
Level 4 The Development of Psychological Attachments

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Unit specifications can be found on the UE Campus Portal: <https://uecampus.com/>

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MCQs and True & False Questions (self-assessment)

Using your Study Guide

Welcome to the study guide for, designed to support those completing their **Level 4 Diploma in Psychology**.

This study guide follows the order of the syllabus, which is the basis for your studies. Each chapter starts by listing the syllabus learning outcomes covered and the assessment criteria.

Level 4 Units

Unit Reference	Mandatory Units	Level	Credit	GLH	TQT
K/650/5556	The Scope of Psychology	4	20	100	200
L/650/5557	Social And Developmental Psychology	4	20	100	200
M/650/5558	Biopsychology	4	20	100	200
R/650/5559	The Development of Psychological Attachments	4	20	100	200
A/650/5560	Processes Of Human Memory	4	20	100	200
D/650/5561	Research Methods and Investigating Psychology	4	20	100	200
Totals			120	600	1200

The study guide includes a number of features to enhance your studies:



'Over to you': activities for you to apply what you have learned) in the space provided).



Industry Insights: discover up-to-date trends, expert opinions, and examples from leading organisations in the travel and tourism industry to help you understand how theory applies in real-world practice.



Did you know? highlights interesting facts or surprising information to help you deepen your understanding of travel and tourism topics.



Case studies: realistic business scenarios to reinforce and test your understanding of what you have read.



'Revision on the go': use your phone camera to capture these key pieces of learning, then save them on your phone to use as revision notes.



'Need to know': key pieces of information that are highlighted in the text.



Examples: illustrating points made in the text to show how it works in practice.

Tables, graphs and charts: to bring data to life.

Reading list: identifying resources for further study.

Source/quotation information to cast further light on the subject from industry sources.

Highlighted words throughout denoting **glossary terms** located at the end of the study guide.

Note

Website addresses current as of March 2026.

Level 4 The Development of Psychological Attachments

About this unit

The aim of this unit is to provide you with information and comprehension of attachments as well as how their loss or disruption can lead to a better understanding of how early experiences can influence later development.

Chapter One – Learning theory of psychological attachment

Introduction

This chapter looks at the learning theory of psychological attachment.

You will analyse learning theory of attachment.

On completion of this chapter, you will assess the development of attachments using learning theory.

Learning Outcomes

On completing the chapter, you will be able to:

- 1. Understand learning theory of psychological attachment.**

Assessment Criteria

1.1 Analyse learning theory of attachment

1.2 Assess the development of attachments using learning theory

1.1 Analyse learning theory of attachment



Over to you – video watch: Attachment Theory Explained

Watch this YouTube video:

Title: Attachment Theory Explained (Psychology)

Duration: 11.08

Link: <https://www.youtube.com/watch?v=JNSFDNZpvM4>

Introduction

Attachment refers to the emotional bond formed between an infant and their primary caregiver. Learning theory explains attachment through principles of behaviourism, focusing on conditioning and reinforcement. This perspective suggests that attachment develops because caregivers provide food and comfort, which become associated with pleasure and reduced discomfort.

- **What is Learning Theory of Attachment?**

Learning theory is based on behaviourist principles, particularly:

- Classical conditioning (associated with Ivan Pavlov)
- Operant conditioning (associated with B.F. Skinner)

This approach suggests attachment forms through learned associations between the caregiver and the satisfaction of basic needs.



Did you Know

That attachment influences emotional development across the lifespan.

- **Classical Conditioning and Attachment**

Classical conditioning involves learning through association.

In attachment:

- Food = unconditioned stimulus (naturally produces pleasure)
- Pleasure = unconditioned response
- Caregiver initially = neutral stimulus
- Over time, caregiver becomes associated with food
- Caregiver becomes conditioned stimulus

- Infant feels pleasure in caregiver's presence

Thus, the infant learns to associate the caregiver with comfort and satisfaction.



Did you Know

That early attachment theories focused heavily on feeding as the main cause of bonding.

- **Operant Conditioning and Attachment**

Operant conditioning involves learning through reinforcement.

In attachment:

- Infant cries (behaviour)
- Caregiver responds with food or comfort
- Crying is reinforced because discomfort is reduced (negative reinforcement)
- Caregiver is reinforced because crying stops

This reciprocal reinforcement strengthens the bond.



Need to Know

Learning theory explains attachment as a learned behaviour based on association and reinforcement. However, it does not fully account for emotional bonding and biological influences.

- **Analysis of Learning Theory of Attachment**

Strengths

- Provides a clear, scientific explanation.
- Based on observable behaviour.
- Supported by principles of conditioning.
- Explains early bonding linked to feeding.

Limitations

- Overemphasises feeding as the basis of attachment.
- Ignores emotional and social factors.
- Animal studies show comfort may be more important than food.
- Does not explain long-term emotional bonds.
- Limited explanation of attachment types.

Research involving infant monkeys demonstrated that comfort and contact were more important than food in forming attachment bonds. This challenges the learning theory's focus on feeding.

Modern psychology suggests attachment is influenced by biological, emotional, and social factors rather than conditioning alone.



Over to you

Critical Analysis Task

1. Explain how classical and operant conditioning explain attachment.
2. Identify two strengths and two limitations of learning theory.
3. Compare learning theory with another explanation of attachment.

Write a short analytical paragraph.



Industry Insight – Applications in Childcare, Education, and Social Care

Understanding attachment theories is important in childcare, education, and social work. Professionals working with infants and young children must recognise the importance of consistent caregiving and emotional support.

In early years education:

- Secure attachments support emotional regulation.
- Responsive caregiving improves social development.
- Stable environments reduce anxiety.

Social workers and foster care services use attachment research to support vulnerable children. Understanding attachment helps professionals recognise signs of neglect, trauma, and insecure bonding.

In healthcare settings, attachment knowledge informs parental support programmes and early intervention strategies.

While learning theory provides a basic explanation, modern professionals combine behavioural, biological, and emotional perspectives to support child wellbeing.



Over to you – Feeding and Bonding

Liam is a newborn whose mother consistently feeds and comforts him when he cries. According to learning theory, Liam begins to associate his mother with satisfaction and relief from discomfort. Over time, he shows distress when separated and pleasure when reunited. However, Liam also seeks comfort even when not hungry, suggesting that attachment may involve more than feeding alone.

Discussion Questions

1. How does learning theory explain Liam's attachment?
2. What evidence challenges this explanation?
3. Why might emotional comfort be important?

Revision on the Go:

- Learning theory is based on behaviourism.
- Classical conditioning involves association with food.
- Operant conditioning involves reinforcement.
- Caregiver becomes linked to pleasure and comfort.
- Feeding strengthens attachment.
- Theory focuses on observable behaviour.
- Criticised for ignoring emotional and biological factors.
- Attachment is more complex than conditioning alone.



