). This is where a person passes through their self-imposed restraint, often in response to emotional distress, intoxication or pre-loading (eating something considered to be fattening), and therefore continues to eat more than they usually would. Herman and Policy also claim that restrained eaters have a larger zone of biological indifference, which means they feel hungry more easily and then take longer to feel full. It is claimed that dieters set themselves a cognitive diet boundary, which limits what they can eat. If they ever cross this boundary (e.g. eating chocolate) the 'what the hell effect' kicks in and they will then continue to eat until they are full and reach their physiological boundary, which is higher than for non-restrained eaters.
Cognitive Theory: Anorexia Nervosa	The cognitive theory of anorexia nervosa focuses on information processing in individuals with anorexia nervosa, and how their thoughts and feelings affect their behaviour. Cognitive theories suggest that those with anorexia nervosa develop faulty schemas during their early years that distort reality. This leads them to develop distortions and irrational beliefs about body image, which they deal with by not eating, in an attempt to lose weight.
Control: Eating Behaviour	According to Minuchin, enmeshed families tend to be overprotective and show a high degree of control. This means that children may feel unable to have any influence over their lives and in adolescence they may rebel against this by refusing to eat.
Cultural Influences: Food Preference	Culture refers to the ideas, behaviours, attitudes, and traditions that exist within a large group of people. These ideas, behaviours, traditions, etc. are passed down from one generation to the next and are often resistant to

	<p>change. Different cultures have different ideas and attitudes regarding food. The general population in the UK tends to eat meat, fish, shellfish, vegetables and fruits, but some groups have the belief that eating certain foods is wrong. For example, to Hindus the cow is a sacred animal and so beef, to them, is not a food. Jews have religious laws forbidding them to eat pork and shellfish, so these are also not viewed as food. These examples illustrate how culture influences food preference. Furthermore, there are cultural differences in the way that people eat, which again influences food preference. There can also be changes within a culture over time and in societies like the US and the UK, there has been a move towards 'grazing' rather than sitting down and eating meals and also an increased preference for convenience foods and takeaway meals.</p>
Disinhibition: Eating Behaviour	<p>Disinhibition is the tendency to overeat in response to particular stimuli, for example when an individual is presented with lots of tasty food or when they are emotionally distressed. This means that the normal inhibitions that prevent overeating are removed, making people more likely to overeat, which can then lead to obesity.</p>
Distortions	<p>Cognitive distortions are inaccurate or exaggerated thought patterns that are unsupported. People with anorexia often show distorted thinking about food, weight, and body image. Examples of distortions include catastrophizing (e.g. believing that if they gain weight, no one will like them), or all-or-nothing thinking (e.g. believing that they are a failure because they ate too much in a day).</p>
Enmeshment	<p>Enmeshment is a concept introduced by Minuchin to describe family members who are over-involved with one other. Consequently, no-one has a clear identity because the family does everything together. This means that children are not allowed to be independent and develop autonomy, so anorexia may be a way for the children to exert some control. It is also suggested that enmeshed families find it difficult to deal with conflict. This creates anxieties which parents may cope with by focusing on their 'ill' child.</p>
Evolutionary Explanations: Food Preference	<p>Evolutionary explanations for food preferences focus on the adaptive benefits that certain foods would have offered our ancestors who lived in a very different environment from us. Having an innate preference for certain foods (e.g. those that were highly nutritious and had a high calorific value) would have increased the chances that an individual would survive, reproduce and pass on their genes to their offspring.</p>
Family Systems Theory	<p>Family systems theory was first introduced by Bowen in the 1950s and is a theory of human behaviour that views the family as an emotional unit. The theory suggests that you cannot understand an individual in isolation, and need to consider the rest of their family. This approach has been applied to anorexia nervosa by Minuchin et al. (1978). They developed the psychosomatic family model, which states that dysfunctional families</p>

	(e.g. those characterised by enmeshment) can trigger anorexia nervosa in a child who is already physiologically vulnerable.
Genetic Explanation: Anorexia Nervosa	Genetic explanations for anorexia nervosa suggest that genetic factors predispose people to develop this eating disorder. Research has shown that anorexia has a tendency to run in families and concordance rates for identical (MZ) twins are higher than for non-identical (DZ twins). For example, Thornton et al. (2010), found 74% concordance for anorexia nervosa in MZ twins, compared with 28% for DZ twins.
Genetic Explanations: Obesity	Genetic explanations for obesity suggest that obesity is determined by a person's genetic makeup: it is inherited from parents. Twin studies investigating the heritability of obesity have reported correlations of between approximately 40% and 75%. In addition, an evolutionary explanation for obesity, known as 'the thrifty gene hypothesis', has been proposed by Neel (1962). Neel suggests that for our ancestors, those who ate lots of food when it was plentiful (and were then able to hold reserves of body fat to use up when food was scarce) would be more likely to survive and pass on their genes. However, these genes no longer provide an adaptive advantage because they promote overeating and the deposit of fat, leading to widespread obesity.
Ghrelin	Ghrelin is a hormone that is known as an appetite increaser. It is released in the stomach and stimulates the hypothalamus to increase appetite. If a person's bodily resources are low, or if they are not eating enough, this leads to an increase in ghrelin levels. Ghrelin levels go up when we are hungry, and then decrease for about three hours after we have eaten a meal.
Hormonal Mechanisms: Eating	Hormonal mechanisms have been linked to eating behaviour. Hormones are chemical messengers secreted by glands. These messengers are sent from one part of the body to affect cells in another part of the body. Hormones travel in the bloodstream and can have a wide range of effects on behaviour. Ghrelin and leptin are examples of hormones that are involved in the control of eating behaviour.
Hypothalamus	The hypothalamus is located in the limbic system and is involved in homeostasis (the way in which an organism maintains a balanced internal environment). In relation to eating behavior, there are different mechanisms which detect the state of the internal environment (e.g. whether the body has enough nutrients) and correct/restore that environment to its optimal state. A decline in glucose levels in the blood activates the lateral hypothalamus (the 'on' switch), which causes hunger and leads the person to search for food and eat. This means that glucose levels rise, which then activates the ventromedial hypothalamus (the 'off' switch), leading to feelings of satiation (feeling full), so the person stops eating.
Irrational Beliefs	Irrational beliefs are illogical, incorrect or distorted ideas that are firmly held by a person despite there being clear, objective and contradictory

	evidence to show otherwise. Individuals suffering from anorexia nervosa often hold faulty beliefs about themselves and the world around them, for example believing they must be thin for other people to like them.
Learning of Food Preferences	Some food preferences may be acquired through learning, rather than being innate. Humans often learn what is good or not good to eat from those around them (e.g. parents and peers). Parents have a large influence on food preferences, as they buy and serve the food that young children eat. They also positively reinforce children for eating certain foods (operant conditioning). Children may also learn their food preferences through social learning. They may observe and imitate their peers, or their preferences may be shaped by media advertising.
Leptin	Leptin is a hormone, known as the 'satiety hormone', because it plays an important role in appetite and weight control. It is mostly produced in white fat deposits in the body and secreted into the bloodstream, where it travels to the hypothalamus in the brain and decreases appetite. Leptin is thought to have two major functions; by binding to receptors in the hypothalamus, it counteracts the effects of neuropeptide Y (a neurotransmitter secreted by the hypothalamus that is believed to be important in stimulating appetite); and it also increases sympathetic nervous system activity, stimulating fatty tissue to burn energy.
Media	Media refers to methods of communication, such as television, newspapers and the Internet. The media is believed to be a major source of influence for body image attitudes shown by Western adolescents. Research has found that the portrayal of thin role models on television and in magazines is a significant contributory factor in body image concerns and pressure for Western adolescent girls to want to be thin. For example, Grabe et al. (2008) found that exposure to media images depicting the 'ideal' thin body is related to body image concerns for women. This may lead to dieting which then triggers anorexia nervosa.
Modelling: SLT	Modelling is a process that occurs during social learning. Modelling occurs when an observer imitates a role model. For example, a person might go on a diet because they want to be as thin as their favourite celebrity, and this might lead to anorexia nervosa.
Neophobia	Neophobia is a tendency to dislike anything new; in relation to eating behaviour it is a tendency to reject new or unusual foods. Evolutionary psychologists suggest this is a naturally occurring reaction that helps protect animals (including humans) from the risk of being poisoned through eating something harmful. This would increase survival chances, especially for animals like humans that eat a varied diet. It has been found that neophobia is much less common in animals that eat a restricted number of foods (e.g. koalas), than it is for those that eat a broad and varied diet (e.g. rats).

