



Exemplar for Internal Achievement Standard

Psychology Level 3

This exemplar supports assessment against:

Achievement Standard 91872

Analyse the interaction between psychological approaches

An annotated exemplar is a sample of student evidence, with a commentary, to explain key aspects of the standard. It assists teachers to make assessment judgements at the grade.

New Zealand Qualifications Authority

To support internal assessment

Grade: Achieved

For Achieved, the student needs to analyse the interaction between psychological approaches.

This involves discussing at least two psychological approaches, focusing on the methodological and theoretical differences between each approach and how they interact. Psychological approaches refer to paradigms about people and the way that they function. Different approaches may offer different explanations for behaviours. Examples of psychological approaches include behavioural, biological, cognitive, sociocultural, evolutionary, humanistic, psychodynamic.

The student has demonstrated an analysis of the interaction between psychological approaches by identifying the methodological and theoretical differences between the biological and sociocultural approach in relation to the causes of aggression. In psychology there are several different approaches. There may be several different theories within an approach, but they share common assumptions that tie them to that approach.

The response also provides a basic description of an interaction between the biological and sociocultural approaches by showing how a biological predisposition (the MAOA gene affecting neurotransmitter levels and emotional regulation) can increase vulnerability to aggressive behaviour, while exposure to a violent social environment reinforces and normalises this behaviour.

For Merit, the student could more explicitly explain how the approaches interact and explain in further detail how the sociocultural approach would encompass the environment. This might include discussing whether twins were raised together and the impact of microenvironments within the family. The evidence could detail the types of environments that may interact with the MAOA (L) gene to increase risk of aggression. This should clearly link to sociocultural theory or research.

Aggression can be defined as 'behaviour that is intended to harm or injure, directed towards another living being. This applies primarily to human behaviour and can include psychological as well as physical injury' (Lippa, 1994). Humans have spent years studying the causes behind this behaviour. In psychology, there are many different approaches, two of which include; biological and sociocultural. Each of these approaches gives us a different insight into the cause behind aggression. In this essay, I will explain in depth the most evidential theories in each approach that explain the causes of aggressive behaviour and how each works together.

The biological approach is one of the many approaches that can be used to explain behaviours such as aggression, it investigates how our genetics, hormones and other biological factors affect our behaviour. One of these factors of the biological approach that can be used to explain the causes of aggression is our genes, specifically the MAOA gene. The MAOA gene is responsible for breaking down key neurotransmitters such as serotonin and dopamine, both of which are responsible for regulating emotion and behaviour. Studies have shown that low levels of serotonin are linked to aggressive and violent behaviours. Another theory within the biological approach that can explain what causes aggressive behaviours in a person is hormones. One hormone that is closely linked to aggressive behaviours is testosterone. A study conducted in a men's prison by Kreutz and Rosel in 1972 found that prisoners who had committed violent crimes during their adulthood had much higher testosterone levels than those who had committed non-violent crimes. It was found that there was a strong link between higher levels of testosterone and more violent and aggressive behaviours being committed.

The sociocultural approach is another approach we can use to understand the causes of aggression. The sociocultural approach looks into the social norms and interactions within our own personal cultures and wider society. The sociocultural approach may help us understand another view on what causes aggression as it is the idea that our behaviours are influenced by our environment. This environment is our social and cultural surroundings such as teachers, parents, religion and other social norms that we grow up with. One way the sociocultural approach may explain aggressive behaviours is by understanding the different norms within cultures.

One person may be viewed as more aggressive than someone from a different culture which has grown up with different behavioural norms. A sociocultural factor that may cause aggression is growing up in a violent neighbourhood where it is common and normalized to see people yelling or hitting each other. A child growing up in this environment sees this behaviour as normal and learn to act in the same way leading to them being viewed as aggressive in social situations outside their culture. Albert Bandura gave us the 'social learning theory' in 1961 in which children were shown models who acted aggressively toward play toys. The results showed that the children paid attention to the models and later imitated the same aggressive behaviour. These results may be applied to situations such as the areas we grow up in and the behaviours we see around us as a child. This means that children who grow up in violent neighbourhoods are likely to be more aggressive than those who didn't.

These approaches have many differences in the way they test for aggressive behaviour. The sociocultural approach uses qualitative data to help understand how and why certain factors may cause aggression because they cannot be easily measured or numerically gathered. Qualitative data is gathered using methods such as interviews and/or questionnaires. This allows researchers to gather information about the participant's social and cultural

backgrounds such as the neighbourhood they grew up in and the behaviours of their role models and apply this to, in this case, their tendency to show aggressive behaviours.

Qualitative data allows researchers to get deeper and more specific when it comes to the causes behind behaviours and find common links between people's experiences and the behaviour they show. This type of research also allows for the data to be uniquely interpreted and patterns to be found that may help us to predict whether someone is more likely to act aggressively coming from a certain cultural setting. On the other hand, the biological approach uses quantitative data which is numerical and observable data. This is done through lab tests where they are easily able to gather information about the person's hormone levels, genes and neurotransmitters. In the context of researching the biological causes behind aggression, a person's hormone levels can be measured in a lab which has allowed researchers to discover the link between high testosterone levels and aggressive crime.

The biological and sociocultural approaches also have many differences in the way they evaluate supporting data and use it to explain behaviours such as aggression. Firstly, they both support different sides of the nature-nurture argument. The biological approach is strongly on the nature side as it uses the idea that our genetics, hormones and other internal factors provide explanations for our behaviours whereas the sociocultural approach focuses more on how our social and cultural environment shapes our behaviour.

The biological approach uses a reductionist method to evaluate the data, simplifying it to its fundamental and basic elements. This means that when using the biological approach to understand the causes of aggression, it is broken down into simple and separate parts that we can really understand and then look back at the bigger picture when we put it together to have a really in-depth, detailed understanding behind the causes of aggression. Eg. researching

specifically on how certain genes may be linked to aggression or how hormone levels may mean a person is more likely to be aggressive and then looking at it as a whole. When it comes to the sociocultural approach, it takes more of a holistic view of things. This is the idea that we can get a better understanding of things if we look at them as a whole and take into consideration as many factors as we can.

