

The consequences of gender social and learning interactions in the classroom are of interest to parents, policy makers, and researchers. However, little is known about gender peer effects in schools and their operational channels. In this paper, we estimate the effects of classroom gender composition on scholastic achievements of boys and girls in Israeli primary, middle, and high schools and identify the mechanisms through which these peer effects are enacted. In particular, we examine whether gender peer effects work through changes in classroom learning and social environment, teaching methods and pedagogy, and teacher burnout and work satisfaction. In assessing these mechanisms, we distinguish between the effects generated by changes in the classroom gender composition and those generated by changes in the behavior of students. To control for potentially confounding unobserved characteristics of schools and students that might be correlated with peer gender composition, we rely on idiosyncratic variations in gender composition across adjacent cohorts within the same schools. Our results suggest that an increase in the proportion of girls leads to a significant improvement in students' cognitive outcomes. The estimated effects are of similar magnitude for boys and girls. As important mechanisms, we find that a higher proportion of female peers lowers the level of classroom disruption and violence, improves inter-student and student-teacher relationships as well as students' overall satisfaction in school, and lessens teachers' fatigue.

We find, however, no effect on individual behavior of boys or girls, which suggests that the positive peer effects of girls on classroom environment are due mostly to compositional change, namely due to having more girls in the classroom and not due to improved behavior of peers.