<p>Neural Explanations: Anorexia Nervosa</p>	<p>Neural explanations for anorexia nervosa focus on areas of the brain and nervous system, and the action of neurotransmitters that might be responsible for anorexia. For example, research by Lipsman et al. (2015) found that dysfunction in the subcallosal cingulate and the insular cortex (parts of the limbic system in the brain) can lead to deficits in emotional processing, which may cause some of the pathological thoughts and behaviours shown by a person with anorexia nervosa. In terms of neurotransmitters, research by Kaye et al. (2005) has found overactivity in dopamine receptors in the basal ganglia to be linked to anorexia nervosa. Serotonin is another neurotransmitter implicated in anorexia nervosa, and it is believed that disruption of serotonin levels may lead to increased anxiety, which can then trigger the eating disorder.</p>
<p>Neural Explanations: Obesity</p>	<p>Neural explanations for obesity assume that obesity is the result of physical differences in the brain. In obesity, problems with neural circuits and imbalances in brain chemistry have been implicated. For example, the arcuate nucleus (a collection of neurons in the hypothalamus) is responsible for monitoring sugar levels in the blood. The arcuate nucleus is activated when energy levels become low, sending messages that produce the desire to eat. This means that if there is any malfunction in this area, overeating and obesity can occur.</p>
<p>Neural Mechanisms: Eating</p>	<p>Neural mechanisms are structures such as neurons, neural circuits and regions of the brain. They are also substances such as neurotransmitters. The hypothalamus is an example of a neural mechanisms involved in the control of eating behaviour.</p>
<p>Obesity</p>	<p>Obesity is a medical condition where an individual's excess body fat may have a negative effect on their health. People are generally considered obese when their body mass index (BMI) is 30 or more.</p>
<p>Psychological Explanations: Anorexia Nervosa</p>	<p>Psychological explanations for anorexia nervosa focus on anorexia being caused or triggered by dysfunctional families (e.g. family systems theory); social learning (observation and imitation of role models); and cognitive factors (irrational beliefs and distortions).</p>
<p>Psychological Explanations: Obesity</p>	<p>Psychological explanations for obesity focus on obesity being caused by factors such as restrained eating (denying yourself certain foods) and disinhibition (overeating in response to stimuli such as emotional distress).</p>
<p>Reinforcement: SLT</p>	<p>Reinforcement refers to anything that strengthens a response and increases the chance that it will occur again in the future. In social learning theory, reinforcement can be direct (e.g. someone being rewarded with praise if they lose weight) or indirect (e.g. seeing someone else being rewarded with praise for losing weight). This is also known as vicarious reinforcement, and observing the consequences of a role model's behaviour makes it more likely that this behaviour will be imitated in the future. Seeing role models being praised for being very thin might lead someone to diet and then develop anorexia nervosa.</p>

Restraint Theory	Restraint theory is a cognitive explanation for obesity proposed by Herman and Mack (1975). Restraint theory suggests that restraint (or trying not to eat) actually leads to overeating. People who use self-control processes to try to suppress their food intake are referred to as restrained eaters, and restraint theory suggests that if these self-control processes are undermined by stressful events, disinhibition of eating is more likely to occur. This leads to an excessive intake of food, that is sometimes known as the 'what the hell' effect. This is because the person thinks that they may as well continue eating now they have started.
Social Influences: Food Preference	Social influences on food preference include family (especially parents) and peers. Children observe the food preferences of their parents and research has shown there to be an association between parents' and children's general attitudes towards foods. Parents also provide the food that young children eat, and often positively reinforce their children for eating certain foods (operant conditioning). They may also reward children with certain foods (e.g. sweets) for producing certain behaviours, and this will also influence food preference. The behaviour of same-age peers also has an important impact on the food preferences of children.
Social Learning Theory: Anorexia Nervosa	Social learning theory states that we learn behaviours (including eating behaviours) by imitating successful role models. SLT states that observational learning can take place, and that this is reinforced vicariously. Vicarious reinforcement occurs when we see another person (the role model) rewarded for a particular behaviour. This observation of the consequences of their behaviour makes it more likely a person will imitate their behaviour. In relation to anorexia nervosa, important role models might be mothers, peers or celebrities in the media. Research has shown that mothers who complain about their weight are more likely to have children who have their own weight concerns. It has also been shown that the portrayal of thin models on television and in magazines is a significant contributory factor in body image concerns and pressure for Western adolescent girls to want to be thin. For example, Grabe et al. (2008) found that exposure to media images depicting the thin-ideal body is related to body image concerns for women.
Success and Failure of Dieting	Dieting refers to the act of placing a cognitive limit on food intake (e.g. deciding to eat fewer than 1,500 calories a day) and attempting to eat only to this limit, which is less than the person would normally eat. It tends to occur as a result of body dissatisfaction and can lead to either success (the person loses weight and doesn't put it back on) or failure (either the person fails to lose weight or they lose some weight but then put it back on). Explanations for the success of dieting include paying attention to detail and social support. Explanations for the failure of dieting include the boundary model and the theory of ironic processes of mental control.
Taste Aversion	Taste aversion is a learned response to eating food that is toxic, poisonous spoiled, or poisonous. It is based on classical conditioning: if an animal eats food that make them sick, they will then avoid eating that food in the

	<p>future as they associate it with illness. It was first tested in the laboratory by Garcia et al. (1955), who found that rats that had been made ill through radiation shortly after eating saccharin developed an aversion to it. Being able to quickly develop taste aversions increases the chances of an animal or human surviving, reproducing and passing on their genes to their offspring.</p>
--	--

NOTES

A series of horizontal dotted lines for writing notes.

STRESS	The stress topic examines the biological and psychological responses to stress, which is experienced when humans face with a perceived threat. A stressor is a stimulus (or threat) that causes the stress response, e.g. an exam, a relationship breakdown or moving house.
Benzodiazepines	The most commonly prescribed anti-anxiety drug belongs to a family of drugs known as benzodiazepines (BZs). These are known as minor tranquillizers, and include trade names such as Librium and Valium. Anti-anxiety drugs decrease arousal and relax the body by reducing tension in the muscles. Since the stress response involves high arousal, benzodiazepines may, in some cases, reduce stress.
Beta Blockers	Long-term stress is often accompanied by high blood pressure, which can lead to hypertension and heart disease. Beta-blockers are a type of drug that slows the heart and reduce the strength of the heart contractions, thereby reducing blood pressure. They block receptors in the heart that are stimulated by noradrenaline, which in turn decreases sympathetic nervous system activity, helping an individual to stay calm and relaxed.
Biofeedback	Biofeedback is a technique that transforms some aspect of physiological behavior, (e.g. heart rate and blood pressure), into electrical signals which the person is able to see/hear. For example, they might be attached to a machine that produces an auditory or visual signal to indicate whether their heart rate is too high. A person is then trained to acquire some control to reduce their heart rate.
Cardiovascular Disorders	Cardiovascular disorders are disorders of the heart (e.g. coronary heart disease - CHD); of the circulatory system (e.g. high blood pressure); and can cause as strokes (where blood flow is restricted to parts of the brain). These disorders are linked to stress, due to the activation of the sympathetic branch of the autonomic nervous system, leading to an increase in adrenaline. High levels of adrenaline increase heart rate, which causes further strain on the heart. This can lead to high blood pressure, which can cause the blood vessels to wear away. It can also dislodge plaque on the walls of blood vessels, leading to blocked arteries, which can cause heart attacks and strokes.
Challenge	Welcoming a challenge is one of the characteristics of the hardy personality and refers to the tendency to view changes as opportunities for growth, rather than threats to security. People who welcome change as a challenge are less likely to perceive events as stressors, so are likely to experience lower levels of stress.
Commitment: Stress	Commitment is one of the characteristics of the hardy personality and refers to a person's sense of purpose or involvement in the events, activities and people in their life. People who have a sense of commitment and purpose in their work and social lives are less likely to perceive events as stressors, so are likely to experience lower levels of stress.