1.2 Assess the development of attachments using learning theory

Introduction

Attachment refers to the emotional bond that develops between an infant and their primary caregiver. Learning theory explains attachment as a behaviour that develops through **conditioning and reinforcement**. This perspective comes from behaviourist psychology and focuses on observable behaviours rather than internal emotions.

- **What is Learning Theory of Attachment?**

Learning theory is based on the behaviourist work of Ivan Pavlov and B.F. Skinner.

It suggests that attachment develops because caregivers provide food and comfort, which are associated with pleasure and relief from discomfort.

There are two main components:

- Classical conditioning
- Operant conditioning



Did you Know

That research later showed infants seek comfort even when not hungry.

1. Classical Conditioning and Attachment

Classical conditioning involves learning through association.

In attachment:

- Food = unconditioned stimulus (naturally produces pleasure)
- Pleasure = unconditioned response
- Caregiver = neutral stimulus at first
- Over time, caregiver becomes associated with food
- Caregiver becomes conditioned stimulus
- Infant experiences pleasure when caregiver is present

According to this explanation, attachment forms because the infant associates the caregiver with satisfaction.



Did you Know

That early psychologists believed feeding was the main reason infants bond with caregivers.

2. Operant Conditioning and Attachment

Operant conditioning involves learning through reinforcement.

In attachment:

- Infant cries (behaviour)
- Caregiver provides food or comfort
- Crying is reduced (negative reinforcement)
- Caregiver is reinforced because crying stops
- Attachment bond strengthens through repeated interactions

The caregiver becomes associated with reward and relief from discomfort.



Need to Know

Learning theory explains attachment as a learned association based on reinforcement. While it provides a simple behavioural explanation, it does not fully account for emotional bonding or biological influences.

• Assessing the Development of Attachment Using Learning Theory

Learning theory explains early attachment development as:

- Based on feeding and reinforcement
- Strengthened through repeated caregiver responses
- Influenced by environmental interaction
- Observable and measurable

Strengths of Learning Theory

- Scientific and testable
- Based on well-established behavioural principles
- Explains early bonding linked to feeding
- Emphasises the role of caregiver consistency

Limitations of Learning Theory

- Overemphasises feeding
- Ignores emotional and biological factors
- Cannot explain attachment in the absence of feeding
- Does not explain attachment types
- Fails to account for the infant's active role

Research involving infant monkeys showed that contact comfort was more important than food in attachment formation. This suggests attachment is not based solely on conditioning.

Modern attachment research recognises biological and emotional influences alongside learning processes.



Industry Insight – Applications in Early Years, Education, and Social Care

Understanding attachment theories is essential in childcare, education, and social services. Professionals working with young children must recognise how early experiences influence development.

In early childhood settings:

- Responsive caregiving promotes secure attachment.
- Consistency and reliability strengthen emotional bonds.
- Positive reinforcement supports healthy development.

In foster care and adoption services, understanding attachment helps professionals support children who may have experienced inconsistent caregiving. Early intervention programmes often focus on improving caregiver responsiveness and bonding.

Although learning theory offers a behavioural explanation, modern professionals combine behavioural, emotional, and biological perspectives to support child wellbeing and development.



Over to you:

Application and Evaluation Task

1. Explain how classical and operant conditioning explain attachment development.
2. Identify two strengths and two weaknesses of learning theory.
3. Suggest why attachment may involve more than feeding.

Write a short analytical response (300–400 words).



Did you Know

That attachment quality influences emotional development throughout life.



Over to you – Early Caregiving and Bonding

Sofia is a six-month-old baby whose mother consistently feeds her when she cries. Over time, Sofia smiles and reaches out when her mother enters the room. According to learning theory, Sofia associates her mother with food and comfort.

However, Sofia also seeks comfort from her mother when frightened, even when she is not hungry. This suggests attachment may involve emotional security as well as reinforcement.

Discussion Questions

1. How does learning theory explain Sofia's attachment?
2. What behaviours support operant conditioning?
3. What evidence suggests attachment is more than feeding?

Revision on the Go:

- Milgram Learning theory is based on behaviourism.
- Attachment forms through classical conditioning.
- Caregiver becomes associated with food.
- Operant conditioning strengthens attachment.
- Crying is reinforced by caregiver response.
- Feeding plays a central role in the theory.
- Emotional factors are not fully explained.
- Attachment development is more complex than conditioning alone.



Reading List

- Ainsworth, M., Blehar, M., Waters, E. & Wall, S. (2015). *Patterns of attachment: A psychological study of the strange situation*. New York: Psychology Press.
- Belsky, J. (2013). *Experiencing the lifespan*. 3rd edn. New York: Worth Publishers.
- Bowlby, J. (2019). *Attachment and loss: Volume I – Attachment*. London: Pimlico.
- Cassidy, J. & Shaver, P.R. (Eds.). (2018). *Handbook of attachment: Theory, research, and clinical applications*. 3rd edn. New York: Guilford Press.
- Gross, R. (2020). *Psychology: The science of mind and behaviour*. 8th edn. London: Hodder Education.
- Holmes, J. (2014). *John Bowlby and attachment theory*. 2nd edn. London: Routledge.
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- O’Shaughnessy, R., Dallos, R., Berry, K. & Bateson, K. (2019). *Attachment theory: The basics*. London: Routledge.
- Schaffer, H.R. (2016). *Introducing child psychology*. 3rd edn. Oxford: Wiley-Blackwell.

Summary

In this chapter you looked at

You learnt about the main phenomena, methods and theorising in social psychology.

On completion of this chapter, you analysed the ethical issues encountered in the psychological studies by Milgram and Zimbardo.

Chapter Two – Understand caregiver-infant interactions, reciprocity and interactional synchrony.

Introduction

In this chapter you will explore caregiver-infant interactions, reciprocity and interactional synchrony.

You will analyse what is meant by the term 'reciprocity' in relation to caregiver–infant interactions.

On completion of this chapter, you will analyse what is meant by the term 'interactional synchrony' in relation to caregiver–infant interactions.

Learning Outcomes

On completing the chapter, you will be able to:

2. Understand caregiver-infant interactions, reciprocity and interactional synchrony.

Assessment Criteria

2.1 Analyse what is meant by the term 'reciprocity' in relation to caregiver–infant interactions.

2.2 Analyse what is meant by the term 'interactional synchrony' in relation to caregiver–infant interactions.

2.1 Analyse what is meant by the term ‘reciprocity’ in relation to caregiver–infant interactions.

Introduction

Early attachment development depends not only on feeding or physical care, but also on the quality of interaction between caregiver and infant. Two key concepts in understanding early bonding are reciprocity and interactional synchrony. These processes describe the dynamic, two-way communication that occurs between infants and caregivers from birth.

- **What is Reciprocity?**

Reciprocity refers to a **two-way interaction** in which both caregiver and infant respond to each other’s signals. It involves turn-taking, mutual responsiveness, and shared emotional communication.

