



**THE ROYAL AUSTRALIAN AND NEW ZEALAND COLLEGE OF
PSYCHIATRISTS**

MOCK WRITTENS EXAMINATION

(from the Auckland New Zealand program)

2013

PAPER II

I hereby verify that I have completed and returned Paper II, Mock Writtens Examination:

CANDIDATE'S NAME:

CANDIDATE'S SIGNATURE:

DATE:

Extended Matching Questions

Do not answer questions in this booklet. Use the separate answer sheet and pencil provided.

All questions are worth 1 mark

- A. Sensory Memory
- B. Short-Term Memory
- C. Procedural Memory
- D. Schemata
- E. Semantic Memory
- F. Propositions
- G. Visual Memory
- H. Episodic Memory
- I. Programmes
- J. Facial Memory
- K. Imagery
- L. Verbal Memory
- M. Paradigms
- N. Working Memory

Which aspect of memory listed above is BEST demonstrated by the following examples.

Please select only ONE option, but any option may be used more than once, if required.

1. You ask a 50 y.o. man who you are assessing to name four New Zealand cities.
2. You are able to drive a car without consciously focussing on every action.
3. An 72 y.o. female patient tells you how she met her first husband in Paris.

Extended Matching Questions

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All questions are worth 1 mark

- A. Full blood count
- B. Urea and electrolytes
- C. Electrocardiogram
- D. Chest X-Ray
- E. HBA1C
- F. Free thyroxine index and TSH
- G. Temperature
- H. Weight
- I. Fasting serum glucose
- J. Serum creatinine
- K. Serum prolactin
- L. AIMS or GATES assessment
- M. Girth (waist) measurement
- N. Serum creatinine kinase

Which investigation listed above is **BEST** demonstrated by each of the following examples.

Please select only **ONE** option, but any option may be used more than once, if required.

- 4. A 25 year old man with first presentation of schizophrenia and a family history of diabetes, now treated with olanzapine after developing sexual dysfunction on risperidone.
- 5. A 45 year old man with chronic schizoaffective disorder transferred to risperidone from fluphenazine decanoate six weeks ago due to mild signs of tardive dyskinesia.
- 6. A 35 year old man with a history of severe psychotic manic episodes who developed neuroleptic malignant syndrome a year ago while on lithium and risperidone, on no treatment for the last six months but now representing with manic symptoms, who has received high-dose oral quetiapine and intramuscular lorazepam for the last three days.
- 7. A 30 year old woman with a resistant schizophrenic disorder who was commenced on clozapine four weeks ago.

Extended Matching Questions

Do not answer questions in this booklet. Use the separate answer sheet and pencil provided.

All questions are worth 1 mark

- A. Sleep terror disorder
- B. Primary Hypersomnia
- C. Caffeine induced sleep disorder (insomnia)
- D. Catalepsy
- E. Sleep disorder due to a general medical condition
- F. Periodic Leg Movement Disorder
- G. Insomnia related to an Axis II disorder
- H. Cataplexy
- I. Narcolepsy
- J. Major Depression
- K. REM Behaviour Disorder
- L. Restless Legs Syndrome
- M. Sleepwalking disorder
- N. Primary Insomnia

Which sleep problem listed above is **BEST** demonstrated by each of the following examples.

Please select only **ONE** option, but any option may be used more than once, if required.

- 8. A 30 year old man is unable to drive due to unpredictable bouts of daytime somnolence which last for about five minutes when they occur.
- 9. A couple present requesting marital therapy. The husband complains of poor and broken sleep causing irritability and that he feels unrefreshed with aching legs on waking. His wife complains that he often kicks her at night, which she describes as him "being passive aggressive".
- 10. A woman presents with tearfulness, tiredness, reduced appetite, weight loss and inability to sleep past 4 a.m., three months after a miscarriage.
- 11. A 4 year old boy sometimes wakes before midnight, screaming and appearing very distressed and unable to be comforted. He has no recall of these episodes in the morning.

Extended Matching Questions

Do not answer questions in this booklet. Use the separate answer sheet and pencil provided.

All questions are worth 1 mark

- A. Parallel Distributed Processing
- B. A Complex System
- C. Modelling
- D. A Basin of Attraction
- E. A Highly Trainable System
- F. A Homeostatic Effect
- G. A Static System
- H. A Node
- I. An Emergent Property
- J. A Chaotic System

Which of the aspects of neural network theory above is BEST demonstrated by each of the following examples.

Please select only ONE option, but any option may be used more than once, if required.

12. A neurone

13. A patient's brain in a state of severe melancholic depression.

14. Consciousness

15. A patient's acute psychosis responds gradually to risperidone

Extended Matching Questions

Do not answer questions in this booklet. Use the separate answer sheet and pencil provided.

All questions are worth 1 mark

- A. Nigrostriatal system
- B. Hypothalamus
- C. Mamillary bodies
- D. Cerebellum
- E. Frontal cortex
- F. Right temporal area
- G. Spinothalamic pathway
- H. Tuberoinfundibular pathway
- I. Dominant parietal region
- J. Amygdala
- K. Temporal cortex
- L. Occipital cortex

Which brain region or system above is BEST demonstrated by each of the following examples.

Please select only ONE option, but any option may be used more than once, if required.

16. A 50 y.o. woman with metastatic lung cancer is referred by her GP for an assessment after developing a non-fluent dysphasia which her doctor thinks may be a conversion disorder. On examination she also has problems with writing and arithmetic and has finger agnosia.
17. A 25 y.o. man commenced on risperidone 4 days previously presents to ED with blephorospasm.
18. A 33 y.o. man develops persistent personality change with irritability, disinhibition and emotional lability after an accident in which he sustained a significant head injury.
19. A 4 y.o. child presents to ED with opisthotonus after ingesting her mother's metoclopramide tablets.

Extended Matching Questions

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All questions are worth 1 mark

- A. Mixed receptive-expressive language disorder
- B. Developmental coordination disorder
- C. Asperger's disorder
- D. Attention deficit/hyperactivity disorder
- E. Autistic disorder
- F. Expressive language disorder
- G. Disorder of written expression
- H. Childhood disintegrative disorder
- I. Mild mental retardation
- J. Mathematics disorder
- K. Rett's disorder
- L. Reading disorder

Which childhood-onset disorder above is **BEST** demonstrated by the following examples.

Please select only **ONE** option, but any option may be used more than once, if required.

20. A six year old boy fails to respond when others try to interact socially with him, has no friends and often sits alone and rocks repetitively. He did not begin to speak until age four and now speaks little and uses repetitive, idiosyncratic language. He becomes agitated if his routines are altered.
21. A ten year old boy interacts clumsily with other children, making few friends. He appears readily frustrated and at times has tantrums and hits other children. He collects rocks and the tops of bottled water containers which he makes into spinning tops, with which he plays repetitively. His speech is normal apart from being slightly stilted, and he does reasonably well in classes, especially in maths and science.
22. A two year old girl develops normally in early infancy but after the first six months loses purposeful hand movements and begins making stereotyped handwashing gestures. She has delayed speech with no whole words as yet. She can stand briefly and crawl stiffly and clumsily, but is not yet walking. She is socially withdrawn and on examination her head circumference is below normal.

