2.7 Eyewitness Testimony: The Effect of Anxiety on Recall

Total Marks

AQA 7182 · about 70 minutes · Write-in edition

Name: _____ Date: ____ / ____ / _____

Answer ALL questions.

1 Describe briefly how levels of arousal affect attention and memory, using appropriate memory terminology in a forensic context.

(Total for Question 1 is 3 marks)

2 State one practical application for police or legal procedures arising from research into anxiety and eyewitness testimony.

(Total for Question 2 is 2 marks)

3 Outline the procedure and main finding of Johnson and Scott's 1976 laboratory study on the effect of a weapon on eyewitness accuracy.

(Total for Question 3 is 4 marks)

4 Identify one ethical issue with laboratory studies that simulate anxiety by staging a violent incident, and suggest how researchers could reduce this ethical concern while retaining experimental control.

(Total for Question 4 is 4 marks)

5 A witness, Kwame, was close to a shop window when an armed robbery occurred. He saw the robber's face clearly for several seconds and later reported being extremely frightened. Would you expect Kwame's recall to be accurate? Apply both the weapon focus literature and the inverted-U theory to justify your judgement.

(Total for Question 5 is 6 marks)

6 Discuss the effect of anxiety on the accuracy of eyewitness testimony. In your answer, refer to relevant studies and to theoretical explanations.

(Total for Question 6 is 16 marks)

7 Outline the key findings of Yuille and Cutshall's 1986 field study of witnesses to a real shooting in a Canadian gun shop.

(Total for Question 7 is 4 marks)

8 Outline Deffenbacher's meta-analytic explanation, often stated as an inverted-U relationship, for the effect of anxiety or arousal on eyewitness accuracy.

(Total for Question 8 is 4 marks)

9 Explain one strength and one limitation of using field studies, such as Yuille and Cutshall or Christianson and Hubinette, to investigate the effect of anxiety on eyewitness recall.

(Total for Question 9 is 6 marks)

10 Explain why laboratory and field studies of anxiety and eyewitness testimony often produce conflicting results, linking methodological differences to theoretical interpretations.

(Total for Question 10 is 6 marks)

Mark scheme · 2.7 Eyewitness Testimony: The Effect of Anxiety on Recall

Question 1

states that increased arousal narrows attention, often concentrating processing on central details and reducing peripheral encoding oe **B1**

states that moderate arousal can enhance encoding and consolidation, improving later recall oe **B1**

uses memory terms such as encoding, attention, consolidation or retrieval in the explanation oe **B1**

Answer: Higher arousal tends to narrow attention so central details are encoded better while peripheral details may be missed; moderate arousal can enhance encoding and consolidation leading to stronger recall, described using terms like encoding and retrieval.

Question 2

states a genuine application, e.g. cautioning juries about the limitations of high-arousal eyewitness testimony, or training officers to consider arousal when assessing witness reliability oe **B1**

links the application to research, e.g. using inverted-U ideas to avoid over-reliance on very highly stressed eyewitness accounts oe **B1**

Answer: Police might train interviewers and juries to consider the witness's arousal level when evaluating testimony, recognising that very high arousal can impair accuracy while moderate arousal may enhance it.

Question 3

outlines the procedure: participants observed a man in a waiting room carrying either a pen and grease on his hands or a bloody knife after an apparent argument, then later attempted to identify him from photos oe **M1**

correctly identifies the two conditions: low-anxiety pen condition and high-anxiety knife condition oe **M1**

states the main finding: identification accuracy was lower in the knife condition than the pen condition oe **A1**

links the result to the idea that attention was drawn to the weapon, impairing facial identification oe **A1**

Answer: In Johnson and Scott (1976) participants saw a man holding either a pen or a bloody knife after an argument; later photo ID was poorer in the bloody knife condition, interpreted as attention being drawn to the weapon and reducing face recall.