Although there may be many differences between the biological and sociocultural approaches, in a wider view of things both approaches work together to deepen our understanding of the causes behind certain behaviours such as aggression. Neither of these approaches can fully explain aggression without the other because no matter what, you are always going to be influenced by both what you are born with and the environment around you. Both approaches and theories work together to explain the causes of aggressive behaviour. An example of how both these approaches work together is a twin study that was done by the University of Louisville where they had a set of identical twins. They tested the twins for intelligence and found that one was more intelligent than the other, but after proper stimulation, for both twins, they found that the more intelligent twin stayed the same while the less intelligent twin caught up. This showed us that you may be born with the potential to reach a certain level of intelligence but without the right stimulation, you may not reach it. The theory of this research can be applied to aggressive behaviours as well. Someone may be born with the MAOA gene and be more susceptible to being aggressive but depending on whether that person gets the right environment and stimulation growing up will also determine how large of an effect this gene has on them, and the behaviour they show.

The interactions between the biological and sociocultural approaches can cause

some people to be extremely aggressive towards others, resulting in criminal

behaviour and prison time. An example of this is someone who carries the MAOA gene, because of this gene that they carry they are more susceptible than others to exhibit aggressive behaviour due to it lowering their levels of serotonin, dopamine and other important neurotransmitters that help us to regulate our emotions and behaviour. If this person grows up in an environment where aggressive behaviour is shown to them all the time because they lack the ability to regulate their emotions and actions, they are more likely to display the same behaviour and the chances of them learning to regulate their emotions after growing up with violence being the norm are very low. This can lead to their aggression growing and possibly resulting in them having to do time in prison. By understanding the people who are most at risk of developing these aggressive behaviours due to genetic, hormonal or other biological issues we can focus on getting them in a more suitable environment where they are more likely to be given the right assets to help them regulate their emotions which would lower the crime rate.

In conclusion, these approaches may have their differences in the way they test them and the way they assess the data that is gathered. Although both of these approaches are important and work together to influence our behaviours, there are limitations to how much we can change when it comes down to it. The biological approach can give us a good insight into why a person may act a certain way, allowing us to take precautions but we cannot change our genetics, therefore it has a stronger influence on us. Knowing about the how the sociocultural approach causes aggression can help us know what to do to avoid imprisonment for horrific crimes such as ensuring children grow up in non-violent households.

[The student also included a reference list, which has been removed for brevity]

Grade: Merit

For Merit, the student needs to analyse, in depth, the interaction between psychological approaches.

This involves critiquing how the approaches interact with each other. The critique includes descriptions of, or references to, psychological theories, concepts and/or studies from published works.

The student has demonstrated how the approaches interact, with reference to psychological theories from published works such as the General Aggression Model (GAM) developed by Anderson (2004) and the Catalyst model (Ferguson, 2008).

The student recognises that GAM was developed specifically to address limitations of single-factor explanations by integrating multiple influences. Further analysis occurs where the student explains that GAM incorporates “*social, cognitive, personality, developmental and biological factors, and how they all contribute to an individual's actions and responses*”. This demonstrates an understanding that aggression is best explained through the interaction of multiple approaches rather than any one approach alone.

The response identifies ethical issues (such as screening for specified variants of the MAOA gene) that could be associated with this explanation if applied in society. This could be extended to strengthen this point through discussion of how this point connects to the issue of “*socially sensitive research*”.

The discussion of the Catalyst Model also demonstrates a critique of the interaction, “*Although it is not the environment itself that causes the violent tendency, an environmental factor causing strain on the individual...can act as a catalyst to their predisposition to aggressive behaviour*”. This is an explicit analysis of the relative contribution of biological and environmental influences. The student is not simply stating that both matter; they explain the mechanism through which environmental factors interact with an existing biological predisposition. These points demonstrate evidence of a critique of the interaction between the two approaches. This supports evidence for the Merit criteria.

For Excellence, the student would critique the evidence and theory being discussed, referring explicitly to the behavioural approach, and/or evaluate the strengths of this interactionalist approach for explaining aggression. The response should seek to strengthen the discussion of the implications of the interaction between approaches, and explicitly discuss the effect on society and how it may be impacted by such an interactionalist explanation of aggression.

Merit

NZQA Intended for teacher use only

Introduction

Violent media and video games are becoming more and more prevalent in today's society and the impact on an individual's aggressiveness is being questioned. The biological and behavioural approaches and how they interact have been continually explored to understand what exactly is responsible for aggressive behaviour and how violent media may impact this.

Biological Approach

The biological approach towards aggression is based upon the physiological cause for an individual's actions. This involves the regions of the brain (neurochemical), genes and hormones, all physical and biological aspects of an individual. This approach is a reductionist approach and explores only the natural, built-in tendencies of an individual. An advantage of the biological approach to psychological implications is that it can be physically studied i.e. the brain can literally be cut open to study which parts affect emotion and aggression or the hormonal levels within a person can be tested to see how it impacts their behaviour. Many biological explanations for aggressive behaviour is due to the influence of violent media and video games that influence the brain and how it reacts and responds with aggressive behaviour.