Extended Matching Questions

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All questions are worth 1 mark

- A. Marital Therapy
- B. Short Term Anxiety Provoking Psychotherapy
- C. Psychodynamic Therapy (Longer-Term)
- D. Exposure and Response Prevention
- E. CBT (Individual Therapy)
- F. Supportive Therapy
- G. CBT-Orientated Group Therapy
- H. Dialectical Behavioural Therapy
- I. Adherence Therapy
- J. Expressive Therapy
- K. Interpersonal Therapy
- L. Peer Support-Group Therapy

Which type of psychotherapy listed above is **MOST** appropriate for each of the following examples:

Please select only **ONE** option, but any option may be used more than once, if required.

- 23. A 35 y.o. highly functioning media executive presents requesting help with longstanding mild dysthymia, feelings of putting on a false front and inability to sustain interpersonal relationships. She talks of wanting to “get to the bottom of this stuff once and for all”.
- 24. A 30 y.o. computer programmer with avoidant and perfectionistic traits presents with onset of anxiety symptoms after a promotion at work brings additional responsibility. He expresses fears about loss of control and requests “practical help”.
- 25. A 6 y.o. boy stops talking altogether after witnessing the death of his 3 y.o. brother in a motor vehicle accident.

Extended Matching Questions

Do not answer questions in this booklet. Use the separate answer sheet and pencil provided.

All questions are worth 1 mark

- A. Alcohol
- B. Cannabis
- C. Nicotine
- D. Opiates
- E. Caffeine
- F. Cocaine
- G. Solvents
- H. Methamphetamine
- I. Benzodiazepines
- J. Methylenedioxymethamphetamine
- K. Benztropine
- L. Lysergic acid

Which substance from the list above is **MOST** likely to be implicated in each of the following examples.

Please select only **ONE** option, but any option may be used more than once, if required.

26. A 24 y.o. man seen in the emergency department is grossly disorientated and plucking repeatedly at his garments and the bedclothes. He has tachycardia, a flushed face, low-grade fever, hyperreflexia and dilated pupils.
27. A 28 y.o. prostitute is rushed to hospital by ambulance unconscious, bradycardic and on arrival develops respiratory arrest. Within 10 minutes of receiving treatment she has attempted to hit staff with her handbag then stormed out of the department.
28. A 17 y.o. girl wearing hipster jeans and a gold lurex top is brought to the emergency department at 3 a.m. in a comatose state with hyperthermia, hypertension, tachycardia and diaphoresis.
29. A 51 year old homeless woman is brought to the emergency department by ambulance, in shock due to haematemesis and melaena.

Extended Matching Questions

Do not answer questions in this booklet. Use the separate answer sheet and pencil provided.

All questions are worth 1 mark

- A. Verbigeration
- B. Clanging
- C. Echolalia
- D. Semantic paraphasia
- E. Incoherence
- F. Neologism
- G. Coprolalia
- H. Circumstantiality
- I. Loss of goal
- J. Answering past the point
- K. Phonemic paraphasia
- L. Jargon aphasia

Which aspect of phenomenology listed above is best demonstrated by each of the following examples.

Please select only ONE option, but any option may be used more than once, if required.

30. "Come over here doctor, sit here beside me on the frouch."
31. "What happened with Dad? Well I was there in the kitchen with Mum and Sharon, and he was saying something, and when people say things to you you have to process it, don't you, you have to absorb it and take it in, but you can take in a lot of toxins that way, there's a lot of pollution about these days. I worry about the environment and how polluted we all are, with toxic thoughts and feelings – I pick up the toxicity, the bad vibes, all the time from others, and sometimes it makes me feel quite ill, actually. It's all this genetic engineering and Helen Clark, she's got a lot to answer for..."
32. "You ask me why I came to the hospital tonight? To answer that I have to go back to 1977 when my first wife, who was a dental nurse, left me looking after our three year old son, Kevin. At the time he (that's Kevin) was suffering from quite severe asthma so I was to and fro to the doctors' every week or so, and my work as a chartered accountant suffered badly. I qualified in 1970 and I think I can safely say that I have always had very high standards in my professional obligations. But I digress. Back in 1977, when my wife left me for another man, a schoolteacher at the local secondary school in fact he was, I was in a sorry state..."
33. "Yes, but it's a faulty one, there's nothing there. It's like latent vaporism, it could be there or not. Like a con-layer, a further learning primate. I have a sort of silver bullet which held me by the leg, that one cannot jump on, and that ends beautifully like the stars. Stars. I say, 'God', but one must have eyes."

Extended Matching Questions

Do not answer questions in this booklet. Use the separate answer sheet and pencil provided.

All questions are worth 1 mark

- A. Zopiclone
- B. Clonazepam
- C. Paroxetine
- D. Thiothixene
- E. Olanzapine
- F. Tranylcypromine
- G. Benztropine
- H. Risperidone
- I. Pimozide
- J. Clozapine
- K. Quetiapine
- L. Gabapentine
- M. Carbamazepine
- N. Lithium carbonate

Which of the medications listed above if used during pregnancy is MOST likely to cause the following effects in neonates

Please select only ONE option, but any option may be used more than once, if required.

- 34. Spina bifida, minor craniofacial defects, fingernail hypoplasia and developmental disability.
- 35. Hypotonia, respiratory depression and hypothermia.
- 36. Jitteriness, poor feeding, hypotonia and tachypnoea.
- 37. Ebstein's anomaly.

Extended Matching Questions

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All questions are worth 1 mark

- A. Summation
- B. Clarification
- C. Confrontation
- D. Interpretation
- E. Paradoxing
- F. Open-ended questioning
- G. Socratic questioning
- H. Education
- I. Humour
- J. Challenging
- K. Reinforcement
- L. Close-ended questioning
- M. Empathy
- N. Reassurance
- O. Problem-solving
- P. Reframing

Which item listed above is **BEST** demonstrated by each of the following examples.

Please select only **ONE** option, but any option may be used more than once, if required.

38. "Across this time, did you have any experiences that you later realised were unusual?"
39. "I wonder if instead of viewing this pending examination as an insurmountable obstacle you could try to see it as an exciting challenge?"
40. "Do you think there's any possibility that this impulse to do the opposite of what your mother asks could be related to angry feelings towards her? "

Extended Matching Questions

Do not answer questions in this booklet. Use the separate answer sheet and pencil provided.

All questions are worth 1 mark

- | | |
|---|--|
| A. Major depressive episode | J. Multi-infarct dementia |
| B. Lewy-body dementia | K. Midazolam |
| C. Carbon monoxide poisoning | L. Hypochondriasis |
| D. Huntingdon's chorea | M. Acute Stress Disorder |
| E. Alzheimer's disease | N. Dissociative identity disorder |
| F. Concussion | O. Adjustment disorder |
| G. Electro-convulsive therapy | P. Pick's disease |
| H. Normal pressure hydrocephalus | Q. Brief psychotic disorder |
| I. Alcohol dependence | R. Dissociative fugue |

Which diagnosis listed above is **BEST** demonstrated by each of the following examples.

Please select only **ONE** option, but any option may be used more than once, if required.

- 41.** A 44 year old man is admitted to a psychiatric ward some distance from his home city, in a dazed state and unable to recall his name or personal details. When his identity is traced it is found that he has been missing from home for a week, and that he has serious marital and financial problems.
- 42.** A 36 year old woman develops irritability, anhedonia, poor concentration and memory and excessive eating and sleeping after the break-up of a relationship.
- 43.** A 57 year old homeless man develops nystagmus, ataxia and confusion, and later has severe anterograde amnesia.
- 44.** A 20 year old young woman is found to have been "date raped" after leaving a party with a casual acquaintance. She has no recall of the event or her attacker.