Control: Stress	Control is one of the characteristics of the hardy personality and refers to the person's belief that they can influence events in their life. People who feel more in control of their lives are less likely to perceive events as stressors so are likely to experience lower levels of stress. Control is also related to workplace stress and refers to the extent to which a person feels able to manage aspects of their work, such as deadlines and work environment. Research has shown that workers with less control over their work are more likely to show symptoms of stress. For example, Marmot et al (1997) conducted 'The Whitehall study', where they investigated over 10,000 civil servants and found low job control to be linked to coronary heart disease (CHD).
Cortisol	Cortisol is a stress hormone: it is a corticosteroid and is released by the adrenal cortex in response to a stressor. This hormone has a number of functions, including releasing stored glucose from the liver (for energy) and controlling swelling after injury. However, cortisol also suppresses the immune system.
Drug Therapies: Stress	Stress is sometimes accompanied by anxiety and depression, and drugs can be used to treat these disorders. Benzodiazepines (BZs) and beta-blockers are examples of drug therapies used to reduce stress.
Emotional	Emotional social support is when someone becomes aware of the emotions that a stressed individual is showing, and tries to offer comfort and support. This may involve listening to them, or offering advice regarding how to reduce their emotions/stress. Friends and family often offer this kind of support.
Esteem	Esteem social support occurs when someone else makes a stressed individual feel better about themselves, leading to a reduction in their feelings of being stressed. Esteem support should increase the self-esteem of the person, resulting in an increase in their feelings of self-worth, confidence and ability to cope. A loved one often offers this kind of support.
General Adaption Syndrome	Selye argued that stressors produce the same reaction in all animals (including humans). He called this the General Adaptation Syndrome (GAS), and identified three main stages: 1) alarm - the body is mobilized for swift 'fight or flight' responses; 2) resistance - if a stressor persists, the release of hormones from the pituitary gland and the adrenal cortex increases and the alarm symptoms of the first stage subside, giving the appearance of a return to normal physiological functioning; 3) exhaustion - if the stressor persists for longer than the body's defences can cope with, then the adrenal glands cease to function normally and there is a drastic fall in blood sugar levels.
Hardiness	Kobasa (1979) claimed that people with a certain personality type, known as hardiness, are less likely to perceive events as stressful and so are likely to experience lower levels of stress.

	She found that the personal beliefs of control, commitment and challenge could be described as a 'hardy personality', e.g. someone who is better equipped to deal with stress.
Hassles and Uplifts Scale	According to Kanner et al. (1981), daily hassles are irritating, frustrating and distressing demands that humans face on a day-to-day basis. In contrast, uplifts are things like getting on well with other people, completing a task, or getting enough sleep, which give people a boost and make them feel better. The hassles and uplifts scale (HSUP) was devised by DeLongis et al. (1982) to measure people's attitudes towards daily situations. The HSUP provides a way of evaluating both the positive and negative events that occur in a person's daily life, rather than the more serious life events.
Hypothalamic Pituitary-Adrenal System (HPA Axis)	The hypothalamic pituitary adrenal system (HPA axis) is a system that directly influences the endocrine system to activate the stress response. When the brain interprets a stressor, the hypothalamus produces a hormone called CRF (corticotropin releasing hormone), which stimulates the pituitary gland to secrete ACTH (adrenocorticotrophic hormone), which stimulates the adrenal cortex, part of the adrenal glands. The adrenal cortex then secretes corticosteroids, which help to increase energy levels.
Immunosuppression	Immunosuppression is the suppression of the body's immune system. This is supported by a system of cells that is concerned with attacking viruses and bacteria so they cannot infect the body. If someone is dealing with an ongoing stressor, the HPA system becomes active, which leads to the production of cortisol. Cortisol reduces the body's immune response, making it more likely that a person will become ill.
Instrumental	Instrumental social support is when someone offers practical help to a stressed individual. This problem-focused social support may be offered by anyone, not just a person's family or friends.
Measuring Stress	Psychologists who want to conduct research into stress need to find a method to measure stress. Some research has used physiological measures of stress, such as skin conductance response, whereas other research has used self-report scales, where the participants complete questionnaires. Two examples are the social readjustment rating scale (SRRS) and the hassles and uplifts scale (HSUP).
Personality: Stress	There are individual differences in the way that people react to stress and some people seem to be able to face horrendous stressors and still remain relatively healthy. Such differences could be down to personality, which is defined as our characteristic ways of behaving, thinking, feeling, reacting and perceiving the world. Some psychologists argue that personality determines a person's behaviour patterns and research has found that some personality characteristics make some people more vulnerable to the negative effects of stress, (e.g. Type A and Type C), whereas other personality characteristics make some people more resistant (e.g. Type B and the Hardy Personality).

Physiology of Stress	The physiology of stress refers to the biological processes in the human stress response. This includes the general adaptation syndrome (GAS); the hypothalamic pituitary-adrenal system (HPA); the sympathomedullary pathway (SAM pathway), and the role of cortisol.
Skin Conductance Response	Skin conductance response is a measurement of the electrical conductivity of the skin. This is a measure of stress because skin conductivity increases when sweat is produced, and this can occur due to the arousal of the sympathetic nervous system (which is activated as a result of stress).
Social Readjustment Rating Scale	The social readjustment rating scale (SRRS) was developed by Holmes and Rahe (1967), two medical doctors who noted a link between stressful life events and illness. In order to create a scale to measure this link, Holmes and Rahe constructed a list of stressful events and asked a sample of nearly 400 people to rate them in terms of their severity. Holmes and Rahe then took an average of each rating to form the SRRS (e.g. death of a spouse = 100, marriage = 50, fired from work = 47, son or daughter leaves home = 29 etc.). These numbers are known as life change units. When the scale is used in research, participants are asked to check off any of the 43 life events they have experienced over a given time period (e.g. 12 or 6 months). The scores are then totalled and used as an index for the amount of life stress the participant has experienced.
Social Support: Stress	Social support refers to the help that people may receive from other people (family, friends and sometimes strangers) during times of stress. Different types of social support can be offered: instrumental (practical help); emotional support (comfort to help deal with negative emotions); and esteem support (making the person feel better about themselves).
Sources of Stress: Daily Hassles	According to Kanner et al. (1981) daily hassles are a source of stress that include irritating, frustrating and distressing demands that people face on a day-to-day basis. Examples of daily hassles could include concerns about weight, health of a family member, rising prices, home maintenance, too many things to do, misplacing or losing things and physical appearance, or all of the above.
Sources of Stress: Life Changes	Life changes are a source of stress; they include major events (e.g. divorce or moving house) that require people to make large adjustments. Holmes and Rahe (1967) developed the social readjustment rating scale (SRRS) in order to measure the amount of life change a person has experienced in a given time period.
Stress and Illness	It has long been noted that stress is related to illness. Short-term stressors lead to the production of adrenaline, which is linked to cardiovascular disorders. Long-term stressors lead to the production of cortisol, which has been linked to immunosuppression, which leaves the body open to viruses and bacteria.
Stress Inoculation Therapy	Stress inoculation therapy is a cognitive behavioural approach to stress management developed by Donald Meichenbaum (1977). He argued that

	<p>just as people can be inoculated against a flu virus, they could also be inoculated against stress and become stress-resistant. Stress inoculation therapy involves three phases: 1) conceptualization - using the cognitive interview to identify and clarify the nature of the person's stress and to educate them about the nature and effects of stress, and how stress inoculation works; 2) skills acquisition - where the person learns a series of skills for dealing with stressful situations; and 3) rehearsal and follow through or application - where the person puts into practice what they have learned.</p>
Sympathomedullary Pathway (SAM Pathway)	<p>The sympathomedullary pathway (SAM pathway) is the route through which the brain directs the sympathetic branch of the autonomic nervous system (ANS) to activate in response to short-term stress. The hypothalamus activates the sympathetic branch of the ANS, which then signals the adrenal medulla to secrete adrenaline and noradrenaline. The sympathetic nervous system itself has direct connections to the heart and activation speeds up heart rate and raises blood pressure. These effects are increased and sustained by the release of adrenaline and noradrenaline. The end result is that oxygen is rapidly pumped to the muscles allowing for increased physical activity. As a result of all this the person is ready for 'fight or flight'.</p>
Type A	<p>Type A personality refers to a pattern of behaviours and attitudes that have long been linked to a vulnerability to stress related illness. The concept evolved from work by Friedman and Rosenman (1974), who found that a particular pattern of behaviour (Type A) seemed to be associated with a vulnerability to heart disease. Someone with a Type A personality experiences constant time pressure, competitiveness in work and social situations, and anger.</p>
Type B	<p>Type B personality refers to a pattern of behaviours that are the opposite of Type A behaviours. The main characteristics are having an easygoing, relaxed and patient approach to life and Friedman and Rosenman (1974) found that people with this personality type seemed to be less vulnerable to heart disease.</p>
Type C	<p>People with a Type C personality suppress emotions, particularly negative ones and are unassertive, likeable people who rarely get into arguments and are generally helpful to others. It has been suggested that Type C individual's cope with stress in a way that ignores their own needs, even physical ones, in order to please others. This eventually has negative effects as all stresses are suppressed but still take their toll. It is thought that emotional suppression is associated with increased stress and lowered effectiveness of the immune system and illness.</p>

