IWCH abstracts

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Black womens' health matters: A literature review of the impact of racial stereotypical narratives on Black women

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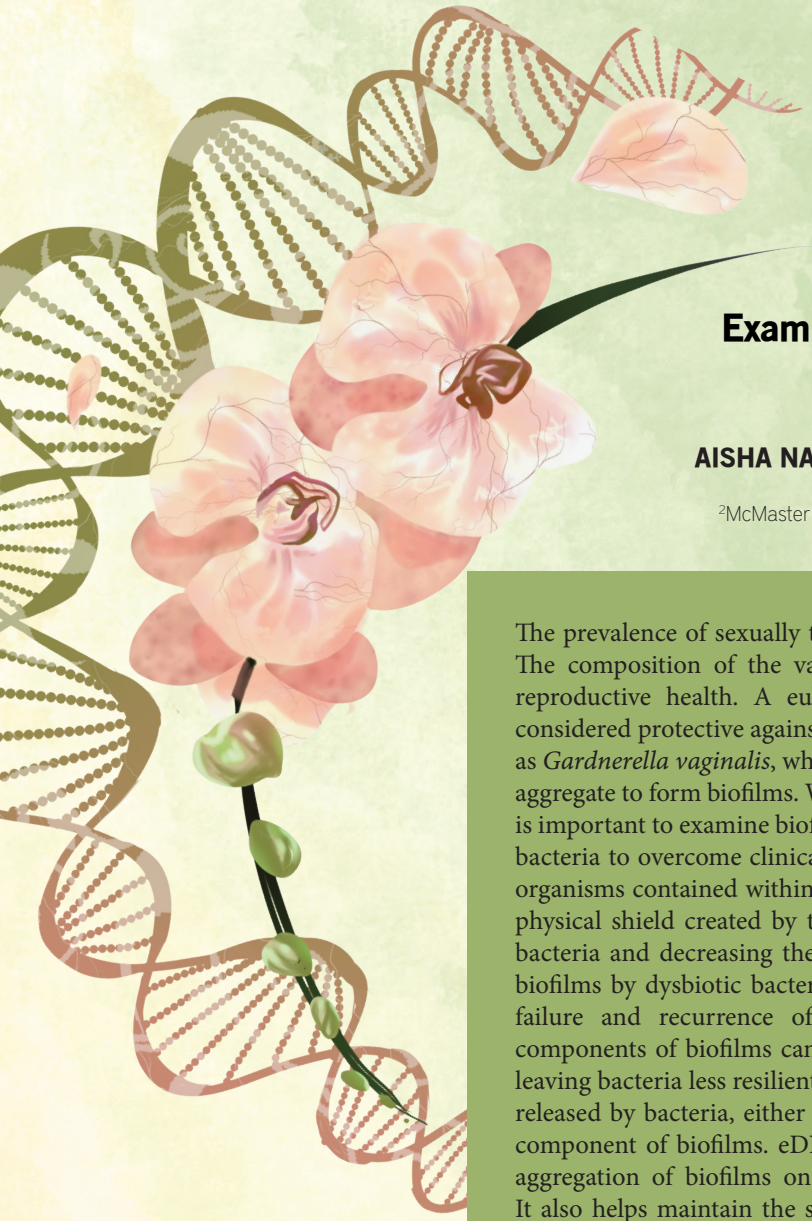
Black women have been disproportionately affected by negative stereotypical narratives and complex representations of their community. The "strong, Black woman" stereotype and many others which are contextually similar possess diverse meanings dependent on social context and lived experience. Studies exploring the implications of normative and stereotypical narratives of Black women on their health have revealed differences in health outcomes dependent on experiences and perception of these stereotypes.

This literature review explores a range of popular meanings attributed to similar racial stereotypes. The researcher, an Afro-Caribbean Black doctoral student in Ontario, examined published research in North America to highlight patterns in the positive and negative mental health experiences of Black women who have been exposed to common racial and gender-focused stereotypical narratives. Studies included in this review discussed the experiences of women that identify as Black members of African descendent populations including but not limited to African American and Afro-Caribbean, from various age groups as early as first-year college students to women approaching old age (approximately 60 years old).