In reciprocal interactions:

- The infant signals (e.g., crying, smiling, vocalising)
- The caregiver responds appropriately
- The infant then reacts to the caregiver’s response
- A pattern of mutual exchange develops

This process helps build trust, emotional security, and attachment.



Did you Know

That Consistent reciprocal interaction supports brain development.

- **How Reciprocity Develops**

From birth, infants are active participants in communication. Research suggests that:

- Infants imitate facial expressions
- Caregivers instinctively respond to infant cues
- Interactions involve rhythm and turn-taking
- Emotional expressions are mirrored

Reciprocity supports:

- Emotional regulation
- Language development
- Social competence
- Secure attachment formation

- **Interactional Synchrony**

Interactional synchrony occurs when caregiver and infant reflect each other's emotions and behaviours in a coordinated way.

For example:

- A mother smiles → infant smiles back
- A baby vocalises → caregiver imitates the sound
- Both maintain eye contact simultaneously

This synchronised behaviour strengthens emotional bonding.



Did you Know

That infants can imitate facial expressions within hours of birth.

- **Research Evidence**

Research into caregiver–infant interaction shows:

- Infants are sensitive to facial expressions and tone of voice.
- Early imitation supports bonding.
- Secure attachments are linked to sensitive and responsive caregiving.

These findings highlight the importance of emotional connection rather than simply feeding.

- **Analysis of Reciprocity**

Strengths

- Supported by observational research.
- Emphasises infant as active participant.
- Explains emotional bonding.
- Helps explain secure attachment development.

Limitations

- Observational studies may lack objectivity.
- Cultural differences affect interaction styles.
- Difficult to measure emotional synchrony precisely.
- Not all caregivers interact in the same way.

Despite limitations, reciprocity is widely accepted as a key factor in attachment formation.



Industry Insight – Applications in Early Years, Education, and Healthcare

Understanding reciprocity is vital in professions working with infants and families. Early years practitioners, health visitors, and social workers use this knowledge to assess attachment quality.

In childcare settings:

- Staff are trained to respond sensitively to infant cues.
- Secure attachments improve emotional regulation.
- Positive interaction supports language development.

In healthcare, midwives and health visitors encourage skin-to-skin contact and responsive parenting to strengthen bonding.

In social care, recognising disrupted reciprocity helps professionals support children experiencing neglect or trauma. Parenting programmes often focus on improving responsive communication and emotional attunement.

Understanding caregiver–infant interaction has long-term implications for mental health, education, and social wellbeing.



Over to you

Building Emotional Bonds

Aisha is a three-month-old baby. When she smiles, her father smiles back and speaks gently. When she cries, he comforts her promptly. Aisha begins to show excitement when her father enters the room.

This repeated two-way interaction builds trust and emotional security.

Discussion Questions

1. How does reciprocity appear in this case?
2. What behaviours show interactional synchrony?
3. How might these interactions influence Aisha's development?



Need to Know

Reciprocity is a mutual, two-way interaction between caregiver and infant involving turn-taking and emotional responsiveness. It plays a crucial role in developing secure attachment and emotional development.



Over to you – Observation and Reflection Task

Observe (or watch a video of) caregiver–infant interaction and:

1. Identify examples of reciprocity.
2. Describe any interactional synchrony.
3. Explain how these interactions support attachment.

Write a short analytical paragraph.

Revision on the Go:

- Reciprocity involves two-way interaction.
- Both infant and caregiver respond to each other.
- Turn-taking is central to reciprocity.
- Interactional synchrony involves mirrored behaviours.
- Emotional responsiveness strengthens attachment.
- Infants are active participants in bonding.
- Sensitive caregiving promotes secure attachment.
- Cultural and individual differences influence interaction.



2.2 Analyse what is meant by the term ‘interactional synchrony’ in relation to caregiver–infant interactions.

Introduction

Early attachment development depends heavily on the quality of communication between caregiver and infant. One important concept in understanding this communication is **interactional synchrony**. This refers to the coordinated, mirrored behaviours that occur between caregiver and infant during social interaction.

- **What is Interactional Synchrony?**

Interactional synchrony describes the process in which a caregiver and infant mirror each other’s facial expressions, gestures, vocalisations, and emotions at the same time. It involves shared attention and emotional attunement.

For example:

- A caregiver smiles → infant smiles back.
- An infant vocalises → caregiver imitates the sound.
- Both maintain eye contact simultaneously.

This synchronised behaviour strengthens emotional bonding and supports attachment formation.

- **How Interactional Synchrony Develops**

Research suggests that infants are biologically prepared for social interaction from birth.

From early infancy:

- Babies show sensitivity to faces and voices.
- Caregivers naturally exaggerate facial expressions and tone.
- Mirroring occurs within seconds.
- Emotional states are shared between caregiver and infant.

Interactional synchrony supports:

- Emotional regulation
- Brain development
- Social competence
- Secure attachment

- **Research Evidence**

Studies of caregiver–infant interaction show that:

- Infants imitate adult facial expressions.
- Synchronised interactions increase over the first few months.
- Secure attachment is linked to sensitive and responsive caregiving.

This research highlights that infants are active participants in forming relationships.

- **Analysis of Interactional Synchrony**

Strengths

- Supported by observational research.
- Demonstrates infants' active role in attachment.
- Explains emotional bonding beyond feeding.
- Links to secure attachment and social development.

Limitations

- Observational research may be subjective.
- Cultural differences affect interaction styles.
- Not all caregivers display synchrony.
- Difficult to measure emotional attunement precisely.

Despite limitations, interactional synchrony is widely recognised as central to attachment development.



Over to you

Watch a short video of caregiver–infant interaction (or observe real interaction where appropriate).

1. Identify examples of interactional synchrony.
2. Describe how the caregiver mirrors the infant's behaviour.
3. Explain how this interaction supports attachment.

Write a short analytical summary (250–300 words).



Did you Know

That consistent interactional synchrony supports healthy brain development.



Did you Know

That newborn babies can imitate facial expressions within hours of birth.



Over to you – Early Emotional Connection

Noah is a four-month-old baby. During playtime, his mother smiles and raises her eyebrows. Noah responds by smiling and waving his arms. When Noah vocalises, his mother imitates the sound. They maintain eye contact and laugh together.

Over time, Noah becomes visibly excited when his mother approaches. He appears calm and secure in her presence.

Discussion Questions

1. How does interactional synchrony appear in this case?
2. What behaviours show mirroring?
3. How might this affect Noah's emotional development?



Industry Insight – Applications in Early Childhood and Mental Health

Understanding interactional synchrony is essential in early years education, childcare, and healthcare. Professionals use this knowledge to assess attachment quality and promote healthy development.

In early childhood settings:

- Staff are trained to respond sensitively to infants' cues.
- Positive interaction improves social and language development.
- Emotional attunement reduces anxiety.