AGGRESSION	Aggression refers to a range of behaviours that can result in both physical and psychological harm to oneself, other people, or objects in the environment. The expression of aggression can occur in a number of ways including physically, verbally, mentally and emotionally. Psychologists also distinguish between two different types of aggression: impulsive aggression (typically unplanned and characterised by strong emotions, normally anger); and instrumental aggression (usually carefully planned with the intention of achieving a goal).
Cognitive Priming	Cognitive priming was first proposed by Berkowitz (1984) to explain the short-term effects of media violence. This is because 'priming' refers to a temporary increase in the accessibility of thoughts and ideas. Berkowitz suggested that if people are exposed to violent media (e.g. films, video games), this activates thoughts or ideas about violence, which then activate (or prime) other aggressive thoughts due to their association in a person's memory pathways. Therefore, if a person is watching a film in which a character 'kills' another characters, this may prime thoughts of physical violence, which may then lead to feelings of anger and wanting to harm another person.
De-Individuation	De-individuation is a social psychological explanation for aggression. De-individuation theory was first introduced by Zimbardo (1969), who suggested that de-individuation occurs when people who are part of a relatively anonymous group, lose their personal identity and consequently their inhibitions in relation to violence. According to Diener (1980), deindividuation occurs as a result of four factors: 1) poor self-monitoring of behaviour; 2) reduced need for social approval; 3) reduced inhibitions against behaving impulsively; and 4) reduced rational thinking.
Desensitisation	Desensitisation refers to the way that in which people become less anxious and shocked by media violence, as a result of exposure. The more violence someone is exposed to (through watching TV, films, or by playing violent video games), the more acceptable aggressive behaviour becomes. The result is that individuals may be more likely to accept violence and aggression and may be more likely to respond violently and aggressively, when presented with the opportunity to do so.
Disinhibition: Aggression	Disinhibition is a theory which explains how the media can influence aggression. It proposes that our normal restraints are loosened after exposure to media violence (e.g. films, TV, video games). Aggressive behaviour then becomes normalised and these norms govern a person's behaviour, which is altered from non-acceptance to acceptance. This means that aggression is then seen as a 'normal' response in certain circumstances. One aspect of aggression that is often normalised is an aggressive response as a result of a real or imagined wrongdoing. If the viewed aggression is seen as a revenge response, this is deemed to be 'normal', and thus it is justified.

Dispositional Explanations: Aggression	Dispositional explanations for institutional aggression, in the context of prisons, suggest that aggression occurs as the result of individual characteristics that prisoners bring into the institution. One example is the Importation Model, which suggests that prisoners bring (import) their own social histories and personality traits into the prison and this influences their behaviour.
Ethological Explanation: Aggression	An ethological explanation seeks to understand the innate behaviour of animals (including humans) by studying them in their natural environment. The focus of an ethological explanation is to try and account for behaviour in terms of its adaptive value to the specific species. With regard to aggression, which is seen in all animal species, it is believed to be an innate behaviour that has an adaptive function. Aggression can aid survival, as it can be used to protect resources such as land and food. Aggression can establish dominance hierarchies, and these are vital to allow access to other resources, such as females. The ethological explanation proposes that aggression can be the result of an evolved automatic biological response in the brain; it is believed that animals have a built-in neural structure (a network of neurons) which, when exposed to specific stimuli (signs or releasers), such as facial expressions, will cause the release of an automatic behavioural response.
Evolutionary Explanations: Aggression	Evolutionary explanations of aggression suggest that aggression serves an important function in terms of both individual survival as well as reproductive potential. Competition arises when resources are limited and animals must compete in order to survive and reproduce. Some behaviours, such as aggression, would have made it more likely that our ancestors survived and passed on their genes. This means that aggression has an adaptive purpose because it facilitates survival and adaptation to the environment. Males who used aggression would have been successful in securing and retaining mates, as they could fight any rivals and prevent their mates from sexual infidelity; consequently, they would be more likely to pass on their genes.
Fixed Action Patterns	Fixed action patterns are behavioural sequences that occur as a result of innate releasing mechanisms. For example, when a dog sees a cat running away from them, they have an instinctive response to chase the cat. When the cat is still, the innate releasing mechanism is not activated; however, it is the cat running that activates the innate releasing mechanism. Consequently, the dog chasing the cat is an example of a fixed action pattern which is activated by an innate releasing mechanism. The dog's desire to chase is automatic and instinctual in response to a cat or any other small animal running away.
Frustration-Aggression Hypothesis	The frustration-aggression hypothesis was developed by Dollard et al. (1939) and is based on the psychodynamic explanation of catharsis. Freud believed that the drive for aggression was innate, like the drive for food. He believed that the only way to reduce aggression is to engage in an activity which released it. Dollard et al. (1939) claim that when humans experience

	frustration, this leads to aggression; the aggression is a cathartic release of the frustration. Furthermore, Dollard explains that if an individual is prevented from achieving a goal by some external factor, then this will lead to frustration, which will always lead to aggression.
Genetic Factors: Aggression	The genetic explanation for aggression suggests that aggression is an inherited behaviour. Early genetic explanations focused on chromosomal abnormalities. Specifically, in the 1960s, the XYY genotype was believed by many to be correlated with aggression. More recently, research has focused on a defect in the MAOA gene, which is linked to aggression.
Hormonal Mechanisms: Aggression	Hormonal mechanisms have been linked to aggression. Hormones are chemical messengers secreted by cells or glands; testosterone is the main hormone that has been implicated in aggressive behaviour.
Innate Releasing Mechanisms	The ethological explanation proposes that aggression can be the result of an evolved automatic biological response in the brain. It is believed that animals have a built-in neural structure (a network of neurons) which, when exposed to specific stimuli (signs or releasers) such as facial expressions, will cause the release of an automatic behavioural response (a fixed action pattern). This inbuilt biological structure or process is called the innate releasing mechanism (IRM). For example, when a dog sees a cat running away from them, they have an instinctive response to chase the cat. When the cat is still, the innate releasing mechanism is not activated; however, it is the cat running that activates the innate releasing mechanism. Consequently, the dog chasing the cat is an example of a fixed action pattern which is activated by an innate releasing mechanism. The dog's desire to chase is automatic and instinctual in response to a cat or any other small animal running away.
Institutional Aggression	Institutions are places where there are strict rules that give little choice to members of that institution. Examples include the armed forces, prisons, and mental institutions. Institutional aggression refers to aggressive behaviours adopted by members of an institution; for example prisoners may form gangs that commit violence against other inmates. Psychologists are interested in whether institutional aggression is caused by the personalities of the institution's members (dispositional factors), or by the situation in which the members find themselves (situational factors).
Limbic System	The limbic system is part of the brain that includes structures such as the amygdala, hypothalamus, and hippocampus that are implicated in reactive aggression. Reactive aggression is a response to a perceived threat, as opposed to proactive aggression, which is a response in anticipation of a reward. The limbic system also connects to the cingulate gyrus, which is responsible for focusing attention on emotionally significant events. In addition, the limbic system has connections to the prefrontal cortex which is involved in forward planning and anticipation of reward.

	The limbic system plays a key role in how an organism responds to environmental threats and challenges and thus is believed to be the key factor in whether we respond aggressively or not to an external stimulus.
MAOA Gene	Monoamine oxidase A (MAOA) is an enzyme that breaks down important neurotransmitters in the brain, including dopamine and serotonin; low levels of serotonin have been associated with impulsive and aggressive behaviour. MAOA is regulated by the MAOA gene and humans have various forms of the gene, resulting in different levels of activity of the enzyme. One variant of the gene is associated with high levels of MAOA (MAOA-H) and another variant is associated with low levels (MAOA-L). Several studies have now found a correlation between the low-activity form of the MAOA gene and aggression.
Media Influences: Aggression	Media influences are changes in behaviour that are attributed to exposure to media such as films, TV and video games. Psychologists are interested in how and why media violence influences aggression and three explanations have been offered: desensitization, disinhibition and cognitive priming.
Neural Mechanisms: Aggression	Neural mechanisms are structures such as neurons, neural circuits and regions of the brain. They are also substances such as neurotransmitters and hormones. Neural mechanisms regulate aggression and examples, including the limbic system, serotonin and testosterone.
Serotonin	Serotonin is a neurotransmitter that exerts a calming effect on the brain, inhibiting neurons from firing. Lower levels of serotonin are associated with less control in relation to aggressive responses. This has led to the claim that low levels of serotonin are linked to impulsivity and explosive acts of violence.
Situational Explanations: Aggression	Situational explanations for institutional aggression, within the context of prisons, focus on aggression stemming from factors within the social situation. One example is the deprivation model, which suggests that the aggression shown by many prison inmates is caused by the deprivations they experience on a daily basis. Sykes (1958) outlined five deprivations that he believed were caused by the indignities and degradations suffered by inmates: deprivation of liberty; deprivation of autonomy; deprivation of goods and services; deprivation of heterosexual relationships; and deprivation of security.
Social Learning Theory: Aggression	Social learning theory states that individuals become aggressive by imitating role models. SLT states that observational learning takes place, and that this learning is reinforced vicariously. Vicarious reinforcement occurs when a person witnesses a model being rewarded for behaving in an aggressive way. Vicarious reinforcement makes it more likely that the model's behaviour will be imitated in the future. According to Bandura, four mediational processes must occur for imitation of behaviour to take place: attention (an individual must pay attention to the model's aggressive behaviour); retention (individuals must code and store the observed aggressive behaviour in long-term memory); reproduction (individuals must