A biological explanation shows that the use of violent video games has the potential to impact the real life behaviour of an individual due to enhanced neural factors. This neurochemical approach towards aggressive behaviour (from exposure to violent media) is implicated by different regions of the brain, such as the amygdala. The amygdala is a collection of cells within the temporal lobe, part of the limbic system, and responsible for controlling the emotion and behaviour¹ within an individual. It has been studied that, when stimulated, the amygdala is responsible for very powerful emotions, such as anger and fear. Theories state that the more exposure an individual has to violent media or playing violent video games, the more desensitized they become to violence with the amygdala less responsive and the individual displays more aggressive behaviour. A method that supports this theory was Downer (1961), a study in which the amygdala within a monkey was surgically removed from one side of the brain. When presented with the visual stimulus of human presence with the eye on the side of the brain that had the amygdala present, the monkey displayed the usual somewhat hostile and aggressive behaviour. However, when the monkey witnessed human presence through the eye of the side of the brain that had the amygdala removed, it showed far more placid and relaxed behaviour.² This clearly displays that the amygdala is significantly responsible for the levels of aggressiveness in an individual's behaviour. Another study to support this theory was the study by Raine (1997)³ that found significant neurological differences between murderers and non-murderers. The difference in the function of the amygdala displayed the difference between the individual's emotional responses and failure of learning from one's actions or experiences. This shows that if the amygdala is damaged or failing to perform, the individual becomes desensitised to violence and aggressive behaviour and shows increased suppression of fear. The more that

an individual sees violent actions on TV or in movies, or plays violent video games, the less responsive the amygdala becomes to violence and the more desensitised the individual becomes to violence in real life - this then promotes more aggressive behaviour from the individual.

Another biological approach towards the effect of violent media on an individual's aggression is the impact of hormones. Hormones are chemical messengers that circulate the body and inform different organs and parts of the body to perform certain functions. Different hormones are released as a result of different experiences or actions. The particular hormone, testosterone, is a predominantly male hormone that is generally associated with negative, aggressive tendencies. There are multiple theories that there is an increase in an individuals' levels of aggression and dominance when they have a higher level of testosterone. A study in 1998 by Kalat⁴ displayed that 15–25-year-old men with the highest levels of testosterone also displayed the highest aggression, according to their crime statistics.⁵ Another study that backs up this theory was Edwards, 1969⁶, where female rats were injected with testosterone and showed higher levels of aggression, based on their fighting frequency. This proves that the more testosterone in an individual means that they are more likely to show aggressive behaviour, regardless of the gender. In violent video games, this can encourage the individual to express their dominance, behaviour which can then translate to real life and be enhanced by the testosterone's effect of competitiveness and dominance.

Behavioral Approach

The behavioural approach towards aggression is defined by the behaviour an individual learns from their surrounding environment. This is a psychological, social approach towards aggressive behaviour. Important components that contribute to learned aggression include observation and vicarious reinforcement, implicate behaviour to be copied by the individual and desensitizing them from the aggressive behaviour. Media, specifically aggressive TV and/or video games is largely influential on an individual's behaviour and levels of aggression.

The behavioural approach is highly influenced by what the individual sees in their surroundings by watching the behaviour of other people and copying depending on the positive or negative consequence that it results in. In the theory by Albert Bandura, called the Social Cognitive Learning Theory, theorises that an individual will learn their behaviour by observing that of others. Rather than receiving our own positive reinforcement, we can observe the consequence of the behaviour of others to evaluate whether this is a good behaviour to imitate or not.

Observational learning takes place more often in the younger years of life as children tend to rely a lot on learning off authority figures such as parents and teachers. This is also significant in how children learn to respond to and socialise with others. Observing the consequences of others to make our own decisions about the behaviour is referred to as vicarious learning.

Bandura explained that in order for the Social Cognitive Learning Theory to be applied, it requires attention, retention, motivation and potential. Attention is required to pay attention to the actions of the model; retention to retain the actions of what has been observed; motivation is required by understanding the 'outcome expectancies' as the result of the

action; potential is required by the individual to be physically and/or mentally able to carry out the action. The main method that explored Bandura's idea was the Bobo doll experiment. In this experiment, a group of children were selected to individually observe an adult acting violently towards a bobo doll toy, hitting and punching it, then leaving the children alone in the room with the same toys. The results of this experiment displayed that many of the children then replicated the same behaviour as that of the adult, conducting the same hitting motions that they had earlier observed. This behaviour from the children supports Bandura's theory that by observing another individual's behaviour they retain the actions then mimic the behaviour, including aggressive behaviour. Regardless of whether a child is intending to learn or aware that learning is taking place, they are shown to be more likely to replicate the behaviour being observed if it is being carried out by a model that they had similarities to, such as a person of the same gender, or someone they respected, such as a parent, sibling or role model. The actions of others that younger people observe can be applied to that of video games as well. By observing the aggressive behaviour in characters of violent video games, children can imitate these actions into their real life behaviour. Their characters on these games tend to somehow relate to the individual, whether it's characterised gender, age or visual presentation. The SLT can be applied to violent media and video games as they are more often than not, targeting young minds. The violent media allows them to observe how their realistic looking problems on video games can be solved through violent behaviour, which they then apply to real life situations as they have learnt to believe that aggression is the solution to their problems. They are not bothered or disturbed by the violence of their actions or the pain they may be causing others because their constant observation and learning of violent behaviour causes them to become desensitized and used to seeing violence.

The behavioural approach also explores how an individual's behaviour is influenced by operant conditioning. Operant conditioning is when an individual bases their behaviour by observing the consequences of others behaviour. When the behaviour is positively reinforced with reward, it is more likely to be repeated by the observer, whereas if the behaviour is negatively reinforced with that of pain as an example, it is less likely to be repeated by the observer. B. F. Skinner theorised that the likeliness of the repetition of a behaviour is dependent on the positive or negative outcome. To back up his theory, Skinner carried out an experiment on rats, using the process of operant conditioning. In the experiment, these rats would accidentally knock a lever creating an accidental response which released food. The rats soon learned, from positive reinforcement as reward, that if they repeated the behaviour and pushed the lever, they would receive more food. This then becomes a deliberate response as they want to repeat the action to earn the food. This can be applied to that of video games as the player completes a task or action and is rewarded with something beneficial such as coins or levelling up, giving a positive result of the individual's actions, therefore making them want to repeat the behaviour for the reward. This is a form of vicarious reinforcement that applies to the same of aggressive behaviours, rewarded then repeated. Violent video games also follow the same structure that rewards particular actions, ranging from hitting to killing other virtual players for points and higher rankings. Games like this, such as Fortnite or Call of Duty with improving realistic graphics, positively reinforce aggressive behaviours with virtual rewards that can then be carried into real life. Cognitive priming is also incorporated in the design of video games as they display the violent behaviour of the virtual character which then primes thoughts of violence and aggressive thoughts that could potentially lead to harming others.⁷ In the case of Adam Lanza, he spent many hours playing violent shooting games and being rewarded through rankings and high scores, one of the games called School Shooting⁸ (Pilkington, 2013), in which the character would enter schools and shoot students. The rewards of these games

positively reinforced his violence online, which he then carried into real life behaviour in the Sandy-Hook elementary school shooting. This shows that violent media such as video games, can perform operant conditioning on its target audience, which tends to be children and young adults and positively reinforce aggressive behaviour. The behavioural approach uses the social learning theory and operant conditioning to apply the effects of violent media/video games to the cause of aggressive behaviour within an individual.

