

BEHAVIORAL GENETICS

PSYCH 3102

Dr Hewitt

HOMEWORK # 5 and PRACTICE EXAM 3

NAME _____

DATE _____

1. Matching Possible answers:-

- | | | | |
|-----------------------|---------------------------|------------------------------------|----------|
| moderate retardation | Down syndrome | mild retardation | dementia |
| severe retardation | reading disorder | fragile X syndrome | PKU |
| dyslexia | Alzheimers disease | Lesch-Nyhan syndrome | |
| additive gene effects | non-additive gene effects | genotype x environment interaction | |
| assortative mating | random mating | inbreeding depression | |

Definitions:-

- Subaverage intellectual functioning, IQ in the range 35-50 _____
- Subaverage intellectual functioning, 85% of the retarded _____
- Metabolic disorder causing moderate retardation if untreated _____
- Second most common genetic cause of retardation _____
- Category comprising 80% of learning disorders _____
- Severe cognitive decline with age _____
- Specific type of reading disorder _____
- Lowering of mean phenotypic score often seen in the offspring
of related individuals _____
- Disease causing 50% of dementia cases _____
- A cause of correlation between spouses _____
- Effect seen when changes caused by the environment depend
on the genotype of the individual _____

2. Autism has a prevalence of about 4-5 per 10,000. A study of 233 siblings of autistic children found that 7 of the siblings (3%) were autistic and that 226 were not. Does this result suggest little family resemblance or considerable family resemblance for autism?

Give reasons for your answer.

3. Assuming adequacy of sample sizes, measurements and the twin study method, and basing your answers on the following correlations, what can you conclude about the genetic and environmental influences on the following conditions?

<u>Condition</u>	<u>MZ correlation</u>	<u>DZ correlation</u>
ADHD	0.62	0.25
Depression	0.44	0.19
Autism	0.91	0.44

ADHD

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Depression

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Autism

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4. i. Name a chromosomal abnormality that is a cause of mental retardation

ii Name a single gene disorder that is a cause of mental retardation

iii Is there any evidence that the genes involved in these disorders have an effect on cognitive ability in the normal range? Give reasons for your answer.

5. Brief account of the genetics of general cognitive ability.

What is g?

Explain the evidence for a genetic influence on g from the following:

a. family studies

b. adoption studies

c. twin studies

Summarize the factors influencing g in childhood

How do these influences change over time?

(Similar questions could be given for: schizophrenia

autism

alcoholism

mood disorders