FORENSIC PSYCHOLOGY	Forensic psychology is a branch of psychology that applies psychological theories and principles to different stages of the criminal justice system, including understanding causes of crime (biological and psychological) and deciding on ways to deal with offenders.
Aims of Custodial Sentencing	The aims of custodial sentencing are the different reasons/rationale for its use. There are four main aims of custodial sentencing: incapacitation (to protect other people); rehabilitation (using education and treatment programmes to change offender behaviour); retribution (to show society and the victim's family that the offender has been forced to pay for their actions); and deterrence (to prevent the offender re-offending and demonstrate to society the consequences of similar actions).
Anger Management	Anger management programmes are cognitive-behavioural in nature and designed to help people learn how to control their anger. In the context of prisons, the assumption is that many crimes occur as a result of anger and therefore, anger management should help prisoners restrain themselves from carrying out crimes in the future. The national anger management package (NAMP) is one such example of an anger management programme that can be used in prisons. The aim of the NAMP is to help prisoners recognise some of the causes of their anger, monitor and learn how to control it through techniques such as group work, role-play and keeping an anger diary.
Behaviour Modification (in custody)	Behaviour modification programmes make use of behavioural principles in order to rehabilitate offenders through operant conditioning, which incorporates reinforcement and punishment. In the context of prison (custody), this is known as a token economy and good behaviour is rewarded with tokens that can be traded for desirable privileges (such as food or television time) and bad behaviour is discouraged through removing such tokens.
Biological Explanations: Offending Behaviour	Biological explanations for offending behavior see the causes as physiological in nature (e.g. nature rather than nurture). The early biological approaches focused on the atavistic form (that some people are born with a criminal personality that is a throwback to a previous more primitive ancestor), whereas more recent biological explanations are based on genes, brain structure and neurotransmitters.
Bottom-Up Approach	The bottom-up approach to offender profiling is sometimes known as the British approach, and is a data-driven approach that makes use of statistical data on similar crimes that have been committed, in order to make predictions about the characteristics of an offender. One example of the bottom-up approach is investigative psychology, which was developed by David Canter.
Cognitive Distortions	Cognitive distortions refer to patterns of negative or exaggerated thought, which can reinforce maladaptive behaviour. Two cognitive distortions, which have been researched in relation to offending behaviour, are hostile attribution bias (interpreting the actions of others as being hostile) and

	minimalisation (playing down the severity of the circumstances that you are in).
Cognitive Explanations: Offending Behaviour	Cognitive explanations focus on mental processes and how they affect offending behaviour. Examples are the level of moral reasoning (the ways people think about right and wrong), and distortions in thinking (including hostile attribution bias and minimalisations).
Custodial Sentencing	Custodial sentencing is a way of dealing with offender behaviour, which occurs when a criminal is found guilty of a criminal act. With custodial sentencing a criminal is punished by being sent to prison or other criminal institution (e.g. a young offenders' unit), for a certain period of time.
Differential Association Theory	Sutherland's (1939) differential association theory is an influential explanation of how individuals learn to become offenders. According to Sutherland, if individual experiences repeated attitudes that are positively associated with crime, rather than negatively (in terms of punishment), then they are more likely to engage in criminal behaviour. The way in which a person becomes an offender is through learned attitudes and imitation of criminal acts. The theory is described as 'differential association' as criminal behaviour can be learned from many different avenues of interactions and experiences, which might be family, peers or the media.
Disorganised Offenders	Hazelwood and Douglas (1980) suggested that disorganised offenders are 'lust murderers' who typically conduct unplanned crimes where the victim is not targeted. The offender is unlikely to engage in conversation with the victim and sexual acts are sometimes performed on the body after death. The weapon is often present at the scene of the crime and the body is not removed. There are also other clues left at the crime scene, such as blood, semen and fingerprints. This type of offender tends to be of low intelligence, socially awkward and unlikely to have a partner. They are likely to have a poor employment history and very little interest in their crimes.
Eysenck's Theory of Criminal Personality	Hans Eysenck's theory of criminal personality suggests that personality is biologically based and that personality traits include dimensions of extraversion and neuroticism that can be measured using a personality questionnaire. Extraversion refers to a biological need individuals have for high or low levels of environmental stimulation, determined by the level of arousal in a person's central and autonomic nervous system. This means that people with high levels of extraversion have a low level of arousal, meaning they require more environmental stimulation to fuel their excitement. In the context of forensic psychology, this environmental stimulation may include criminal behaviour. Neuroticism refers to the stability of personality and a high neuroticism score would represent someone who is more reactive and volatile and perhaps more likely to engage in offending behaviour. Later, Eysenck added a third personality dimension, psychoticism, which relates to the degree to which somebody is anti-social, aggressive and uncaring.

	Eysenck (1964) argued for there being a criminal personality, which would characterise people who score highly on these three dimensions.
Genetic Explanations: Offending Behaviour	Genetic explanations propose that offending behaviour is inherited as one or more genes predispose people to commit crimes. The evidence comes from family studies (which have shown that certain types of crime run in the family) and twin studies (which show higher concordance rates for offending in MZ twins compared to DZ twins). For example, Raine (1993) reviewed research looking at the delinquent behaviour of twins, finding 52% concordance for MZ (identical) twins and 21% concordance for DZ (non-identical) twins. Some researchers have attempted to identify genes that might be linked to crime, and one example is the MAOA gene, which causes a deficiency in monoamine oxidase A (MAOA), an enzyme responsible for the metabolism of neurotransmitters such as serotonin (which has links to aggression).
Geographical Profiling	David Canter suggested that people reveal themselves through the locations where they commit crimes, and geographical profilers focus on where crimes are committed. Geographical profiling involves analyzing the location of a connected series of crimes, and looking at factors such as the spatial relationship between the different crime scenes and what these reveal in relation to the perpetrator. For example, Rossmo (1997) refers to offender behaviour as having 'hunting patterns', and through examining the locations of crime scenes and their spatial relationship to each other, we can know more about where the criminal is located.
Historical Approach (Atavistic Form)	Atavistic form is a historical approach used to explain criminal behaviour, which is based on the biological factors. This explanation was proposed by Lombroso in the 1870s and suggests that some people are born with a criminal personality (e.g. it is innate) that is a throwback to a previous more primitive ancestor. This was based on research that examined the features and measurements of nearly 4,000 criminals, as well as the skulls of 400 dead criminals. Lombroso found that the criminals examined shared a number of common physical characteristics (e.g. sloping brow, pronounced jaw, high cheekbones, large ears) and concluded that these indicated that such people were more primitive in an evolutionary sense. He also said that such individuals were not responsible for their actions, as they could not be blamed for their innate, inherited physiology.
Hostile Attribution Bias	Hostile attribution bias refers to the extent to which an individual interprets the actions of others as hostile. An individual with a high level of hostile attribution bias is more likely to see the benign and innocuous actions of another as hostility directed towards them. For example, such a person might see two people laughing together and make the assumption that they are laughing about them. This can obviously become, as an individual who has high hostile attribution bias could be inclined to become angry about what they have seen, making them more likely to be aggressive and therefore more likely to engage in criminal behaviour.