Interactions Reductionist:

Both the behavioural and biological approaches are classified to be reductionist approaches, meaning each approach is their own separate and individual explanation for the cause of aggression in a person and how it is impacted by exposure to violent media and video games. The biological approach consists of the neurological, hormonal and genetic explanation as to why a person is aggressive and how this is influenced by the aggressive media. This reductionist approach singles down the cause of aggressive behaviour into basic reasons for aggression, such a high level of testosterone or damage to one's amygdala. This does not take into account any environmental influences that may be part of the behavioural response.

Biological implications towards aggressive behaviour can quite literally be seen under an MRI scan, autopsy etc. to identify the physical mistakes that may have led to such violent behaviour. For example, in the case of Phineas Gage, it was clear that there was a physical, biological cause for his change in emotion and personality that was responsible for his irreverent behaviour and profane language. In the case of the Downer method which explored the impact of the amygdala on behaviour, the results are promising in showing how the visual stimulus connects with the amygdala. This clearly displays how the amygdala is responsible for a monkey's emotions and when removed, the more passive the behaviour. However, this cannot be proven to work the same in humans - while monkeys are very closely related to a human, they are not the exact same, nor as developed as humans and therefore do not show an exact representation of the impact of the amygdala on human aggression. It is entirely focused on the physical approach and does not interrelate with the behavioral approach.

The behavioural approach, however, is purely psychological and focuses solely on how the environment is responsible for the aggression of an individual and how the others around them act. It ignores any possible biological influences on aggressive behaviour, such as genetics or injuries to the regions of the brain responsible for emotion. This is largely just based on theories; however they can be backed up by experiments or real life cases. The Social Learning Theory is widely used as an explanation for learned behaviour that influences an individual's aggressive tendencies and a reductionist approach can focus on this as a singular cause of aggression. A method that explores this approach was Bandura's. This method was used to back up his theory, however it does display its own strengths and weaknesses. The benefit of this experiment is that it shows the children are easily influenced by observing the behaviour of an authoritative figure. It is limited however, as it was only based on one experiment with the same children. As these kids may have already been pre exposed to violent behaviour, possibly from their household or school, public etc., this could affect their reaction to watching the adult. This experiment would be more reliable if the children had been raised with no earlier exposure to violence and therefore would be a 'clean slate'. However, the only way to ensure they are not exposed to violence would be to shut them off from the outside world so everything they see can be controlled. This would likely impact their social behaviours and alter the experiment in a different way, as well as being ethically wrong. Another downfall of this experiment is that it may have impacted the

children in the long run - although it may have been seen as a harmless experiment, it would actually impact their levels of aggression in the future and how they deal with situations. This approach focuses strongly on how violent media causes disinhibition, desensitisation and cognitive priming which then becomes relevant to the application that violent media influences on an individual.

Interactionist Approach:

The holistic approach between the biological and behavioural approaches show the interrelationship of the two and how they impact each other. This explains how one approach cannot work without the other but must involve an aspect of each to complete a proper understanding of how aggressive behaviour occurs within an individual. The combination of so-called 'nature and nurture' brings together the biological and behavioural factors to give reason to an individual's aggression, implicating how both impact and support each other. This could mean exploring one's inherited traits that make them who they are and how the social factors can influence their natural personality which may affect their behaviour and how they respond to violence. For example, an individual may be born with a particularly high level of the aggression-related hormone testosterone - the biological factor. This means that they have a natural tendency towards a higher level of aggressive behaviour. If this individual is regularly exposed to violent media, their built-in tendency towards aggression will enhance the influence of surrounding violence applied through the behavioural approach. The implications of the behavioural impacts may include the Social Learning Theory in which the individual observes the violent behaviour of others and becomes desensitised to violent behaviour, causing them to become more likely to carry out the same behaviour. This observational behaviour, combined with a naturally high testosterone level, can cause the individual to carry out aggressive behaviour on a regular basis and possibly to a dangerous extent. Violent media then enhances the effect of both of these approaches on a person, displaying violent behaviour of others or characters to which the individual becomes disinhibited, carrying out the same or similar actions as it becomes more acceptable in their mind.

General Aggression Model:

The General Aggression Model (GAM) is an interactional approach that combines the likes of the biological and behavioural approaches. This model considers multiple aspects that could be the reason for aggressive behaviour, specifically social, cognitive, personality (such as goals and beliefs), developmental and biological factors, and how they all contribute to an individual's actions and responses in response and regard to violence. This model is specific for aggressiveness.

GAM was developed in 2004 by Anderson and considers how social learning and development is impacted through learning processes and how an individual responds, interprets and perceives the surrounding environment. It states that the repeated use of violent video games will reinforce aggressive behaviour as a normality and a desensitization to violence. Each time the individual witnesses or experiences the violence in the media/video games, they are more considerate to aggressive behaviours and that aggressive behaviour is generally the solution to real life problems and conflict. An example of how the GAM model may be applied could be Adam Lanza. Lanza grew up displaying very introverted behaviour, socially isolating himself in school and in group activities. He was very sheltered, mainly only socialising with his mother and spending the rest of his time in his room. This shows that he has not observed and learnt very much 'normal' behaviour from

other kids his age. He then spent a large amount of his childhood playing violent video games, observing the aggressive behaviour of the characters in which he participated as - this causes desensitization and disinhibition, contributing towards his violent act. His violent tendencies then developed even more as he became obsessed with past mass murders, those of whom had killed the most people, noting down the number of fatalities and who had the most. This then became his goal to kill the most people and become the best in terms of mass murders. The combination of these factors can be applied to the multiple aspects of the GAM model, all contributing to the result of his shooting at Sandy Hook elementary school.

