Tutorial Letter 201/2/2024

Foundations of sub-disciplines in Psychology

PYC1512

Semesters 2

Department of Psychology

Feedback for assignment 01.

BARCODE

Feedback on Assignment 01

Dear Student,

The purpose of the assignment was to assess your knowledge, understanding, and level of engagement with the module content. Please read this feedback carefully and pay attention to the questions you may have had difficulty answering in your assignment. The feedback should help you to identify areas that you need to focus on based on your assignment mark and prepare for the exam. We hope that you have learned more about the module and will make an effort to prepare for the second assignment and the exam.

All the best with your studies.

PYC1512 Teaching Team

Please note that the questions for Assignment 01 have been randomised in the online assessment. Therefore, the order of the MCQs in your assignment may differ from the order below. Ensure that you compare your assignment feedback with the corresponding question and answer in this tutorial letter.

Question	Answer
1	B. Brain and spinal cord
2	B. Sympathetic nervous system
3	C. Dilation of pupils to facilitate vision
4	B. Support and protect neurons
5	B. Neurons and glia
6	A. Axon
7	B. Synaptic cleft
8	C. Axon
9	A. Microglia
10	B. Distal
11	C. Head
12	B. Inferior colliculi
13	B. Corpus callosum
14	B. Nurture; nature
15	D. Frontal lobe
16	C. DSM-V
17	C. Axis IV
18	B. Absolutist
19	D. Etic and emic
20	D. Promote the rights of political minority groups
21	A. Extrinsic
22	B. Ukufa kwabantu
23	D. All the options
24	A. Interdependence
25	A. They have family structures that are limited only to the nuclear family

Assignment 1 feedback

Question 1
Which of the following accurately describes the central nervous system's (CNS) composition?
A. all the nerves that exit the brain and spinal cord.
B. the brain and spinal cord.
C. axons conveying messages from the sense organs.
D. the sympathetic and parasympathetic nervous system.

Feedback
The human nervous system is composed of two parts: the central nervous system (CNS) and the peripheral nervous system (PNS). The CNS consists of the brain and spinal cord. The PNS includes all the nerves that extend from the brain and spinal cord, carrying sensory and motor messages to and from the rest of the body. Part of the PNS is the somatic nervous system, which consists of axons conveying messages from the sense organs to the CNS, and from the CNS to the muscles. Another part of the PNS is the autonomous nervous system (ANS) which controls the heart, intestines, and other organs. The ANS is composed of the sympathetic nervous system and the parasympathetic nervous system. The correct answer is **option B**.

Question 2
The ----- acts as an integrated whole that affects smooth muscle systems.

A. spinal cord
B. sympathetic nervous system
C. central nervous system
D. parasympathetic nervous system

Feedback
To answer this question, students must understand the section on the composition and functions of the human nervous system. The human nervous system is composed of two parts: the central nervous system (CNS) and the peripheral nervous system (PNS). The central nervous system consists of the brain and the spinal cord. Part of the PNS is the autonomous nervous system (ANS). The autonomic nervous system is composed of the sympathetic nervous system and the parasympathetic nervous system. The sympathetic nervous system affects smooth muscle systems to enable a "fight or flight" response when we perceive danger. The parasympathetic nervous system controls rest, enjoyment, eating, sleep, and sexual activity. Based on the outlined explanation, the correct answer is **option B**.

Question 3
The sympathetic response includes -----

A. controlling rest, enjoyment, eating and sleep.
B. dilation of the pupils to facilitate vision.
C. stimulates saliva for digestion.
D. decreases the heart rate.

Feedback
To answer this question, students must understand the functions of the sympathetic nervous system. The sympathetic nervous system triggers a "fight or flight" response when we sense danger. Typical sympathetic responses include pupil dilation to improve vision, and the narrowing of peripheral arteries to increase blood flow to the arteries and the brain. Additionally, the body releases epinephrine to raise blood sugar and boost metabolism, while reducing stomach and intestinal activity to conserve energy for other functions. In contrast, the parasympathetic nervous system controls rest, enjoyment, eating, sleep, and sexual activity. It stimulates the secretion of saliva and those responsible for digestion in the stomach, produces pupillary constriction, decreases the heart rate, and increases blood flow to the genitalia during sexual activity. The correct answer is **option C**.