Investigative Psychology	Investigative psychology is the bottom-up approach to profiling developed by David Canter, who proposed that profiling can and should be based in psychological theory and research. Key assumptions made by this approach include: interpersonal coherence (there is a consistency between the way offenders interact with their victims and with others in their everyday lives); time and place (the time and location of an offender's crime will communicate something about their own place of residence/employment); and criminal characteristics (characteristics about the offender can help to classify them, which helps the police investigation).
Level of Moral Reasoning	Level of moral reasoning refers to the ways that people think about and perceive right or wrong. Kohlberg's theory of moral reasoning has been applied to many areas, including crime. It is a developmental theory that looks at the ways in which individuals grow in their understanding of moral decision-making and behaviour. Kohlberg argued that this happens in a staged process where moral reasoning becomes more complex and abstract as a child ages. Importantly, he argued that it is usually complete by the time the child is 9 or 10 years old, which is in line with the age of criminal responsibility in the UK, which is set at 10 years old.
Minimalisation	Minimalisation refers to a type of cognitive bias where a person is more likely to minimise or play down the severity of the circumstances they are in. It can also be seen as denial or self-deception, as the downplaying of the situation highlights their non-acceptance of what they have done and is perhaps a way of dealing with the emotional guilt. In the context of offending behaviour, research suggests that offenders have a tendency to use minimalisation as a way of reducing their guilt, and perhaps even put some of the blame onto the victim, as part of the process. For example, Kennedy and Grubin (1992) found that the majority of convicted sex offenders tended to blame the victim, and a quarter of the sample interviewed believed that the abuse was a positive thing for the victim, thereby minimalising their involvement.
Neural Explanations: Offending Behaviour	Neural explanations of offending behaviour focus on areas of the brain and nervous system, and the action of neurotransmitters. For example, Raine et al. (1997) found that the offender group (murderers who had pleaded not guilty by reason of insanity) showed reduced activity in areas of the brain such as the prefrontal cortex and corpus callosum (the nerve fibres responsible for swift communication between the hemispheres). There were also abnormalities in the activity of the limbic system, including the amygdala and thalamus. In terms of neurotransmitters, serotonin has been linked to mood and impulsiveness, (particularly aggression), and could also be a cause of violent crime.
Offender Profiling	Offender profiling (also known as psychological profiling) refers to a set of investigative techniques used by the police to try to identify perpetrators of serious crime. It involves working out the characteristics of an offender by examining the characteristics of the crime scene and the crime itself.

	There are two main approaches to offender profiling: the top-down approach and the bottom up approach.
Offender Surveys	Offender surveys collect information from offenders, in order to develop an understanding of their behaviour and attitudes. One example is the Offending Crime and Justice Survey (OCJS), which was a longitudinal study carried out between 2003 and 2006. In 2003, a sample of people aged 10 to 65 was taken and then about 5,000 of them were followed-up longitudinally until 2006. It collected data from a variety of areas including self-reported offending, indicators of recidivism (repeat offending), and the types of offences committed.
Official Statistics	Official statistics on crime are collected by the government annually and have been produced by the Home Office (in England and Wales) since 1805. They are now published by the Office for National Statistics (ONS) and hold information on crime surveys carried out on victims, as well as those recorded by the police. Some of the areas of crime covered include criminal damage, property crime, drug crime and physical and sexual crime.
Organised Offenders	Hazelwood and Douglas (1980) suggested that organised offenders are 'lust murderers' who tend to plan their crimes and specifically target the victim. The weapon is usually hidden and the body removed from the scene. Violent fantasies will often have been acted out on the victim. This type of offender is typically of high intelligence, has a skilled job and is socially and sexually competent. They will often follow the media reporting of their own crimes.
Problems in defining crime	Defining crime is problematic because crime is a social construct and therefore heavily reliant on the context in which it is set. For example, the law changes with the times, meaning that acts which are considered criminal at one point in time are not necessarily considered criminal at another point. Culture is also relevant to how we define crime, and acts that are legal in one culture might be illegal in another. The age of responsibility also influences whether an act is considered criminal, and in the UK a child has to be at least 10 years old to be considered criminally responsible.
Psychodynamic Explanations: Offending Behaviour	Psychodynamic explanations of offending behaviour focus on the influence of early childhood experiences and how they impact later development. For example, Freud's concepts of the unconscious mind and tripartite (three part) personality can be used to explain the development of criminal behaviour. The superego is the part of personality that is likely to be related to offending behaviour, as it embodies our conscience and sense of right and wrong. If an individual's superego is weak or under-developed (through failure to identify with the same sex parent in the phallic stage), then an individual will have little control over anti-social behaviour and be more likely to act in ways that gratify the id, which is based on the pleasure principle and wants immediate gratification.

Psychological Effects of Custodial Sentencing	Psychological effects of custodial sentencing are the negative effects of being imprisoned. These include the following: depression (due to loneliness and boredom); suicide and self-harm (particularly at the beginning of incarceration); psychotic disorders (e.g. many prisoners have been found to suffer hallucinations and delusions); anxiety disorders (e.g. post-traumatic stress disorder).
Psychological Explanations: Offending Behaviour	Psychological explanations for offending behaviour focus on life experiences and the ways in which criminals think and process information. Examples are Eysenck's theory of the criminal personality; cognitive explanations for offending; differential association theory, and psychodynamic explanations.
Recidivism	Recidivism is where a person re-offends, even after receiving some form of punishment. This is a concern for society, as it has implications for the aims of custodial sentencing and suggests that current treatment programmes in prison do not necessarily work. Research into recidivism suggests that there are a number of factors contributing to recidivism rates, such as prisoners being mentally ill and the availability of post-release support.
Restorative Justice Programmes	Restorative justice programmes aim to help rebuild relationships between the offender, the victim, their family and the community at large. Such programmes attempt to improve the experience for the victim, as well as encouraging the offender to take responsibility for their crime. Different techniques are used in order to help bring about restorative justice, including face-to-face meetings between the offender and victim; direct mediation (a meeting between the offender and victim, but accompanied by a trained mediator to help manage their discussions and offer support); and indirect mediation (the offender and victim do not meet face-to-face, but their communication is passed to each other via a mediator).
Top-Down Approach	The top-down approach to offender profiling is sometimes known as the American approach because it was the approach adopted by the FBI (Federal Bureau of Investigation) in the 1970s. It begins by looking carefully at the crime scene and drawing conclusions from the evidence found there about the offender. The profiler also looks at other cases (where criminals have been interviewed) in order to build a picture of typical offender profiles. Using all of this information a profile is built for the current offender 'from the top down'. This method is typically used for more extreme crimes, such as murder and rape. Hazelwood and Douglas (1980) made a distinction between organised and disorganised types of offender.
Victim Surveys	Victim surveys involve asking a sample of people to identify both reported and unreported crimes that have been committed against them. One of the largest victim surveys carried out in the UK is the Crime Survey for England and Wales (previously known as the British Crime Survey). It is a face-to-face survey that collects data from 50,000 households in the UK (2016/17), selected at random from the Royal Mail's list of addresses.

ADDICTION	Addiction is the compulsion to perform a behaviour or use a substance, even though one understands that the consequences are harmful. If someone has an addiction, then they are unable to stop using the substance or stop performing the behaviour, to the extent that it might prevent them from working and negatively affect their relationships with family and friends.
Aversion Therapy	Aversion therapy is a behavioural therapy used in the reduction of addictive behaviour. Aversion therapy is based on classical conditioning and involves the person creating a learned association between an aversive stimulus (something unpleasant) and their addictive behaviour (e.g. smoking, gambling, taking drugs etc.). For example, if someone was being treated for a smoking addiction they would be asked to smoke (neutral stimulus), but at the same time be exposed to a drug (unconditioned stimulus) to make them feel sick (unconditioned response). After a number of pairings, smoking a cigarette will become a conditioned stimulus, and the person will feel sick (conditioned response), even though they have not been given the drug. This should reduce their addictive behaviour.
Behavioural Interventions: Reducing Addiction	Behavioural interventions for reducing addiction are based on the assumption that addictive behaviours (e.g. smoking or gambling), are learnt and can be changed or modified by changing the consequences of the behaviour. Examples include aversion therapy and covert sensitisation, which are both based on the principles of classical conditioning. The difference is that aversion therapy involves creating a real unpleasant association, whereas covert sensitisation involves introducing an imagined unpleasant association.
Brain Neurochemistry Explanations: Nicotine Addiction	Brain neurochemistry explanations for nicotine addiction focus on the chemical and neural processes associated with nicotine, which is the main active ingredient of tobacco. Nicotine activates the 'reward pathways' of the brain that regulate feelings of pleasure. It does this by attaching to neurons in a region of the brain called the ventral tegmental area, and these neurons trigger the release of dopamine in another nearby brain region known as the nucleus accumbens. In addition, nicotine stimulates the release of a neurotransmitter known as glutamate, which triggers the release of additional dopamine. This release of dopamine produces pleasure, but as the effects of nicotine disappear within a few minutes this creates a need to continue taking in nicotine throughout the day, in order to keep getting the same pleasurable feeling. Furthermore, if these dopamine-enhancing neurons are continually activated, this changes their sensitivity to nicotine, leading to tolerance, dependency and addiction.
Cognitive Behavioural Therapy: Reducing Addiction	Cognitive behaviour therapy is based on the assumption that feelings and behaviours (such as gambling or drug dependence) are caused by a person's faulty thought processes. According to cognitive-behavioural therapists, people can change how they think about an addictive substance/behaviour and therefore change how they feel and behave. It can be delivered in a group format or on a one-to-one basis. When used to reduce addiction, the

