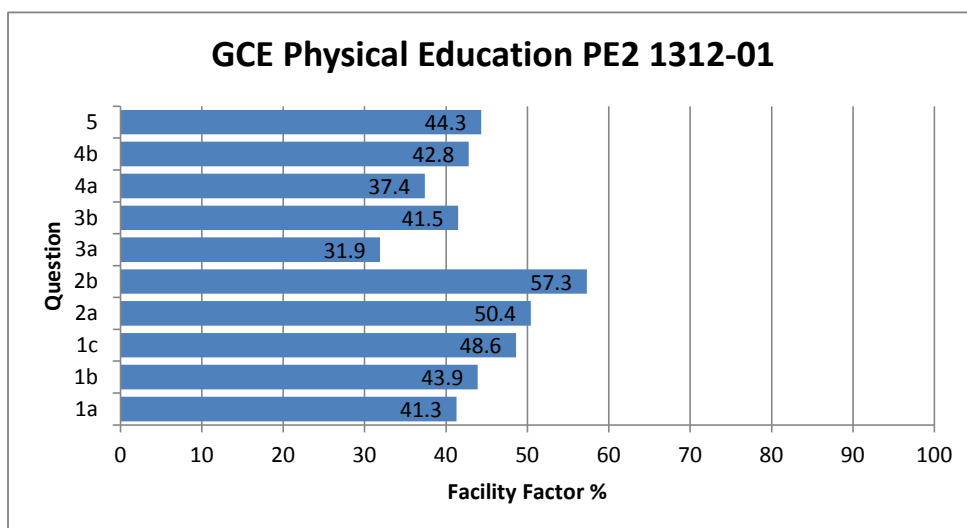


GCE Physical Education PE2 1312-01

All Candidates' performance across questions

| Question Title | N | Mean | S D | Max Mark | F F | Attempt % |
|-----------------------|----------|-------------|------------|-----------------|------------|------------------|
| 1a | 965 | 1.2 | 0.8 | 3 | 41.3 | 100 |
| 1b | 965 | 1.3 | 1 | 3 | 43.9 | 100 |
| 1c | 965 | 1.9 | 1.1 | 4 | 48.6 | 100 |
| 2a | 964 | 3 | 1.6 | 6 | 50.4 | 99.9 |
| 2b | 965 | 2.3 | 1.2 | 4 | 57.3 | 100 |
| 3a | 963 | 1.6 | 1.1 | 5 | 31.9 | 99.8 |
| 3b | 964 | 2.1 | 1.2 | 5 | 41.5 | 99.9 |
| 4a | 965 | 1.5 | 1 | 4 | 37.4 | 100 |
| 4b | 965 | 2.6 | 1.3 | 6 | 42.8 | 100 |
| 5 | 965 | 4.4 | 2.4 | 10 | 44.3 | 100 |



- 1 (c) Increased capillarisation of muscles is a long term adaptation of Fartlek training. Explain how this adaptation could help develop sporting performance. [4]

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- (c) Increased capillarisation of muscles is a long term adaptation of Fartlek training. Explain how this adaptation could help develop sporting performance.

Examiner
only

[4]

Increased capillarisation could help develop sporting performance by allowing the performer to get oxygen to the muscles more rapidly and therefore increase the anaerobic threshold and ~~delay~~ ^{delay} the start of lactic acid production. Increased capillarisation could also help speed up the removal of waste products from the blood such as lactate and therefore speed up recovery.

1312
010003



- (c) Increased capillarisation of muscles is a long term adaptation of Fartlek training. Explain how this adaptation could help develop sporting performance.

Examiner
only

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1312
010003



- (c) Increased capillarisation of muscles is a long term adaptation of Fartlek training. Explain how this adaptation could help develop sporting performance.