Extended Matching Questions

Do not answer questions in this booklet. Use the separate answer sheet and pencil provided.

All questions are worth 1 mark

- A. Paranoid schizophrenia
- B. Delusional disorder
- C. Brief psychotic episode
- D. Autism
- E. Psychotic depression
- F. Alcohol withdrawal
- G. Body dysmorphic disorder
- H. Paranoid personality disorder
- I. Benzodiazepine withdrawal
- J. Seasonal affective disorder
- K. Catatonic schizophrenia
- L. Schizophreniform disorder
- M. Schizotypal personality disorder
- N. Adjustment disorder with depressed mood
- O. Amphetamine induced psychosis
- P. Asperger's syndrome

Which diagnosis listed above is the **MOST** likely to be demonstrated by each of the following examples.

Please select only **ONE** option, but any option may be used more than once, if required.

- 45. A 23 year old man alternates between immobility and sudden violent agitation.
- 46. A 30 year old physics graduate student becomes agitated and hits his father when his collection of bottle tops is disturbed while the family are moving house.
- 47. A 28 year old woman suffocates her three month old baby then commits suicide using a bottle of nortriptyline tablets.
- 48. A 19 year old girl is brought to hospital after stabbing herself in the abdomen. She has a four month history of beliefs that she has been invaded by aliens, and of hearing their "transmissions" emanating from her stomach.

Extended Matching Questions

Do not answer questions in this booklet. Use the separate answer sheet and pencil provided.

All questions are worth 1 mark

- | | |
|----------------------------------|--|
| A. Somatic delusion | N. Palilalia |
| B. Obsession | O. "Made" speech |
| C. Cluttering | P. Perseveration |
| D. Coprolalia | Q. Loss of goal |
| E. Delusion of guilt | R. Poverty of content of speech |
| F. Echolalia | S. Preoccupation |
| G. Referential delusion | T. Tangentiality |
| H. Knight's move thinking | U. Nihilistic delusion |
| I. Logorrhoea | V. Poverty of speech |
| J. Magical thinking | W. Semantic paraphasia |
| K. Neologism | X. Circumstantiality |
| L. Word salad | Y. Delusion of poverty |
| M. Rumination | Z. Idea of reference |

Which aspect of speech or thought is the **MOST** likely to be demonstrated by each of the following examples.

Please select only **ONE** option, but any option may be used more than once, if required.

49. "I have to wear my lucky jacket when I watch Arsenal on TV, see, or else they might lose the match."
50. "It isn't me talking at all doctor – he speaks through me, the hypnotist. He's taken me over."
51. "I went to the shops after lunch. I don't know what...Television. Killing us... "
52. "There's no warning, doc. Shit! There - Bugger! Shit! See?"
53. "I have brain cancer – it's all empty in there."
54. "I keep getting these horrible thoughts that the baby's stopped breathing and I have to check on her all the time. I know it's stupid – she's perfectly healthy. I know that, but I can't stop the thoughts."

Extended Matching Questions

Do not answer questions in this booklet. Use the separate answer sheet and pencil provided.

All questions are worth 1 mark

- A. Gammahydroxybutyrate intoxication
- B. Phentermine abuse
- C. Benzodiazepine overdose
- D. Methylenedioxymethamphetamine use
- E. Tobacco dependence
- F. Lysergic acid intoxication
- G. Alcohol withdrawal
- H. Cannabis abuse
- I. Benztropine overdose
- J. Solvent abuse
- K. Opiate dependence
- L. Caffeine dependence
- M. Psilocybin abuse
- N. Methamphetamine abuse

Which of the substance use disorders listed above is the **MOST** likely to be demonstrated by each of the following examples.

Please select only **ONE** option, but any option may be used more than once, if required.

- 55. A 24 year old young man presents to the ED with constricted pupils and a groin abscess.
- 56. A 45 year old medically admitted homeless man is agitated, saying he sees bats flapping about the room.
- 57. A 50 year old kindergarten teacher with a history of recurrent depression is brought to the ED in respiratory arrest.
- 58. A 52 year old waiter has a tachycardia, tremor, and macrocytosis.

Extended Matching Questions

Do not answer questions in this booklet. Use the separate answer sheet and pencil provided.

All questions are worth 1 mark

- A. Formication
- B. Prosopagnosia
- C. Palinopsia
- D. Simultanagnosia
- E. Autotopagnosia
- F. Dysaesthesia
- G. Derealisation
- H. Micropsia
- I. Depersonalisation
- J. Pareidolia
- K. Déjà vu
- L. Visual agnosia
- M. Anosognosia
- N. Jamais vu
- O. Finger agnosia
- P. Dysgeusia

Which aspect of abnormal perception listed above is the **MOST** likely to be demonstrated by each of the following examples.

Please select only **ONE** option, but any option may be used more than once, if required.

- 59. A man in a confused and disoriented state post-operatively tries to brush insects off his skin, believing that he can feel them crawling on him.
- 60. A man in a neurological ward can copy a picture of a tree but cannot tell you what the picture represents.
- 61. A woman with epilepsy finds that familiar things seem strange and as though experienced for the first time, just prior to a seizure.

Extended Matching Questions

Do not answer questions in this booklet. Use the separate answer sheet and pencil provided.

All questions are worth 1 mark

- A. Obsessive Compulsive Disorder
- B. Creutzfeldt-Jakob Disease
- C. Rett's Syndrome
- D. Major Depressive Disorder
- E. Infantile Autism
- F. Parkinson's Disease
- G. Wernicke Korsakoff Syndrome
- H. Pick's Disease
- I. Vitamin B12 deficiency
- J. Carbon Monoxide poisoning
- K. Schizophrenia
- L. Affective psychosis
- M. Lewy body dementia
- N. Alzheimer's dementia
- O. Huntingdon's disease
- P. Binswanger's Disease

Which condition listed above is the **MOST** likely to result in each of the following examples.

Please select only **ONE** option, but any option may be used more than once, if required.

62. Patchy cell loss in the globus pallidus, hippocampus and cerebral cortex

63. Atrophy of the caudate nucleus

64. Spongiform neuronal degeneration of the cortex, basal ganglia, thalamus and cerebellum

65. Depigmentation of the substantia nigra

Extended Matching Questions

Do not answer questions in this booklet. Use the separate answer sheet and pencil provided.

All questions are worth 1 mark

- | | | | |
|----|---------------------------|----|---------------------|
| A. | Verbal Fluency | J. | HoNOS |
| B. | AIMS | K. | YMRS |
| C. | HDRS | L. | Draw-a-Person |
| D. | EAT | M. | Wisconsin Card Sort |
| E. | Y-BOCS | N. | MADRS |
| F. | PANSS | O. | PASAT |
| G. | CAGE | P. | Stroop |
| H. | Paired Associate Learning | Q. | BDI |
| I. | Trail-making | R. | GATES |

Which test listed above is the **MOST** likely to be useful in each of the following examples.

Please select only **ONE** option, but any option may be used more than once, if required.

