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The use, misuse and overuse of the 'low-income and middle-income countries' category

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The use of low/middle-income countries (LMIC) has become so pervasive and normalised across disciplines that its use is rarely questioned. The income classification is assigned to countries by the World Bank based on the countries' Gross National Income. The most recent (2022) categories range from US$1045 or less for low-income countries to an upper range of US$4096–US$12 695 for upper-middle-income countries.[1] The latest classification positions 137 countries in the LMIC categories, representing 63% of countries in the world. The use of such a broad classification in global health scholarship requires consideration both in terms of its utility and its implications in perpetuating divisions and separation between countries that are not warranted and fostering 'otherness'. The latter point is part of the broader project of critically examining how asymmetries are maintained in the domain of global health.[2]

The ubiquitous use of LMIC as a category across disciplines suggests that this category is seen to represent something meaningful when seeking to understand phenomena. Whether it is agricultural practices, population nutrition, healthcare services or some other domain of concern, this category is often used beyond its narrow association with national income. The use of this category can serve to implicitly reify and naturalise differences across country categories (ie, between high-income countries (HIC) and LMIC). When the category is used in global scholarship without proper justification it can serve to extend legacies of racism, imperialism, colonialism and a general othering or 'foreign gaze'.[3] In this article, we suggest that an unreflexive reliance on income classifications can serve both to obscure and divide. As Memmi wrote, 'The colonialist stresses those things which keep him separate, rather than emphasizing that which might contribute to the foundation of a joint community'.[4]

The absence of a critical approach to the use of income categories persists despite findings that suggest income classification is often of limited value when studying phenomena. For example, in an introduction to a journal supplement on health economic evaluation in countries around the world, Briggs and Nugent make the powerful observation that

> what is clear from the collection of papers in this supplement, and the collective experience of authors across many countries, is that the differences between health economic evaluation in LMIC and those in higher income countries (HIC) are chiefly down to the context … the conceptual differences between LMIC and HIC are relatively few.[5]

There are many examples illustrating that the crude usage of LMIC as a lens to understand phenomena often serves to position innovation, knowledge, practices and other important social goods as the products of 'HIC', serving to marginalise or silence the contributions of those in LMICs.

Here, we suggest that using the category LMIC to reflect something static, homogenous and ultimately 'real' has important (and often negative) implications for research, policy, programming and how we view others. In this paper, we suggest a need to critically examine the pervasive use of this category in global scholarship. We explore the implications of its use and suggest a way forward that emphasises targeted categorisation in global scholarship.

THE IMPLICATIONS OF A CATEGORY

Preconceived assumptions can have a powerful impact on how we view the world. The way we view the world then shapes how we institute policy and programmes. This sequence has implications for how the LMIC

categorisation can distort how these countries are viewed and approached by those in HIC. van Zyl and colleagues make the point that the assumptions informing the use of categories like LMIC or 'low-resource setting' are often not specified in the literature.[6] They conducted a comprehensive review to define the term 'low-resource setting' using meaningful and identifiable characteristics. One of the interesting aspects of their characterisation is that it has features that apply to both HIC and LMIC, illustrating that when a construct like 'low-resource setting' is approached conscientiously there emerge factors that apply across contexts.

In many cases, income classification perpetuates perceived differences when no such differences exist. In a way, it is the same legacy of difference that leads to the gaze of global health being focused 'somewhere else'.[7] Harris and colleagues found that participants noted prejudice and 'national stereotypes' to be a major barrier in bringing new healthcare innovations into the USA from low-income country contexts. In another study, Harris and colleagues used psychological methods to examine bias against low-income country research and found a common bias associating 'good research' with 'rich countries'.[8] The implications of these prejudices are far-reaching. For example, if we look at international aid, very little is spent on independent research and scholarship within the recipient countries; the case is even more dire for natural sciences (except for anomalous cases[9]). There are obviously numerous examples of innovative research and programs emerging in LMICs that contradict these assumptions, such as digital transfer of money (pioneered in Philippines and scaled up in Kenya as *m-pesa*),[10–12] fast sutureless cataract surgery (pioneered in Nepal),[13] community health services such as *Family Health Strategy* (pioneered in Brazil), and *Friendship Bench* (pioneered in Zimbabwe).[14] For a list of innovations in medical technology and psycho-social interventions, we point the reader to Skopec *et al*'s excellent article.[14] We note, however, that despite the excellent examples reviewed in the article, the authors' adoption of the LMIC categorisation and the term 'reverse innovation', which may be necessary to alert scholars to innovations occurring in places that had previously been ignored, implicitly perpetuates the HIC–LMIC dichotomy.

Contrary to the myth that LMICs are poor in science and technology we see examples like South African scientists identifying the Omicron variant of COVID-19. The fall-out after the discovery is a vivid and recent example of the foreign gaze that is often embedded in 'LMIC thinking'. This thinking caused the discovery to be viewed as the origin, leading to travel bans on Southern African nations by many countries.[15 16] The assumption that such bans could somehow 'contain' the variant was debunked by experts over the coming weeks when it was found that the omicron was already in numerous parts of the world, likely at the time of its discovery.[17] International responses to disease outbreaks have consistently shown significant prejudices against LMICs by North American and European governments and media. Often the media conflates diseases with the regions in which they emerge, but often only when it comes to LMICs, where Ebola becomes 'African'[18] and H1N1 becomes 'Mexican'.[19]

At the same time, there is a complex political economy tied to inequities placed on many countries that fall in the LMIC classification that feed resource constraints .[20] The history of international relations requires the recognition that many LMICs remain poor due to inequitable market practices and government policies in wealthier countries. For example, companies located in wealthier countries often leave very little benefits in the countries where they extract raw materials or exploit low-wage labour. The use of LMIC as a category often implies a certain neutral relationship between states and companies without recognising that the income distribution across countries is often tied to inequity and exploitation. The misuse and overuse of LMIC can serve to reify the idea that difference in conditions across countries is somehow 'natural'.[21] At the same time, the increasing interconnectedness of countries and peoples through the movement of people and things makes it difficult to attribute meaningful characteristics to 137 countries based on national income.[22] It may be possible to use this classification meaningfully, however, we again note that such usage requires rigorous justification.

