



AS Level Psychology

H167/02 Psychological themes through core studies

Time allowed: 1 hour 30 minutes

No extra materials are needed.



Please write clearly in black ink. **Do not write in the barcodes.**

Centre number

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Candidate number

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First name(s) *StemUp Model Solution*

Last name

INSTRUCTIONS

- Use black ink.
- Write your answer to each question in the space provided. If you need extra space use the lined pages at the end of this booklet. The question numbers must clearly be shown.
- Answer **all** the questions.

INFORMATION

- The total mark for this paper is **75**.
- The marks for each question are shown in brackets [].
- Quality of extended response will be assessed in questions marked with an asterisk (*).
- This document has **12** pages.

ADVICE

- Read each question carefully before you start your answer.

SECTION A – Core studies

Answer **all** the questions.

- 1 (a) Explain how the procedure from Bocchiaro *et al.*'s study relates to the key theme of responses to people in authority.

Bocchiaro et al. tested whether participants would obey, disobey or whistleblow when faced with an unjust request from an authority figure. The authority figure was a formally dressed, stern experimenter who participants believed was a legitimate researcher. He asked them to write an enthusiastic statement persuading other students to take part in a potentially harmful sensory deprivation study, and 76.5% of them obeyed this unethical request, showing how people respond to authority. [3]

- (b) Outline **one** weakness of the method used in Milgram's study into obedience.

The method lacks ecological validity because it was carried out in a laboratory at Yale University. Sitting in a room giving what you believe are genuine electric shocks of up to 450 volts to a stranger for getting a word pair wrong does not reflect a real-life situation in which people are asked to obey. [2]

- 2 (a) Name the experimental design used in Loftus & Palmer's study into eyewitness testimony.

Independent measures (independent groups) design. [1]

- (b) Outline **one** weakness of the way the sample was organised in Loftus and Palmer's first experiment.

Different participants were used in each of the five verb conditions (smashed, collided, bumped, hit and contacted), so individual differences such as driving experience may have affected how well each group could estimate speed, rather than the verb itself, lowering the validity of the results. [2]

- 3 (a) To what extent does Chaney *et al.*'s Funhaler study change our understanding of the key theme of external influences on children's behaviour? Support your answer with evidence from appropriate core studies.

To a large extent it adds to our understanding. Bandura et al. had shown that external influences on children's behaviour come from observing and imitating role models, such as the adult hitting the Bobo doll. Chaney et al. showed that children can also learn through operant conditioning: the Funhaler positively reinforced correct inhaler use with a spinning disc and whistle, so adherence rose from 10% to 73%, improving the children's health. This shows that reinforcement, not just observation, shapes children's behaviour. [3]

- (b) Describe **one** similarity between Chaney *et al.*'s study and Bandura *et al.*'s study into the external influences on the development of children's behaviour.

One similarity is that both studies used the experimental method, manipulating an independent variable to see its effect on children's behaviour. This means that both studies could establish a cause and effect relationship between the external influence and the behaviour. In Chaney et al.'s study the independent variable was whether the child used a standard inhaler or the Funhaler, and adherence to the medical regime was measured by questionnaire. In Bandura et al.'s study one of the independent variables was whether the child observed an aggressive or a non-aggressive model, and the number of imitative aggressive acts was then observed. [4]

- 4 (a) (i) Give the sample used in Sperry's split-brain study.

11 patients who had undergone a commissurotomy to control severe epilepsy. [1]

- (ii) Outline **one** example of sampling bias in this study.

All of the participants had to have had a commissurotomy, so the sample was very small (only 11 patients). This makes it very difficult to generalise the findings about hemisphere function to the wider population whose brains are intact. [2]

- (b) Describe the background to Casey et al.'s study of neural correlates in the delay of gratification.

Previous research had shown that performance on a delay of gratification task in childhood (resisting a cookie now for a bigger reward later) predicted how efficiently the same individuals performed a cognitive control task, such as a go/no-go task, as adolescents and young adults. Pre-schoolers who focused on the rewarding aspects of the situation (low delayers) had more difficulty suppressing inappropriate actions later on. Casey et al. wanted to build on this to assess whether delay of gratification in childhood predicts impulse control in adulthood and whether brain regions such as the inferior frontal gyrus and ventral striatum correlate with low self-control. [4]

- 5 Explain **one** way in which Freud's study of Little Hans could be criticised for its lack of reliability.

Freud used the case study method, which lacks reliability because it has no standardised procedure and so cannot be replicated. The observations and questioning of Hans were carried out by his father, who was a supporter of Freud's theories, and were unique to Hans, so we only have Freud's interpretation of the data. Another researcher could not revisit the study after the event to check whether Hans's horse phobia really represented the Oedipus complex, so consistency cannot be tested. [3]

SECTION B – Areas, perspectives and debates

Answer **all** the questions.