Examiner
only

[4]

Capillarisation around the muscles will increase the blood flow, rich with oxygen to the working muscles. This will enhance sporting performance as an athlete will benefit from a higher volume of oxygen rich blood in a shorter time period. This blood rich in haemoglobin will enter the muscles quickly and myoglobin helps to diffuse the oxygen quickly - thus providing the performer with more energy as the mitochondria provides energy through the consumption of oxygen. This process would not be as fluid if there were a lack of capillaries providing blood, therefore increased capillarisation enhances this process. Therefore, a sportsperson would be able to use their muscles for a longer period of time when performing e.g. Mo Farah will have an extensive capillary system which enables him to run for long periods of time with an efficient flow of oxygenated blood. ~~With an extensive capillary system it can also make sporting performance easier.~~

1312
010003



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1312
010003



- (c) Increased capillarisation of muscles is a long term adaptation of Fartlek training. Explain how this adaptation could help develop sporting performance. [4]

Increased capillarisation of muscles is where the network of capillaries becomes more dense, it helps both aerobic fitness as well as anaerobic. ~~glycolysis~~. This is because there is more surface area for oxygen to be diffused into the myoglobin and mitochondria in the muscle. So a larger volume of oxygen would be able to be delivered quicker. This would increase VO_2max , the maximum volume of O_2 which can be taken in and used by an individual in 1 minute. This would enable the sportsperson to work aerobically for longer.

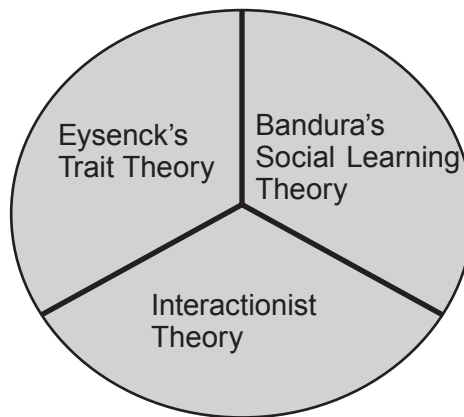
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3

Personality Theories

- (b) Using the diagram, discuss how personality theories attempt to explain behaviour in sport. [5]

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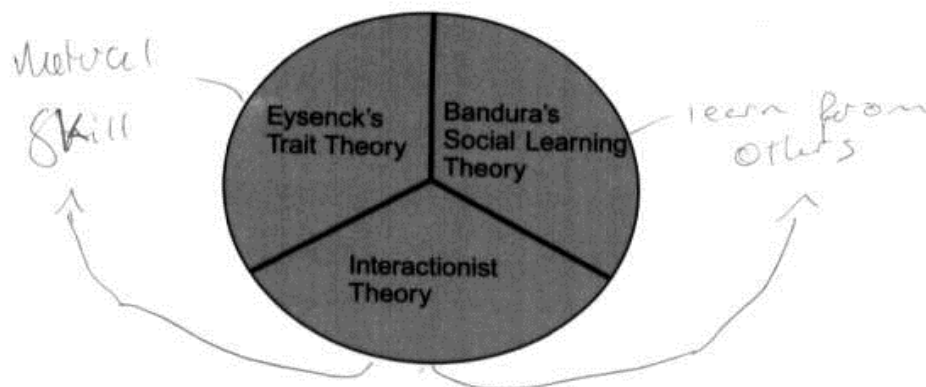
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Personality Theories

Examiner
only



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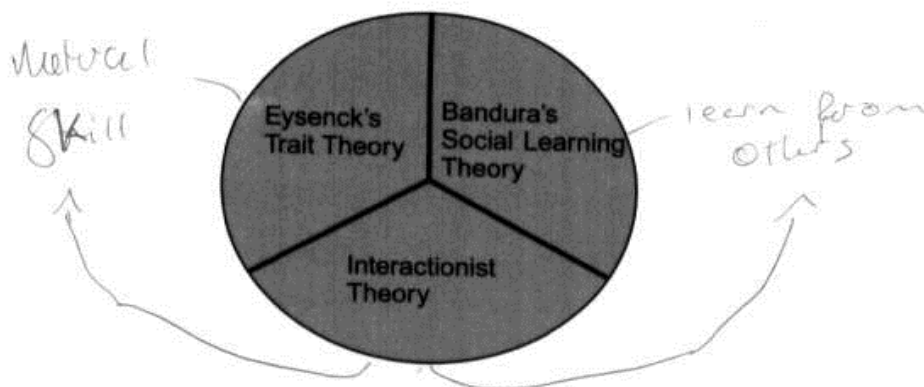
Eysenck's Trait Theory suggests that someone's behaviour is ~~pre~~ made predictable by their natural traits and skills that they have in their genes. Eysenck suggests that these traits are the ^{Foundation} ~~base~~ of all behaviour which is displayed in sport. Bandura's social learning theory suggests that the type of sport someone goes into and therefore what type of people socialise them is the main factor as to how someone behaves in sport. For example if someone starts off playing ~~the~~ golf, a sport where you have to remain calm and passive, and then ends up playing rugby you will most likely see the original sports social characteristics showing through ~~and~~ being calm and controlled isn't the way forward in rugby where you need to be aggressive and committed. However the golfing influence may create better discipline on the