MOVING TOWARDS CREATIVE AND TARGETED CATEGORISATION

To move beyond the unreflexive use of LMIC in global scholarship we suggest a more nuanced approach to categorisation, namely targeted categorisation. The notion of targeted categorisation permits the use of LMIC when justified and if phenomena being studied can be linked to well-theorised and strongly justified common conditions that exist in this income-based categorisation. We suspect that such an approach will both reduce the number of studies using this category, given that many studies do not have good reason to use it, while enhancing our understanding of phenomena. For example, studies that have examined the impact of school-based interventions to address childhood obesity find that factors such as combining nutrition education and physical activity and strengthening parental involvement lead to positive improvements in the outcomes being measured across high-income and low-income countries.[23 24] A meta-analysis on school-based health promotion interventions found similar outcomes across high-income and low-income countries.[23] This type of intervention focused on the common features of the intervention and the outcome measures used without assuming differences across income categories.

The LMIC category can be useful if it is part of the research focus and is justified. For example, Allen and colleagues sought to examine research conducted on 'best buy' interventions for the prevention of non-communicable diseases in LMICs and found that the

majority of countries had not implemented the interventions and in countries where interventions had been implemented very little research had been conducted to evaluate the impact.[25] While such studies can be useful to understand international contexts, there remains a need to justify the use of this classification and to abandon such usage for more targeted categorisation when warranted. If we use Allen's study as a constructive example of the use of LMIC, it is worth noting that the income classification can serve as a starting point rather than an end point to understanding. There is still the need for further inquiry to clearly identify the conditions that are similar and different across the countries that were studied. For example, we would still need to explore why certain countries within the LMIC grouping are not implementing these interventions while others are. Is it strictly due to a lack of resources? There is variation within the classification that requires exploration.

Navigating the line between the general and the particular is a longstanding challenge in the field of global health. The global mental health movement serves as an excellent example. The global mental health movement was in part born from the recognition (or argument) that the diagnosis and treatment of mental disorders was sorely lacking in many LMICs.[26 27] Those seeking to advance this movement sought the scale-up of services in these settings. The approach to mental healthcare being advanced was rooted in diagnostic and treatment models that had been developed and adopted in North America and Europe. While this movement was lauded by many, others noted that the universal adoption of these models risked neglecting local views on distress and healing that had served the needs of many communities around the world and ignoring the numerous limitations (and harms) of these models. Efforts continue to be made to find a way to avoid the problems associated with these 'western' modes of diagnosis and care while working to identify their strengths and integrate local approaches to healing and care.[28 29] It is this type of critical engagement with approaches that is needed when using LMIC in global scholarship. The assumption of likeness or difference without rationale or justification can obscure perspectives on phenomena of interest.

Another illustrative example can be found in the field of tobacco control. Tobacco control research has illuminated shared challenges across LMICs in the implementation of tobacco control measures.[30] At the same time, targeted studies can provide important insights into contextual factors that shape tobacco control. Factors such as the presence or absence of pro-tobacco civil society organisations, a formal tobacco control unit within government, levels of industry investment in the country or whether the country grows tobacco all contribute uniquely to advancing or hindering tobacco control independent of income classification. This type of grouping, based on particular conditions or variables, requires a more conscious and systematic approach to cross-country comparisons. The exercise itself can lead to richer findings. The point is that to assume common conditions within the LMICs can be useful in some circumstances, but it should not be to the neglect of unique conditions that may exist across countries in the LMIC category and the common conditions that exist between income categories.

The benefit of targeted categorisation is that it lends to more theoretically informed and empirically robust analysis. For example, if we analyse health services for a specific sub-population across LMICs, we may implicitly operate with the assumption that what holds these countries together is a 'lack of resources'. This operating assumption can infuse both analysis and interpretation and may prevent researchers from moving to more specific categories of conditions. As we noted earlier, we often see reference to 'lack of resources' as a 'barrier' to health services in LMICs.[6] But what type of resources? What resources are needed to provide robust health services? What is the relationship between material and human resources? There is also a significant in-country variation that may not be captured with crude categorisation based on country income status. For example, we see that factors such as racial category, household income, access to private insurance and rural versus urban dwelling impact access to health services in Brazil.[31] Similar results can be found in the USA and Canada.[32] Findings like these illustrate that while overall national income has an important bearing on healthcare services, so does racialised status within a country, where one lives within that country, and economic status relative to others within the country.

CONCLUSION

While the category 'LMIC' may warrant use in some research endeavours, we have suggested that its unreflexive overuse poses many problems for how we view the world and how we conduct global scholarship. The ubiquitous use of LMIC as a category suggests that this category is seen to represent something meaningful when seeking to understand our global reality. Here, we illustrate that an unreflexive reliance on income classifications can serve both to obscure and divide, particularly, but not exclusively, in the area of global health. The unjustified use of this classification can obscure both commonalities and important differences across country contexts. The ubiquitous use of this category has the potential to perpetuate and naturalise differences between countries based on income classification. In this paper, we urged scholars to use more targeted categorisation to avoid the overuse and misuse of LMIC as a category and to provide clear justification for its use when necessary.

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