

Cognitive Offloading: Increased Dependency on Technology Good or Bad

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Human brain has great capacity to store information. The human brain has different types of memory like short-term, long-term memory. The short-term memory consists of working memory which is essential for execution of daily tasks. Expanding working memory and reducing brain fatigue is the demand of today's fast forward life. Technology has made this easier. Technology has assisted the cognitive offloading which helps in expanding the working memory. Risko and Gilbert [1] gave the term cognitive offloading for the act of storing daily information like meetings and dates in the technology format or in written format to reduce the load of working memory. It enhances the working memory and hence cognition. This in turn helps in reducing the mental fatigue.

The studies have shown the enhancement in brain functioning in the presence of limited cognitive offloading. Limited cognitive offloading is the essential term to be understood as excess cognitive offloading has shown diminishing of different types of memories in the studies. The excess of cognitive offloading that is getting over dependent on technology for daily life information has shown the demeaning effect on spatial memory.

It's very obvious in the recent days to feed all mobile numbers, important meeting dates and times, using google maps for directions etc. this has led to increased dependency on technology and using less brain memory which in course of time would lead to reduced neural plasticity. Neuroplasticity is crucial phenomenon of brain rewiring and reorganization. Sequentially leading to neurological and psychiatric disorders. Its very important to understand how much cognitive offloading is the requirement for healthy brain functioning as cognitive offloading is helpful in reducing brain fatigue and enhancing the brain functioning and cognition.

The overuse of cognitive offloading and overdependency on technology has shown increase in memory manipulation. Memory manipulation is fabricating or modifying the missing link of the memory. This happens because the information which put for cognitive offloading is insignificant for brain memory. Hence it is easily forgotten and hence more prone to manipulation when later needed to recall. many experimental studies has shown the memory manipulation effect due to excess cognitive offloading.

Cognitive offloading is an important phenomenon for human cognitive functioning. It benefits in brain functioning and short-term memory enhancement. Working memory helps in daily life smooth regulation and that's why at the end of the day our brain needs a sound sleep for memory retention and withdrawal of brain fatigue. But the boon may shift to bane with the excessive use of cognitive offloading. The dependency of human race on technology for cognitive offloading may lead the race towards many neurological disorders due to diminishing cognitive effect. More researches and studies needed to understand this gifted phenomenon our body possess [2,3].

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