

Outline and Evaluate Explanations Of Two or More Sleep Disorders

There are several different sleep disorders, ranging from insomnia to sleepwalking. Sleep disorders can affect children and adults and cause a range of symptoms. However there are several different explanation for these disorders. Some are more scientific, for example biological explanations, and some are not, for example psychodynamic explanation.

One particular sleep disorder is sleep apnea, which relates to repeated episodes of breathing failure during sleep. These often last for 20 to 40 seconds, although can go on for several minutes. There are two main types - obstructive sleep apnea (OSA) and central sleep apnea (CSA). OSA is when the breathing passages from the mouth to the lungs are obstructed, whereas during CSA there are no obvious problems with these upper airways. The main symptoms include loud snoring, sudden awakening to restart breathing and choking or gasping during sleep to get air into the lungs. Once there is an imbalance of oxygen and carbon dioxide, the brain restarts the breathing process. The main explanation is that there is a genetic disposition to the disorder. The National Center on Sleep Disorders Research suggests patients who suffer from sleep apnea may pass it on to their children as there is a genetic disposition to the disorder. Often members of the same family are likely to suffer from the same form of sleep apnea. The main theory behind this is the link between obesity and sleep apnea. Patients who suffer from obesity are more likely to suffer from sleep apnea, and because obesity is often caused by genetic factors, it shows a genetic link. In addition, current research shows that nearly half of the genetic variance in the sleep apnea hyperpnea index, an index that explains the cause and likeliness of sleep apnea, is shared with phenotypes of obesity. One problem is that this explanation suggests all patients with this disorder are obese, yet half of the sufferers are not. However this explanation is particularly deterministic as it suggests that sleep apnea cannot be avoided. The biological explanation can also explain sleep apnea, yet this is again deterministic. This explanation suggests OSA is caused by an obstruction which stops the air flow to the nose and mouth. Clearly both these explanations are on the 'nature' side of the 'nature/nurture' debate. This shows the explanations are highly reductionist, for example they ignore the fact that obesity could actually be due to environmental factors. Despite this, the biological approaches are good as they provide clear predictions and can easily be proven.

Another quite common sleep disorder is sleepwalking. Sleepwalking episodes can range from quiet walking to agitated running. Typically the eyes are open with a glassy,

staring appearance and on questioning, the person's responses are often slow with simple thoughts. Unless the person is woken, they usually do not remember the episode. Some studies suggest that children who sleepwalk may have been more restless sleepers when aged 4-5 years, and more restless with more frequent awakenings during the first year of life. One explanation of this disorder is the psychodynamic explanation, suggesting that that sleepwalking is the expression of unresolved unconscious conflicts. This means that the sleepwalker is simply acting out their repressed conflicts. One example of this psychodynamic behaviour was the case of a 42 year old woman who was arrested for shoplifting while sleepwalking. This was completely opposite of her normal behaviour. After the episode, she was afraid to leave her home. After several sessions of therapy, she managed to recall that she had been a sleepwalker all her life. Once when she was younger, she had her leg tied to the bed to stop her wandering off. Therefore it was decided that the behaviour was due to extreme pressures and personal difficulties, including a recent death of a relative. The sleepwalking was a cry for help due to all of her unresolved conflicts. However, it is clear that this explanation is quite outdated as we now know a larger amount of information about genetics. Indeed the explanation is difficult to falsify. The explanation is not backed by scientific evidence. Yet it does recognise the importance of unconscious factors and the complexity of human behaviour. This is ignored by the behaviourist approach, suggesting it is not as reductionist. Therefore there is large amounts of evidence suggesting that sleepwalking has genetic links. Bakwin studied the frequency of sleepwalking in 19 monozygotic twins and 14 dizygotic twins. He found a correlation of 47% with monozygotic and 7% in dizygotic. He also found that sleepwalking is likely to run in the family. Data has also showed that sleepwalking was more common in near relatives than distant ones. This experiment was controlled, however it was correlational meaning that we cannot infer cause and effect. Bassetti has suggested that it may be related to an abnormality with the HLA gene. He found that 50% of sleepwalkers he tested had a version of the gene that was only found in 24% of non-sleepwalkers. However he did not suggest why only 50% of the sleepwalkers had this gene and why the non-sleepwalkers who did have it, were not sleepwalkers. However both studies were well controlled and suggest there is a substantial genetic influence on sleepwalking. There is also a more biological explanation towards sleepwalking. This was established from looking at brain images which show that the brain is in a different state during sleepwalking. According to Dexter there is an association between sleepwalking and migraine headaches. 55 of his 100 patients with migranes reported sleepwalking, this was much higher than the control group. However it is thought that sleepwalking could also be

due to other factors, such as drug taking. This includes prescription medicines, such as antihistamines. Again these approaches are very much on the nature side of the nature/nurture debate. This again is very deterministic. However, having looked at the psychodynamic explanation, it does suggest that these genetic and biological explanations are the reasons for sleepwalking.

Another sleep disorder is narcolepsy, when someone feels sleepy all the time and often has episodes of cataplexy. This may cause *ins omnia*. These episodes are triggered by various forms of emotional arousal, for example anger or stress. Other symptoms of the disorder include hallucinations and sleep paralysis. The disorder usually begins in adolescence and early adulthood and continues throughout life. There are three main explanations into the disorder - REM, HLA and Hypocretin. REM was an explanation which was particularly common during the 1960s suggesting that narcolepsy was linked to a malfunction of the system that regulated REM sleep. However this only considers the biological aspect of the disorder. Although the approach is falsifiable, it does not include behavioural and environmental causes. The HLA explanation was researched in 1980s and indicated the narcolepsy was linked to the mutation of the immune system. For example, Honda found increased frequency of one type of antigen in narcoleptic patients. However this was a correlation study and therefore we cannot infer cause and effect. Another problem is that the antigen is often found in some non sufferers and not all narcoleptics, suggesting it cannot be the sole explanation. The explanation is quite deterministic as it suggests that the individual has no control over their behaviour. The last explanation is the most recent and suggests a link between hypocretin and narcolepsy. These hypocretins appear to play an important role in maintaining wakefulness in humans. However the main study into this link has been on dogs. This causes problems as it is unsure whether animals and humans have the same balance of chemicals. There are also animal ethical issues surrounding this study as the dogs may have been shocked during the experiment. However it could be argued that it was for valid medical reasons as narcolepsy can often be a serious problem, for example a road accident was once caused due to the driver having narcolepsy and falling asleep at the wheel. The findings from the dogs showed that human narcoleptics have lower levels of hypocretin in their cerebrospinal fluid. This could be due to brain infection, injury, diet or stress. Therefore all the explanations of narcolepsy are again very biological and deterministic.