

※ 考生請注意：本試題不可使用計算機。請於答案卷(卡)作答，於本試題紙上作答者，不予計分。

一、選擇題（每題 5%，共 8 題，40%）

1. What is the main difference between true experimental design and quasi-experimental design?
(A) Random differentiation
(B) Random sampling
(C) Random assignment
(D) Random processing
2. Which of the following statements about causality is incorrect?
(A) Two variables has a chronological order in time
(B) There is a high probability of causality if two variables are highly correlated
(C) There is a direct relationship between the two variables
(D) Covariance of cause and effect is not due to the influence of other variables
3. Based on the theory and literature, the researcher proposes that there is no variation exists between variables. In this case, which type of the following hypotheses is considered?
(A) Alternative hypothesis
(B) Simple hypothesis
(C) Null hypothesis
(D) Complex hypothesis
4. Which of the following statement about variables is wrong?
(A) Independent variable refers to a variable that a researcher can manipulate or intervene
(B) Control variable refers to the extraneous variable that affect the dependent variable but not the primary interest
(C) Dependent variable refers to a variable that is affected by the changes to the independent variable
(D) Moderating variable is a variable that links the independent and the dependent variables
5. For the levels of evidence, what is the correct ranking (from high to low) for the following studies?
① Cohort study ② Quasi-experimental study ③ Randomized controlled trial
④ Descriptive study ⑤ Case-control study
(A) ③→②→①→⑤→④
(B) ②→③→①→⑤→④
(C) ③→①→②→⑤→④
(D) ③→②→④→①→⑤

6. A researcher wants to study the causes of internet addiction. He starts by observing the phenomenon, then finds out the patterns. After that, he proposes the research hypotheses and conducts a study to test it. In this case, what kind of scientific thinking logic is used?
- (A) Induction
 - (B) Extrapolation
 - (C) Analogy
 - (D) Deduction
7. In the experimental study, which of the following problem can be reduced by using the randomization?
- (A) Systematic errors
 - (B) Experimenter bias
 - (C) Sampling bias
 - (D) Random errors
8. Which of the following statements about cohort study and case-control study is correct?
- (A) Cohort study is a follow-up study among a group of healthy people, and the case-control study is a follow-up study among a group of patients.
 - (B) Cohort study is grouped according to the subject's exposure, but case-control study is grouped based on the subject's disease.
 - (C) Case-control study is easier to assess incidence than cohort study.
 - (D) Cohort study can assess multiple exposures, while case-control study can assess multiple diseases.

二、請說明何謂研究的內外效度（20%）

三、請根據下列文章摘要回答下列三個問題（共 20%）

【摘錄自：Kim, H. H. S., & Chun, J. (2019). Bullying victimization, school environment, and suicide ideation and plan: Focusing on youth in low-and middle-income countries. *Journal of Adolescent Health, 66*, 115-122.】

A B S T R A C T

Purpose: This study examines the relationship between bullying victimization, measured at individual and school levels, and suicide intent and plan among youth living in less developed parts of the world.

Methods: Multilevel modeling is used to estimate the degree to which school-level bullying has an independent effect on the two suicide measures and how it moderates the impact of individual-level victimization on contemplating and planning suicide. Data are drawn from the Global School-Based Student Health (2000–2012) survey that consists of probability samples of adolescents in low- and middle-income countries.

Results: By fitting three-level mixed effects models, we find that adjusting for personal experience of victimization, greater school-level prevalence of bullying has a positive independent relationship with suicide plan, but not ideation. Significant cross-level interaction effects are shown, that is, the bullying–suicide linkage at the individual level is moderated by the school environment. For suicide ideation only, it is weaker in schools where more students are bullied. The association is also less pronounced in the context characterized by higher proportion of physical violence among students and peer hostility on campus.

Conclusions: The bulk of prior research narrowly defines the relationship between bullying and suicide at the individual (e.g., student) level. This study shows that school context (e.g., proportion of bullied peers) must be incorporated into the analysis in better understanding the conditions under which youth think about and/or plan on inflicting lethal self-harm.

1. 此篇文章屬於何種研究設計？（5%）
2. 此研究之自變項與依變項分別為何？（5%）
3. 請敘述此篇文章主要的結果為何？（10%，除專有名詞外，請以中文描述）

四、請根據下表說明解釋研究結果（20%）

[摘錄自：Hazzard, V. M., Miller, A. L., Bauer, K. W., Mukherjee, B., & Sonnevile, K. R. Mothe-child and father-child connectedness in adolescence and disordered eating symptoms in young adulthood. *Journal of Adolescent Health*. doi:10.1016/j.jadohealth.2019.09.019]

Associations between parent-child connectedness in adolescence and disordered eating symptoms in young adulthood

	Binge eating-related concerns, OR (95% CI)	Compensatory behaviors, OR (95% CI)	Fasting/skipping meals, OR (95% CI)
Mother-child connectedness			
Among males	.89 (.70-1.15)	1.00 (.60-1.65)	.91 (.73-1.14)
Among females	.83 (.74-.94)**	.85 (.75-.97)*	.79 (.72-.87)***
Father-child connectedness			
Among males	1.19 (.93-1.53)	1.05 (.66-1.67)	.87 (.69-1.10)
Among females	.79 (.69-.91)***	.81 (.69-.95)**	.81 (.73-.91)***

Models adjusted for participant age, participant race/ethnicity, highest parental education, percent federal poverty level in adolescence, family structure, and mother/father type.

CI = confidence interval; OR = odds ratio.

* $p < .05$.

** $p < .01$.

*** $p < .001$.