

Abstract/Synopsis

Short time perception is a cognitive skill related to perception of the duration of short lasting events. It is also known as interval timing or short-interval time estimation. It is a subtle and prerequisite phenomenon in humans for taking quick decision and doing any activity coherently. The research work was completed in three phases to investigate the accuracy in short-interval estimation in apparently healthy, free from any neurodegenerative diseases randomly selected males and females of adolescent to older age groups (total: N=981). The short-interval judged near to accuracy (60 s) was standardized (N=55). The circadian variation in the 60-s interval production in normal free-living condition in younger to older subjects (N=128), the endogenous basis of circadian rhythm in 60-s interval production in young subjects (N=16) under constant routine condition was also explored. The circannual rhythm in the interval timing of 60-s interval was studied in young subjects (N=25) using time production method prospectively for fourteen months during 10:00-12:00. The adolescent (N=757) also estimated prospectively the short intervals 10-s and 60-s using time production and verbal estimation methods between 10:00-12:00. Results of the present study provide evidence in support of a possible interaction between the interval timer and circadian/circannual timing systems for the best judged interval 60 s. The factors gender, age and body temperature appear to modulate time estimation capacity and rhythm in time estimates of 60-s interval. The performance variables attention, mood and motivation modulate the short-time perception. The optimum sleep length for enhanced 60-s judgment suggested to be 6-8 h. The female sex hormone seems to alter the short-time estimation in females. The variability in interval estimation of 60-s interval as a function of age apparently healthy population could be used as an indicator of cognitive deterioration. For

	<p>better performance in academic and sports in experiencing the passing time or making quick decisions, the motivational level in adolescent should be augmented. The circadian and circannual involvement in time estimates may have implications in the management of attention-demanding and time-perception-related cognitive tasks in personal, academic, industrial and security maintenance spheres.</p>