In health services, midwives and health visitors encourage:

- Skin-to-skin contact
- Face-to-face communication
- Responsive parenting

In social care, professionals assess interactional synchrony when working with vulnerable families. Parenting programmes often aim to improve emotional attunement and responsiveness.

Long-term benefits include improved emotional regulation, resilience, and relationship skills.



Need to know –

Interactional synchrony refers to the coordinated, mirrored communication between caregiver and infant. It strengthens emotional bonds and supports secure attachment through shared attention and emotional responsiveness.

Revision on the Go:

- Interactional synchrony involves mirrored behaviours.
- Occurs during face-to-face interaction.
- Includes shared eye contact and emotional expression.
- Infants are biologically prepared for interaction.
- Supports secure attachment.
- Enhances emotional regulation and development.
- Research is mainly observational.
- Cultural and individual differences exist.



Summary

In this chapter you looked at caregiver-infant interactions, reciprocity and interactional synchrony.

You learnt about what is meant by the term 'reciprocity' in relation to caregiver–infant interactions.

On completion of this chapter, you analysed what is meant by the term 'interactional synchrony' in relation to caregiver–infant interactions.

Reading List

- Ainsworth, M., Blehar, M., Waters, E. & Wall, S. (2015). *Patterns of attachment: A psychological study of the strange situation*. New York: Psychology Press.
- Belsky, J. (2013). *Experiencing the lifespan*. 3rd edn. New York: Worth Publishers.
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- Cassidy, J. & Shaver, P.R. (Eds.). (2018). *Handbook of attachment: Theory, research, and clinical applications*. 3rd edn. New York: Guilford Press.
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- Schaffer, H.R. (2016). *Introducing child psychology*. 3rd edn. Oxford: Wiley-Blackwell.

Chapter Three – Understand the development of attachment in human and animal studies.

Introduction

In this chapter you will learn about the development of attachment in human and animal studies.

You will learn the way in which attachment develops in humans and animals.

On completion of this chapter, you will investigate the development of attachment in humans and animals.

Learning Outcomes

On completing the chapter, you will be able to:


3. Understand the development of attachment in human and animal studies.

Assessment Criteria

3.1 Analyse the way in which attachment develops in humans and animals.

3.2 Analyse the findings of studies that investigate the development of attachment in humans and animals.

3.1 The way in which attachment develops in humans and animals

	Over to you – The BEAUTY and the BEAST of Animal Research
<p>Watch this YouTube video:</p> <p>Title: The BEAUTY and the BEAST of Animal Research Harry Harlow & Konrad Lorenz</p> <p>Duration: 14.15</p> <p>Link: https://www.youtube.com/watch?v=3iBDiU9cgiE</p>	

Introduction

Attachment is the emotional bond that forms between an infant and their caregiver. Psychologists study attachment development through both human observations and animal research. These studies help explain how early relationships form and why they are important for emotional and social development.

Understanding attachment in both humans and animals provides valuable insights into caregiver–infant interactions, emotional bonding, and survival behaviours.

- **Attachment Development in Humans**

In humans, attachment develops through **consistent, responsive interactions** between caregiver and infant.

Important processes include:

- Reciprocity – two-way communication between infant and caregiver
- Interactional synchrony – mirroring of emotions and behaviours
- Sensitive caregiving – responding appropriately to infant needs

These interactions help infants develop:

- Emotional security
- Trust in caregivers
- Social and communication skills
- Emotional regulation

Face-to-face communication, eye contact, smiling, and vocalisation are common features of early attachment development.

- **Attachment Development in Animal Studies**

Animal studies provide controlled insights into how attachment forms. Two influential researchers contributed significantly to understanding attachment.

- **Imprinting and Early Attachment**

Research by Konrad Lorenz demonstrated **imprinting**, where newly hatched birds attach to the first moving object they see.

Key findings:

- Imprinting occurs during a **critical period shortly after birth**.
- Young animals follow and remain close to the caregiver.
- This behaviour supports survival and protection.

Imprinting shows that attachment behaviours may have biological and evolutionary origins.

- **Comfort and Attachment**

Research by Harry Harlow studied attachment in infant monkeys.

Key findings:

- Infant monkeys preferred a soft cloth surrogate mother rather than a wire mother that provided food.
- Contact comfort was more important than feeding.
- Monkeys deprived of normal attachment showed social and emotional problems.

These findings suggest that emotional comfort plays a key role in attachment development.

- **Analysis of Human and Animal Attachment Studies**


Strengths

- Animal studies allow controlled experiments.
- Provide biological explanations for attachment.
- Demonstrate evolutionary importance of bonding.
- Support the role of caregiver–infant interaction.

Limitations

- Ethical concerns regarding animal research.
- Animal behaviour may not fully represent human relationships.
- Human attachment is influenced by culture and social context.
- Observational studies may lack experimental control.

Combining human and animal research helps psychologists develop a more complete understanding of attachment.

	Case Study – Early Bonding and Development
<p>Maya is a six-month-old baby who lives with her parents. Her caregivers regularly smile, talk, and respond to her needs. Maya shows excitement when they enter the room and becomes distressed when separated. This behaviour reflects the development of a secure attachment through consistent caregiver interaction.</p> <p>Discussion Questions</p>	

1. Which caregiver behaviours support attachment in this case?
2. How does Maya's behaviour reflect attachment development?
3. How might animal studies help explain early bonding behaviours?



Did you Know

That some animals imprint on the first moving object they see after birth.



Did you Know

That infant monkeys in research preferred comfort over food when forming attachments.



Industry Insight – Applications in Childcare, Education, and Social Services

Research on attachment has influenced practices in childcare, education, healthcare, and social work. Understanding early bonding helps professionals support healthy child development.

In early childhood education:

- Responsive caregiving promotes secure attachment.
- Stable relationships improve emotional wellbeing.
- Positive interaction supports language and social development.

In healthcare, midwives and health visitors encourage early bonding through skin-to-skin contact and responsive parenting.

In social care, attachment research informs foster care, adoption services, and child protection programmes. Professionals use attachment theory to identify emotional difficulties and support vulnerable children.

Although animal research provided important insights, modern practice emphasises ethical considerations and focuses on supporting healthy caregiver–infant relationships.



Need to Know

Attachment develops through early caregiver–infant interaction, emotional responsiveness, and biological mechanisms. Animal studies provide insights into the evolutionary basis of attachment, while human studies emphasise emotional bonding and social development.



Over to you: Research and Comparison Task

1. Describe one human study and one animal study of attachment.
2. Identify similarities and differences between them.
3. Explain how caregiver–infant interactions influence attachment development.


Prepare a short-written report (300–400 words).

