Another support for the restoration theories comes from Stern and Morgane 1974 as they proposed that REM sleep is specifically for the restoration of brain neurotransmitters. They found that after REM sleep deprivation, participants showed 'REM rebound', which is an increase in REM sleep when they are allowed to sleep normally. It is plausible that REM rebound is necessary for restoring something lost during REM sleep deprivation. In addition, they found that antidepressant drugs reduce REM sleep but there is no REM rebound when the drug treatment is ceased. They argued that the drugs increase levels of brain neurotransmitters such as Serotonin that are normally a function of REM sleep. But given that people taking antidepressant drugs have increased the levels of neurotransmitters in their brain anyway, they do not need REM sleep and therefore show no REM rebound when they stop taking the drugs. And this study supports the theory as it tells us that REM sleep does have an effect on our brain’s level of neurotransmitters.

Everson et al. 1989 in an animal study also provided support for restoration accounts of sleep. They found that sleep deprivation in rats causes them to increase their metabolic rate, lose weight and die within an average of 19 days. Clearly showing that animals will die without the restorative functions of sleep. However, the use of animals in this research is highly unethical as it is likely to have caused the animals pain and ultimately, death.

Nevertheless, the key research in this area is the case study on Randy Gardner who stayed awake for 11 days in 1964. Gulevich et al. 1996 found that recovery was specific to two thirds of stage 4 SWS and half of REM, therefore supporting Horne’s view. But the study is criticized as being culturally and gender biased, as it is a study of one man and his assumptions are assuming findings are relevant to other cultures and women. Despite the lack of generalizability. The restoration theories are also criticized for being reductionist as it narrows down what is highly complex, the function of sleep as the key to our body’s recovery, ignoring individual differences. If the function of sleep were restorative to our mind and body then surely we would all sleep the recommended 8 hours a day. Yet, some people are known to sleep just 2 hours, and consequently making the theories deterministic in nature as well as they ignore free will and one’s ability to stay awake. As a result, the restoration theories are limited as an explanation of the functions of sleep.

Mark: 18/24