Catalyst Model:

The Catalyst Model, like that of biology, speeds up the result of an action. Developed by Ferguson, 2008, the Catalyst model assumes that an individual who is already biologically aggressive are influenced by (friends and family etc.), leading to an outburst of violent behaviour. Although it is not the environment itself that causes the violent tendency, an environmental factor causing strain on the individual (such as financial issues or relationship troubles), can act as a catalyst to their predisposition to aggressive behaviour, speeding up their tendency to act on it. This implies that more naturally aggressive individuals are more likely to look for violent material and act on it, that individuals that are less naturally aggressive as they do not have the same desire for aggressive activity. This links to aggressive behaviour caused by the media in the way that the media can be an environmental factor that acts as a catalyst to speed up the individual acting on their aggressive behaviour. Adam Lanza as an example, may have already had an innate, biological aggression, however, his constant interaction with violent video games and obsessive researching of mass murderers catalysed (sped up) the result of him acting on it, leading to his action on the Sandy Hook elementary school shooting.

Societal Link:

The regular exposure of violent media and video games to an individual impacts their own aggressive behaviour. The debate of whether this is due to biological or behavioural factors, or an interaction of both, still remains undecided. It is, however, supported that the violence in video games does have a rather large effect on a person's aggressive behaviour. In order to try to prevent aggressive acts in the future, solutions to deal with exposure to violent media must be implicated in global society. The media is so easily accessed by anyone with Wi-Fi and a device these days, including young children. As children and young teenagers are the most easily influenced due to their developing brain and learning behaviour. The most obvious solutions to restricting violent media from younger children would be age restrictions and implicating small costs. While there are already age restrictions to video games, they are incredibly easy to bypass as they are minimally enforced. Online, it's as easy as just clicking a button to say you are 18 without any age proof or consequences for lying. To solve this, an increase in security on age restrictions should be applied - this could be as simple as uploading a picture of ID for proof of age. While they could use someone else's ID, this still creates another layer of protection. An alternative to this could be to charge a tiny fee to download a game. This could literally just be \$0.01 because then the person would have to have ownership of a debit card in order to make the payment which, in the case of NZ, is 15 years old. While this isn't 18 years of age, it would still be a drastic improvement. Other solutions to preventing violence could be to test at birth for the MAOA genes and restricting violent media from those who carry it. The ethical issues however, could be that it is not up to the individual whether or not they carry the gene so how is it fair for them to not be allowed to play video games like other kids their age. Another large part of

violent behaviour is the use of guns. As many violent video games recreate shootings, the learned behaviour from these are often applied to real life shootings as displays of aggressive behaviour. In America in particular, stricter gun laws would largely decrease the number of shootings and prevent people from easily accessing guns to carry out this violent behaviour. There are many contributors to violent behaviour that an individual may carry out, but preventing it before it happens, or identifying where it most likely will happen, is vital in decreasing the amount of violence in our society. Stricter education on teaching younger children how to stay calm in stressful situations instead of resorting to violence could make a big difference in how people react with or without aggressive behaviour in the future.

[The student also provided citations and a reference list, which has been removed for brevity]

Grade: Excellence

For Excellence, the student needs to comprehensively analyse the interaction between psychological approaches.

This involves a detailed critique focusing on the degree of interaction between the approaches and showing the impact of these interactions in a societal context.

The student response explains that interaction between the approaches is limited because they are based on contrasting objective and subjective theoretical perspectives, and highlights models of interaction such as the Diathesis stress model proposed by Meehl.

The analysis is comprehensive because it moves beyond simply identifying an interaction to explaining the mechanism by which the approaches work together, demonstrating how genetic vulnerability interacts with environmental stressors to influence the development of schizophrenia. It also evaluates the degree of interaction by recognising that, despite working together in practice, the approaches remain conceptually distinct due to their differing theoretical (objective vs. subjective) perspectives. Furthermore, the response extends this analysis beyond theory by applying the interaction to societal contexts, such as informing treatment approaches and reducing relapse rates in schizophrenia, thereby demonstrating the broader impact of integrating psychological approaches.

The student has demonstrated a detailed critique focusing on the degree of interaction between the approaches, with detailed supporting evidence.

The critique of the degree of interaction effectively discusses the impact of this interaction on society and includes strong links to, and evaluation of, relevant research evidence throughout. The discussion of the findings from Falloon & Pederson highlights the importance of combining the biological and psychodynamic approaches in improving recovery rates. The response recognises the value of both drug treatment and therapeutic interventions, including individual and family therapy, in further reducing relapse rates. Overall, the response provides sufficient evidence to meet the Excellence criteria.

Research and planning

Context: Schizophrenia is a serious mental disorder in which people interpret reality abnormally. Schizophrenia may result in some combination of hallucinations, delusions, and extremely disordered thinking and behaviour that impairs daily functioning and can be disabling. People with schizophrenia require lifelong treatment.

Research suggests a combination of physical, genetic, psychological and environmental factors can make a person more likely to develop the condition. Some people may be prone to schizophrenia, and a stressful or emotional life event might trigger a psychotic episode.

