

Migrant health under a climate-migration lens

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Despite many methodological challenges, understanding the climate-migration-health nexus should be of policy relevance and substantive interest in environmental studies, migration studies, and population health. For one, a better grasp of this nexus is required to fully comprehend the plight of populations displaced by climate-related and other shocks. Such examination should also allow for a better assessment of how effectively migration allows individuals –or different collectivities– to cope with the negative fallout of climate change and its accompanying variability in the short-term, or if the impacts of migration rise to the level of long-term climate-related adaptation.

The empirical assessment of these patterns is complicated, however, by at least two major conceptual and methodological challenges. First, understanding the way in which migration is related to health and wellbeing requires the separate identification of the selectivity of migrants from the manner in which health changes as migrants adapt in destinations (a.k.a., modes of incorporation).

Second, because climate-migration is –virtually by definition– produced by different conditions of exit than movement related to other motivations, selectivity and even modes of incorporation may differ for climate-related vs. other forms of migration. Indeed, also note that –depending on sending area context– climate may sometimes displace people, trapping them in others, complicating patterns (and testing of) selectivity and –thus– of modes of incorporation.

In addition to the difficulty of identifying pre-migration health from post-migration change, it is further necessary to identify climate from non-climate migration in tandem and, perhaps, even climate from non-climate non-migration/“trapping” (see DeWaard et al., in progress). Examining all these aspects concurrently imposes large demands on data collection and analytical design.

Besides being a methodological challenge, this consideration is substantively relevant because the conditions producing climate-related vs. other forms of migration may differ in ways that produce diverging forms of selectivity. Further, because the circumstances in which people emigrate out of sending areas can also influence the modes in which they incorporate to their destination, climate- and other forms of migration might lead to different health-related outcomes for different “types” of migrants.

Over the next few lines, I examine the possible ways in which the context of emigration may affect health-related selectivity and migration-related adaptation, paying attention to the way in which

climate-related migration signals a particular form of selectivity. I do the same with immigrant adaptation in health, and wrap up with some concluding remarks.

Health-related selectivity

Separately identifying migrant selectivity and modes of incorporation is challenging as it necessitates reliable measurements of pre- vs. post-migration health for migrants and as well as for other relevant counterfactual populations. Ideally, the examination of health-related selectivity in particular necessitates the collection of health data before the migration takes place, after which the health status of migrants is compared to that of nonmigrants. As we further discuss, when possible, pre-migration health data collection should not occur too far back in time prior to a move.

Regardless of type of or the motivations behind migration, this measurement is challenging for many reasons. Longitudinal data that includes health and migration indicators are in short stock around the world (for exceptions in Malawi, Indonesia, and Mexico see (Anglewicz et al. 2018; Nobles, Frankenberg and Thomas 2015; Rubalcava et al. 2008). Given this lack of data, migrant health scholars often resume to blending measures on (recently-arrived) migrants in destinations, assessing selectivity by comparing them to non-migrants in sending areas (e.g., Diaz, Zeng and Martinez-Donate 2018; Riosmena, Kuhn and Jochem 2017; Riosmena, Palloni and Wong 2013; Ro and Fleischer 2014).

As mentioned at the outset, in addition to these complications, others are added when considering climate-related vs. other types of migration:

- 1) This blending of data sources is not conducive to understanding the motivations behind people's migration (for possible solutions, see Ro and Fleischer 2014).
- 2) There is of course the challenge of identifying "climate migrants" –especially as (one may ideally want to do) as a discrete category of individuals, particularly when analyzing the effect of slow-onset shocks in which the climate-migration signal is weaker than it may otherwise be (for a solution see (Hunter and Simon 2017).
- 3) The timing of measurement between shocks and migration becomes more relevant for the study of some types of climate-related phenomena (and of other shocks more generally). This is the case because climate shocks in particular can change food security, disease vector distributions, and mental health conditions (see, e.g., Obradovich et al. 2018; Watts et al. 2015). As such, baseline data collected before a climate shock may not allow for a proper assessment of selection. A measurement after a shock but before migration may be just plain unfeasible.
- 4) The relevant health-related selection to examine might differ according to the type of move being studied. For climate, these relate to nutrition, infectious disease, and mental health. For "purer" or other forms of labor migration, they may relate to sexual and reproductive health and chronic disease (assuming these other forms are more stable and climate migration is not, which is not necessarily correct in all cases). In addition, the e.g., age range or gender composition of people migrating for climate vs. other reasons could differ, and with them the relevant health dimensions and measures to study.

