Some Students are Bigger than Others, Some Students' Peers are Bigger than Others Students' Peers

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One of the most debated issues in the field of health economics in the last years has been the influence of social interactions or peer group effects on several health-related behaviours among teenagers (i.e., the consumption of tobacco, alcohol, marijuana or adolescent weight). The main methodological challenge in this literature is to separate, according to Manski (1993, 2000), the direct or "endogenous" effect from the "correlated" and "exogenous" effect of the peer relationship.

Based on data on juvenile behaviour from a Southern EU country, the goal of the paper is to find new evidence of the impact of peers' weight on adolescent weight after accounting for the existence of several fixed effects, instrumental variable estimation and alternative definitions of peer groups. We draw from a unique survey of secondary school students in Catalonia (Spain) conducted in 2008 providing a rich set of personal data, school characteristics and parental background and, more importantly, the real composition of cliques within classrooms. The data present a number of advantages over data used in previous studies: i) we can define peer group based on nominated friends within the classroom. Few other studies have been able to define peer pressure at such a fine level (e.g., Clark and Lohéac, 2007; Trogdon et al., 2008; Renna et al., 2008); ii) contrary to the Add Health data (with a wide use in the literature) where students were limited to list up to 10 friends (5 male and 5 female), in our dataset students were asked to identify a free number of close friends in the classroom; iii) we can consider more sophisticated social networks like asymmetries in classmates' relationships. Hence, similarly to Christakis and Fowler (2007) we can distinguish among three different kinds of friendships: (a) "all nominated friends" where the groupis formed by all listed friends, (b) "mutual friends" where the nomination is reciprocal (i.e., flows in both directions) and (c) "non-mutual friends" in which the reference group does not identify the adolescent as a friend; and, finally, iv) we are able to address the issue of endogenous sorting.

In line with previous results based on a US socio-cultural context, our results (after accounting for a wide array of controls) confirm that peer effects, based on nominated friends, exist for adolescent weight (BMI and overweight) in a typical southern EU juvenile social context characterised by a high or intense social life among teenagers, being this effect larger among females and the mutual friends peer group. The results were obtained using a combination of school and neighbourhood fixed effects, IV estimation (using a set of valid instruments) and alternative definitions of peers. These peer effects could well contribute to explain the known rapid growth observed in the prevalence of childhood obesity in Spain in the last years.

Keywords: Peer effects, Childhood obesity, Adolescent behaviour