Cognitive

The information consolidation theory of sleep is based on cognitive research and suggests that people sleep in order to process information that has been acquired during the day. Some research also suggests that sleep helps cement the things we have learned during the day into long-term memory. Support for this idea stems from a number of sleep deprivation studies demonstrating that a lack of sleep has a serious impact on the ability to recall and remember information.

Physiological/Biological

Affective

Research methods

1) Apart from sleep loss, many studies have provided unnatural regimes which may have ameliorated possible effects of total sleep deprivation.

2. (2) Most studies are of relatively short duration and may not have been sufficiently long for effects to develop.

3. (3) Measures are often limited in range and depth of analysis.

4. (4) Subjects are mostly fit, young adult, intelligent males and there is little constitutional variability.

5. (5) Reported changes of statistical significance may be of no physiological significance and changes of possible physiological significance may be obscured by statistical procedures.

6. (6) Intervening behavioural variables, such as novelty and anticipation of the sleep deprivation situation, may confound real effects.

Because it is difficult to separate the effects of sleep loss from the effects of stressful conditions that may have induced the sleep loss, results of sleep deprivation studies must be interpreted cautiously. Many studies of sleep deprivation do not control for extraneous variables such as stress.