Revision on the Go:

- Attachment is an emotional bond between infant and caregiver.
- Human attachment develops through interaction and responsiveness.
- Reciprocity and interactional synchrony support bonding.
- Animal studies show biological aspects of attachment.
- Imprinting demonstrates early attachment behaviour.
- Contact comfort is important for emotional development.
- Animal studies provide controlled evidence.
- Human attachment is influenced by social and emotional factors.




3.2 Analyse the findings of studies that investigate the development of attachment in humans and animals

	Over to you – Animal studies of attachment: Lorenz and Harlow - Attachment
<p>Watch this YouTube video:</p> <p>Title: Animal studies of attachment: Lorenz and Harlow - Attachment</p> <p>Duration: 8.10</p> <p>Link: https://www.youtube.com/watch?v=SJudYOGMzf8&t=71s</p>	

- **The Development of Psychological Attachments**

Attachment is the emotional bond that forms between an infant and a caregiver. Psychologists have studied attachment through human observations and controlled animal research to understand how these relationships develop and why they are important for survival and emotional wellbeing. These studies highlight the importance of early interaction, comfort, and responsiveness in forming secure attachments.

	Did you Know
<p>That securely attached infants are more likely to develop strong social relationships later in life.</p>	

- **Human Studies of Attachment Development**

Human attachment research focuses on **caregiver–infant interaction and emotional bonding**.

One influential researcher was Mary Ainsworth, who developed the **Strange Situation procedure** to observe attachment behaviour in infants.

Key findings from human attachment studies include:

- Infants seek proximity to their caregiver when distressed.
- Securely attached infants use caregivers as a secure base for exploration.
- Sensitive and responsive caregiving is associated with secure attachment.
- Inconsistent caregiving may lead to insecure attachment patterns.

These findings suggest that emotional responsiveness and caregiver sensitivity are critical for healthy attachment development.



Did you Know

That early attachment experiences can influence mental health in adulthood.

- **Animal Studies of Attachment Development**

Animal studies allow researchers to explore attachment mechanisms in controlled conditions.

Imprinting in Birds



Research by Konrad Lorenz showed that newly hatched birds attach to the first moving object they see.

Key findings:

- Attachment occurs during a critical period shortly after birth.
- Young birds follow and stay close to the caregiver.
- This behaviour increases survival.

This research suggested that attachment may have a **biological and evolutionary basis**.

- **Comfort and Attachment in Monkeys**

Research by Harry Harlow examined attachment in infant monkeys.

Key findings:

- Monkeys preferred a **soft cloth surrogate mother** over a wire mother that provided food.
- **Contact comfort** was more important than feeding.
- Monkeys deprived of normal attachment showed emotional and social difficulties.

These findings challenged learning theories that suggested attachment was based mainly on feeding.



Did you Know

That some animals form attachment within hours of birth through imprinting.

• Analysis of Findings

Key Insights

Human and animal studies suggest that:

- Attachment has biological and evolutionary roots.
- Emotional comfort and caregiver responsiveness are essential.
- Early interactions shape long-term emotional development.
- Attachment behaviours support survival and protection.

Strengths of These Studies

- Provide scientific evidence for attachment development.
- Combine observational and experimental methods.
- Demonstrate biological and emotional influences on bonding.

Limitations

- Animal behaviour may not fully reflect human relationships.
- Ethical concerns in animal research.
- Cultural differences influence human caregiving practices.
- Observational research may involve subjective interpretation.

Despite these limitations, both human and animal studies provide valuable insights into how attachment develops.



Need to know –

Attachment research shows that early caregiver–infant interaction, emotional comfort, and responsiveness play a key role in development. Animal studies highlight biological aspects of bonding, while human research emphasises emotional and social factors.



Case Study – Secure Attachment Development

Oliver is an eight-month-old baby who lives with his parents. When his mother leaves the room, Oliver becomes distressed, but he quickly calms down when she returns. During playtime, he explores toys but regularly looks back to ensure his caregiver is nearby.

This behaviour reflects secure attachment and shows the importance of responsive caregiving.

Discussion Questions

1. What behaviours suggest Oliver has developed a secure attachment?
2. How do caregiver responses influence attachment development?
3. Which research findings support this behaviour?



Over to you – Comparison and Analysis Task

1. Describe one human study and one animal study of attachment.
2. Identify key findings from each study.
3. Explain how these findings contribute to our understanding of attachment development.

Write a short analytical report (300–400 words).



Industry Insight – Applications in Childcare, Healthcare, and Social Services

Research into attachment has influenced professional practice in childcare, education, healthcare, and social work. Understanding early bonding helps professionals support healthy development in children.

In early childhood settings:

- Consistent and responsive caregiving promotes secure attachment.
- Emotional security supports learning and social development.
- Positive caregiver relationships improve wellbeing.

Healthcare professionals encourage early bonding through practices such as skin-to-skin contact and responsive parenting.

In social care, attachment research informs foster care, adoption services, and child protection policies. Professionals assess caregiver–infant interaction to identify potential emotional or developmental difficulties.

Attachment research has also influenced parenting programmes and interventions designed to support families and improve child wellbeing.

Revision on the Go:

- Attachment is an emotional bond between infant and caregiver.
- Human studies highlight caregiver sensitivity and responsiveness.
- Animal studies demonstrate biological attachment behaviours.
- Imprinting shows early attachment during a critical period.
- Contact comfort is essential for emotional bonding.
- Secure attachment supports healthy development.
- Ethical issues exist in animal research.
- Attachment research combines biological and social perspectives.



Summary

In this chapter you looked at the development of attachment in human and animal studies.

You learnt how attachment develops in humans and animals.

On completion of this chapter, you investigated the development of attachment in humans and animals.

Reading List

- Ainsworth, M., Blehar, M., Waters, E. & Wall, S. (2015). *Patterns of attachment: A psychological study of the strange situation*. New York: Psychology Press.
- Belsky, J. (2013). *Experiencing the lifespan*. 3rd edn. New York: Worth Publishers.
- Bowlby, J. (2019). *Attachment and loss: Volume I – Attachment*. London: Pimlico.
- Cassidy, J. & Shaver, P.R. (Eds.). (2018). *Handbook of attachment: Theory, research, and clinical applications*. 3rd edn. New York: Guilford Press.
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- Mesman, J., van IJzendoorn, M. & Sagi-Schwartz, A. (2016). *Cross-cultural patterns of attachment*. Cambridge: Cambridge University Press.
- O’Shaughnessy, R., Dallos, R., Berry, K. & Bateson, K. (2019). *Attachment theory: The basics*. London: Routledge.
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Chapter Four – Understand individual and cultural variations in attachment.

Introduction

In this chapter will learn about individual and cultural variations in attachment.

You will analyse the way in which attachment can vary between individuals and cultures.

On completion of this chapter, you will evaluate whether patterns of attachment appear to be universal or are subject to cultural influences.

