Chess and Children in Rural Bangladesh: Effects on Cognitive and Non-Cognitive Skills

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Abstract

We investigate the benefits of an intensive 30 hour chess training program on students starting grade five in rural Bangladesh using a randomized experiment. The main outcome we focus on are academic results from a compulsory public exam all grade five students in Bangladesh must sit for – the Primary School Certificate (PSC) exam. The exam took place 9-10 months after the completion of the chess training. While the previous literature has emphasized potential links between chess and academic outcomes, a novel contribution of this paper is a focus on the following non-cognitive outcomes: risk preferences, patience, creativity and attention/focus. We find that chess training has a moderately significant positive impact on math scores in the national exam and reduces the treatment group’s level of risk-aversion. While the program has insignificant effects on students’ level of patience, it reduces the presence of hyperbolic discounting and increases the likelihood of consistent decision making within the patience-eliciting task. A potential mechanism by which the effect on math occurs is by increasing the treatment group’s appetite for risk. Effects of chess training on the other academic outcomes and creativity are not significant.

JEL codes: C93, D80, I21, I25

Keywords: randomized trial, non-cognitive skills, chess, creativity, math, patience, risk