Approach One: Psychodynamic Theories for Approach One:

1. Theory of Personality/Self (Id, Ego, Super Ego)
2. Nurture

Approach Two: Biological Approach Theories for Approach Two:

1. Biological link
2. Dopamine hypothesis
3. Gottesman - Uses Technology
4. Nature

Theoretical Analysis

In studying and explaining behaviour, the biological approach and psychodynamic approach choose to focus on different positions in the nature vs. nurture debate. The biological approach focuses on the belief that we are a consequence of genetics and physiology. This approach examines thoughts, feelings, and behaviours all of these ultimately having a biological cause. A biological perspective is relatable to the study of psychology in three ways: comparative method (different species can be studied), physiology (how the brain works and how changes in structure and/or function can affect behaviour, etc), and the investigation of inheritance (genetics). All three of these aspects can help to explain our human behaviour. This is where we see it favour the nature side of the debate as nature involves the extent to which aspects of behaviour are a product of inherited (genetic) influences. The Nature side of the debate was originally credited to psychologist Sir Francis Galton in 1869. The psychodynamic approach however emphasises human behaviour based upon the interaction of drives and forces within a person, particularly unconscious, and between the different structures of the personality. It explains that experiences in your childhood have a key influence on your adult life in terms of shaping your personality. Different events that occur during your childhood can remain in the unconscious, and later cause problems as an adult. The theoretical aspect the psychodynamic approach chooses to focus on is nurture. Nurture is influenced by external factors such as the environment, for example, the result of exposure, experience, and learning on an individual. This places it more on the nurture side of the debate as nurture involves the extent to which aspects of behaviour are a product of environmental influences. This approach leans more towards nurture however it does have some nature influences amongst it too.

The biological approach focuses on the biological influence that can lead to schizophrenia.

Under the biological approach through the investigation into inheritance, experiments have been conducted by studying twins. Twin studies have acted as the primary source of evidence for supporting the importance of genetic determinants.

Research and writings gathered by clinical psychologist Irving Gottesman have radically changed the way that we think about schizophrenia in terms of the biological approach. A study by Gottesman in 1991 found that the occurrence of schizophrenia was higher in relatives of a person with schizophrenia than the general population. Identical and non-identical twins tend to share the same environment in which they are raised. Therefore, if a disorder such as schizophrenia shows greater co-occurrence in identical versus non-identical twins it will show evidence of there being a genetic effect.

Likewise, if the absence of 100% concordance in identical twins occurs it shows evidence of environmental effects. Gottesman's Twin Study conducted in 1967, clearly confirmed the idea that genes play a role in schizophrenia. This concordance indicated that genes influenced such behaviour. This theory explains schizophrenia as a genetic influence which you were born with. This creates a strong link between the biological approach sitting on the theoretical nature side of the debate as they both are linked to genetic and biological factors. While the psychodynamic approach focuses on environmental influence which can lead to schizophrenia. The investigation of our behaviour being based on the interaction of internal drives and forces within a person have been shown through Sigmund Freud's psychodynamic theory. Freud's work accumulated over more than 50 years from 1885 to 1939. His work was psychoanalytic and focused particularly on the unconscious state, and between the different structures of the personality. He found that your mind is made up of three different parts; The id, ego and superego. His research and writings have changed the way that we think about schizophrenia in terms of the psychodynamic approach. He believes that schizophrenia occurs when the ego gets overwhelmed by the wants of the id or from being surrounded by the guilt from the superego. The ego can no longer cope so it uses protection mechanisms to look after itself which is regression. The schizophrenic's ideals become a blur with reality which increases hallucinations and delusions. He suggests that the hallucinations are not actually happening and that the schizophrenic sufferer is dreaming as they cannot tell the difference between their dreams and reality. Freud believed that schizophrenia was an infantile state and that such symptoms of delusions grandeur reflect this primitive state. He further thought that auditory hallucinations reflect their attempt to restore ego control. This theory explains schizophrenia as a result of the experiences in your childhood having a key influence on your adult life in terms of shaping your personality. The psychodynamic approach recognises the influence of environmental factors as it argues that we are driven by innate biological instincts, represented by the Id through nature, but the way that these instincts are expressed is shaped by our social and cultural environment through nurture.

In studying and explaining behaviour, the biological approach and psychodynamic approach each focus on having an objective or subjective perspective. The biological approach focuses on the belief that its conclusions are objective therefore they are not influenced by personal opinion. The biological approach uses a range of highly scientific and accurate methods such as scanning techniques like fMRIs, EEGs and drug trials, meaning their measurements and findings are objective, increasing the reliability of data, making the approach more valid. This means the approach has an objective perspective as it is based on scientific evidence.

The psychodynamic approach's conclusions however are subjective therefore they are in fact influenced by personal opinion. The psychodynamic approach is based largely around case studies.

Therefore, we cannot generalise the results. Subjective conclusions refer to a person's perspective or opinion, feelings, beliefs, and desires. It is often referred to as unconfirmed personal opinions rather than knowledge and fact-based beliefs. Freud's ideas are clinically derived as he based them on what his patients told him during their therapy sessions. This means the psychodynamic approach has a subjective perspective as it is based on personal bias.

The biological approach focuses on schizophrenia being understood by an objective approach. The dopamine hypothesis shows the relationship between neurotransmitters and their influence on causing schizophrenia through the use of genetic techniques. First mentioned by J. Van Rossum in 1967, he studied dopamine, the chemical in your brain which causes neurons to fire. The initial dopamine hypothesis found that schizophrenia suffered from an excessive amount of dopamine. This means that the neurons used dopamine to fire too often and transmit too many messages. It was found that when studies used amphetamine it increased your dopamine levels but at the same time it also increased psychotic symptoms. Large doses of amphetamine were given to people with no history of psychological disorders; they showed behaviour which was very close to paranoid schizophrenia. When small doses were given to people who already suffered from schizophrenia their symptoms also tended to get worse. These high dopamine levels lead to serious episodes and positive schizophrenia symptoms such as delusions, hallucinations and confused thinking. However, when reserpine was used it decreased your dopamine levels and reduced psychotic symptoms. This hypothesis states that schizophrenia is a cause of excessive amounts of the neurotransmitter dopamine in the neural pathway. This theory proves that the biological approach falls under an objective perspective. This study was scientifically and genetically understood therefore it was based on reliable and accurate information used to form a conclusion on how schizophrenia is caused.

