



# Reframing the early childhood obesity prevention narrative through an equitable nurturing approach

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## Abstract

High-quality mother-child interactions during the first 2,000 days, from conception to age 5 years, are considered crucial for preventing obesity development during early life stages. However, mother-child dyads interact within and are influenced by broader socio-ecological contexts involved in shaping child development outcomes, including nutrition. Hence, the coexistence of both undernutrition and obesity has been noted in inequitable social conditions, with drivers of undernutrition and overnutrition in children sharing common elements, such as poverty and food insecurity. To date, a holistic life-course approach to childhood obesity prevention that includes an equitable developmental perspective has not emerged. The World Health Organization (WHO) Nurturing Care Framework provides the foundation for reframing the narrative to understand childhood obesity through the lens of an equitable nurturing care approach to child development from a life-course perspective. In this perspective, we outline our rationale for reframing the childhood narrative by integrating an equitable nurturing care approach to childhood obesity prevention. Four key elements of reframing the narrative include: (a) extending the focus from the current 1,000 to 2,000 days (conception to 5 years); (b) highlighting the importance of nurturing mutually responsive child-caregiver connections to age 5; (c) recognition of racism and related stressors, not solely race/ethnicity, as part of adverse child experiences and social determinants of obesity; and (d) addressing equity by codesigning interventions with socially marginalized families and communities. An equitable, asset-based engagement of families and communities could drive the transformation of policies, systems and social conditions to prevent childhood obesity.

## KEYWORDS

child development, codesign, equity, historic and racial trauma, mother-child interactions, nurturing care, obesity

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## 1 | INTRODUCTION

Child obesity has far-reaching health, social and economic implications across diverse socioeconomic status and geographical locations around the world (World Health Organization (WHO), 2016), and disproportionately impacts disadvantaged populations (Kumanyika, 2019; Perez-Escamilla et al., 2018). The double burden of malnutrition (the coexistence of both undernutrition and obesity), which is now highly prevalent in low- and middle-income countries, is driven by inequitable social conditions, such as poverty, housing, food instability and lack of health care (Nugent, Levin, Hale, & Hutchinson, 2020; Perez-Escamilla et al., 2018; Swinburn et al., 2019; Wells et al., 2020). Inequities are often recognized but not always connected with obesity prevention or addressed (Kumanyika, 2019). Hence, we are yet to narrow the inequitable impact it is having among disadvantaged populations globally (Kumanyika, 2019). Doing so requires applying a health equity lens.

The first 2,000 days (from conception to age 5 years) have been identified as a highly sensitive window for enacting integrated, cross-sectoral strategies to prevent childhood obesity (WHO, 2016; Haire-Joshu & Tabak, 2016; Swinburn et al., 2019), by targeting social inequities and improving nutrition, with the end goal of optimizing child development. Importantly, conception to 5 years of age is a period when factors contributing to maternal and child obesity risk are closely linked. Hence, such approaches need to span the interplay between multilevel socio-ecological factors (Perez-Escamilla & Kac, 2013), such as political, economic and social drivers of inequities (Braveman, Egerter, & Williams, 2011; Kumanyika, 2019; Kumanyika et al., 2012) that shape mother-/caregiver<sup>1</sup>-child interactions and impact nutrition and child development outcomes (Bergmeier et al., 2020; Haire-Joshu & Tabak, 2016). Capturing the most proximal influences on obesity risk as children transition across ages and stages that occur in the first 2,000 days requires applying a child development perspective. However to date, a holistic life-course approach to childhood obesity prevention that includes an equitable child developmental perspective has not been taken. This is of concern because evidence indicates that hundreds of millions of children under the age of 5 years are at risk of failing to reach their full potential due to the impact of developmental risks on health, well-being and productivity throughout life (Black et al., 2017).

The WHO Nurturing Care Framework (WHO, United Nations Children's Fund (UNCF), World Bank Group (WBG), 2018) provides the foundation for reframing the narrative to understand childhood obesity through the lens of an equitable nurturing care approach to child development from a life-course perspective. The framework supports the holistic development of children during pregnancy to age 3. It emphasizes the importance of the impact of quality caregiver-

<sup>1</sup>The term mother has been used here to signal the biological, psychological and behavioural interactions linking maternal and early childhood obesity risk across conception to age 5 years; but it may also apply to other primary caregivers involved in promoting child development outcomes, such as fathers, coparents and guardians. Caregiver refers to carers across socio-ecological context whose roles may have a significant impact on bolstering child development outcomes, including parents, relatives and early year educators.