Researchers that have previously interviewed Black women within the North American context found that there were several theses associated with stereotypical narratives specifically applied to Black women: strong/assertive, independent, educated, hardworking/ambitious, caring, and self-confidence. Several Black women expressed their beliefs that internalizing and perpetuating strong, Black women traits has been a source of empowerment and promotes self-sufficient and resilient behaviour in this marginalized population. Comparably, these narratives can be particularly debilitating and oppressive as Black women may feel objected to altering their behaviour to fit within the boundaries ascribed by the stereotype. Other Black women have displayed symptoms commonly associated with depression, which have been correlated with their exposure to these stereotypes which have harmful effects on their physical and psychological health. Predominant stereotypes and lifestyle behaviours contribute to experiences of threatened mental health as society constantly reproduces unattainable images of an ideal.

Further investigation by the researcher is expected to reveal differentiated but interrelated results between the endorsement of Black women centered narratives and health experiences throughout the life course. This research is crucial as much of the published literature is conducted within the United States of America and the importance of the deep-rooted slavery history, culture, and covert racist treatment of Black people today may hinder the generalizability of the findings to the Canadian context. While Black women remain disadvantaged within Canada, literature regarding the impact of these stereotypical narratives on Black women within the Canadian context is underrepresented within published research.



Examining the role of extracellular DNA present in bacterial biofilms on vaginal health

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The prevalence of sexually transmitted infections (STIs) remains a major issue worldwide. The composition of the vaginal microbiome (VMB) has a crucial role in maintaining reproductive health. A eubiotic VMB is colonized by *Lactobacillus crispatus* and is considered protective against STIs. A dysbiotic VMB is populated by anaerobic species such as *Gardnerella vaginalis*, which are associated with increased susceptibility to STIs and often aggregate to form biofilms. With antibiotic resistance presenting an ever-growing concern, it is important to examine biofilm formation – one of the resistance mechanisms developed by bacteria to overcome clinical treatments. Biofilms are communities of aggregated bacterial organisms contained within a thick matrix of extracellular polymeric substance (EPS). The physical shield created by the biofilm EPS confers antibiotic resistance by protecting the bacteria and decreasing their response to antibacterial agents. The formation of bacterial biofilms by dysbiotic bacteria in the vagina can thus increase the likelihood of treatment failure and recurrence of vaginal infections. Investigating the important structural components of biofilms can help develop ways to target and disperse these communities, leaving bacteria less resilient and more susceptible to treatment. Extracellular DNA (eDNA) released by bacteria, either actively or through cell lysis, is considered to be an important component of biofilms. eDNA has been shown to be critical in bacterial attachment and aggregation of biofilms on surfaces, especially in the early states of biofilm formation. It also helps maintain the structural stability of the rigid biofilm matrix that protects the bacterial cells within. The role of eDNA in the VMB is not well-researched, but could be a target for disaggregation of biofilms. Determining the role of eDNA in biofilm formation and vaginal health can aid the development of treatments for recurring vaginal infections.

We assessed the timing of DNA release in 4 different bacterial species: dysbiotic bacteria *Prevotella bivia* and *Gardnerella vaginalis*, eubiotic bacteria *L. crispatus*, and an intermediate between dysbiotic and eubiotic state, Lactobacillus iners. The release of eDNA in the stationary-growth phase is indicative of bacterial lysis, while maximal eDNA release in the early exponential-growth phase is associated with active release mechanisms. We found that eDNA release in *G. vaginalis* only peaked in the early exponential growth phase, which represents active release, rather than bacterial lysis. In contrast, eDNA release in *L. crispatus, P. bivia* and *L. iners* peaked in the stationary phase, indicating release of eDNA after bacterial cell lysis. Currently, we are investigating the effects of eubiotic and dysbiotic bacterial eDNA on vaginal epithelial cells by assessing changes in vaginal epithelial barrier integrity, as well as immune factors induced by eDNA in vaginal cells. Preliminary findings have shown that eDNA derived from *L. crispatus* upregulates anti-inflammatory factors in vaginal epithelial cells, while eDNA from *G. vaginalis* and *L. iners* induces upregulation of pro-inflammatory factors. In the future, we will determine whether the eDNA of different bacterial species can modulate the inflammatory response in vaginal epithelial cells against an immune insult. This study will help to understand the role of eDNA in biofilm formation to potentially improve biofilm treatment options for women suffering from recurrent infections.