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Response to Letter Regarding Article, "The Global Cardiovascular Risk Transition: Associations of Four Metabolic Risk Factors With Macroeconomic Variables in 1980 and 2008"

Drs Schooling and Leung provide a number of hypotheses on why cardiometabolic diseases and risks may still be conditions of affluence. Our study[1] on the associations of 4 cardiometabolic risks with macroeconomic variables provides a bird's eye view of global risk-factor distributions and inequalities at snapshots in time, including how these distributions have changed over nearly 3 decades. As emphasized in our study, these cross-sectional associations should not be interpreted as the causal influences of macroeconomic variables on cardiometabolic risk factors in specific countries. For example, although high-income countries on average had lower body mass index and fasting plasma glucose than middle-income countries in 2008, body mass index and fasting plasma glucose increased in most countries parallel to increasing national income.[2,3] Systolic blood pressure decreased in high-income countries but increased in some low-income ones,[4] whereas trends in serum total cholesterol differed even across high-income countries, decreasing in Western countries and increasing in East Asia and the Pacific.[5]

The causal effects of macro factors on population health are undoubtedly complex and should be studied. Whatever these causal effects, our observations on global risk-factor patterns are straightforward reflections of global patterns and seem to indicate that most risk factors are lower in high-income societies and hence are no longer diseases of affluence. This finding is also consistent with the persistent and even increasing social inequalities in cardiometabolic diseases and risks within individual countries. Perhaps most importantly, as we continue to investigate causation, we should implement policies and programs that have been shown to reduce risk factors[6] in countries at all stages of economic development.

Disclosures

Dr Paciorek holds stock in Pfizer. The other authors report no conflicts.

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