Learning Outcomes

On completing the chapter, you will be able to:

4. Understand individual and cultural variations in attachment.

Assessment Criteria

4.1 Analyse the way in which attachment can vary between individuals and cultures.

4.2 Evaluate whether patterns of attachment appear to be universal or are subject to cultural influences.

4.1 Analyse the way in which attachment can vary between individuals and cultures.

Introduction

Attachment is the emotional bond between an infant and their caregiver. While attachment is considered a universal human process, research shows that attachment patterns can vary between individuals and across cultures. These variations are influenced by factors such as caregiving styles, cultural values, family structures, and social expectations.

Understanding these differences helps psychologists recognise that attachment development is shaped not only by biological processes but also by social and cultural environments.



Did you Know

That some cultures emphasise group caregiving rather than a single primary caregiver.

• Individual Differences in Attachment

Not all infants develop the same type of attachment. Research suggests that attachment can vary due to:

- Caregiver sensitivity and responsiveness
- Consistency of caregiving
- Infant temperament
- Family environment

Psychologist Mary Ainsworth identified three main attachment types through the **Strange Situation** procedure:

Secure Attachment

- Infant feels safe exploring the environment.
- Shows distress when caregiver leaves.
- Seeks comfort when caregiver returns.

Insecure-Avoidant Attachment

- Infant avoids contact with caregiver.
- Shows little distress when caregiver leaves.
- Appears emotionally distant.

Insecure-Resistant (Ambivalent) Attachment

- Infant shows high distress when separated.
- Seeks contact but resists comfort.
- Displays anxiety and clinginess.

Later research also identified **disorganised attachment**, where behaviour appears confused or inconsistent.



Did you Know

That secure attachment is the most common attachment type in many cultures.

- **Cultural Differences in Attachment**

Attachment behaviours also vary between cultures due to differences in parenting practices and social expectations.

Western Cultures

In many Western societies:

- Independence is encouraged.
- Infants may spend time apart from caregivers.
- Secure attachment is often the most common pattern.

Collectivist Cultures

In some collectivist cultures:

- Infants remain close to caregivers for longer periods.
- Community or extended family caregiving is common.
- Attachment patterns may differ from Western norms.

Cross-cultural research led by Van Ijzendoorn found that while secure attachment is the most common type globally, the **distribution of attachment styles varies between cultures**.



Did you Know

That cultural parenting practices influence emotional development and attachment behaviour.

- **Analysis of Individual and Cultural Variations**

Strengths of Cross-Cultural Research

- Demonstrates attachment as a universal human process.
- Highlights cultural diversity in caregiving practices.
- Encourages culturally sensitive understanding of development.

Limitations

- Some research may reflect Western cultural assumptions.
- Observational methods may be influenced by cultural bias.
- Attachment classifications may not apply equally across cultures.

Overall, attachment research suggests that while the need for attachment is universal, the way it is expressed can vary across individuals and cultures.



Industry Insight – Applications in Education, Childcare, and Social Services

Understanding individual and cultural differences in attachment is important in professions working with children and families. Teachers, childcare practitioners, psychologists, and social workers must recognise that parenting styles and attachment behaviours vary across cultures.

In education and childcare settings:

- Cultural sensitivity helps professionals support diverse families.
- Strong caregiver relationships support emotional wellbeing and learning.
- Recognising attachment differences prevents misunderstanding children's behaviour.

In social services and healthcare, professionals working with multicultural communities must consider cultural values when assessing parenting practices. For example, extended family caregiving may be normal in some cultures and should not automatically be interpreted as insecure attachment.

Attachment research therefore supports more inclusive and culturally aware approaches to child development and family support.



Over to you:

Cross-Cultural Analysis Task

1. Describe two different attachment types.
2. Identify how cultural practices might influence attachment behaviour.
3. Discuss why psychologists must consider cultural context when studying attachment.

Write a short analytical paragraph (250–300 words).



Case Study – Cultural Differences in Caregiving

Lina is a six-month-old baby raised in a large extended family household where grandparents and relatives regularly care for her. She shows comfort with multiple caregivers and remains calm when her parents leave the room.

In contrast, Daniel, raised in a nuclear family environment, shows distress when separated from his mother but quickly calms when she returns.

Discussion Questions

1. How do caregiving environments differ in this case?
2. How might culture influence attachment behaviour?
3. Why is it important to consider cultural context when analysing attachment?



Need to Know

Attachment patterns are influenced by both individual factors (such as caregiver responsiveness) and cultural contexts (such as parenting practices and social values). Understanding these variations helps psychologists develop a more culturally sensitive view of child development.

Revision on the Go:

- Attachment patterns vary between individuals.
- Caregiver responsiveness influences attachment security.
- Secure attachment is the most common globally.
- Cultural values influence parenting styles.
- Western cultures often emphasise independence.
- Collectivist cultures emphasise closeness and community care.
- Cross-cultural research highlights diversity in attachment patterns.
- Attachment classifications may be influenced by cultural bias.



4.2 Assess the psychological meaning of biological changes during adolescence.

- **The Development of Psychological Attachments**

Adolescence is a period of significant **biological, psychological, and social change**. During this stage, young people experience puberty, brain development, and hormonal changes that influence emotions, behaviour, identity formation, and relationships. These biological developments also affect attachment patterns, particularly how adolescents relate to parents, peers, and wider social groups.

Understanding the psychological meaning of biological changes helps psychologists explain how adolescents develop independence while maintaining emotional bonds with caregivers.



Did you Know

That cultures celebrate adolescence with rituals marking the transition to adulthood.

- **Biological Changes During Adolescence**

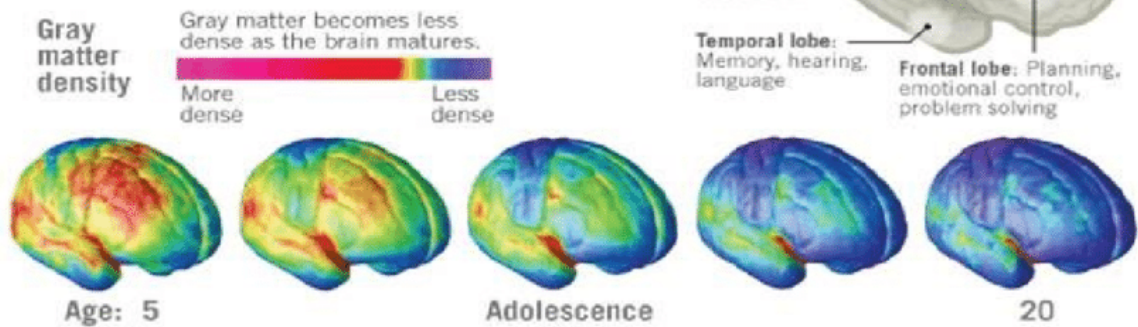
Adolescence typically begins with puberty, a biological process that leads to physical maturity. Hormonal changes trigger a range of physiological developments, including:

- Growth spurts
- Development of secondary sexual characteristics
- Changes in sleep patterns
- Increased emotional sensitivity

At the same time, the brain undergoes major development, particularly in areas responsible for decision-making, emotional regulation, and social behaviour.

