

Navigating Blame: Examining Prevalent Mother-Blame Attitudes in Epigenetic Discourse

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INTRODUCTION

The Developmental Origins of Health and Disease (DOHaD) hypothesis proposes a connection between early life exposures—encompassing the prenatal conditions of sperm, in-utero conditions and thereafter—and long-term metabolic disorders and diseases like diabetes, cancer and neurodevelopmental disorders. This hypothesis suggests that environmental conditions can modulate epigenetic processes, driving DNA changes in response to environment and impacting fetal behaviour.¹ For example, epigenetic mechanisms such as histone modifications alter genomic DNA during the embryogenesis stage.² These alterations in early developmental stages can induce and maintain altered gene expression throughout life, consequently affecting adult pathology.^{3,4} While a plethora of factors—such as paternal exposures, postnatal environments, and sociocultural factors—also contribute to the DOHaD theory, emphasis is placed on maternal exposures in utero.⁵ As epigenetics garners media attention, Richardson et al. warn about the impacts of oversimplification and miscommunication of DOHaD, contributing to narratives that unjustly blame mothers for their children's future disease susceptibility.⁶ This paper will examine the causes, implications, and strategies to address mother-blame narratives pervading DOHaD discourse through a feminist lens, focusing on the experiences of pregnant mothers.

DISCUSSION

THE ROLE OF MEDIA COMMUNICATION

Media language evidenced in news headlines, such as “Mother’s diet during pregnancy alters baby’s DNA” and “Grandma’s Experiences Leave a Mark on Your Genes,” imply that maternal choices or experiences affect the genetic material of the developing fetus without acknowledging the various environmental, social, and paternal determinants that also influence offspring health.⁶ Consequently, the sensationalization of scientific findings as



definitive conclusions results in anxiety for pregnant women. For instance, Beatriz, a participant in a focus group conducted by Norrmén-Smith et al., shared that the media “take[s] a scientific paper, one piece of information, [and] make[s] it a big headline, and then they talk about it like it was the end of your life. It’s like, they take it out of context and it creates so much anxiety.”⁷ Reductionist and exaggerated headlines fuel harmful societal expectations, which cause anxiety, blame, and stigma for mothers.

STIGMATIZATION OF MOTHERS AND FETAL ALCOHOL SPECTRUM DISORDER

Women with children who develop Fetal Alcohol Spectrum Disorder (FASD), a spectrum of disorders caused by in utero alcohol consumption, are often privy to stigma as a result of distorted health narratives. Shanker et al. interviewed an FASD policy worker who illustrated the stigma experienced by FASD mothers: “The mom is solely responsible to produce that FASD child...Responsibility is part of the bigger picture, but it is mom that has the relationship there.”⁸ As such, societal stigma often places full responsibility on mothers for choices made during pregnancy, depicting mothers as neglectful caregivers or addicts who are in denial.⁹ While mothers are often burdened with their children’s health outcomes, it is imperative to consider the role of fathers in contributing to FASD risk. Although paternal alcohol use does not directly cause FASD, “Fathers who drink may contribute to this condition through their influence on women’s alcohol use in pregnancy” and “can negatively impact intelligence and cognitive ability in their children.”¹⁰ Stigma experienced by FASD mothers underscores a societal tendency to assign blame solely to them, reinforcing traditional gender roles and overlooking the shared responsibility of both parents in contributing to the child’s well-being. These harmful narratives can commonly lead to lower self-esteem and persistent guilt in women. In particular, affected mothers are more likely to attribute their alcohol consumption during pregnancy to individual responsibility, rather than consider the societal and structural factors that may influence their behaviors: “I am the responsible one...I am the one who was pregnant. I feel horrible about that,” stated a participant in a study conducted by Zobotka et al.^{9,11} Hence, dismantling this public stigmatization not only requires a shift in individual perspectives, but also prompts a collective societal acknowledgement on the lack of support infrastructure in place for pregnant women.