66. A psychologist wishes to explore her client's personality and perception of self and others prior to commencing psychodynamic psychotherapy.
67. You want to monitor the response of a 41 year old inpatient with intractable, resistant mania to a trial of olanzapine added to his usual regime of sodium valproate and lithium carbonate.
68. A 33 year old woman with schizophrenia complains of stiffness in her legs, pains in her back, agitation and pacing a month after commencing risperidone.
69. A 45 year old business executive has an annual physical with his GP who notices that the patient has a raised GGT and a macrocytosis on laboratory tests. When asked if he has been drinking the patient says "No more than usual".

Extended Matching Questions

Do not answer questions in this booklet. Use the separate answer sheet and pencil provided.

All questions are worth 1 mark

- A. Echopraxia
- B. Perseveration
- C. Coprolalia
- D. Catatonia
- E. Verbigeration
- F. Agitation
- G. Dyspraxia
- H. Motor tic
- I. Dysgraphia
- J. Wernicke's dysphasia
- K. Gegenhalten
- L. Dyskinesia
- M. Acalculia
- N. Astasia abasia
- O. Psychomotor activation
- P. Rhinotillexomania

Which abnormality of speech or behaviour is the **MOST** likely to be demonstrated by each of the following examples.

Please select only **ONE** option, but any option may be used more than once, if required.

- 70. A 24 year old acutely admitted young man displays driven, erratic but purposeless bursts of movement, alternating with immobility.
- 71. A 77 year old woman in a rest home repeats words and phrases frequently during an assessment interview.
- 72. A 19 year old youth commenced on risperidone as an outpatient develops acute blephorospasm.
- 73. A 35 year old woman who ceased taking her clozapine one week previously demonstrates stereotypical, senseless repetition of words and phrases.

Extended Matching Questions

Do not answer questions in this booklet. Use the separate answer sheet and pencil provided.

All questions are worth 1 mark

- A. Lithium carbonate
- B. Quetiapine
- C. Zopiclone
- D. Lamotrigine
- E. Olanzapine
- F. Moclobemide
- G. Benztropine
- H. Risperidone
- I. Aripiprazole
- J. Clozapine
- K. Clonazepam
- L. Gabapentin
- M. Carbamazepine
- N. Procyclidine

Which medication listed above is the **MOST** likely to cause each of the following examples.

Please select only **ONE** option, but any option may be used more than once, if required.

74. Amenorrhoea

75. Stevens Johnson Syndrome

76. Prolongation of succinylcholine's neuromuscular blockade

77. Hypomania

Extended Matching Questions

Do not answer questions in this booklet. Use the separate answer sheet and pencil provided.

All questions are worth 1 mark

- A. Phenomenological qualitative research
- B. Unstructured interview data collection
- C. Snowball sampling
- D. Data collection using video recordings
- E. Selection bias in qualitative research
- F. Latent level of analysis
- G. Data collection by note-taking
- H. Data collection using documentation
- I. Semi-structured interview data collection
- J. Grounded Theory
- K. Focus group data collection
- L. Constant Comparative Analysis
- M. Ethnographic qualitative research
- N. An extended case study
- O. Manifest level of analysis
- P. Highly structured interview data collection

Which aspect of qualitative research listed above is the MOST likely to be demonstrated by each of the following examples.

Please select only ONE option, but any option may be used more than once, if required.

- 78. A qualitative study describing and analysing organisational change in the restructuring of a community service, across a period of two years.
- 79. Originated with Glaser and Strauss' work in the 1960s on the interactions between health care professionals and dying patients.
- 80. A qualitative researcher studying a mental health service gathers up the organisation's policies, mission statements, annual reports, minutes of meetings, codes of conduct, memos and notices pinned to notice boards.
- 81. A qualitative research project looks at the experience and concept of "carers" - what does "caring" actually mean and what is it like to be a "carer"?

Extended Matching Questions

Do not answer questions in this booklet. Use the separate answer sheet and pencil provided.

All questions are worth 1 mark

- A. Graded exposure
- B. Reinforcement-based therapy
- C. Shaping
- D. Implosion therapy
- E. Behavioural modification
- F. "ABC" analysis
- G. Operant conditioning
- H. Social skills training
- I. Classical conditioning
- J. Decelerating therapy
- K. Counterconditioning
- L. Exposure-based therapy
- M. Aversion therapy
- N. Habit reversal
- O. Imaginal exposure
- P. In vivo sensitisation

Which Behavioural Therapy term listed above is the MOST likely to be demonstrated in the following vignettes.

Please select only ONE option, but any option may be used more than once, if required.

82. A man with a fear of heights is shown a video taken from a camera strapped to a sky diver jumping out of a plane.
83. A patient and therapist discuss the triggers for a bulimic binge, what happened during the bingeing and the patient's reaction afterwards.
84. A young woman with trichotillomania learns to rub a polished marble egg in response to impulses to twist her hair repetitively.

Extended Matching Questions

Do not answer questions in this booklet. Use the separate answer sheet and pencil provided.

All questions are worth 1 mark

- A. i.b.s. linkage analysis
- B. Haplotype relative risk genetic association method
- C. Ultra-rapid P450 2D6 metabolizer phenotypes
- D. chromosome 22q deletions
- E. P450 1A2 polymorphisms
- F. Intermediate P450 2D6 metabolizer phenotypes
- G. Serotonin receptor gene
- H. P450 3A4 polymorphisms
- I. Chromosome 21 linkages
- J. i.b.d. linkage analysis
- K. Genetic polymorphism affecting acetaldehyde dehydrogenase
- L. Serotonin transporter gene 5HTT

Which of the examples from genetic research listed above is the **MOST** likely to be associated with each of the following examples.

Please select only **ONE** option, but any option may be used more than once, if required.

85. Implicated in the aetiology of bipolar disorder.

86. Patients with the "LL" genotype do better with SSRI therapy than those with the "SS" genotype.

87. Linked with velocardiofacial syndrome and schizophrenia.

88. Implicated in genetic vulnerability to the development of alcoholism.

Extended Matching Questions

Do not answer questions in this booklet. Use the separate answer sheet and pencil provided.

All questions are worth 1 mark

A	Somatic delusion	N	Palilalia
B	Obsession	O	"Made" speech
C	Cluttering	P	Perseveration
D	Coprolalia	Q	Loss of goal
E	Derailment	R	Poverty of content of speech
F	Echolalia	S	Preoccupation
G	Incoherence	T	Tangentiality
H	Knight's move thinking	U	Nihilistic delusion
I	Delusions of reference	V	Poverty of speech
J	Magical thinking	W	Semantic paraphasia
K	Neologism	X	Circumstantiality
L	Word salad	Y	Delusion of poverty
M	Rumination	Z	Referential ideas

Which aspect of phenomenology listed above is **BEST** demonstrated by each of the following examples.

Please select only **ONE** option, but any option may be used more than once, if required.

- 89.** Joe, aged four, thinks his dog was run over because he was angry with it.
- 90.** Ben is in love and spends hours thinking about his girlfriend
- 91.** Angela is fairly sure that people are talking about her and criticising her wherever she goes.
- 92.** Pierre has recurrent negative thoughts that he has failed at work and as a husband and father and has to take sick leave from work.
- 93.** Margaret has frequent unwanted thoughts that she has run over someone on the motorway. She has to keep driving back to check if this is so.
- 94.** Tom finds that car numberplates contain a special code that only he can decipher, which confirms his belief that the FBI are stalking him.

Extended Matching Questions

Do not answer questions in this booklet. Use the separate answer sheet and pencil provided.