Growing a Grown-up Brain

Scientists have long thought that the human brain was formed in early childhood. But by scanning children's brains with an MRI year after year, they discovered that the brain undergoes radical changes in adolescence. Excess gray matter is pruned out, making brain connections more specialized and efficient. The parts of the brain that control physical movement, vision, and the senses mature first, while the regions in the front that control higher thinking don't finish the pruning process until the early 20s.



Source: "Dynamic mapping of human cortical development during childhood through early adulthood," Nitin Gogtay et al., *Proceedings of the National Academy of Sciences*, May 25, 2004; California Institute of Technology

Two key brain areas involved are:

- The limbic system, associated with emotions and reward
- The prefrontal cortex, responsible for planning and impulse control

The limbic system develops earlier than the prefrontal cortex, which helps explain emotional intensity and risk-taking behaviour in adolescence.



Need to Know

Biological changes during adolescence influence emotional development, identity formation, and social relationships. While these changes are universal, cultural expectations and individual experiences shape how adolescents understand and respond to them.

• Psychological Meaning of Biological Changes

Biological changes during adolescence have several important psychological implications.

Identity Formation

Adolescents begin to explore personal identity, values, and beliefs. Physical development increases self-awareness and interest in social roles.


Emotional Development

Hormonal changes can lead to:

- Mood fluctuations

- Increased sensitivity to stress
- Strong emotional reactions

Learning to regulate these emotions is a key developmental task.


 Did you Know
That human brain continues developing into the mid-20s.

- **Changing Attachment Relationships**

Adolescents gradually seek greater independence from caregivers while forming stronger relationships with peers. This shift does not mean attachment disappears; rather, attachment patterns become more complex.

Social Awareness

Adolescents become more aware of social evaluation, which may influence self-esteem and behaviour.

 Did you Know
That adolescents may be more sensitive to peer influence due to brain development.


- **Individual and Cultural Influences**

Biological changes occur universally, but the psychological meaning of these changes may vary depending on cultural expectations and social environments.

For example:

- Some cultures emphasise independence during adolescence.
- Others emphasise family loyalty and interdependence.
- Cultural traditions and rites of passage may mark the transition into adulthood.

These differences influence how adolescents interpret and respond to biological changes.

 Industry Insight – Applications in Education, Mental Health, and Youth Development

Understanding the psychological meaning of biological changes during adolescence is essential for professionals working with young people. Teachers, psychologists, youth workers, and healthcare providers use this knowledge to support adolescent wellbeing.

In education, recognising developmental changes helps teachers support emotional regulation, motivation, and social development. In mental health services, professionals address issues such as anxiety, identity challenges, and peer pressure.

Youth development programmes often focus on building resilience, self-confidence, and decision-making skills during this stage. Cultural awareness is also important when supporting adolescents from diverse backgrounds, as expectations regarding independence, family roles, and identity may differ.

By understanding the interaction between biology, psychology, and culture, professionals can better support adolescents during this important stage of development.



Case Study – Navigating Adolescence

Amina is a 15-year-old student experiencing rapid physical development and increased independence. She sometimes feels overwhelmed by emotional changes and peer expectations. While she enjoys spending time with friends, she still relies on her parents for guidance and support.

Her school counsellor helps her understand that these experiences are a normal part of adolescent development and encourages strategies to manage stress and build confidence.

Discussion Questions

1. Which biological changes might Amina be experiencing?
2. How might these changes influence her emotions and behaviour?
3. How can caregivers and schools support adolescents during this stage?



Over to you –

Reflection and Analysis Task

1. Identify two biological changes that occur during adolescence.
2. Explain how these changes may influence emotions and behaviour.
3. Discuss how cultural expectations may shape adolescent development.

Write a short reflection (250–300 words).

Revision on the Go:

- Adolescence involves major biological and psychological changes.
- Puberty triggers hormonal and physical development.
- Brain development affects emotions and decision-making.
- Adolescents begin exploring identity and independence.
- Emotional regulation develops gradually.
- Attachment relationships shift towards peers.
- Cultural expectations influence adolescent development.



Summary

In this chapter you looked at individual and cultural variations in attachment.

You analysed the way in which attachment can vary between individuals and cultures.

On completion of this chapter, you evaluated whether patterns of attachment appear to be universal or are subject to cultural influences.

Reading List

- Ainsworth, M., Blehar, M., Waters, E. & Wall, S. (2015). *Patterns of attachment: A psychological study of the strange situation*. New York: Psychology Press.
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Glossary

Word / Term	Explanation
Attachment	A strong emotional bond that develops between an infant and a primary caregiver, providing a sense of security and comfort.
Attachment Theory	A psychological framework explaining how early emotional bonds between infants and caregivers influence development and relationships throughout life.
Attachment Behaviour	Actions that infants use to maintain closeness with their caregiver, such as crying, smiling, or following.
Avoidant Attachment	A type of insecure attachment where infants appear emotionally distant and avoid contact with their caregiver.
Caregiver	A person who provides care and support to an infant or child, often a parent or primary guardian.
Classical Conditioning	A learning process where a neutral stimulus becomes associated with a meaningful stimulus, forming the basis of learning theory explanations of attachment.
Contact Comfort	The physical comfort and emotional security provided through touch and closeness with a caregiver.
Critical Period	A specific time during development when attachment is most likely to form.
Cross-Cultural	Research examining how psychological processes, such as attachment, vary across different cultures.
Imprinting	A form of early attachment observed in some animals where newborns form a bond with the first moving object they encounter.
Insecure Attachment	An attachment style characterised by anxiety, avoidance, or inconsistent responses to caregivers.
Interactional	Synchrony A coordinated interaction in which caregiver and infant mirror each other's behaviours and emotional expressions simultaneously.
Learning Theory of Attachment	A behaviourist explanation suggesting attachment develops through conditioning and reinforcement, particularly through feeding and comfort.
Operant Conditioning	A learning process where behaviour is strengthened or weakened through reinforcement or punishment.

Reciprocity	A two-way interaction between caregiver and infant where each responds to the signals and behaviours of the other.
Secure Attachment	An attachment style in which the infant feels safe and confident exploring their environment while using the caregiver as a secure base.
Sensitive Caregiving	Caregiver behaviour that responds appropriately and consistently to an infant's emotional and physical needs.
Separation Anxiety	Distress experienced by an infant when separated from their caregiver.
Social Development	The process through which individuals develop the ability to interact and form relationships with others.
Strange Situation Procedure	A structured observational method used to assess attachment styles in infants.
Temperament	An infant's natural emotional and behavioural style, which can influence attachment development.
Unconditioned Stimulus	In classical conditioning, a stimulus that naturally produces a response without prior learning.
Variation in Attachment	Differences in attachment patterns across individuals and cultures due to factors such as parenting practices, social environment, and cultural values.

