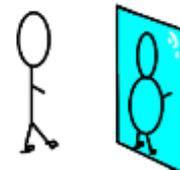


## Outline and evaluate one biological explanation of an eating disorder. (8 and 16 marks)



Anorexia Nervosa (AN) is a mental illness in which the main symptoms are a low body weight, an intense fear of becoming fat, body dysmorphia, amenorrhoea and many other physiological problems.

One biological explanation is the evolutionary approach. The 'adapted to flee' hypothesis proposes that the typical symptoms of AN (food restriction, hyperactivity and denial of starvation) reflect an adaptive mechanism that would have helped survival during the famine experienced during the EEA. Therefore, among those who are genetically vulnerable to AN, losing too much weight may trigger these ancestral mechanisms.

A genetic explanation usually focuses on twin studies. Holland found that concordance rates for MZ twins (who share 100% of their genes) were higher than that for DZ twins. This evidently suggests that there is a role of genetics in AN.

A further explanation is complications during birth or pregnancy as researchers have found that birth problems may lead to brain damage caused by hypoxia. This could impair the child's neurodevelopment and could upset their HPA stress response and high levels of stress can affect serotonin. It is also suspected that serotonin can then influence the development of AN, especially since it is also part of the hypothalamic system that controls feeding behaviour.

To evaluate, a problem with the evolutionary approach is that it cannot explain why AN is predominantly found in females when it would have seemed sensible for it to have affected both males and females in the EEA. The condition, overall, also seems more maladaptive; it leaves the individual weak, frail and vulnerable as well as a liability to the group and thus the basics for survival (e.g. hunting) becomes difficult. We could also question how the symptoms of AN would be passed on by natural selection since it decreases fertility and can even kill the individual. All these problems therefore decrease the credibility of the evolutionary explanation.

As for the genetics argument, even though Holland did find significant concordance rates with MZ twins, the rates were still not 100% and therefore this can lend support to an environmental effect. AN may therefore reflect neither nature or nurture but rather an interaction between the both, and this is not considered in wholly biological approaches.

Additionally, even though families do pass on their genes, they also transmit social and cultural values which may be why research has found that families who have immigrated into western cultures go on to develop AN at the same rate as people from families who have always lived in the west.

With the neurodevelopment and serotonin hypothesis, one clear downfall is that fact that researchers cannot be certain whether abnormal serotonin levels are the cause of AN or an effect of prolonged starvation. This would decrease the internal validity of the hypothesis.

However, overall there are many benefits from the biological explanations. They offer the promise of a range of treatment possibilities such as drug therapies to normalise neurotransmitter levels or even gene replacement therapy. They also allow people to realise that they are dealing with a dysfunctional *biology* (which can be treated) rather than a dysfunctional *family* (which cannot). They therefore reduce the guilt generated by the view that it is the parents who cause the development of AN.

Nevertheless a big problem is reductionism. Biological explanations try to explain a complex illness down to just one component such as neurotransmitter levels whilst ignoring other contributing factors such as stressors or life events when psychological approaches such as SLT appear to offer explanations with copious amounts of research support.

The explanations also suffer from being deterministic as they assume people have no control over their biology or the development of AN which is evidently not true as highlighted in Holland's study as the MZ twins share identical genetic makeup yet concordance rates were only 55% and so this highlights the role of free will that people have to override their biological pre-dispositions.

Lastly, biological approaches also provide real-life applications. This is because in the US, treatment for AN is restricted under many insurance plans as it's not considered "biologically based". However these biological explanations and research creates a case for insurance companies to consider AN in the same way as other psychiatric conditions that are considered biologically based.