* additional
material



Personality Theories

Examiner
only



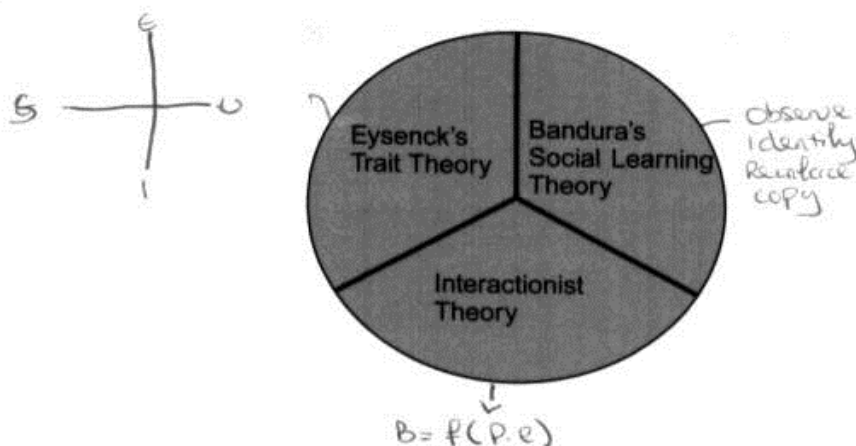
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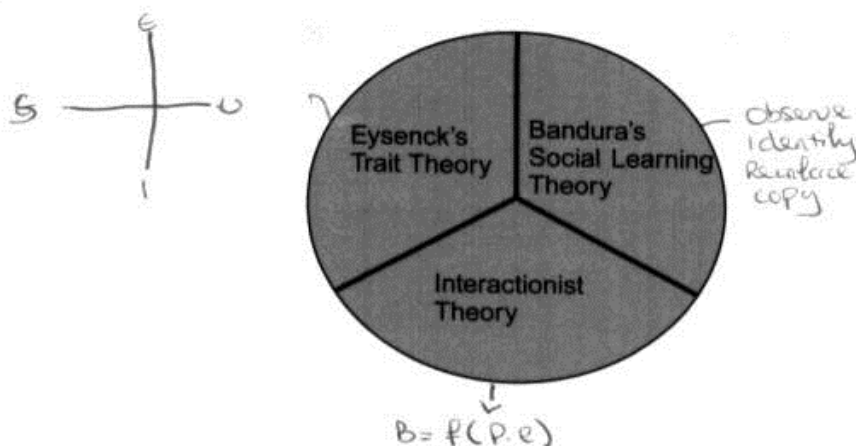
Examiner
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- (b) Using the diagram, discuss how personality theories attempt to explain behaviour in sport. [5]

Eysenck's trait theory ~~believes~~ states that one is born with their personality. It is ~~also~~ innate. Eysenck believed that behaviour in sport is unchangeable and an individual is one of few things, a stable/unstable extrovert or introvert. Eysenck would claim that stable extroverts are more accustomed to team sports whereas introverts individual sports. Bandura's social learning theory believed one adopts their behaviour through experience, his theory is a state theory. He believed individuals observe, identify, reinforce then copy what they are subject to, and behave accordingly. For example, they have an aggressive parent, this individual would copy this and become aggressively behaved in sport. Finally, Lewin's interactionist theory believed that the environment and individual finds themselves in will change their behaviour. He exemplified through the use of a formula - behaviour = function (personality x environment). This explains why an individual may be confident outside of a sporting environment, but shy and reserved when in one.