Self-assessment Tests

True/false questions

Answer True or False to the following statements. Justify your answers.

1. Learning theory suggests attachment is formed through reinforcement.
2. Learning theory fully explains emotional bonding.
3. Attachment only develops through feeding.
4. Learning theory suggests attachment develops through reinforcement.
5. Learning theory fully explains emotional bonding.
6. Attachment can develop through repeated caregiver responses.
7. Reciprocity is a one-sided process.
8. Infants are active participants in interaction.
9. Sensitive responses from caregivers promote secure attachment.
10. Attachment develops through caregiver–infant interaction.
11. Animal studies have contributed to understanding attachment.
12. Feeding is the only factor influencing attachment.
13. Attachment research includes both human and animal studies.
14. Animal studies have no influence on understanding human attachment.
15. Emotional comfort plays an important role in attachment development.
16. Biological changes during adolescence influence psychological development.
17. Brain development stops at the beginning of adolescence.
18. Cultural expectations can influence how adolescents experience development.

Multiple-choice questions

1. Learning theory of attachment is based on:
 - A. Cognitive development
 - B. Behaviourism
 - C. Humanism
 - D. Psychoanalysis

2. In classical conditioning, the caregiver becomes a:
 - A. Unconditioned stimulus
 - B. Neutral stimulus
 - C. Conditioned stimulus
 - D. Reflex

3. Operant conditioning involves:
 - A. Association only
 - B. Reinforcement
 - C. Genetics
 - D. Instinct

4. Learning theory of attachment is based on:

- A. Cognitive psychology
- B. Behaviourism
- C. Humanistic theory
- D. Psychoanalysis

5. In classical conditioning, the caregiver becomes a:

- A. Reflex
- B. Conditioned stimulus
- C. Hormone
- D. Punishment

6. Operant conditioning strengthens attachment through:

- A. Genetics
- B. Reinforcement
- C. Instinct
- D. Cognition

7. Reciprocity refers to:

- A. Feeding behaviour
- B. One-way communication
- C. Two-way interaction
- D. Genetic bonding

8. Interactional synchrony involves:

- A. Ignoring cues
- B. Mirroring behaviours
- C. Discipline
- D. Conditioning

9. Reciprocal interactions support:

- A. Only physical growth
- B. Emotional and social development
- C. Feeding schedules
- D. Sleep patterns only

10. Interactional synchrony refers to:

- A. Mirrored communication
- B. Feeding patterns
- C. Discipline techniques
- D. Genetic bonding

11. Interactional synchrony primarily involves:

- A. One-way communication
- B. Mirroring facial expressions and behaviours
- C. Conditioning
- D. Reward systems

12. Interactional synchrony supports:

- A. Only physical growth
- B. Emotional bonding and attachment
- C. Sleep patterns only
- D. Reflex responses

13. Imprinting refers to:

- A. Learned behaviour in adulthood
- B. Early attachment to a moving object
- C. Feeding behaviour
- D. Language development

14. Research involving infant monkeys showed attachment was based on:

- A. Feeding only
- B. Contact comfort
- C. Punishment
- D. Social rules

15. Reciprocity in caregiver–infant interaction refers to:

- A. One-way communication
- B. Mutual interaction
- C. Genetic bonding
- D. Reflex behaviour

16. Imprinting refers to:

- A. Emotional bonding during adulthood
- B. Early attachment to the first moving object seen
- C. Feeding behaviour
- D. Language development

17. Research with infant monkeys showed attachment was mainly based on:

- A. Feeding
- B. Contact comfort
- C. Discipline
- D. Observation

18. Secure attachment in infants is linked to:

- A. Inconsistent caregiving
- B. Responsive caregiving
- C. Lack of interaction
- D. Genetic factors only

19. Secure attachment is characterised by:

- A. Avoidance of caregivers
- B. Comfort and trust in caregivers
- C. Aggressive behaviour
- D. Lack of emotional response

20. Cultural differences in attachment may be influenced by:

- A. Parenting practices
- B. Social values
- C. Family structure
- D. All of the above

21. Cross-cultural attachment research suggests:

- A. Attachment is identical in all cultures
- B. Secure attachment is common worldwide
- C. Attachment does not exist in some cultures
- D. Culture has no influence on attachment

22. Puberty refers to:

- A. Emotional development only
- B. Biological process leading to physical maturity
- C. Cultural expectations
- D. Cognitive learning

23. The brain region responsible for decision-making that continues developing during adolescence is the:

- A. Cerebellum
- B. Prefrontal cortex
- C. Brainstem
- D. Hippocampus

24. Biological changes during adolescence can influence:

- A. Emotions and behaviour
- B. Identity formation
- C. Social relationships
- D. All of the above

True or False Questions

Answers to true/false questions

1. *True.* Learning theory suggests attachment is formed through reinforcement.
2. *False.* Learning theory DOES NOT fully explain emotional bonding.
3. *False.* Attachment DOES NOT only develop through feeding.
4. *True.* Learning theory suggests attachment develops through reinforcement.
5. *False.* Learning theory DOES NOT fully explain emotional bonding.
6. *True.* Attachment can develop through repeated caregiver responses.
7. *False.* Reciprocity is NOT a one-sided process.
8. *True.* Infants are active participants in interaction.
9. *True.* Sensitive responses from caregivers promote secure attachment.
10. *True.* Attachment develops through caregiver–infant interaction.
11. *True.* Animal studies have contributed to understanding attachment.
12. *False.* Feeding is NOT the only factor influencing attachment.
13. *True.* Attachment research includes both human and animal studies.
14. *False.* Animal studies have no influence on understanding human attachment.
15. *True.* Emotional comfort plays an important role in attachment development.
16. *True.* Biological changes during adolescence influence psychological development.
17. *False.* Brain development stops at the beginning of adolescence.
18. *True.* Cultural expectations can influence how adolescents experience development.

Answers to multiple-choice questions

1. (b) Behaviourism
2. (c) Conditioned stimulus

3. (b) Reinforcement
4. (b) Behaviourism
5. (b) Conditioned stimulus
6. (b) Reinforcement
7. (c) Two-way interaction
8. (b) Mirroring behaviours
9. (b) Emotional and social development
10. (a) Mirrored communication
11. (b) Mirroring facial expressions and behaviours
12. (b) Emotional bonding and attachment
13. (b) Early attachment to a moving object
14. (b) Contact comfort
15. (b) Mutual interaction
16. (b) Early attachment to the first moving object seen
17. (b) Contact comfort
18. (b) Responsive caregiving
19. (b) Comfort and trust in caregivers
20. (d) All of the above
21. (b) Secure attachment is common worldwide
22. (b) Biological process leading to physical maturity
23. (b) Prefrontal cortex
24. (d) All of the above