Question 4

What is the primary role of glia in the nervous system?
A. To process and transmit information.
B. To support and protect neurons.
C. To receive environmental information.
D. To transmit signals to other cells.

Feedback
The peripheral nervous system is made up of two types of cells: neurons and glia. The neuron process and transmit information to the central and peripheral nervous systems. Neurons receive information about the environment and transmit it to other cells. The glia (from the Greek word meaning *glue*) serve various support functions for neurons. The correct answer is **option B**.

Question 5
What are the two types of cells that make up the peripheral nervous system?
A. Neurons and synapses.
B. Neurons and glia.
C. Glia and axons.
D. Axons and dendrites.

Feedback
The peripheral nervous system consists of two types of cells: neurons and glia. A synapse is a small gap at the end of a neuron that allows a signal to pass from one neuron to the next. Dendrites and axons are the specialised branches that extend from the cell body and communicate with other cells. The axon is a thin fibre that conveys impulses towards other neurons, an organ or a muscle. Based on the outlined explanation, the correct answer is **option B**.

Question 6
Which of the following conveys impulses to other neurons, organs, and muscles?

A. Axon
B. Synaptic cleft
C. Nucleus
D. Soma

Feedback
The axon (option A) is a thin fibre that conveys impulses towards other neurons, an organ, or a muscle. The synaptic cleft (option B) is the space separating the pre-synaptic and post-synaptic membranes. The soma (option D) refers to the cell body where the neuron's metabolism takes place. The nucleus (option C) is a structure contained in the cell body along with ribosomes and mitochondria. The correct answer is **option A**.

Question 7
What is the space between the transmitting and the receiving neuron called?
A. dendritic spines
B. synaptic cleft
C. synaptic receptors
D. axon terminal

Feedback
Dendrites, which become narrower near their ends, are lined with synaptic receptors (option C) which enable them to receive information from other neurons. Most dendrites have short outgrowths known as dendritic spines (option A) that increase the surface area available for a synapse, thus heightening its ability to receive information. An example of synaptic activity is when a person takes medication – Aspirin, for instance – to treat a headache. After the Aspirin is taken, it reaches the neuron's terminal buttons (at the axon). The terminal button of this neuron containing Aspirin then "talks" to the dendritic membrane of the "receiving" cell, causing an alteration in the dendritic membrane of the receiving cell, to enable the transmission of Aspirin. The membranes of the two neurons are therefore "talking" to each other (the

membrane of the transmitting neuron is the pre-synaptic axon terminal and that of the receiving neuron is the post-synaptic dendrite membrane). The space separating the pre-synaptic and post-synaptic membranes is known as the synaptic cleft (option B). The correct answer is **option B**.

Question 8
Which of the following is NOT a type of macroglia?
A. astrocytes
B. ependymal cells
C. axon
D. oligodendrocytes

Feedback
Glia, also known as neuroglia, are categorised according to their size: macroglia are large varieties of glial cells, and microglia are tiny cells. There are four types of macroglia: astrocytes, ependymal cells, oligodendrocytes, and Schwann cells. Astrocytes (option A) provide nutrients to neurons by dilating blood vessels in active regions of the brain and help maintain the blood-brain barrier, by preventing toxins circulating in the blood from entering the brain. Ependymal cells (option B) line the ventricles of the brain and the central canal of the spinal cord. And act as a firewall against viruses that pose a threat to the CNS. They facilitate the movement of cerebro-spinal fluid (CSF), monitor the CSF's quality, and provide CSF proteins to the underlying brain cells. Oligodendrocytes and Schwann cells (option D) build the myelin sheaths that surround and insulate vertebrate axons. Oligodendrocytes build myelin sheaths for axons in the brain and spinal cord, while Schwann cells provide the same function in the peripheral nervous system. Axons (option C) are not a type of macroglia. The question asked students to identify the item that does not belong to the list of macroglia, the correct answer is **option C**.