- 5) Most importantly perhaps, assuming again climate-migration (or migration related to shocks more generally) alter the otherwise “regular” course of a particular migration flow, and this flow is substantial enough, climate-related migration may not only alter the profile of those who migrate, but also that of those who do *not*. Indeed, climate and other shocks could lead to worse health for migrants and, especially, nonmigrants just prior to and leading to the departure of the former. This, again, potentially complicates the measurement of selection relative to other types of migration.

Migrant adaptation in destinations

While the motivations behind a migration may affect selectivity most directly, the circumstances in which individuals leave sending areas may also lead to divergent outcomes in destinations as context of emigration affects who migrates, why, and whether they intend to return, for instance.

In other words, selectivity is not only a nuisance process that needs to be taken into account in order to better assess migrants’ modes of incorporation in destinations, but is also likely to be endogenous to the process of incorporation to destinations. For instance, if migrants are particularly healthy individuals pre-migration, it is likely that their incorporation (on similar outcomes to those evaluated for selectivity) will be favorable (see Riosmena et al. 2017). In addition, if people have the intention that their migration is temporary only, they may be willing to withstand (harsher) working and living conditions in order to reach e.g., a specific target earnings amount, which may thus lead to a more rapid health deterioration than otherwise.

Interestingly, selection in characteristics other than health may be more relevant in influencing migrants’ modes of incorporation. In particular, the circumstances leading to a migration that may matter the most for successful incorporation are the amount of social capital available to migrants and the degree to which the migration is legally or socially sanctioned in destinations.

People with more varied and/or stronger connections to prior and current migrants are considerably more likely to migrate because these ties often provide vital information and assistance to make the move possible, in large part as they reduce the costs and uncertainty of migrating by smoothing out the settlement process (e.g., Flores-Yeffal 2013). This allows for social capital to have positive impacts on e.g., wages (Munshi 2003). Regarding social capital, the literature on (not limited to, but including climate-related) *displacement* points to the notion that people more suddenly uprooted tend to have lower amounts of connections and knowledge of potential destinations.

Better wages in destinations do not necessarily always translate into better health. This is in part because the circumstances leading to a move that is not legally or socially sanctioned (e.g., irregular cross-border migration, internal migrations that are heavily regulated by states, or heavily structured by social hierarchies). People migrating under (and despite) these circumstances may experience somewhat worse health outcomes due to their tenuous status (e.g. Hatzenbuehler et al. 2017). And while these modes of incorporation are largely produced by the context of reception, circumstances in sending areas –including climate-related and other shocks– can severely alter individual calculations on whether to engage in these riskier, more stigmatized types of mobility.

As discussed in the prior section, under some circumstances, migration may be less likely to occur after climatic shocks due to their trapping effects (e.g., altering the “regular course” of labor migrations). As a result, those able to migrate in response (or despite) these shocks may become a hyperselected bunch

in terms of e.g., connections to prior migrants (see Riosmena, Nawrotzki and Hunter 2018), which could result in a more favorable incorporation in destinations than otherwise. This, however, an empirical question that needs to be further studied in the context of climate-migration-health, or other immigrant adaptation outcomes related to wellbeing.

Concluding remarks

This short reflection shows the complexity of separately identifying (health-related) selectivity from changes occurring during the process of incorporating to destinations, which is especially pronounced when examining moves according to their motivation or even climate-related migration by itself.

Despite these challenges, the need for a more comprehensive identification of the way in which different circumstances in sending areas lead to different types of/motivations for migration is necessary in order to better ascertain the implications of each type of flow on the wellbeing of individuals moving.

In particular, related to climate-related responses, the migration experience needs to be used as a yardstick by which one is to evaluate whether migration itself was used as a coping mechanism or a longer-term adaptation strategy to climate change. Health and other measures of wellbeing (post-migration relative to pre-migration levels, for those staying in destinations as well as for those eventually returning to sending areas, see Arenas et al. 2015; Goldman et al. 2014) may provide interesting insights on this regard.

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