### Key messages

- The first 2,000 days, from conception to age 5 years, are crucial for preventing childhood obesity.
- Mother-child dyads function within and are influenced by a broader context of socio-ecological factors involved in promoting the quality of caregiving, including nutrition, across the highly sensitive early stages of child development.
- Childhood obesity prevention must address social and health inequities, including historical and racialized trauma, underpinning links between maternal and early childhood nutrition and the disproportionate prevalence of obesity among disadvantaged populations.
- A holistic life course approach to childhood obesity prevention that includes an equitable developmental perspective is needed.

child relationship and learning on optimizing children's capacity to reach their full potential and recognizes the broader context, including community, government and policy factors, that influence equitable opportunities for establishing high-quality mother-/caregiver-child interactions. Nurturing multidirectional interactions and connections are the most important factor for fostering a young child's potential. While childhood obesity is recognized as a threat to the physical and mental health of children (Sahoo et al., 2015; Small & Aplasca, 2016), a gap exists between the WHO Framework and practice as it relates to childhood obesity. Here, we outline our rationale for reframing the childhood obesity narrative by integrating an equitable nurturing care approach for prevention in the first 2,000 days—from conception to 5 years of age. This paper stems from collective thinking generated from one of the working groups from the Salzburg Global Seminar 'Halting the Childhood Obesity Epidemic: Identifying Decisive Interventions in Complex Systems' held in Austria December 14–19, 2019 (see Acknowledgements).

### 1.1 | Extending the nurturing care approach framework to 2,000 days globally

Currently, the WHO Framework focuses primarily on the first 1,000 days, without sufficiently emphasizing the continuity needed for establishing mother-/caregiver-child feeding interactional patterns leading to lifelong healthy weight-related lifestyle habits (Bergmeier et al., 2020; Bergmeier, Paxton, et al., 2020). Empirical evidence strongly supports the importance of including a life-course framework from time of conception to 5 years of age, which is a critical window for obesity prevention and ensuring a healthy weight trajectory through life (New South Wales (NSW) Ministry for Health, 2019; Perez-Escamilla & Kac, 2013). The first 2,000 days in a

child's life is a highly sensitive period for child development, particularly social-emotional and cognitive development (Blewitt et al., 2020). Importantly, child self-regulation, which is involved in managing thoughts and feelings, controlling behaviours and enabling goal-directed actions (Bronson, 2000; Calkins, 2007), and is a foundation of health behaviour (Robson, Allen, & Howard, 2020; Rosanbalm & Murray, 2017), develops and evolves substantially during the first 5 years (Bronson, 2000; Rosanbalm & Murray, 2017). From infancy to toddlerhood (the first 1,000 days), children largely rely on caregivers to meet their self-regulatory needs as they begin to build the social, cognitive, motor and language skills needed to control certain aspects of their environment (i.e., ask for food; move toward an object) (Bronson, 2000; Rosanbalm & Murray, 2017). In preschool years (ages 3–5 years), children undergo rapid gains in self-regulation, in line with increases in language and social-emotional development (Calkins, 2007; Rosanbalm & Murray, 2017). As more intense reliance on caregivers for self-regulatory support is lessened, children experience a deepened capacity to make their own decisions and continue learning and using self-regulation skills, such as those involved in establishing healthy lifestyle patterns such as diet (Bergmeier, Paxton, et al., 2020), physical activity (Jones, Hinkley, Okely, & Salmon, 2013) and sleep behaviours (Jones et al., 2013), implicated in obesity risk. Hence, exposure to caregiver-child stimulating relationships and learning environments across the first 2,000 days can bolster life-long health and well-being.

## 1.2 | Nurturing mutually responsive relationships

An equitable nurturing care framework for child obesity prevention should reflect the mutually responsive mother-child interactions involved in promoting child development (Bergmeier, Hill, et al., 2020; Bergmeier, Paxton, et al., 2020; Pérez-Escamilla, Segura-Pérez, & Lott, 2017), as well as the mutual responsiveness between caregiver-child interactions and the broader external factors or environments surrounding them (Black et al., 2017; Braveman et al., 2011; NSWmfH, 2019). Recent conceptual advances in childhood obesity prevention have mapped out modifiable early dyadic mother-child interactional pathways, including perinatal mental health, child attachment security, early caregiver-child feeding interactions and child self-regulation, linking maternal and childhood obesity risk (Bergmeier, Hill, et al., 2020; Bergmeier, Paxton, et al., 2020). Yet prevention requires a much broader understanding of dynamics and pathways that influence the establishment of mother-child relationships beyond the family context. As recognized by the Social Ecological Model (Kilanowski, 2017), mother-child relationships function within and are influenced by broader community, sociocultural, economic and policy level structures that shape the quality of caregiving across early stages of child development (Kumanyika et al., 2012; WHO, UNCF, WBG, , , 2018). Therefore, child obesity prevention must be based on a deep understanding of the layers of influence surrounding the child as they transition across the ages and stages of development that occur in the first 2,000 days.