Question 9
The function of the ----- is to remove fungi and viruses as well as damaged neurons after brain damage.
A. microglia
B. oligodendrocytes
C. ependymal
D. astrocytes

Feedback
Glia, also known as neuroglia, are categorised according to their size: macroglia are large varieties of glial cells, and microglia are tiny cells. Microglia (option A) function as part of the immune system. They remove fungi, viruses, dead and damaged neurons from the brain following brain damage. There are four types of macroglia: astrocytes, ependymal cells, oligodendrocytes, and Schwann cells. Oligodendrocytes and Schwann cells (option B) build the myelin sheaths that surround and insulate vertebrate axons. Oligodendrocytes build myelin sheaths for axons in the brain and spinal cord, while Schwann cells provide the same function in the peripheral nervous system. Ependymal cells (option C) line the ventricles of the brain and the central canal of the spinal cord. They function as a firewall against viruses that pose a threat to the CNS. They facilitate the movement of cerebro-spinal fluid (CSF), monitor the CSF's quality, and provide CSF proteins to the underlying brain cells. Astrocytes (option D) provide nutrients to neurons by dilating blood vessels in areas of heightened neural activity. Astrocytes also protect the blood-brain barrier, by preventing toxins circulating in the blood from entering the brain. The correct answer is **option A**.

Question 10
The anatomical term that indicates the position of an animal’s tail to the brain is known as -----
A. dorsal
B. distal
C. proximal
D. rostral

Feedback

To be able to answer this question students must read and understand information about the anatomical terms denoting parts of the brain from various viewpoints. Dorsal (option A) refers to an area that is towards the back. Distal (option B) refers to an area that is far from the point of origin. Proximal (option C) refers to an area located close to the point of origin. Rostral (option D) refers to an area near the front end of the body. The correct answer is **option B**.

Question 11
The spinal cord communicates with all sense organs and muscles in the body, except those in which part of the body?
A. The arms
B. The legs
C. The head
D. The chest

Feedback
To answer this question, students need to understand the components of the human nervous system, especially the central nervous system (CNS). The CNS consists of the brain and spinal cord. The brain is the part of the central nervous system that communicates with the sense organs and muscles in the head. The spinal cord is part of the central nervous system that communicates with all sense organs and muscles in the body, except those in the head. The correct answer is **option C**.

Question 12
While walking in the street, Themba hears a loud banging noise, and his head turns toward this loud noise. What area in the midbrain is responsible for this action?
A. Superior colliculi
B. Inferior colliculi
C. Pons
D. Corpus callosum

Feedback
The midbrain contains several nuclei associated with cranial nerves. The superior colliculi (option A) which receives input from the optic nerves leaving the eye and is responsible for guided eye movements. The inferior colliculi (option B) are responsible for hearing and regulating auditory reflexes, such as turning the head in the direction of a loud noise. The pons (option C) refers to a bridge which lies posterior and ventral to the medulla and contains nuclei from several cranial nerves. The corpus callosum (option D) refers to the membrane that divides the two brain hemispheres. In the scenario, Themba turns his head when hearing a loud noise. The correct answer is **option B**.

Question 13
The left and the right hemispheres of the brain are divided by a membrane known as the -----
A. brainstem
B. corpus callosum
C. contralateral
D. forebrain

Feedback
The brain is a soft tissue organ located inside the skull, and it is organised into three bulges: the hindbrain, midbrain, and forebrain. The hindbrain and the midbrain make up what is often called the brainstem (option A). The forebrain (option D) is the most prominent and recognisable part of the brain, consisting of two hemispheres – one on the right and the other on the left, divided by a membrane known as the corpus callosum (option B). Contralateral (option C) is an anatomical term that refers to or denotes the structure of the body that is opposite the side on which a particular structure or condition occurs. The correct answer is **option B**.

Question 14
The environmental influence on behaviour is referred to as -----, while the genetic influence on behaviour is referred to as -----

A. nature; nurture
B. nurture; nature
C. heredity; nature
D. nature; heredity

Feedback
To be able to answer this question students are required to study the section on the genetic basis of behaviour, especially an understanding of heredity and the environment. The influence of genes on behaviour refers to nature, whereas the influence of the environment refers to nurture. Heredity is incorrect as it refers to it refers to things that are passed down through one's genes from one generation to the next. The correct answer is **option B**.

Question 15
When preparing for your studies, you need to plan your study programme and process the necessary module content. Which part of the brain is responsible for this function?