Personality Theories



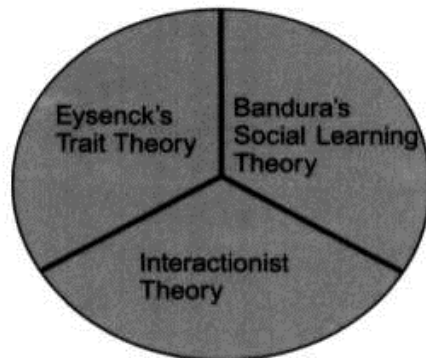
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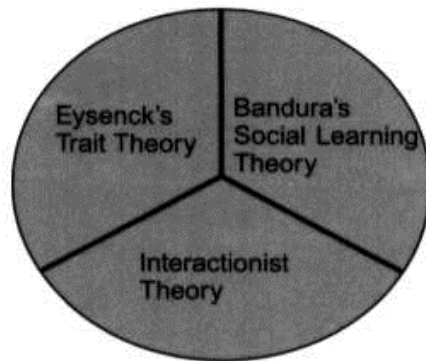


- (b) Using the diagram, discuss how personality theories attempt to explain behaviour in sport. [5]

Bandura's social learning theory states that all behaviour ~~is sport~~ is learnt and influenced by those around us. In sport that would mean your behaviour is affected by your team-mates, your coaches and your opposition. Eysenck's trait theory suggests that you are born with your behaviour and it is something which is innate. In sport this would mean all your aggression or lack of, comes from ~~with~~ in within you and is not influenced by others. The Interactionist theory is a mix between the two, some behaviour is learned and some ~~is~~ you are born with. In sport this would mean some attitudes/behaviour you learn from your peers and people around you but there is still some ~~innate~~ ^{is not} learned and is innate which you are born with.



Personality Theories



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[6]



(b) Explain how an individual's diet can affect both short and long term health.

Examiner
only

[6]

~~Short term~~ An individual's diet can affect someone in the short term by not providing them with enough energy to exercise if they don't eat well. For example both simple and complex carbohydrates are required for exercise. One short term point would be that if they don't eat enough fruit and vegetables, their digestion would be slow which would stop the helpful vitamins and minerals from reaching the body in time for transporting energy, this could lead to a paper hitting the wall earlier than expected and result in a drop in performance. In the short term too much food which is high in sugar could cause the body to become resistant to insulin and therefore someone becomes diabetic. This will lead to long term struggles of injecting insulin and monitoring blood sugar levels for the rest of their lives. A long term problem caused by a poor diet could be obesity as a poor diet often leads to a positive energy balance. A sustained positive energy balance will lead to weight gain and eventually obesity. Another long term

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(b) Explain how an individual's diet can affect both short and long term health.

[6]

Examiner
only

An individual's diet must be balanced in order to ensure a healthy lifestyle. Short term effects of diet are improved by ensuring one has the correct levels of carbohydrates, protein and fats as well as minerals, vitamins, water and starch.

Carbohydrates boost glycogen stores which in the short term improves the ability to carry out everyday life as well as intense exercise. Also, fats are important for fat soluble vitamins such as A to be transported around the body for fundamental bodily functions. However, high levels of saturated fat and high in glucose carbohydrates on the glycaemic index can cause breathlessness and an inability to perform long durations of exercise.

Long term, a diet high in saturated fats accompanied with smoking and alcohol can cause health problems. Low density lipoprotein is a bad form of cholesterol due to a fatty diet and causes atherosclerosis, which can lead to heart attacks or strokes, due to the build up of fibrous plaques in the arterial walls. Also, high GI foods may provide energy short term but in high quantities can cause diabetes (type 2) where there is too much sugar in the blood, insulin is no longer produced. However, vitamins and minerals such as calcium have positive long term effects. Calcium reduces the chances of osteoporosis by strengthening the bone tissue.



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[6]

Short term, if a person has a diet of simple sugars and high GI foods, they will get quick released energy but will fatigue once that is used up, whereas complex carbohydrates and low GI foods provide a slow release and will give energy through out the day. They also make you feel fuller so you would eat less, whereas with higher GI foods a person would eat more, consuming more than their recommended calorie intake, without burning them and so they will be converted to fat and stored as adipose tissue and in the long run can cause diseases such as type II diabetes and obesity. This can cause many problems such as angina, where oxygen flow to the heart is restricted, causing chest pains, heart attack where oxygen is completely cut off from part of the heart, or stroke, where not enough oxygen flows to the brain, these are all caused by restricted blood flow due to unhealthy eating. ~~Eaten~~ Lots of high density lipoprotein (bad cholesterol) also causes high cholesterol which is bad compared to low density lipoprotein.



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