All questions are worth 1 mark

- A. Lithium carbonate
- B. Quetiapine
- C. Nortriptyline
- D. Lamotrigine
- E. Olanzapine
- F. Amitriptyline
- G. Citalopram
- H. Risperidone
- I. Aripiprazole
- J. Clozapine
- K. Venlafaxine
- L. Sertraline
- M. Sodium valproate
- N. Fluoxetine

For each of the following examples, select the **MOST** appropriate medication.

Please select only **ONE** option, but any option may be used more than once, if required.

- 95. Level I evidence of efficacy in combination with lithium when used after ECT for resistant depression
- 96. Serum levels can fluctuate with menstrual cycle in women with Bipolar disorder
- 97. Most effective antipsychotic to improve negative symptoms of schizophrenia
- 98. Level II evidence of efficacy in treating Bipolar II depressions
- 99. Does not cause rebound worsening of chronic tardive dyskinesia if substituted for first generation antipsychotics
- 100. Level II evidence as a mood stabiliser when combined with fluoxetine

Extended Matching Questions

Do not answer questions in this booklet. Use the separate answer sheet and pencil provided.

All questions are worth 1 mark

- A. Nigrostriatal system
- B. Hypothalamus
- C. Mamillary bodies
- D. Cerebellum
- E. Frontal cortex
- F. Right temporal area
- G. Brain Stem
- H. Tuberoinfundibular pathway
- I. Parietal cortex
- J. Amygdala
- K. Temporal cortex
- L. Occipital cortex

Which brain region or system listed above is **MOST** associated with each of the following problems.

Please select only **ONE** option, but any option may be used more than once, if required.

- 101. Anomia and dysgraphia
- 102. Nystagmus and ataxia
- 103. Word blindness and movement agnosia
- 104. Prosopagnosia and fluent aphasia
- 105. Dysphagia and sleep apnoea

Extended Matching Questions

Do not answer questions in this booklet. Use the separate answer sheet and pencil provided.

All questions are worth 1 mark

- A. Bulimia nervosa
- B. Body Dysmorphic Disorder
- C. Hypochondriasis
- D. Acute Stress Disorder
- E. Depersonalization disorder
- F. Binge Eating Disorder
- G. Factitious disorder With Predominantly Psychological Signs and Symptoms
- H. Amnestic Disorder Due to Head Trauma
- I. Dissociative Identity Disorder
- J. Delusional disorder, somatic type
- K. Anorexia nervosa
- L. Acute Posttraumatic Stress Disorder
- M. Factitious disorder With Predominantly Physical Signs and Symptoms
- N. Delusional disorder
- O. Dissociative amnesia
- P. Somatization Disorder
- Q. Conversion Disorder

Which diagnosis listed above is the **MOST** likely to be demonstrated by each of the following examples.

Please select only **ONE** option, but any option may be used more than once, if required.

- 106. Three weeks after a near-fatal car accident in which his leg was broken, a young man still suffers from nightmares and intrusive memories of the crash.
- 107. A 40 y.o. woman is convinced that she is infested with parasites which crawl just underneath her skin, which is covered in scratches and raw lesions.
- 108. A plump young woman admits to bingeing on cereals or ice-cream when feeling low. The only consequence afterwards is a worsening of her mood.
- 109. A 35 y.o. man presents to the Emergency Department with abdominal pain. There is evidence of several prior surgeries with scarring on his abdomen.
- 110. Jodie, aged 35, regularly binges then makes herself vomit. She uses laxatives and exercises excessively, and her BMI is in the normal range.
- 111. A 27 y.o. man assaults his dentist after the dentist refuses any further appointments to grind down his right upper molars for complaints of malocclusion.

Extended Matching Questions

Do not answer questions in this booklet. Use the separate answer sheet and pencil provided.

All questions are worth 1 mark

- A. Intellectualisation
- B. Flight into health
- C. Negative transference
- D. Idealisation and devaluation
- E. Regression
- F. Positive transference
- G. Manic defence
- H. Rationalisation
- I. Repression
- J. Reaction formation
- K. Countertransference
- L. Sublimation

Which psychological process listed above is BEST demonstrated by each of the following examples.

Please select only ONE option, but any option may be used more than once, if required.

- 112. Mark tells his psychotherapist that he has started seeing a naturopath every week who is “extremely understanding and helpful – and very practical.”
- 113. Annabel writes to her therapist: “Sorry I can’t make it to the last ten sessions, but I’m feeling fine now so I don’t need any more therapy.”
- 114. Raj goes home after therapy with a needy new patient feeling irritable and as though he is suffocating.

Extended Matching Questions

Do not answer questions in this booklet. Use the separate answer sheet and pencil provided.

All questions are worth 1 mark

- A. Benztropine 2 mgs orally
- B. Nortriptyline and lithium carbonate
- C. Maintenance electroconvulsive therapy
- D. Risperidone Consta
- E. Olanzapine short-acting injection
- F. Tranylcypromine
- G. Nortriptyline
- H. Lithium carbonate
- I. Citalopram
- J. Mirtazepine
- K. Benztropine injection 2 mgs intravenously
- L. Cognitive behavioural therapy and fluoxetine
- M. Midazolam
- N. Venlafaxine
- O. Lamotragine
- P. Benztropine injection 2 mgs intramuscularly
- Q. Diazepam
- R. Olanzapine oral wafers

Which treatment option listed above is the **MOST** appropriate or evidence-based choice in each of the following examples.

Please select only **ONE** option, but any option may be used more than once, if required.

- 115. Jim, aged 37, is recovering from a resistant melancholic depression which required ECT before responding. He now needs an ongoing outpatient treatment regime.
- 116. Ming, a 19 y.o. Chinese student admitted with schizophrenia, develops a severe and painful torticollis the weekend after commencing risperidone.
- 117. Thelma has a history of persistent lowered mood with two past episodes of major depression. She recently recovered from a hypomanic episode and is now becoming dysthymic again.
- 118. Mario is brought to hospital by the police acutely aroused and struggling violently, with grandiose delusions and pressured speech, shouting about being Jesus.
- 119. Sophia presents with longstanding social phobia, having become almost house-bound and very reliant on her husband.
- 120. Henry, aged 79, develops muscle twitching while still unconscious after his ECT treatment – reapplication of the EEG shows this to be a tardive seizure.

Extended Matching Questions

Questions 121 to 130

**THE FOLLOWING QUESTIONS ARE WORTH TWO MARKS EACH.
ONE MARK FOR EACH CORRECT ANSWER.**

Do not answer questions in this booklet.

Use the separate answer sheet and pencil provided.

Extended Matching Questions:

Do not answer EMQ questions in this booklet. Use the separate answer sheet and pencil provided.

All questions are worth 2 marks each

Please select UP TO TWO responses for each question.

More than two responses will incur a mark of zero.

Answers to one question may be used for subsequent questions if required.

- A. Hypothyroidism
- B. Family history of anxiety disorder
- C. Amphetamine abuse
- D. Prematurity at birth
- E. Loss of a parent before age eleven
- F. Family history of depression
- G. Dehydration
- H. Opiate dependancy
- I. Hyperthyroidism
- J. High parental expressed emotion
- K. Female sex
- L. Birth by caesarian section
- M. Cigarette smoking
- N. Past cerebrovascular accident

For each of the following examples, select the TWO MOST LIKELY risk factors from the list above.