The psychodynamic approach focuses on schizophrenia being understood by a subjective approach. The double bind theory shows the relationship between environmental factors and their influence on causing schizophrenia through the analysis of communication patterns. In 1956 Bateson found that a double bind is a communication problem that arises from a conflict between two or more messages. This situation can lead to psychological disorders like schizophrenia. An example of this is when a child interacts with their mother who struggles to be affectionate. She physically displays how much she loves them but unfortunately only through her body language. The verbal signs the mother is sending doesn't align with her body language. As a result, the child only sees an indication of rejection finding themselves stuck in a conflict between affection and rejection. Using this theory and observations from schizophrenic patients, they came to the idea of the "double bind".

This theory proves that the psychodynamic approach falls under a subjective perspective. This study was analysed around communication patterns therefore it is not considered as factual evidence. They used subjective information to form a conclusion on how schizophrenia could be caused.

Methodology Analysis

In studying and explaining behaviour, the biological approach and psychodynamic approach have methodological differences between using technology and case studies to discover and develop their ideas. The biological approach has used technology to form accurate conclusions in their inquiries. The human brain is very complicated and can influence several different types of behaviour, so it is important that we have methods that enable us to study how our brain works. The first method is neurosurgery, because we know so little about the brain and its functions, brain surgery is usually followed through at the last resort. In 1953,

Henry Molaison (H.M) suffered severe epilepsy and brain surgery was the last option to help. After the surgery was completed, his epilepsy was cured although they had to remove the hippocampus (part of the limbic system in the middle of the brain.) He could remember everything from before but anything new was a struggle so this led to the conclusion the hippocampus is involved with our memory. The other two methods are Electroencephalograms (EEGs) and brain scans. The biological approach also show that human behaviour can largely be explained through biology e.g. our genes and hormones. Human genes have evolved over millions of years to adapt behaviour to the environment. The biological approach provides us with clear predictions about the effects of neurotransmitters or the behaviours from genetics related people. This means that explanations can be scientifically tested, proven and supported with strong evidence through genetic testing. Gottesman's Twin Study conducted in 1967 further supports the use of technology and genetic testing as a methodological use in the biological approach. He was able to clearly confirm the idea that genes play a role in schizophrenia, also finding in 1991 that the occurrence of schizophrenia was higher in relatives of a person with schizophrenia than the general population.

The methodological use of exploring our brain's function was further discovered between the 1960s and 70s by J. Van Rossum with his dopamine hypothesis. This hypothesis shows the use of drug trials to see how dopamine the chemical in our brains influences the onset of schizophrenia. These genetic techniques proved the relationship between neurotransmitters and their influence on causing schizophrenia. In studying and explaining behaviour, the biological approach has demonstrated their methodological use of technology and genetics in studies above to discover and develop their ideas. On the other hand, the psychodynamic approach uses case studies of individual patients and groups to form accurate conclusions in their inquiries. A case study is an in-depth study of a specific subject. A clinical case study is a narrative report written by the therapist of what happened during a therapy session combining the therapist's interpretations of what happened. It is possible that certain semi structured assessment materials are used such as questionnaires or diagnostic interviews. It is still the therapist however that uses these to interpret and discuss them in their report. Freud's investigation into behaviour being based on the interaction of internal drives and forces within a person have been shown through his id, ego and superego approach further supports the use of case studies as a methodological use in the psychodynamic approach. With Freud's work accumulating over more than 50 years (1885-1939), his work came about through his clinical trials with patients and general observations of their human behaviour. His work was psychoanalytic and focused particularly around their unconscious state. His use of individual patient accounts supports case studies as a large influence of methodology in this approach. The research and writings gathered by Sigmund Freud's case studies have radically changed the way that we think about schizophrenia in terms of the psychodynamic approach.

A further methodological relationship was discovered in 1956 where the double bind theory showed the relationship between environmental factors and their influence on causing schizophrenia through the analysis of communication patterns. Bateson used communication patterns with his patients through several case studies as the analysis of their health. In studying and explaining behaviour, the psychodynamic approach has proved their methodological use of case studies in the research above to discover and develop their ideas.

How the two approaches interact

In the context of schizophrenia, the interaction between the biological and psychodynamic approach is shown through the Diathesis stress model proposed by Meehl in 1962. Diathesis means that you are predisposed to something which is inherited, for example schizophrenia.

If your mother has it then you are more vulnerable to getting it yourself. The biological approach is demonstrated through Gottesman's twin studies when in 1991 he found that the occurrence of schizophrenia was higher in relatives of a person with schizophrenia than the general population. This demonstrates the genetic predisposition there is to schizophrenia as there is a genetic connection between family members already suffering from the disease and their offspring aligning with the ideas of the diathesis structure. The stress factor includes environmental stressors which could come as a result of childhood trauma or drugs. The psychodynamic approach is demonstrated by Varese, et.al. (2012) when it was found that children who experienced severe trauma before the age of 16 were 2.7 times more likely to develop schizophrenia when they were older compared to the general population. Within stress some of the id, ego and superego around family trauma is where this approach fits into this model. If you experience trauma you are more likely to develop schizophrenia.

These findings show that childhood difficulty is strongly associated with increased risk for psychosis. Tienari, et.al (1985) conducted an important study around parental influence on schizophrenia. It shows a good indication of this model and fits under the psychodynamic approach in terms of family parenting influence and genetic predisposition. Because psychodynamic is not scientific, these ideas are all not proven. So, although they help to explain this model, they do not entirely make it up as there are other theories and approaches involved. If you have the genetic component as well as the stress factor, then you are likely to develop schizophrenia but without enough of either of these components you are not likely to develop schizophrenia. The biological approach comes into play around the diathesis stage and interlinks with the psychodynamic approach which features in the stress stage. The stronger your genetic influence is of schizophrenia (diathesis) means the less stress is necessary to produce schizophrenia. This works the other way around too. The more stress you have means the less amount of genetic influence you will need before developing the disease.