	<p>goal of cognitive behavioural therapy is to teach the person to recognise situations in which they are most likely to drink, use drugs, gamble etc. and then train them to avoid these circumstances. A person is also helped to find alternative ways to cope with other problems in their lives which may trigger their addictive behaviour. If the person is being treated for pathological gambling then they would be helped to identify and correct the cognitive biases (e.g. 'the gamblers fallacy', 'illusions of control') that they use to make decisions when gambling. This should lead to a process of 'cognitive restructuring' where the person begins to think differently about their problem behaviour and at this point the therapist would encourage them to practise these changes in their everyday lives.</p>
Cognitive Bias	<p>A cognitive bias is an error in thinking that affects the decisions and judgments that people make. Research suggests that gamblers show a range of biases that contribute to the development and maintenance of pathological gambling. One example is the 'near miss' bias, which occurs when a gambler has an outcome that was nearly a win, such as a horse coming a close second in a race. According to Griffiths (1991), this causes the gambler to feel that rather than consistently losing, he or she is consistently nearly winning. Another example, proposed by Blanco et al. (2000), is the 'recall' bias, which describes the tendency to remember wins and forget, underestimate or rationalise losses. This cognitive bias means that a series of losses will not necessarily act as an incentive to stop gambling, as the pathological gambler will believe they will eventually win.</p>
Cognitive Theory: Gambling	<p>Cognitive theory explains gambling in terms of irrational thought processes and focuses on the reason people give for engaging in gambling behaviour and the role of cognitive biases, such as illusions of control (overestimating their own ability to influence the outcome of random events) and gambler's fallacy (expecting to win after a losing streak).</p>
Cover Sensitisation	<p>Covert sensitisation is a behavioural therapy used in the reduction of addictive behaviour. Covert sensitisation is based on the principles of classical conditioning and involves a person creating an imagined unpleasant association between the addictive behaviour (e.g. smoking, gambling) and an unpleasant stimulus (e.g. the pain created by an electric shock). For example, if someone was using covert sensitisation to treat pathological gambling, they would imagine themselves gambling (e.g. playing slot machines or cards for money) and then as vividly as they can, imagine a very unpleasant consequence, such as an intense electric shock. By consistently making this association in their mind, they should lose the desire to gamble.</p>
Cue Reactivity	<p>Cue reactivity is a learning explanation of relapse that is used as an explanation for the relapse of smoking. Cue reactivity is the idea that a person associates specific moods, situations or environmental factors (smoking-related cues) with the rewarding effects of nicotine, and these cues can trigger a relapse. Years of smoking will have led to a conditioned association between things like the sight and smell of cigarettes and the</p>

	<p>reinforcing effects of nicotine. Nicotine is the unconditioned stimulus (UCS) and the pleasure caused by the increase in dopamine levels is the unconditioned response (UCR). However, following this increase in levels, the brain will try to lower the dopamine back to normal. Any stimulus that is associated with nicotine entering the brain (e.g. the smell of cigarette smoke) will change from a neutral stimulus (NS) to a conditioned stimulus (CS), and eventually becomes capable of producing a conditioned response (CR). However, the brain's response to these cues in the absence of nicotine and its effects will lead to a lowering of dopamine levels to below the optimum level, which will be experienced as withdrawal symptoms; this may lead to a relapse.</p>
Dopamine	<p>Dopamine is one of the key neurotransmitters which produces pleasure when the 'reward pathway' in the brain is activated. Nicotine attaches to neurons in a region of the brain called the ventral tegmental area, and these neurons then trigger the release of dopamine in another nearby brain region known as the nucleus accumbens; this release of dopamine produces pleasure.</p>
Drug Therapies: Reducing Addiction	<p>Drug therapy for the reduction of nicotine addiction includes nicotine replacement therapy which gradually releases a small amount of nicotine into the bloodstream. These products are available over the counter in several forms, such as patches, sprays, gum, and lozenges. In addition, there are two drugs that can be prescribed by doctors: varenicline (trade name Champix) and bupropion (trade name Zyban) which reduce the nicotine cravings and other withdrawal symptoms. Bupropion was originally developed as an antidepressant and works by inhibiting the re-uptake of dopamine. There is no drug approved in the UK for the treatment of pathological gambling. However, other available drugs, such as opioid antagonists and antidepressants, have been used to reduce the urge to gamble and the symptoms of depression or anxiety that might trigger a gambling spree. For example, Kim et al. (2002) found that naltrexone (an opioid antagonist that binds to the D2 dopamine pathway in the brain) was effective in reducing the frequency and intensity of gambling urges, as well as gambling itself. This is because it blocks the receptors in this 'reward pathway', meaning that gambling does not have the same reinforcing properties.</p>
Family Influences	<p>Family influences are a risk factor in the development of addiction. Parents can influence addiction in two main ways: 1) by acting as role models if they have an addiction themselves; and 2) through the parenting styles that they use. Glynn (1981) conducted a review of research into addiction and found that a parent's substance abuse habit was the most influential factor affecting a child's substance abuse. He explained this using Bandura's social learning theory, suggesting that if an adolescent identified with the parent and the relationship between the parent and child was good, the child would have a higher probability of abusing the same substance because they model their parent's behavior. Wardle et al. (2007) report that</p>

	<p>problem gamblers are more likely to have parents who gamble regularly.</p> <p>Ahmadi et al. (2014) found that that the authoritative parenting style (shows warmth, but exerts appropriate control) is associated with lower levels of substance abuse in offspring, when compared with the despotic style (authoritarian, restrictive and heavy use of punishment as a means of control) and the permissive style (involved with the child but do not place any controls). Ahmadi suggested that the despotic and permissive parenting styles predispose a tendency towards risky behavior in children.</p>
Genetic Vulnerability	<p>Genetic vulnerability refers to the inherited characteristics passed on from parents to children that make it more likely that a person will develop an addiction. For example, research by Slutske et al. (2010) found that identical twins had a higher concordance rate for pathological gambling (49% for male pairs and 55% for female pairs) in comparison to non-identical twins (21% for male pairs and for female pairs). In terms of specific genes, Blum and Payne (1991) correlated the dopamine D2 Receptor Taq 1 allele with alcoholism. This gene is associated with decreased dopamine availability in the reward centre of the brain, which means that anything which increases dopamine levels will produce strong feelings of pleasure. Blum called this gene a 'reward gene' and it is also related to other addictive behaviours, including drug addiction, smoking, overeating, and pathological gambling.</p>
Learning Theory: Gambling	<p>Learning theory explains gambling in terms of operant conditioning: gambling behaviour is reinforced and this increases the likelihood that the behaviour will be repeated. Griffiths (2009) argues that some types of gambling, such as slot machines, may become addictive because, as well as financial rewards, there are physiological rewards (the adrenaline and dopamine 'buzz' of winning'), psychological rewards (excitement) and social rewards (praise from peers). Many gamblers talk about having a large win or winning streak early in their gambling career and Aasvad (2013) found that they continue to gamble in order to repeat these early experiences. Gambling is reinforced on a partial schedule (not every time), which makes it resistant to extinction. Gambling machines pay out on a variable reinforcement schedule, which is a type of partial reinforcement where only a proportion of responses are reinforced and there is no fixed pattern; this lack of predictability keeps people gambling.</p>
Learning Theory: Smoking	<p>Addiction can be viewed as a learned behaviour because the positive reinforcement (e.g. pleasure and enjoyment) gained from a behaviour such as smoking makes it more likely that the individual will repeat the behaviour in the future. In terms of smoking, learning operates during the initiation phase (when the person first starts smoking); the maintenance phase (where they become a habitual smoker); and the relapse phase (where they try to give up, but learned associations with pleasure make it very difficult). Initiation: Social learning theory suggests that young people observe and imitate role models (parents and peers) around them who smoke and vicarious reinforcement leads them to expect positive</p>