Question 4

identifies a genuine ethical issue, e.g. causing psychological harm or severe stress to participants through deception or staged violence oe **M1**

explains why this is a concern: participants may experience lasting distress and their right to protection from harm is at risk oe **A1**

suggests a way to reduce the concern, e.g. use milder stressors, full risk briefing, staggered informed consent, or an independent ethics check oe **M1**

explains how the suggestion reduces harm while retaining some control, e.g. milder manipulations lower distress while standardising arousal levels across participants oe **A1**

Answer: Staging violent incidents can cause psychological harm through deception and distress; researchers can reduce this by using milder, ethically approved stressors, providing thorough pre-screening and debriefing, and obtaining ethics committee approval to balance protection with experimental control.

Question 5

identifies that Kwame experienced very high arousal and close proximity to the event oe **M1**

applies weapon focus: if a weapon was present attention may have focused on it and impaired facial identification, predicting lower accuracy oe **A1**

applies Deffenbacher's inverted-U: very high arousal may lie on the impairing side of the curve, predicting reduced recall oe **M1**

contrasts with field studies: some real-world witnesses at high arousal have shown accurate recall, so Kwame could still be accurate if his attention was on the face rather than the weapon oe **A1**

draws a justified conclusion that recall might be impaired if attention was drawn to a weapon or arousal exceeded optimal levels, but may be accurate if he had clear unobstructed view and encoded the face well oe **B1**

acknowledges uncertainty and suggests that additional information such as presence of a weapon and duration of viewing would change the prediction oe **B1**

Answer: If Kwame's attention was drawn to an obvious weapon, weapon focus literature predicts impaired face ID; Deffenbacher's inverted-U also predicts that very high arousal can reduce accuracy. However, field studies show some highly aroused witnesses can be accurate, so if Kwame had an unobstructed clear view of the face for several seconds his recall might still be good. Overall, impairment is likely if a weapon captured attention or arousal was extreme, but good accuracy remains plausible depending on viewing conditions.

Question 6

Level 4 Knowledge is accurate and detailed. Discussion demonstrates a thorough, well integrated evaluation of theories and studies about anxiety and eyewitness testimony, showing strong links between empirical evidence and theory. The answer considers strengths and limitations, methodological and ethical issues, and reaches a balanced, justified conclusion using specialist terminology.	**13-16**
Level 3 Knowledge is generally accurate with some detail. Discussion evaluates and links studies and theory, but may be less thorough or slightly unbalanced. Some methodological or ethical points are made and applied to the question. Conclusion is supported but may lack full development.	**9-12**
Level 2 Knowledge is present but limited. Discussion consists mainly of descriptive points about studies or theory with limited evaluation. Application to the question is partial. Conclusions are simple and not well substantiated.	**5-8**
Level 1 Knowledge is minimal and answers are simplistic or disorganised. Little or no evaluation. Conclusions, if present, are unsupported. Specialist terminology is largely absent or misused.	**1-4**
Level 0 No creditworthy content.	**0**

Indicative content:

- AO1: Key studies include Johnson and Scott (1976) showing weapon focus in a lab setting leading to reduced identification accuracy, Yuille and Cutshall (1986) and Christianson and Hubinette (1993) field studies showing high arousal witnesses can be accurate, and Deffenbacher's meta-analytic inverted-U account reconciling these findings.
- AO1: Theoretical accounts include weapon focus and tunnel vision, which propose attention narrows to central threat stimuli under high anxiety, reducing peripheral encoding, and the inverted-U (Yerkes-Dodson style) where moderate arousal improves performance and very high arousal impairs it.
- AO2: Apply studies to examples, noting that a witness's accuracy depends on factors such as whether attention was captured by a weapon, the witness's proximity and viewing time, and the level of arousal relative to the inverted-U peak.
- AO3: Methodological evaluation contrasts high experimental control in lab studies that allow causal inferences but may create artificial arousal or ethical problems, with high ecological validity of field studies but lower experimental control and reliance on retrospective self-report of anxiety.
- AO3: Ethical considerations include the inadmissibility of intentionally inducing severe stress in lab participants and the acceptability of studying naturally occurring incidents; ethical constraints therefore shape what can be learned experimentally.
- AO3: Alternative explanations and moderators include individual differences in stress sensitivity, the role of attention and memory consolidation, measurement issues such as physiological versus self-report indicators of anxiety, and the nature of the memory tested (central versus peripheral).
- AO3: Practical implications for police and courts include cautious evaluation of eyewitness testimony that acknowledges arousal effects, training for interviewers, and using converging evidence rather than relying solely on high-arousal eyewitness accounts.
- Balanced conclusion: the effect of anxiety on eyewitness accuracy is complex; evidence shows both impairment and enhancement depending on arousal level, attention focus, and methodological context, so a nuanced stance acknowledging the inverted-U and methodological limits is appropriate.

