

Sample Answer

Neural explanations of offending behaviour focus on neurochemicals and structural differences in the brain. Hormones such as testosterone and adrenaline have been associated with aggressive behaviour. **Dabbs et al (1987)** found that prisoners with high testosterone levels are more likely to have committed violent crimes and are more aggressive in prison. In addition, low levels of serotonin in the brain have been linked to aggressive behaviour. Evidence to support this comes from **Brunner et al (1993)** who conducted a case study of a family of violent criminals that showed differences in the way their serotonin was metabolised. Moreover, structures in the brain, specifically the limbic system and the amygdala are associated with aggression. The limbic system which includes the hippocampus and the amygdala process emotional information. Evidence **from Raine et al (1997)** found murderers to have less activity in the left side of the hippocampus and amygdala and more activity in the right side, therefore they are less likely to experience emotion. This study is limited in terms of generalisation as only a small group of 41 murderers were tested. The dysfunction in the murderers brains may have contributed to their crime, however, this explanation is too reductionist and ignores cognitive or social factors in offending. However, studies like **Raine et al (1997)** which used brain scans (PET) help to increase the objectivity and reliability of the findings that link neural explanations to offending behaviour. Despite this, it is impossible to demonstrate clear cause and effect with neural explanations, as other factors may be responsible for brain differences such as diet or brain damage from birth. Also, not everyone with problems in their neurology go on to commit crime, which suggests that the neural explanation of offending fails to consider individual differences such as personality.

