

The relationship between intelligence and creativity has been subject to empirical research for decades. Nevertheless, there is yet no consensus on how these constructs are related. One of the most prominent notions concerning the interplay between intelligence and creativity is the threshold hypothesis, which assumes that above-average intelligence represents a necessary condition for high-level creativity. While earlier research mostly supported the threshold hypothesis, it has come under fire in recent investigations.

The threshold hypothesis is commonly investigated by splitting a sample at a given threshold (e.g., at 120 IQ points) and estimating separate correlations for lower and upper IQ ranges. However, there is no compelling reason why the threshold should be fixed at an IQ of 120, and to date, no attempts have been made to detect the threshold empirically. Therefore, this study examined the relationship between intelligence and different indicators of creative potential and of creative achievement by means of segmented regression analysis in a sample of 297 participants. Segmented regression allows for the detection of a threshold in continuous data by means of iterative computational algorithms. We found thresholds only for measures of creative potential but not for creative achievement. For the former the thresholds varied as a function of criteria: When investigating a liberal criterion of ideational originality (i.e., two original ideas), a threshold was detected at around 100 IQ points. In contrast, a threshold of 120 IQ points emerged when the criterion was more demanding (i.e., many original ideas). Moreover, an IQ of around 85 IQ points was found to form the threshold for a purely quantitative measure of creative potential (i.e., ideational fluency). These results confirm the threshold hypothesis for qualitative indicators of creative potential and may explain some of the observed discrepancies in previous research. In addition, we obtained evidence that once the intelligence threshold is met, personality factors become more predictive for creativity. On the contrary, no threshold was found for creative achievement, i.e. creative achievement benefits from higher intelligence even at fairly high levels of intellectual ability.

Ler tudo (Read all): <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3682183/>