A. Occipital lobe
B. Parietal lobe
C. Temporal lobe
D. Frontal lobe

Feedback
The occipital lobe (option A) contains the primary visual cortex. Images received in the retina of the eye activate this lobe, which activates vision. The parietal lobe (option B) is primarily responsible for the entire body receiving inputs from the skin and muscles. This means that touching the skin activates the parietal lobe in the central nervous system. The temporal lobe (option C) is responsible for auditory information. The left temporal lobe is essential for spoken language. It also contributes to complex aspects of vision, including the perception of movement and recognition of faces. Also, emotional and motivational behaviours are also regulated in the temporal lobe. The frontal lobe (option D) controls important cognitive functions such as processing information relating to language, memory, decision-making, and problem-solving. The correct answer to this question is **option D**.

Question 16
Which Diagnostic and Statistical Manual is the latest?

A) DSM-I
B) DSM-II
C) DSM-V
D) DSM-IV-TR

Feedback
You are required to understand the classification system used to clinically diagnose mental health conditions, the Diagnostic and Statistical Manual (DSM) of Mental Disorders. The classification system has been revised a few times. The DSM-I (option A, Diagnostic and Statistical Manual of Mental Disorders, First Edition) was published in 1952 and included a broad range of mental health disorders. It was based on a psychodynamic model of mental health and did not include a systematic approach to diagnosis. The DSM-II (option B, Diagnostic and Statistical Manual of Mental Disorders, Second Edition) was published in 1968 and expanded the number of mental health disorders included. The DSM-IV-TR (option D, Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision) published in 2000 and included a more systematic approach to diagnosis. The DSM-V (option C, Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition) was published in 2013 and included significant changes from the DSM-IV-TR. The correct answer is **option C**.

Question 17
Which Axis of the DSM-IV assess the problems that the person may have that might affect diagnosis, for example, issues of employment or living situation?

A. Axis I
B. Axis II
C. Axis IV
D. Axis III

Feedback
DSM-IV was a multi-axial system which evaluated the individual on five axes or dimensions and facilitated a comprehensive and structured diagnostic evaluation. Axis IV (option C) addressed external factors a person may have that might affect diagnosis, such as employment and/or living situations. Axis I (option A) contains almost all the major disorders, such as anxiety, depression, and schizophrenia. Axis II (option B) focused on enduring conditions like personality disorders and mental retardation. Axis III (option D), on the other hand, assessed general medical conditions that could influence mental health. The correct answer is **option C**.

Question 18
Which perspective(s) disregard(s) cultural influences in diagnosing mental health?

A. Universalistic
B. Absolutist
C. Relativistic
D. All the options

Feedback

To better understand how culture influences mental illness, three main theoretical positions from a cross-cultural approach are used: universalistic, relativistic and absolutist perspectives (Hassim, 2013). Universalistic perspectives (option A) are etic in nature in that they signify an explanation of encounters independent of the attached connotations. Classification manuals such as the DSM-V and ICD10 (the World Health Organisation's (WHO) International Classification of Diseases (ICD)) fall under the universalistic approach because they assume that the Western understanding of syndromes can be applied to all contexts. The relativistic perspective (option C) is based on the notion that mental illness should be understood through the context of a particular behavioural norm within a specific culture. According to the relativistic perspective, classification schemes like the DSM-V give culture a very restricted position in diagnoses, leading to a category fallacy and unfair homogeneity in pathology across cultures. The absolutist perspective (option B) assumes that culture does not influence the expression of behaviour. In this view, the presentation, manifestation, and implications of psychological distress are the same across all cultures, effectively minimizing the role of culture in shaping human behaviour. The question asks which perspective does not consider culture, making **option B** the correct answer.

Question 19
When looking at how the DSM-V has considered individuals from different backgrounds in an effort to improve its diagnoses, what type of an approach does it use to understand mental illness?

A. Etic
B. Emic
C. People skills
D. Etic and emic

Feedback
As people we interact with individuals from various cultural backgrounds we make assumptions about them, thus we need to be aware of the etics (option A; universal truths or principles which appear consistent across different cultures) and emics (option B; findings that appear to be culture-specific) in our truths. Put simply, an etic view of a culture is the perspective of an outsider looking in, whereas an emic view is a focus on the intrinsic cultural distinctions that are meaningful to members of a given society, an insider's perspective. People skills (option C), while important, do not specifically address the need to distinguish

between universal cultural principles (etics) and culture-specific insights (emics). The correct answer to this question is **option D**.