	<p>consequences from smoking. In addition, the principles of operant conditioning suggest that any behaviours that are rewarded will increase in frequency. Addictive substances like nicotine are immediately rewarding because they activate areas of the brain that regulate feelings of pleasure, which results in quick learning. Maintenance: negative reinforcement can help explain the maintenance of an smoking in terms of withdrawal symptoms. As the effects of nicotine wears off, symptoms such as increased anxiety, irritability or low mood may be experienced. The person is then likely to smoke a cigarette to remove these symptoms (negative reinforcement) and as a result they are likely to repeat this behaviour in the future. Relapse: Cue reactivity is a learning explanation that can be used to explain relapse. This is because the person associates specific moods, situations or environmental factors (smoking-related cues) with the rewarding effects of nicotine, and these cues can trigger a relapse.</p>
Partial Reinforcement	<p>A partial reinforcement schedule occurs when reinforcement occurs on some occasions and it has been found that behaviours acquired with partial reinforcement show a much slower extinction rate. In terms of gambling, people do not win every time, but the partial reinforcement of winning sometimes means that they know there is a chance they could win next time, which makes it difficult to stop.</p>
Peers	<p>Peers are a risk factor in the development of addiction because they act as influential models by introducing, providing, or pressuring risky activities, such as drug or alcohol use. Findings from a national drug agency (AADK) study conducted in Malaysia showed that of 26,841 drug addicts surveyed between 2007 and 2008, 55% became addicted after being introduced to the substance by friends. Social identity theory (Tajfel and Turner, 1986) suggests that peers are highly influential because people want to belong to an 'in-group' (the group with which they identify) in order to be socially accepted and this means they are more likely to adopt in-group behaviours. Morgan & Grube (1991) showed that peers affected both the initiation and maintenance of smoking and Morton et al. (2005) found that adolescents who spent more time with deviant peers were more likely to drink alcohol.</p>
Personality: Addiction	<p>Personality refers to an individual's unique and consistent pattern of thinking, feeling, and behaving and is a risk factor in the development of addiction. Krueger et al. (1998) identified personality traits such as sensation seeking and impulsivity that seem to be linked to addictive behaviours such as gambling and alcohol abuse. The addiction-prone personality scale (APP) was developed by Barnes et al. (2000) by isolating personality items that were linked with both a family history of alcohol abuse/dependence, and a lifetime diagnosis of alcohol abuse/dependence. This scale has been used in a number of research studies, for example Barnes et al. (2005) who found that personality was a significant predictor of heavy cannabis use and Anderson et al. (2011) who found that personality is a significant predictor in the development of new cases of alcohol abuse/dependence. It has also been found that personality</p>

	disorders, such as borderline personality disorder and anti-social personality disorder, are linked to addiction. Zimmerman and Coryell (1989) found that approximately 43-77% of people diagnosed with personality disorders would also meet the criteria for an alcohol use disorder at some point during their lives.
Physical Dependence	Physical dependence occurs with the long-term use of many drugs, such as nicotine, heroin and anti-anxiety drugs. If a person is physically dependent on a drug it means that they need to take it in order to feel 'normal'. Physical dependence can be demonstrated by the person showing withdrawal symptoms if they stop taking the drug, and is also often accompanied by tolerance (needing an increased dose in order to feel the same effect).
Prochaska's Six-Stage Model	Prochaska's six-stage model of behaviour change is based on research that has shown that people move through a series of stages when modifying or changing behaviour. This has been applied to people who are trying to change a problematic behaviour like smoking or pathological gambling. The first three stages represent variations in the individual's intentions to change. Stage 1 is the precontemplation stage, where the person has no intention of changing their behaviour in the near future, possibly because they are unaware that it is a problem. Stage 2 is the contemplation stage, where the person is aware their behaviour is problematic, but are not committed to do anything about it. Stage 3 is the preparation stage, where those who are prepared to change their addictive behaviour start to make small changes (e.g. cutting down the number of cigarettes they smoke). The latter three stages are all 'post-action' stages: stage 4 is the action stage which involves the most change and is where the person modifies their behaviour in order to overcome their problems (e.g. stops smoking). They are classified as being in this stage when they have changed their behaviour for between 1 day and 6 months. Stage 5 is the maintenance stage, where the person has to work hard to prevent relapse (e.g. continue to not smoke). Stage 6 is the termination stage, and once the person enters this stage they are no longer tempted to revert to their previous behaviour (e.g. start smoking again) and often add new goals to achieve more success. Prochaska claimed only about 20% of people ever make it to this stage.
Psychological Dependence	Psychological dependence occurs when a drug or a behaviour becomes of central importance to a person's thoughts, emotions and activities. The person may experience cravings, which are intense desires to take the drug or to engage in the behaviour. Even though an addiction is non-physical (e.g. gambling) it can still lead to psychological dependence.
Risk Factors: Addiction	Risk factors in the development of addiction refers to things that make some people more vulnerable to addiction than others. Examples include genetic factors, stress, personality, family influences and peers.
Stress	Stress is a risk factor in the development of addiction. The 'self-medication' model proposed by Gelkopf et al. (2002) suggests that some people

	<p>deliberately deal with everyday stressors by using different types of pathological behaviour (alcohol, drugs and/or gambling) in order to make themselves feel better. Research by Dawes et al. (2000) has shown that stress is one of the strongest predictors of relapse in drug users. Research has also showed that severe stress can make people more vulnerable to developing an addiction. For example, Kessler et al. (1995) found that 34% men and 27% of women with a history of post-traumatic stress disorder (PTSD) reported drug abuse or dependence at some point in their lives (compared with 15% of men and 8% of women who did not have PTSD).</p>
Theory of Planned Behaviour	<p>The theory of planned behaviour (TPB) was proposed by Ajzen (1989) as a refinement to the earlier theory of reasoned action proposed in the 1970s by Ajzen and Fishbein. It helps us to understand how humans can change a behaviour (e.g. reduce addiction). The model claims that behaviour is controlled by intentions. These intentions vary in their strength and are influenced by three factors: behavioural attitudes about the outcome of the behaviour and the value placed upon the outcome; the individual's subjective norms (their perception of how others would view the behaviour); and perceived behavioural concerns (the extent to which they feel they can actually perform the behaviour). The TPB can be used to explain the processes that led to addiction, and also be applied to help develop appropriate programmes to bring about long-lasting changes in addictive behaviour. The theory suggests that in order to change the behaviour, you need to change the behavioural attitudes (create a different attitude towards smoking or gambling); change the subjective norms by giving actual data about the number of people who actually engage in the risky behaviour (e.g. the number of teenage smokers or pathological gamblers), and change the perceived behavioural control, by helping smokers or gamblers to focus on the willpower and effort required to give up their behaviour.</p>
Tolerance	<p>Tolerance refers to the way that someone who has become physically dependent on a substance (e.g. alcohol or heroin) no longer responds to it in the same way. The result is that they need to keep increasing the dose in order to feel the same effect as before.</p>
Variable Reinforcement	<p>A variable reinforcement schedule is a type of partial reinforcement where only a proportion of responses are reinforced and there is no fixed pattern. Gambling machines use variable reinforcement, as a win comes after an unpredictable number of responses. It is this unpredictability that often results in continued gambling.</p>
Withdrawal Syndrome	<p>Withdrawal syndrome comprises a set of symptoms that occur when someone who is physically dependent either stops taking or reduces the dosage of their drug (e.g. heroin, alcohol). Anxiety, insomnia, nausea, perspiration, body aches, and tremors are just a few of the symptoms of drug and alcohol withdrawal. The risk of withdrawal syndrome occurring increases with dosage and length of use.</p>

CHECKLIST

Specification

Social Influence	<input type="checkbox"/>
Memory	<input type="checkbox"/>
Attachment	<input type="checkbox"/>
Approaches in Psychology	<input type="checkbox"/>
Psychopathology	<input type="checkbox"/>
Research Methods	<input type="checkbox"/>
Biopsychology	<input type="checkbox"/>
Issues & Debates	<input type="checkbox"/>
Relationships	<input type="checkbox"/>
Gender	<input type="checkbox"/>
Cognition & Development	<input type="checkbox"/>
Schizophrenia	<input type="checkbox"/>
Eating Behaviour	<input type="checkbox"/>
Stress	<input type="checkbox"/>
Aggression	<input type="checkbox"/>
Forensic Psychology	<input type="checkbox"/>
Addiction	<input type="checkbox"/>

