



## Section One – Research Methods (20 marks)

### Question One

Researchers wanted to investigate the ongoing health effects of working as a medical student at a busy city hospital. Participants were first year medical students chosen from a hospital close to the university where the researchers worked. They were followed throughout their medical training. Researchers met participants once a year over an eight-year period.

- (a) Name the study design used by researchers. Circle the correct answer below. (1 mark)

**Longitudinal**     /     **Cross-sectional**

- (b) State **one** advantage of using this type of study design. (1 mark)

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- (c) State **one** disadvantage of using this type of study design. (1 mark)

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- (d) Identify the sampling technique used in this study. Justify your answer. (1 mark)

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- (e) State **one** disadvantage of this type of sampling. (1 mark)

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- (f) Provide ONE example of quantitative data and one example of qualitative data that psychologists could use to assess the health effects of working as a medical student. State whether each example is *objective* or *subjective*. (4 marks)

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## Question Two

Read an abstract and interpret and develop an experiment: hypothesis and steps to ensure a reliable and valid method

### Abstract one

The main purpose of the study was to examine among Latino/a college students the extent to which dimensions of minority stress related to ethnic group membership (college climate, academic achievement, ethnic discrimination, and intra-ethnic pressure stress) were uniquely associated with depression symptoms when general college stress was taken into account. The study also examined if ethnic identity moderated the relation of minority stress to depression symptoms. Participants were 309 Latino/a undergraduate students (53% women; 69% of Mexican descent) enrolled in a diverse, major research, urban, public university in the southwestern United States. Findings revealed that minority stress in the areas of academic concerns and negative perceptions of the campus climate contributed unique variance to depression symptoms when controlling for gender and students' general college stress. Ethnic identity did not moderate the relation of any of the minority stress dimensions to depression. Implications of these findings are discussed. (PsycINFO Database Record (c) 2013 APA, all rights reserved).

### Abstract two

Racism-related stress is thought to contribute to widespread race/ethnic health inequities via negative emotion and allostatic stress process up-regulation. Although prior studies document race-related stress and health correlations, due to methodological and technical limitations, they have been unable to directly test the stress-reactivity hypothesis in situ. Guided by theories of constructed emotion and allostasis, we developed a protocol using wearable sensors and daily surveys that allowed us to operationalize and time-couple self-reported racism-related experiences, negative emotions, and an independent biosignal of emotional arousal. We used data from 100 diverse young adults at a predominantly White college campus to assess racism-related stress reactivity using electrodermal activity (EDA), a biosignal of sympathetic nervous system activity. We find that racism-related experiences predict both increased negative emotion risk and heightened EDA, consistent with the proposed allostatic model of health and disease. Specific patterns varied across race/ethnic groups. For example, discrimination and rumination were associated with negative emotion for African American students, but only interpersonal discrimination predicted increased arousal via EDA. The pattern of results was more general for Latinx students, for whom interpersonal discrimination, vicarious racism exposure, and rumination significantly modulated arousal. As with Latinx students, African students were particularly responsive to vicarious racism while 1.5 generation Black students were generally not responsive to racism-related experiences. Overall, these findings provide support for allostasis-based theories of mental and physical health via a naturalistic assessment of the emotional and sympathetic nervous system responding to real-life social experiences.

Ethnic identity development may increase resilience to discrimination and prejudice, which are often common and stressful for ethnic minority adolescents. Based on ethnic identity development theory and resilience theory, we hypothesize that under high discrimination stress, ethnic affirmation and ethnic identity stage will have protective moderating effects on self-esteem and depressive symptoms. A cross-sectional self-report study with 125 ethnic minority adolescents (13–18 years) found that ethnic affirmation ( $p < .05$ ) had protective effects on depressive symptoms ( $p < .05$ ) and protective-enhancing effects on self-esteem at high levels of discrimination stress. Achieved ethnic identity stage ( $p < .05$ ) had protective-stabilizing effects on self-esteem at high discrimination stress. Our findings demonstrate that the protective elements of ethnic identity are feeling positive about one's ethnic group, having learned about one's history, and having resolved conflicts about one's ethnic group.

**Short Answer Questions– Developmental Psychology (18 marks)**

- (a) Piaget identified four stages in a human's cognitive development. Name and describe the two stages below: (4 marks)

*Piaget's first stage of cognitive development:*

Name: \_\_\_\_\_

Description:

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*Piaget's third stage of cognitive development:*

Name: \_\_\_\_\_

Description:

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Dana is playing hide and seek with her brother Dion (age three). Dion stands in the centre of the room and covers his eyes with his hands and says, 'I am hiding'.

- (b) Explain, why Dion believes that he is hiding, referring to the relevant concept from Piaget's theory of cognitive development. (2 marks)

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- (c) Outline two skills that children develop as part of their social and emotional development. (2 marks)

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Table 2: Concordance rates of a given trait in Monozygotic and Dizygotic twins

Trait	Monozygotic Twins	Dizygotic Twins
IQ	74	58
Anxiety Disorder	45	25
Major Depression	54	20

- (d) According to Table 2, which trait has a largest genetic component? Use information in the table to justify your answer. (2 marks)

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- (e) Explain why twin studies and adoption studies are useful for the Nature vs Nurture debate. (4 marks)

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