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Should we always log-transform looking time data in infancy research?

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Abstract

Researchers often measure infants looking time (LT) as a dependent variable to measure how infants pay attention to certain stimuli. Using a large repository of data from their lab and the literature, Csibra and colleagues (2016) reported that the distribution of LT is positively skewed and thus proposed that researchers should log-transform LT before running any parametric analysis. In this study, we investigated whether log-transformation of LT will make the distribution normally distributed by using data from a large-scale replication infancy study (ManyBabies Consortium (MB1), in press). Further, we simulated positively skewed LT data to examine whether log-transformation of LT would improve power. We found that log-transformation of the MB1 LT data did not make the LT data normally distributed. Also, we found that log-transformation of LT only slightly increased power. Implications and benefits of log-transformation of LT data will be discussed.