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BACKGROUND

- **SEX** refers to physical and biological characteristics (1).
- **GENDER** refers to the roles, behaviors, activities, and attributes assigned by a given society at a given time (1).

Gender intersects and interacts with every aspect of a person's life (race, economic status, education, culture, age, ability, and sexuality) (2).

Urban built environments have historically been conceived by and for men, raising questions regarding the gender bias their structures present and how they might affect genders differentially and contribute to urban health inequities (3).

OBJECTIVE

We propose a tool for examining the connections between gender relations, sex-linked biology, and health-related exposures and outcomes to disentangle the role of sex and gender in determining urban health.

METHODS

• MODEL PROPOSED:

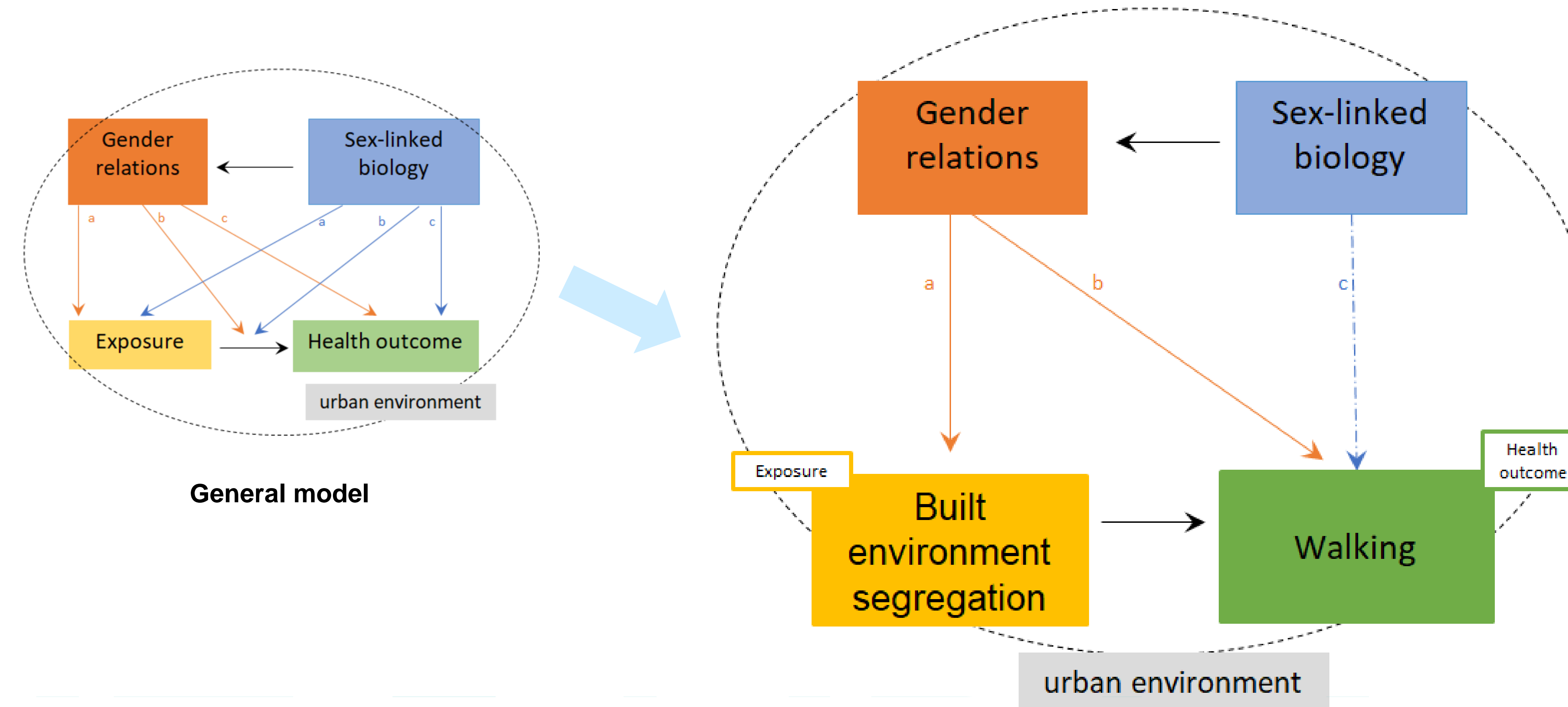
Inspired by previous models (5), we present 'Gender' and 'Sex' as influencers linked to exposures and health outcomes. Arrows indicate the direction of these influences.

• EXAMPLE APPLICATION:

"Segregation refers to the way that different groups are located in space based on their socioeconomic status, with groups defined based on education, unemployment, race, age, or income levels" (4). Segregation is caused by multiple socio-economic determinants and may determine health effects, and affect people differently according to their gender. We apply results from the SALURBAL Project to exemplify **how to build a model to orient sex/gender analysis**.

The chosen exposure and outcome are based on SALURBAL findings pointing at inequities in walking patterns between men and women.

Fig 1. The role of gender relations and sex-linked biology in determining exposures (Built environment segregation) and related health outcomes (Walking) in urban environments. Source: Authors' elaboration.



Urban environment: Living in segregated areas of the city may substantially increase the distance a person travels to work, access services, and perform everyday activities. Walking can play a role in determining the health of urban dwellers, and therefore represents an important outcome as well as a potential marker for gender disparities in LAC cities.

Gender relations influence:

BE Segregation: Women constitute the majority of people living in poverty for various reasons. Gender roles overcharge women with reproductive and caring functions, which may lead to them living in poorer conditions in segregated urban areas.

Walking: Women walk more for errands, but men walk more to work and for recreation. This may be attributed to traditional gender roles according to which men serve as providers and women as caregivers and home-makers, with women having less access to paid/formal work. As a result of these gender differences in walking purposes, men may enjoy more health benefits from walking, such as increased physical activity and fitness (attributed to higher recreational walking). Men also have more access to motorized vehicles. On the other hand, women walk more for running errands, and might be restricted by safety concerns and time constraints resulting from the uneven share of household and caregiving responsibilities.

Sex-linked biology influences:

Walking: Occasional changes across the lifespan may differentially influence walking among males and females. For example, some females may experience reduced capacity to walk during pregnancy, especially in highly polluted urbanized environments.

RESULTS

Compared to men, women walk more frequently for travel on a daily basis. They have less access to paid formal work, which affects their economic status and often results in them living in more segregated areas, as well as more limited access to motorized vehicles (4).

Women's travel inside the city are often to relatives' homes, to health centers, and schools – places that are generally not in central areas of the city. This increases the chance that there is limited or no public transport for these routes. Walking is therefore more likely to be a burden, not a choice.

Because of gender norms, women might also be exposed to risks that may outweigh the health benefits of walking.

CONCLUSION

Our model can help guide researchers in understanding the relevance of both sex-linked biology and gender norms and relations in determining urban health exposures and outcomes, improving our understanding of gender-related health disparities across populations and supporting the development of public policies to diminish them.

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