- 6 (a) Outline **two** defining principles and concepts of the cognitive area.

1. The cognitive area assumes that internal mental processes such as memory, perception, attention and thinking precede and guide our observable behaviour, so to understand behaviour we must study these processes, for example how misleading information can distort what an eyewitness recalls.

2. The mind is seen as mechanistic, working like a computer that inputs, processes and outputs information. Because these processes cannot be seen directly, the area uses experimental methods and infers how people think from their measurable behaviour on cognitive tasks. [4]

- (b) One strength of the cognitive area is that it favours the scientific method. Explain why this is a strength. Support your answer with evidence from an appropriate core study.

Using the scientific method, with controlled laboratory experiments, means that extraneous variables are controlled so cause and effect can be established between a cognitive factor and behaviour. For example, Loftus and Palmer were able to establish that the different speed estimates (40.8 mph for 'smashed' compared with 31.8 mph for 'contacted') were caused by the verb used in the critical question, as everything else was standardised. The procedure can also be replicated to check reliability. [3]

- (c) One weakness of the cognitive area is that studies can lack ecological validity. Explain why this is a weakness. Support your answer with evidence from an appropriate core study.

Many cognitive studies are laboratory experiments carried out in controlled but unrealistic conditions, so the findings may not represent how memory works in real-life situations. For example, in Loftus and Palmer's study participants watched short film clips of car crashes and then answered questions, which is very different from witnessing a real, emotionally arousing crash, so the misleading questions may not have the same effect on real eyewitnesses. [3]

- (d) Explain how Grant *et al.*'s study into context-dependent memory can be considered useful.

Grant et al. found that recall of a two-page article was better when the environment at learning matched the environment at testing, with participants in the silent-silent condition performing well. This is useful because it shows that if information is recalled in the same situation it was learned in, memory is enhanced. Students and teachers can apply this by revising in quiet conditions, because exams are taken in silence, so their recall will be more accurate. [3]

- (e)* Discuss the nature/nurture debate in psychology. Use examples from relevant core studies to support your answer.

The nature/nurture debate asks whether behaviour is the result of heredity or of experience. The nature side assumes that behaviour is innate and linked to biological factors; the characteristics of the human species are a product of evolution and individual differences are due to each person's unique genetic code. The nurture side assumes that at birth the mind is a blank slate which is gradually filled through direct and indirect learning from the environment.

Evidence supporting nature comes from Casey et al., who found that low delayers at age four still showed poorer impulse control forty years later, with lower inferior frontal gyrus activity and higher ventral striatum activity to happy faces. This suggests that self-control is a stable, biologically based trait that may be inherited. Similarly, Baron-Cohen et al. found that adults with autism scored lower on the Eyes Test, supporting the idea that autism is a distinct syndrome with a biological basis. A strength of the nature argument is that it is supported by scientific, objective evidence such as fMRI scans and twin studies, and it explains why some behaviours, such as the obedience Milgram found in 65% of participants, appear so difficult to change. A weakness is that it is biologically deterministic, suggesting people cannot be held responsible for behaviour, and reductionist: behaviour as complex as self-control is unlikely to be caused by single genes or brain regions, and cross-cultural differences in behaviour cannot be explained by biology alone.

Evidence supporting nurture comes from Bandura et al., who showed that children who observed an aggressive adult model imitated the aggression towards the Bobo doll, so behaviour is learned from the environment through observation. Chaney et al. showed that positive reinforcement from the Funhaler increased adherence from 10% to 73%, and Milgram's findings can also be seen as showing the impact of the situation, as the legitimate authority at Yale made ordinary people obey.

A strength of the nurture argument is that it is supported by hard, scientific evidence of observable behaviour change through conditioning, and it is useful, as it suggests behaviour can be changed and justifies investment in education, therapy and the penal system. A weakness is that it is environmentally deterministic and ignores free will, and it focuses on the situation at the

[12]

SECTION C – Practical applications

Answer **all** the questions.

Does TV and internet advertising feed children's junk food habits?

"Every hour kids spend online increases chance of buying junk food by a fifth," reports The Daily Telegraph.

A study was carried out using an online survey by researchers from the University of Liverpool and the charity Cancer Research UK. Researchers found links between the amount of time children spent watching TV or on the internet and their likelihood of being overweight, asking for junk food, and buying and eating certain types of junk food. Time spent watching commercial TV or online wasn't linked to children's activity levels.

Children who watched more than 3 hours of commercial TV a day were 59% more likely to be overweight or obese than children who watched half an hour a day or less. Those who used the internet more than 3 hours a day were 79% more likely to be overweight or obese than children who used the internet half an hour a day or less.