PUBLIC HEALTH CONCERNS

Lappé et al. argues that biocentric communications of epigenetics and DOHaD shift significant responsibility of birth outcomes to mothers, perpetuating historical narratives that disproportionately affect racialized communities (e.g. Black, Brown, and Indigenous populations).¹² For example, studies suggest that gestational diabetes may be related to up to 30% of type two diabetes cases amongst Oji-Cree mothers, compared to 6% of cases amongst other populations in Saskatchewan.¹³ Coupled with the lack of comprehensive nutritional counseling programs, these potential health risks contribute to anxiety and guilt amongst Indigenous women.^{14,15} Related discourse glosses over the historical consequences of colonization on healthcare systems, including food insecurity, loss of traditional hunting land, and practices that modulate higher risks for gestational diabetes.¹⁶ Consequently, the effects of social determinants of health and racial inequities in maternal healthcare become overlooked in epigenetics discourse. For example, Scott et al. discussed the detrimental implications of medical professionals abdicating responsibility for poor birth outcomes of Black women who come to pregnancy “older, sicker, and fatter.”¹⁷ As highlighted by clinician-scientist Monica McLemore, “focusing on a mother’s individual characteristics or behavior avoids the uncomfortable truth that health care systems, namely hospitals and clinics and the people who work in them, contribute to these poor [birth] outcomes.”¹⁸

RECOMMENDATIONS BIOSOCIAL DISCOURSE

To mitigate mother-blame narratives in DOHaD, it is critical to bridge gaps in knowledge translation between biological scientists, social scientists, clinicians, public health professionals, and the public. Molinaro et al. suggests that public health translation of DOHaD should be made more readily available to the public, in addition to promoting awareness about social determinants of health



which acknowledge the historical and social barriers that restrict individual choices.¹⁹ Similarly, Harris et al. suggest a biosocial approach that considers “dynamic, bidirectional interactions between biological phenomena and social contexts, which contribute to the lifelong development of humans to shift away from viewing healthcare as a strictly empirical and scientific field.”²⁰ Moreover, it is suggested that the roles of community and society are emphasized in epigenetics discourse to acknowledge the upstream effects of sociocultural factors (e.g. economic instability, food insecurity, environmental exposures to toxins, and marginalization) on the biological processes that contribute to and occur during fertilization and pregnancy.²⁰ Thus, biosocial discourse promotes the collective efforts to support and improve the wellbeing of women.

FRAMING STRATEGIES

Rather than using language that implies maternal responsibility, language describing the circumstances behind the mother’s decision-making should be applied. For instance, conventional communication instincts such as, “we need to focus on mothers’ diets during pregnancy” or “if women experience too much stress” subtly reinforce a restricted viewpoint centered around the mother.²¹ To foster a more comprehensive understanding, Winett et. al suggest that effective communication should employ frameworks transcending individual-centric narratives, focusing instead on broader concepts framed as “the circumstances in which women are pregnant and in which children develop” or “the social and economic pressures facing that community.”²¹ Such framing facilitates an expanded cognitive map, fostering consideration of the intricate network of influences contributing to the issue, which avoids invoking perspectives that impede inclusive thinking.

CONCLUSION

The historical focus on the intrauterine factors and maternal responsibilities in epigenetics and DOHaD discourse results in mother-blame narratives that perpetuate stigmatization, fear, and guilt in mothers. These narratives enable potential abdication of responsibilities to deliver quality healthcare and public health initiatives. To dispel these narratives, DOHaD discourse should be made more accessible to the public and approached from a biosocial lens that acknowledges the multifaceted relationship between maternal and paternal biological epigenetic processes and sociocultural factors contributing to disease risks. Rather than placing blame on mothers, the insights provided by DOHaD



research can be leveraged to develop educational public health campaigns and policies that promote healthy living, public nutrition, and mental wellness initiatives to protect from disease risk.

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