Question 7

states that Yuille and Cutshall interviewed real witnesses to a shooting several months after the event oe	**M1**
reports that witnesses were highly accurate in their recall and resistant to misleading questions oe	**A1**
notes that those reporting higher anxiety during the event were often the most accurate, contrary to some lab findings oe	**A1**
may mention the ecological validity of field research as relevant to these findings oe	**B1**

Answer: Yuille and Cutshall (1986) found that real witnesses interviewed months after a shooting remained highly accurate, and witnesses who reported higher anxiety tended to be more accurate, supporting field evidence that anxiety can enhance recall.

Question 8

states that Deffenbacher's synthesis proposes an inverted-U relationship between arousal and performance oe	**M1**
explains that low arousal produces poor attention and poor recall, moderate arousal enhances performance, and very high arousal impairs performance oe	**A1**
applies this to eyewitness testimony, reconciling lab findings showing impairment at very high arousal with field findings showing enhancement at moderate arousal oe	**A1**
may mention that task complexity and type of memory tested can shift where the peak of the curve lies oe	**B1**

Answer: Deffenbacher's meta-analytic account proposes an inverted-U relationship: low arousal gives poor recall, moderate arousal improves accuracy, but very high arousal reduces accuracy; this helps reconcile differing lab and field findings.

Question 9

strength: high ecological validity because events are real and witnesses experience authentic emotional responses oe	**M1**
explains why this matters: results are more likely to generalise to real criminal situations and show how anxiety operates in natural contexts oe	**A1**
limitation: reduced experimental control over extraneous variables, such as exposure time or post-event discussion, which may confound results oe	**M1**
explains the consequence: it is harder to establish cause and effect or to isolate anxiety as the factor producing better or worse recall oe	**A1**
may give an example linking to Yuille and Cutshall or Christianson and Hubinette, e.g. different witness vantage points varied naturally oe	**B1**
may note that ethical acceptability is higher, since no deliberate harm is inflicted, but that retrospective self-report of anxiety can be biased oe	**B1**

Answer: Strength: field studies have high ecological validity because witnesses experience real emotional arousal, so findings generalise to real crimes. Limitation: low experimental control means extraneous factors like vantage point or post-event experiences can confound results, making it hard to isolate anxiety as the cause of any differences in recall.

Question 10

identifies key methodological differences: labs use controlled but artificial tasks and staged stressors, while field studies use real events with natural stress oe	**M1**
explains how artificiality in labs may produce unnaturally high or low arousal and demand characteristics that affect recall differently than real trauma oe	**A1**
links Deffenbacher's inverted-U theory to these differences, explaining that lab manipulations may push arousal to the very high end where recall falls, while real events may produce moderate arousal that enhances recall oe	**M1**
explains that measurement differences also matter: retrospective self-report of anxiety in the field may differ from physiological measures in the lab, affecting conclusions oe	**A1**
may note that ethical constraints limit how extreme laboratory stress can be, so labs may not fully replicate real-world arousal patterns oe	**B1**
may conclude that the conflict can be partly resolved by integrating methods and using converging evidence oe	**B1**

Answer: Lab studies are controlled but artificial and may induce extreme or contrived arousal that impairs memory, while field studies involve natural arousal that can be moderate and enhance recall. Deffenbacher's inverted-U helps explain this: labs may push arousal beyond the peak, whereas real events often produce arousal near the peak; differences in measurement and ethical limits also contribute to conflicting results.