But it's important to note that we don't know whether these results mean TV or internet use directly causes obesity or increased junk food consumption. There are some limitations to online surveys. Though the researchers tried to get a broad sample representative of the population, there may still have been selection bias, as parents and children who frequently use the internet are more likely to have participated. The results are also reliant on people accurately recalling the amount of time spent on each activity, and children may have been reluctant to divulge their true onscreen time or consumption of unhealthy foods. We also need to be cautious about the report, as the full results aren't easily accessible and haven't been subjected to the scrutiny other published research undergoes.

Adapted from an online article on the NHS website (October 2018)

- 7 (a) Outline **one** issue of validity raised by the article.

One issue is the validity of cause and effect. The study only found a link between screen time and being overweight, so we cannot know whether watching more than three hours of commercial TV directly causes obesity, or whether children who are already overweight choose to spend more time online, or whether an extraneous variable such as parenting style explains both. [2]

- (b) (i) Identify the type of data quoted in the article.

Quantitative data. [1]

- (ii) Outline **one** strength of using this type of data in the research quoted in the article.

Quantitative data allows comparisons between groups to be made easily and objectively. For example, the researchers could compare the children who watched more than three hours of commercial TV a day, who were 59% more likely to be overweight or obese, with those who watched half an hour or less. [2]

- (c) Explain how the behaviourist perspective may be applied to this article.

The behaviourist perspective assumes that all behaviour is learned from the environment through classical conditioning, operant conditioning and social learning. Applied to the article, children who spend hours watching commercial TV or online see adverts in which attractive role models are shown enjoying junk food, so through social learning they imitate this eating behaviour. The adverts also provide vicarious reinforcement, as eating junk food is shown as rewarding and cool, which makes the children ask for and buy it. Once eaten, the pleasant taste positively reinforces the behaviour, so the children's junk food habits are learned from their immediate environment and are repeated. [4]

- (d) Using your knowledge of psychology, suggest **two** ways in which children could be encouraged to be more physically active.

Suggestion 1: positive reinforcement based on operant conditioning, as used by Chaney et al. with the Funhaler. Schools and parents could introduce a token economy in which children earn stickers or tokens for every 30 minutes of physical activity they complete, recorded on a chart or activity tracker. Tokens would be exchanged for secondary reinforcers such as certificates, medals or choosing the game in PE. The exercise could also be made intrinsically rewarding by using fun equipment and games, in the same way the spinning disc and whistle made the Funhaler enjoyable, so the behaviour is repeated and becomes a habit. Rewards would be given immediately and consistently so the association is learned quickly.

Suggestion 2: modelling, based on Bandura et al.'s finding that children imitate role models, particularly same-sex ones. Popular footballers, cartoon characters and social media influencers could appear in adverts during children's TV and online content being active and clearly enjoying it, so that children observe and imitate the behaviour and experience vicarious reinforcement. Parents and teachers could also model being active by walking to school and joining in games, so that physical activity becomes a social norm.

[8]

- (e) Evaluate the suggestions you have made in part (d) with reference to issues and debates you have studied in psychology.

Both suggestions are based on the nurture side of the nature/nurture debate, assuming that activity levels are learned from the environment. This is useful because learned behaviour can be changed, and Chaney et al.'s evidence that adherence rose from 10% to 73% suggests reinforcement works. However, it is reductionist, as it ignores biological factors such as genetic predispositions to obesity or energy levels, so a token economy may not work for every child.

Both suggestions are also environmentally deterministic, assuming children's behaviour is controlled by rewards and role models rather than free will. The reinforcement suggestion may only work while the rewards are available, and once the stickers stop the children may stop exercising, which questions its long-term usefulness. There is also an ethical issue, as rewarding children for exercise could be socially sensitive if overweight children feel singled out or punished.

The modelling suggestion relies on Bandura et al.'s laboratory study, which lacks ecological validity, as imitating a Bobo doll is different from choosing to exercise, so the celebrities may be less effective in real life. However, using the same mass media that the article links to junk food is a practical and ethical way to change social norms. [8]

END OF QUESTION PAPER

ADDITIONAL ANSWER SPACE

If additional space is required, you should use the following lined page(s). The question number(s) must be clearly shown in the margin(s).

6(e) expense of the individual, so it struggles to explain why 35% of Milgram's participants disobeyed or
 why not every child in Bandura et al.'s study was aggressive. In conclusion, neither side alone fully
 explains behaviour, and most psychologists now take an interactionist view. Blakemore and Cooper
 showed that kittens' innate visual system (nature) only developed normally if they were exposed to
 the right environment (nurture), and Casey et al.'s low delayers may have had a genetic predisposition
 that was shaped by their experiences. The debate is therefore best seen as a question of how much
 each side contributes rather than which one is correct.

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