Question 20
Which of the following DOES NOT relate to the formation of community psychology in South Africa?

A) dislodge apartheid.

B) establish democracy.

C) transform unequal societies.

D) promote rights of political minority groups.

Feedback
Community psychology emerged to dislodge apartheid (option A), assert community identity, and establish democracy (option B). Furthermore, community psychology in South Africa developed with a focus on political liberation and the transformation of unequal societies (option C). **Option D** is the correct answer, community psychology in South Africa was not formed to promote the rights of political minority groups.

Question 21
According to the African perspective, the causes of psychopathology are -----

A) extrinsic
B) intrinsic
C) the ancestors or spirits
D) extrinsic and intrinsic

Feedback
According to the African perspective, the cause psychopathology and disease is thought to exist outside of a person's control. The correct answer is **option A**. Option B is incorrect because it refers to illness which is caused by internal factors within an individual. Option C is also incorrect in that, although ancestors are important in people's lives because the spiritual side of African existence is prioritised, ancestors or spirits are not the sole cause of pathology. Option D is incorrect, because in the African perspective, extrinsic factors are thought to cause psychopathology.

Question 22
In which category do psychopathologies fall under according to the African perspective?

A. Umkhuhlane
B. Ukufa kwabantu
C. Ukuthwasa
D. Badimo ba re furaletse

Feedback
A distinction is made between umkhuhlane (option A) refers to diseases or infections caused by natural factors, such as physical illnesses or conditions. It does not directly relate to psychopathologies from the African perspective. Ukufa kwabantu (option B) refers to disorders caused by supernatural factors or ancestors, including ancestors or witchcraft. According to the African perspective, certain psychopathologies may be viewed as the result of disturbances in spiritual or ancestral connections, factors that are external to the person, so this is the correct answer. Ukuthwasa (option C) is a process of spiritual initiation, often undertaken by individuals who are called to become traditional healers, known as sangomas or inyanga. It is not related to psychopathology, but rather a calling for spiritual or healing roles.

Badimo are the spirits of the deceased and the expression, “Badimo ba re furaletse” (option D) means that the ancestral spirits have withdrawn their protection, potentially leading to misfortune. However, this does not directly link to causes of psychopathology. The correct answer is **option B**.

Question 23
Which rituals/customs should be performed to avoid punishment from Badimo?

A. Extensive birth rites
B. Initiation rites
C. marriage and death rites
D. All the options

Feedback
In some cultures, it is believed that ancestors may punish their kin in situations where they are disappointed or angered. The disorder or misfortune sent by the ancestors serves as a warning to amend one’s behaviour and follows culturally prescribed code of conduct. To avoid punishment, extensive birth, initiation, marriage, and death rites must be performed. The correct answer is **option D.**

Question 24
Which of the following terms characterises African communities and a way of life in communal settings?

A) Interdependence
B) Independent
C) Individualism
D) Uniqueness

Feedback

African communities are grounded on communal living. Option B is incorrect because the individuals within a community are not independent. Option C is incorrect because African communities are not individualistic. Option D is incorrect because individuals in an African community do not take pride in their uniqueness or standing out from the group. Individuals and communities are seen as interdependent, that is, in relationship with others. The correct answer is **option A**.

Question 25

Which of the following statements about "African families live communal lives" is INCORRECT?

A) They have family structures that are limited only to the nuclear family.
B) Family involves various next of kin.
C) Life is defined in relation to community, not the self.
D) Community members are responsible for each other’s well-being.

Feedback

The statement reads, "African families live communal lives" and students are required to indicate the incorrect option. According to the statement, this means that African families have family structures that do not limit family to only a nuclear family. The correct answer is **option A**. The family structure also involves various next of kin, referred to as “extended family” in the West (option B). Option C, life is viewed as communal, and a person is defined in relation to the community. Option D, individuals and communities are seen as interdependent and community members are responsible for each other’s well-being.

---------- End of assignment 1 feedback ----------