## 1.3 | Recognition of racism, not solely race/ethnicity and racism-related stressors, as social determinants of obesity

Obesity prevention in the context of the nurturing care framework should incorporate a contextualized focus on health inequities and social determinants of health by addressing the disproportionately high levels of obesity among marginalized, ethnic minority and low-income groups (Kumanyika, 2019; Kumanyika et al., 2012; Perez-Escamilla et al., 2018). Structural, interpersonal, institutional, internalized racism harms child health (Trent, Dooley, & Dougé, 2019). Recognition of racism, not solely race/ethnicity, as a key driver of health inequities should be followed by rigorous measurement of, and commitment to understanding, the mechanisms through which racism impacts health (Boyd, Lindo, Weeks, & McLemore, 2020; Heard-Garris, Williams, & Davis, 2018). Social stressors, including adverse childhood experiences, are established social determinants of obesity in childhood and over the life-course (Eisenberg et al., 2017; Suglia et al., 2018). Racism-related stressors, which include intergenerational trauma, structural conditions and interpersonal experiences (Harrell, 2000), have been largely overlooked in this work, although narratives in the literature of race and obesity are prevalent (Strings, 2019). There are few studies of racism-related stress and childhood obesity. Understanding and targeting interlinked maternal and child social determinants of health (Braveman et al., 2011) will require the framework to explicitly incorporate a focus on racism (Boyd et al., 2020; Heard-Garris et al., 2018). Developing solutions will also require an understanding of historical trauma and racism-related traumatic stress (Harrell, 2000; Sotero, 2006). In particular, it must understand and address mechanisms through which social structures and systemic inequities perpetuated by colonialism and neocolonialism, institutional racism and white supremacy, impact current neighbourhood conditions, food systems, opportunities to pursue health promoting activities and parent-child interactions which then result in the widening inequities in obesity rates and disproportionate burden experienced by historically disadvantaged populations. Recommendations include identifying and naming different forms of racism and measuring and exploring mechanisms through which racism impacts health (Boyd et al., 2020; Heard-Garris et al., 2018).

## 1.4 | Advancing equity through intervention codesign to engage community members in asset-based capacity building

Solutions to advance equity must aim to breakdown silos and align policies, systems and social conditions to address social determinants of health and advance the tailoring and optimization of well-coordinated multisectoral interventions. These solutions cannot be generated and translated effectively without active community involvement of those who may be traditionally socially marginalized to ensure that interventions are relevant, accessible and feasible to the intended families and communities (Brett et al., 2014; Manafo,

Petermann, Vandall-Walker, & Mason-Lai, 2018; Staniszewska, Denegri, Matthews, & Minogue, 2018). To achieve this aim, it is vital that solutions are family and community centred; that is, responsive to the family and community needs and wants and relevant to the spheres of social-cultural, community and political level influences in which the caregiver-child dyad exists and interacts (Richter et al., 2017). Doing so requires that childhood obesity prevention initiatives are codesigned in partnership with families and the local community as central to conceptualizing and implementation of asset-based systems-wide life-course approaches that promote child development, by addressing key dimensions of nurturing care including adequate nutrition and obesity prevention. Codesign is a participatory approach where community stakeholders collaboratively develop social innovations. This strategy intentionally helps operationalize equity as it centres on voices and perspectives that would otherwise be marginalized. It acknowledges the historical processes that led to the existing power structures that have contributed to inequitable access to resources and lack of participation in critical decision making. The critical race theory framework (Crenshaw, Gotanda, Peller, & Thomas, 1995; Ford & Airhihenbuwa, 2010) offers several key strategies for advancing racial equity, including centring the perspectives, ideas and stories of socially marginalized groups and developing counter narratives (Ford & Airhihenbuwa, 2010; Solórzano & Yosso, 2002); this strategy is epitomized by the codesign model. Previous obesity prevention initiatives codesigned with communities experiencing social adversities (Coughlin & Smith, 2017; Hoelscher et al., 2010; Renzaho, Halliday, Mellor, & Green, 2015) provide valuable insights into what can be achieved to improve health behaviour at various social-ecological levels; albeit much work is still needed for solutions to be designed and led by marginalized communities that target deeply rooted mechanisms impeding equity in child obesity prevention (Sherriff et al., 2019).

## 2 | CONCLUSION

Despite increasing efforts to prevent global childhood obesity over recent decades, we are yet to bring the public health priority under control and to narrow the disparate impact it is having among disadvantaged populations globally. Future efforts to prevent child obesity need to be different in order to succeed. First, they must comprehensively address heretofore overlooked social adversities and determinants: historical and racialized trauma and how these social factors impact the first 2,000 days. Next, a promising way forward is to codesign strategies in partnership with communities. Reframing the early childhood obesity narrative in the first 2,000 days via an equitable nurturing care life-course framework that creates solutions focused on equitable systems for long-term healthy lifestyles and weight trajectories would have a positive impact on the health of children and the next generation of children.

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## CONFLICTS OF INTEREST

The authors declare no conflicts of interest.

## CONTRIBUTIONS

HS, SDB, JB, RBJ, MD, KG, RPE, MS are Salzburg Global Seminar Fellows and conceptualized this paper. HS and HB drafted the manuscript with input from all authors, and all authors reviewed and contributed toward changes to the original manuscript. All authors have read and approved the final version of the manuscript.

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