Any option may be used more than once, if required.

121. A 69 year old patient taking risperidone is admitted acutely with rigidity, temperature of 38 degrees, confusion, and on investigation has an elevated creatinine kinase, leucocytosis and mildly elevated liver enzymes.
122. A 19 year old patient living at home with family and treated with fluphenazine decanoate is readmitted for the third time with a relapse of auditory hallucinations and fears of being controlled by radio waves from Mars.

Extended Matching Questions:

Do not answer EMQ questions in this booklet. Use the separate answer sheet and pencil provided.

All questions are worth 2 marks each

Please select UP TO TWO responses for each question.

More than two responses will incur a mark of zero.

Answers to one question may be used for subsequent questions if required.

- | | |
|------------------------------|-----------------------|
| A. Countertransference | J. Humour |
| B. Denial | K. Resistance |
| C. Altruism | L. Repression |
| D. Anticipation | M. Transference |
| E. Parallel process | N. Reaction formation |
| F. Isolation of affect | O. Displacement |
| G. Devaluation | P. Rationalisation |
| H. Projective identification | Q. Projection |
| I. Idealisation | R. Splitting |

For each of the following examples, select the TWO MOST LIKELY descriptions of defences or psychotherapy processes from the list above.

Any option may be used more than once, if required.

123. A psychiatric registrar under pressure to help her psychodynamic psychotherapy patient feels frustrated with her supervisor, as he will not give her advice about the case. At home after the supervision session, she argues with her partner about who was supposed to buy more milk.
124. A man who suffered emotional deprivation as a child develops a career in stand-up comedy, entertaining audiences with jokes about the various foster families and orphanages he has known. He donates a percentage of his earnings to charities related to children.

Extended Matching Questions:

Do not answer EMQ questions in this booklet. Use the separate answer sheet and pencil provided.

All questions are worth 2 marks each

Please select UP TO TWO responses for each question.

More than two responses will incur a mark of zero.

Answers to one question may be used for subsequent questions if required.

- A. Sleep spindles
- B. Hypnagogic hallucinations
- C. Delta waves
- D. Myoclonic jerks
- E. Atonia
- F. K-complexes
- G. Sleep walking
- H. Night terrors
- I. Alpha waves
- J. Dreams
- K. Bed wetting

For each of the following sleep stages, select the TWO options from the list above which BEST correspond.

Please select only TWO options for each question, but any option may be used more than once, if required.

125. REM sleep

126. Stage 2 sleep

Extended Matching Questions:

Do not answer EMQ questions in this booklet. Use the separate answer sheet and pencil provided.

All questions are worth 2 marks each

Please select UP TO TWO responses for each question.

More than two responses will incur a mark of zero.

Answers to one question may be used for subsequent questions if required.

- A. SSRI antidepressant
- B. Cognitive behavioural therapy
- C. Clomipramine
- D. Psychodynamic psychotherapy
- E. Oral risperidone
- F. Group CBT with peers
- G. Clozapine
- H. Tranylcypromine
- I. Group therapy with peers
- J. Venlafaxine
- K. Exposure and response prevention
- L. Family therapy
- M. Risperidone Consta

For each of the following examples, select the TWO MOST APPROPRIATE treatment options from the list above, to be used concurrently.

Please select TWO options for each question, but any option may be used more than once, if required.

127. Rosalie works as a kindergarten teacher and is aged 27. She shares an apartment with friends and has been referred with bulimia nervosa and depressive symptoms.
128. Andrew is a 39 y.o. married accountant with obsessive compulsive disorder. He has not responded to high-dose SSRI or SNRI therapy.

Extended Matching Questions:

Do not answer EMQ questions in this booklet. Use the separate answer sheet and pencil provided.

All questions are worth 2 marks each

Please select UP TO TWO responses for each question.

More than two responses will incur a mark of zero.

Answers to one question may be used for subsequent questions if required.

- A. Schizophrenia, paranoid type
- B. Manic episode with mood-congruent psychotic features
- C. Delusional disorder, somatic type
- D. Schizophrenia, catatonic type
- E. Schizoaffective disorder
- F. Brief psychotic disorder
- G. Substance-induced psychotic disorder
- H. Delusional disorder, persecutory type
- I. Psychosis due to a General Medical Condition
- J. Schizophreniform disorder
- K. Shared psychotic disorder
- L. Schizophrenia, residual type
- M. Major depression with mood-congruent psychotic features

For each of the following examples, select the TWO MOST CORRECT differential diagnoses from the list above.

Please select TWO options for each question, but any option may be used more than once, if required.

129. Abdul, aged 27, is a devout Muslim. He is convinced that "Homeland Security" are watching and following him, despite there being no evidence of this. He says that he can hear them talking about him sometimes when he lifts up the telephone receiver. These problems have been building up across the past year.
130. Rhonda, aged 32, has a 20 year history of grand mal seizures, generally quite well controlled on medication. Across the past eight months she has become very religious and convinced that "the Holy Ghost" is literally inside her. She says that she can see an aura around herself that proves this. She often hears the voices of "angels and demons", discussing her actions, and believes that the demons plan to try to kill her via a car accident. She sleeps and eats well, however.



**THE ROYAL AUSTRALIAN AND NEW ZEALAND COLLEGE OF
PSYCHIATRISTS**

**CRITICAL
ANALYSIS
PROBLEMS**

MOCK EXAMINATION

Paper II

2013

DIRECTIONS

Do not answer questions in this booklet.

Use the separate answer sheet and pencil provided.

SELECT ONLY AS MANY ANSWERS AS INSTRUCTED

**Note: in any question, selecting *more* answers than instructed
will incur a mark of zero for that question**

Critical Analysis Question 1 (20 marks)

Please read the abstract, excerpts, tables and figures, and answer the questions, based on this information and your other knowledge.

Do not answer questions in this booklet. Use the separate answer sheet and pencil provided.

As an advanced trainee, exploring which treatments might best protect your patients with bipolar disorder from serious sequelae, you discover the following article:

Lithium in the Prevention of Suicidal Behavior and All-Cause Mortality in Patients With Mood Disorders: (title truncated)

Andrea Cipriani, M.D., Heather Pretty, M.L.I.S., Keith Hawton, D.Sc. and John R. Geddes, M.D.
Am J Psychiatry 162:1805-1819, October 2005

Abstract (excerpt)