Tienari et al. (1985) investigated the combination of genetic vulnerability and parenting style in children adopted from Finnish mothers with schizophrenia. It was found that a 'Schizophrenic' mother as well as a healthy or only mildly disturbed adoptive family resulted in no schizophrenia. Whereas a 'Schizophrenic' mother as well as a disturbed adoptive family resulted in schizophrenia. Disturbed meaning a child who was brought up with high levels of criticism and conflict and low levels of empathy. This combination of findings supports the idea that there is a possible genetic vulnerability which interacts with the adoptive upbringing environment. The diathesis stress model works by using these two approaches and their interaction together to understand the cause of schizophrenia.

The degree of interaction of the two approaches:

The biological and psychodynamic approach's degree of interaction in terms of the approaches theoretical and methodological ideas are limited as they are quite contrasting. In studying and explaining behaviour, the biological approach and psychodynamic approach each have differing theoretical positions in the nature vs. nurture debate. They are based on totally different ends of the theories. The biological approach comes as a cause of nature proven through Gottesman's 1991 twin studies and the psychodynamic as a cause of nature proven through Freud's work (1885-1939) around the psychoanalytic theory id, ego, superego. The limited interaction of these approaches is also seen through their contrasting theoretical objective or subjective perspectives. They are based on totally different ends of these perspectives. The biological approach takes an objective perspective proven through the dopamine hypothesis, J. Van Rossum in 1967. These findings were not influenced by personal opinion. The psychodynamic approach takes a subjective perspective proven through the double bind theory, Bateson 1956 where the findings were influenced by personal opinion as they were based around the analysis of communication patterns. The

biological approach and psychodynamic approach have methodological differences between using technology and case studies to discover and develop their ideas. The biological approach uses technology to form accurate conclusions in their inquiries. This was again demonstrated through the dopamine hypothesis, 1967 and Gottesman twin studies, 1991. This contrasts the psychodynamics use of case studies of individual patients shown through Freud's work (1885-1939) work in his clinical trials with patients and general observations of their human behaviour. These examples show the degree in which there is limited interaction between these two approaches' theoretical and methodological ideas however in the context of schizophrenia each complement one another to help us understand schizophrenia. The degree of interaction between the two isn't that strong; however, a model used to show the slight interaction that they do have is the Diathesis stress model proposed by Meehl in 1962 as explained above. The diathesis stress model shows a more comprehensive explanation of schizophrenia with the two approaches providing theories as evidence to support this. This is where we see the two approaches interact with one another. Their relationship is further proven through the treatment of schizophrenia below.

Impact of the interaction on the treatment and relapse of Schizophrenia:

In the last three decades, medical and psychosocial treatments for schizophrenia have evolved rapidly resulting in remarkable effects on patient's relapse prevention and symptom control. It is important that we understand schizophrenia is not caused by one factor alone, instead it is a combination of the interaction between biological and psychological factors. This is understood above through the psychodynamic and biological approach. People with schizophrenia will get the best out of their treatment if they use both of these factors in conjunction to reduce psychotic symptoms, potential relapse and improve a patient's recovery, remission, and illness progression.

Under the biological approach the dopamine hypothesis was an idea that has contributed to the development around the use of medication for the treatment of schizophrenia. Originally introduced by Van Rossum in 1967 he found that hyperactivity of dopamine transmission resulted in symptoms of schizophrenia as well as certain drugs being able to block dopamine which reduced their psychotic symptoms. The idea that your brain functioning could lead to increased symptoms meant that they needed to create a drug designed to work on specific biological targets. In 1957 the introduction of chlorpromazine (antipsychotic) as a treatment for schizophrenia was discovered. In the early 1960s it was found that continuing antipsychotic treatment after a person with schizophrenia has responded to the medication, as opposed to stopping treatment, resulted in more than half the risk of relapse and readmission to hospital. These antipsychotics help to treat hallucinations and delusions. The best treatment for schizophrenia however is a combination of both medication, psychological treatment and community support.

Under the psychodynamic approach the expressed emotion theory (EE) can occur in a disadvantaged family environment involving the standard of interaction patterns of family relationships between family caregivers and patients suffering from schizophrenia. The influence of expressed emotion has been found to be one of the crucial predictors of relapses in schizophrenia. The idea that the environment you are surrounded in could lead to increased symptoms meant that they needed to find a way to help not only the person suffering but their relationships with the people they live with. This was discovered through the use of counselling around family environments. Types of psychological treatment for schizophrenia include cognitive behavioural therapy (CBT), psychoeducation and family psychoeducation. A study of schizophrenia sufferers who are already receiving antipsychotic medications and are living in high expressed emotion households was conducted by Falloon et. al. (1985) and Falloon & Pederson (1985, 1987). It reported that only 17% of patients who received behavioural family therapy relapsed compared to 83% who only received individual

supportive therapy. Patients that received family therapy showed improvements in their social and vocational performance as well as fewer hospitalisations and lower doses of antipsychotic medications prescribed by psychiatrists. This shows how important the combination of both the biological and psychodynamic approach is to get the best out of the treatment for schizophrenia. Not only with individual therapy but with family therapy reducing relapse rates even further.

Research by (Malmberg & Fenton, 2001) shows that there is little evidence to support the traditional methods of psychodynamic psychotherapy. Psychodynamic treatment is understood by 'talking' therapies. The relationship between the therapist and the patient suffering from schizophrenia plays a key role for their therapy.

Therapy for people with schizophrenia as their only treatment, without medication, has not been assessed very well, apart from four studies in the early 1970s and 1980s. From the limited studies available it is clear that medication is a main part of treatment for psychological illnesses and should be used together with talking treatments.

With the continuous and increased understanding around schizophrenia constantly improving, more effective methods and personalised treatment plans are being developed to allow mental health experts to better explain and control their patients' recovery from the illness.

[The student had included a reference list, which has been removed for brevity]