

REPLY TO WHAT DID WE LEARN?

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We appreciate that Professor Kaestner has commented on the apparently contradicting findings from our paper and the closely related paper of Chen et al. Professor Kaestner concludes first that “both studies lack statistical power” after which he states “The precision of estimates in Artmann et al., is better, but still sufficient to detect relatively large effects.” and “Artmann et al. was, in my opinion, under powered given my priors about a plausible effect size.” We think that these remarks do not do justice the strength of the evidence presented in our paper.

Professor Kaestner infers that our empirical analysis can reliably detect effect sizes (relative to the control complier mean) of 18% and 25% for father’s and mother’s mortality, respectively. The 18% for fathers is based on a comparison of a point estimate of -0.0042 minus twice a standard error of 0.0151 and a control complier mean of 0.1708. For mothers, the respective numbers are: 0.0004, 0.0122 and 0.0965. We argue that estimates and standard errors of this magnitude are typically regarded as precisely estimated zeros. Furthermore, estimates from a proportional hazard model exclude reductions of the hazard rate larger than 6% for fathers and 7.5% for mothers with 95% probability. The Chi-square value from a Wilcoxon rank-sum test for equality of the survivor functions of parents of lottery winners and lottery losers equals 0.00 ($p=0.98$) for fathers and 0.45 ($p=0.50$) for mothers. The test-statistic for fathers states that distributions of mortality ages are completely identical, which holds also almost for mothers.

We complement our findings on parents’ mortality with estimates of the effects on a large number of variables related to health care costs and use. Many of these estimates are precisely estimated zeros. For example, the effect on GP visits by fathers is -0.0137 (s.e. 0.0091) and by mothers is -0.0023 (s.e. 0.0084), which should be compared to complier means of 0.8299 for fathers and 0.8592 for mothers. Finally, our study is more than sufficiently powered to rule out the estimates reported by Chen et al.