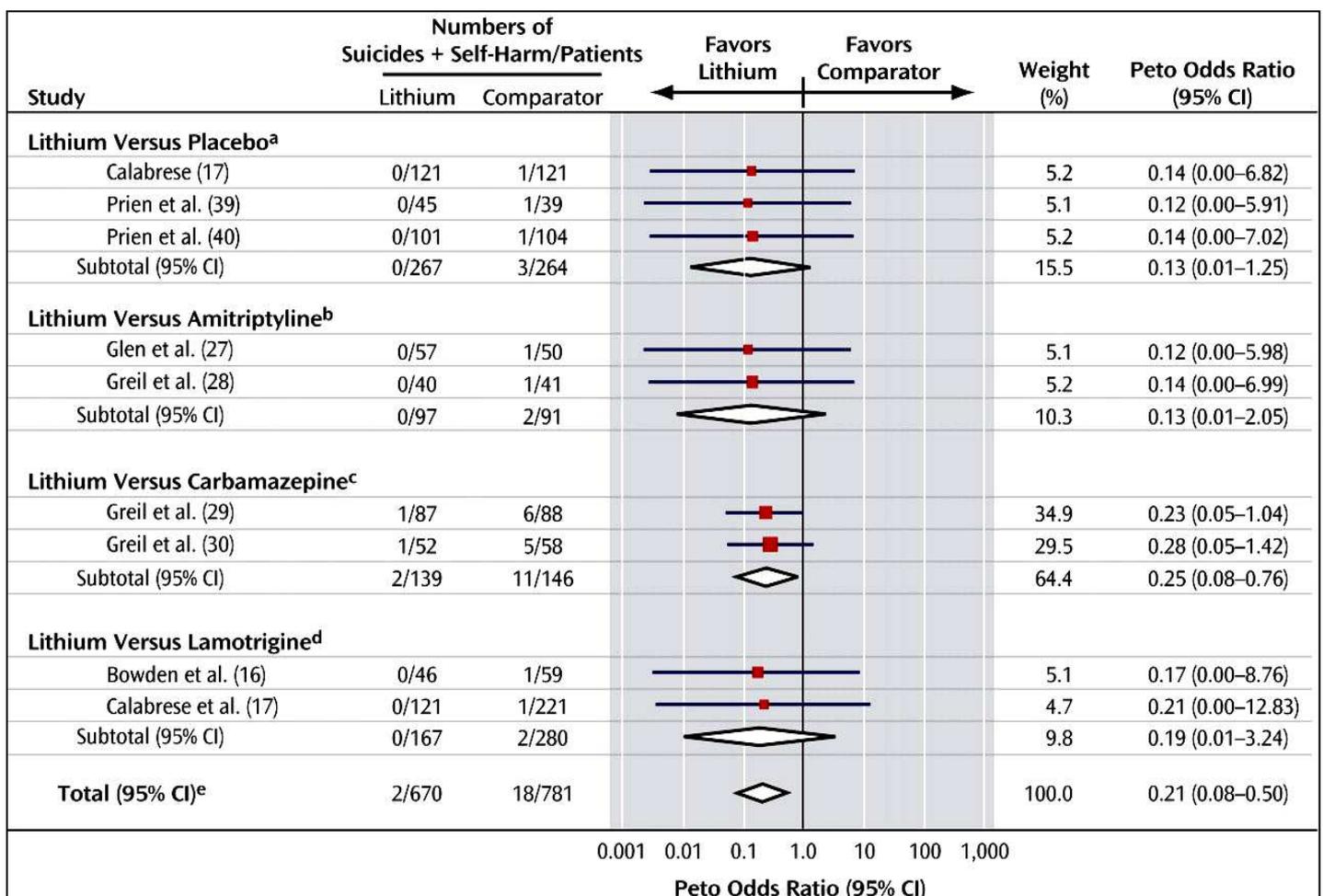
OBJECTIVE: Observational studies suggest that long-term lithium treatment has a strong antisuicidal effect in mood disorders, but it is uncertain whether this association is a genuine therapeutic effect or is due to confounding factors in nonrandomized studies.

Results (excerpt)

Suicide and Deliberate Self-Harm

Examine the figure below and answer the following questions.

Figure 2: Numbers of Suicides Plus Deliberate Self-Harm in Randomized Trials Comparing Lithium With Placebo or Active Comparators in mood disorders.



Critical Analysis Question 1 (20 marks)

Do not answer questions in this booklet. Use the separate answer sheet and pencil provided.

QUESTION 1.11 (1 mark)

What sort of studies produce this type of diagram?

(having regard to the diagram and your other knowledge, select the ONE option which best answers this)

A	Retrospective cohort studies
B	Meta-analyses
C	Multi-centre trial studies
D	Cochrane collaboration studies
E	Systematic reviews

QUESTION 1.12 (2 marks)

What are the key characteristics of this type of study?

(having regard to the diagram and your other knowledge, select the TWO options which best answer this)

A	Compares interventionist studies
B	Clear rules for the inclusion and exclusion of studies
C	Uses only randomised studies
D	Systematic search of the literature
E	Only uses electronic search techniques
F	Carried out using controlled trials

QUESTION 1.21 (2 marks)

What is the total number of patients included in this analysis?

(having regard to the diagram and your other knowledge, select the ONE option which best answers this)

A	1471 $(2 + 670) + (18 + 781)$
B	111 $(781 - 670)$
C	1451 $(670 + 781)$
D	95 $(781 - 18) - (670 - 2)$
E	1431 $(670 - 2) + (781 - 18)$

QUESTION 1.31 (4 marks)

Why might the study have looked at "all-cause mortality" rather than just deaths from suicide?

(having regard to the information provided and your other knowledge, select the TWO options which best answer this)

A	As the majority of suicides go unreported
B	Because patients treated with lithium have poorer pre-existing health
C	As lithium is somewhat toxic and might raise mortality rates
D	As patients prescribed lithium have inherently higher suicide risk
E	Because all-cause mortality statistics do not include suicides
F	To more accurately assess the risks and benefits of lithium therapy
G	To include deaths from cardiac disease

QUESTION 1.41 (4 marks)

"Cases" in the study were patients where suicide or self-harm occurred. Given that, which of the following statements are correct?

(having regard to the information provided and your other knowledge, select the TWO options which are most accurate)

A	The odds ratio is the number of cases exposed to lithium therapy, divided by the number of cases not exposed to lithium therapy
B	The odds ratio is the fraction of cases exposed vs not-exposed to lithium therapy, divided by the fraction of non-cases exposed vs not-exposed to lithium therapy
C	The odds ratio is the total number of cases divided by the total number of non-cases
D	The odds ratio is calculated by dividing the odds of "caseness" in the group exposed to lithium therapy by the odds of "caseness" in the comparator group
E	The odds ratio is the fraction of non-cases exposed vs not-exposed to lithium therapy, divided by the fraction of cases exposed vs not-exposed to lithium therapy
F	The odds ratio is calculated by dividing the odds of caseness in the group exposed to lithium therapy by the odds of caseness in the total study population

The study states: "it is uncertain whether this association is a genuine therapeutic effect or is due to confounding factors in nonrandomized studies."

QUESTION 1.51 (3 marks)

What sort of confounding factors in nonrandomized studies might make it appear that lithium has a strong antisuicidal effect in mood disorders? (3 marks)

(having regard to the information provided and your other knowledge, select the THREE options which are most accurate)

A	The dose of lithium prescribed is likely to be higher in nonrandomised studies
B	Lithium might be prescribed more frequently to patients felt to have a lower suicide risk
C	Nonrandomised studies are more likely to show an effect so are more likely to be published
D	More stable and cooperative patients might be more likely to be offered lithium therapy
E	Patients with a less severe condition might more frequently opt to take lithium
F	There is likely to be more polypharmacy in nonrandomised studies

QUESTION 1.61 (4 marks)

What conclusions can you draw from Figure 2?

(having regard to the information provided and your other knowledge, select the TWO options which are most accurate)

A	Lithium appears to have a protective effect against suicide and self harm in people with mood disorders
B	Placebo treatment is more effective at preventing suicide and self-harm than carbamazepine
C	Two studies in the review contributed most of the evidence for lithium's protective effect – those by Prien et al.
D	The risk of self harm and suicide in those taking lithium is roughly one fifth that of people not taking lithium.

Critical Analysis Question **2** (20 marks)

Please read the abstract, excerpts, tables and figures, and answer the questions, based on this information and your other knowledge. Select only the number of answers requested – selecting more than the number of answers requested will incur a mark of zero.

Do not answer questions in this booklet. Use the separate answer sheet and pencil provided.

Structured risk assessment and violence in acute psychiatric wards: randomised controlled trial

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[*The British Journal of Psychiatry* (2008) 193: 44-50. doi: 10.1192/bjp.bp.107.045534]

Background

There is a lack of research on the possible contribution of a structured risk assessment to the reduction of aggression in psychiatric in-patient care.

Aims

To assess whether such risk assessments decrease the incidence of violence and coercion.

Method

A cluster randomised controlled trial was conducted with 9 acute psychiatric admission wards as the units of randomisation, (with four wards in the intervention arm and five wards in the control arm). The intervention comprised a standardised risk assessment following admission with mandatory evaluation of prevention in high-risk patients.

Results

Incidence rates decreased substantially in the intervention wards, whereas little change occurred in the control wards. The adjusted risk ratios suggest a 45% reduction in severe aggressive incidents and a 27% decline in the use of coercive measures. The severity of aggressive incidents did not decrease.

Conclusions

Structured risk assessment during the first days of treatment may contribute to reduced violence and coercion in acute psychiatric wards.

(excerpts from Methods)

We conducted a prospective multicentre randomised waiting-list controlled trial with wards as the unit of randomisation and with the inclusion of a preference arm to assess the impact of a structured risk assessment on the incidence rate of severe patient aggression and coercive measures. Data collection and data verification procedures were pilot tested in an independent study involving two wards. The study was approved by six regional research ethics committees.

Recruitment and design

The 86 acute wards were invited to partake in a large intervention trial, of which one arm was a structured risk assessment. Sixty-two wards declined to participate, including ten wards predominantly treating private patients with few involuntary admissions. Nineteen wards consented to be randomised within the trial, and five wards preferred to introduce the study protocol of structured risk assessment without randomisation. Randomisation was carried out prior to inclusion on the basis of a computer-generated random-number list. Here, we report on the four wards randomised to structured risk assessment, the five wards randomised to the waiting-list control arm, and the five wards of the preference group... After enrolment, wards collected baseline data during a 3-month period (phase 1), followed by the 3-month intervention period (phase 2).

Question 2.11 (2 marks)

What is a cluster randomised controlled trial?

(having regard to the information provided and your other knowledge, select the ONE option which best answers this. Selecting more than ONE answer will incur a mark of zero)

A	A cluster of randomised trials which include multi-centre participants
B	A set of randomised controlled trials clustered in a specific geographical area
C	A trial where the participants are randomised into specific clusters based on demographic characteristics
D	A trial where the unit of randomisation is not an individual participant but a group of participants
E	A trial where each subject is individually assigned at random to an intervention group and the intervention is applied directly to the subject.

Question 2.12 (2 marks)

Select the one situation below where using a cluster randomised trial is NOT the best option

(having regard to the information provided and your other knowledge, select the ONE option which best correlates. Selecting more than ONE answer will incur a mark of zero)

A	Where the intervention is directed at a cluster or group of participants rather than at single individuals
B	Where an “educational” topic such as a quality improvement initiative is being studied
C	Where participants cannot be prevented from interacting closely with one another during the treatment period
D	Where participants who are not supposed to get the intervention would readily be “contaminated” by those who have received it
E	Where the individual response of specific participants to an intervention is being studied

Question 2.13 (2 marks)

Why is a cluster randomised trial always bigger than the equivalent individually randomised controlled trial?

(having regard to the information provided and your other knowledge, select the TWO options which best answer this. Selecting more than TWO answers will incur a mark of zero)

A	More clusters are needed to show an effect size – rather than studies using a larger number of individual participants
B	Because the effective sample size is reduced and power is lost
C	Because the clusters are not likely to be affected by local environmental or situational factors
D	Because the size of standard errors is reduced in cluster randomisation
E	As confidence intervals and P values are reduced in cluster randomisation, compared to a study of the same size using simple randomisation.

Question 2.21 (4 marks)

What are the key ethical issues in this study?

(having regard to the information provided and your other knowledge, select the TWO options which best answer this. Selecting more than TWO answers will incur a mark of zero)

A	Consent (autonomy): Staff members may be more at risk of violence in a ward in a control group rather than a ward carrying out the intervention
B	Lack of Ethical Committee approval for all participating services
C	Consent (autonomy). The individual patients are not asked for their consent to take part in the study
D	Consent (autonomy): individual staff members are not asked for their consent to take part in the study
E	Consent and access to appropriate services (autonomy and justice). Patients have no choice about being admitted to a ward carrying out the intervention versus a ward in a control group.

Question 2.22 (4 marks)

How would you address them?

(having regard to the information provided and your other knowledge, select the FOUR options which best answer this. Selecting more than FOUR answers will incur a mark of zero)

A	At least ask participants for permission to collect data, even if they have no choice about being in an "intervention" or a "control" ward
B	Admit only voluntary patients who are capable of giving informed consent for the duration of the study
C	Arrange for "guardians" to consent to the trial – i.e. the CEOs of the hospitals should give informed consent and be fully appraised of possible risks and benefits
D	Get approval for the study from all the relevant Ethical Committees
E	Obtain individual patient consent before admission to a ward participating in the study
F	Work with the staff beforehand to provide as much information as possible

Table 2: Main outcome measures

	Intervention			Control		
	Patients, <i>n</i> (treatment days)	Incidents	Rate/100 treatment days (95% CI)	Patients, <i>n</i> (treatment days)	Incidents	Rate/100 treatment days (95% CI)
Before intervention	364 (6074)	81	1.33 (1.06-1.66)	515 (8449)	95	1.12 (0.91-1.37)
After intervention	390 (7727)	56	0.73 (0.59-1.00)	583 (10 485)	100	0.95 (0.78-1.16)
Change			-45%			-15%

Question 2.31 (2 marks)

Table 2 shows the main outcome measures for this study. What is the absolute risk reduction for the change in incidents per 100 days for the intervention?

(having regard to the information provided and your other knowledge, select the ONE option which best answers this. Selecting more than ONE answer will incur a mark of zero)

A	1.08 – 0.59 (0.49)
B	1.33 – 0.73 (0.6)
C	1.66 – 1.00 (0.66)
D	45%

Question 2.32 (2 marks)

From Table 2, what is the relative risk reduction for the change in incidents per 100 days for the intervention?

(having regard to the information provided and your other knowledge, select the ONE option which best answers this. Selecting more than ONE answer will incur a mark of zero)

A	30% (45% – 15%)
B	75% (45%) / (45%+15%)
C	60% (45%+15%)
D	45%

Question 2.33 (2 marks)

From Table 2, what is the relative risk reduction for the change in incidents per 100 days for the intervention compared to the controls?

(having regard to the information provided and your other knowledge, select the ONE option which best answers this. Selecting more than ONE answer will incur a mark of zero)

A	3 (45 / 15) (a 3-fold reduction in incidents)
B	7.5 (4.5) / (4.5+1.5) (a 7.5-fold reduction in incidents)
C	6 (4.5+1.5) (a 6-fold reduction in incidents)
D	4.5 (45% = 4.5) (a 4.5-fold reduction in incidents)