

Zika virus: a case study to understand Brazilian sociodemographic differences in reproductive health and rights

Summary: This study uses unique focus group data from women of reproductive age to investigate whether and how women's fertility intentions and prevention strategies in response to the Zika virus epidemic in Brazil varies by socioeconomic status, which includes the capacity of actively delaying pregnancy and resorting to safe abortion. Based on the content analysis of public health campaigns, we also investigate the role of gender in public health messaging and women's negotiation of Zika and pregnancy prevention during the epidemics. We find that women of low socioeconomic status report facing more obstacles to preventing unwanted births. Women of high status report wanting to postpone pregnancy due to the epidemic and making a more efficient effort to use contraception. We also find that public health campaigns reinforced gender roles by emphasizing prevention efforts among women while excluding men. Traditional gender roles expect women to prevent pregnancy without challenging the normative gendered power dynamics that prevented them from doing so. Because role in prevention efforts change according to SES, public health campaigns may have reinforced women's vulnerability to infection and unwanted pregnancy, especially among low socioeconomic status couples.

INTRODUCTION

In the decades before the ZIKV epidemic, Brazil's fertility fell dramatically, from 5.8 births per woman in the 1970s (Berquó and Cavanaghi 2004) to 1.9 by 2010 (Cavanaghi and Berquó 2014). However, unintended fertility remains high in Brazil, where approximately 50 percent of all births are deemed unintended (Le et al. 2014). This large unintended birth rate reveals an important disconnect between the fertility desires and behaviors of many women. Thus, even if women wish to prevent pregnancy during the epidemic, it is unlikely that all of them will be able to do so successfully. Some women who do become pregnant may seek an abortion, despite the fact that abortion is highly restricted in Brazil (Aiken et al. 2016). These abortions may pose additional health risks because many are unsafe (Fusco and Andreoni 2012; Grimes et al. 2006), and they may be especially risky if performed in the second or third trimester. Because unintended pregnancy disproportionately occurs among women of lower socioeconomic status (Prietsch et al. 2011; Theme-Filha et al. 2016), women with greater economic resources may be more successful in preventing unwanted pregnancy during the epidemic and beyond. To prevent or delay pregnancy, women must either limit their sexual activity or use effective forms of contraception consistently (Bongaarts 1978). However, women's consistent use of contraception often varies with their social context. For instance, socioeconomic status shapes women's ability to obtain and afford reproductive services (Campbell, Sahin-Hodoglugil, and Potts 2006; Dennis and Grossman 2012) and also influences which individuals women interact with on a regular basis, which over time can affect their attitudes toward contraception (Bachrach and Morgan 2013). Socioeconomic status may also shape women's use of contraception by determining the type of reproductive health services to which they have access (Potter et al. 2003).

The Zika epidemic is a particularly pertinent public health crisis to investigate because Zika can be transmitted both sexually and via mosquito, and intrauterine exposure to the virus increases the risk of microcephaly and other severe brain abnormalities (Rasmussen et al. 2016). Thus, pregnancies experienced during the epidemic were at increased risk of adverse birth outcomes demanding of both immediate and longer-term care.

However, there was a lack of public consensus and centralized messaging in Brazil about how best to curb the epidemic among pregnant women, with some public health officials suggesting that women should avoid pregnancy altogether (Romero 2015) and others suggesting that women should decide for themselves whether or not to get pregnant, but to protect against mosquitos and sexual transmission at a minimum (McNeil 2016b; Spanne 2016).

Because of the uncertainty they entail, public health crises provide an opportunity for longstanding norms to either be reproduced or challenged. Moreover, because norms can exacerbate or diminish health disparities, reproducing or challenging them has important implications for future population health and health inequalities. How public health officials respond to crises, and the types of messages they relay to the public, are important because they have the potential to set the tone for how couples develop strategies to protect themselves against unwanted health outcomes. These previous campaigns, and the ways in which they reinforced normative gender

power relations, underscore the significance of understanding how public health messaging in Brazil upheld or challenged gender norms that then informed whether and how women were able to negotiate Zika and pregnancy prevention with their partners. By recognizing women as the protagonist of the prevention against Zika, campaigns may have ignored the importance of protecting the whole population given that all humans serve as a reservoir of the virus. Furthermore, campaigns broadly focused on mosquito transmission even though the virus is also sexually transmitted.

Earlier research on gender relations and sexual health in Brazil generally suggests that men tend to enjoy a dominant position in their relationships and that this dominance often makes it difficult for women to convince their partners to use condoms (Chachan 2016). Relatedly, men often present higher rates of riskier sexual behavior (e.g. drug use and multiple sexual partners) that make them more prone to STIs (Noar & Morokoff 2002), while women tend to bear the burdens and costs of contraception and/or childbearing in Brazil (Censo Demográfico, 2010). As part of the widespread gender ideology, women reproduce the idea that children are their responsibility (Wajnman, 2016). Although women have joined the workforce over the last few decades and oftentimes are the solo breadwinner (Wajnman, 2016), men refuse to share in housework and childcare equally and rarely take responsibility for these types of tasks (Wajnman, 2016). This power dynamic has potentially important consequences for women's health, especially when viruses such as Zika require active engagement from both partners. Existing gender imbalances, as they pertain to the negotiation of pregnancy and sexual health, suggest that public health campaigns reinforcing gender norms would be paradoxical—charging women with preventing pregnancy and the sexual transmission of Zika without challenging the underlying gender dynamics that prevent them from doing so.

Combines with gender, social inequality and the different levels of agency between women of high and low education may have also played a role in women's perceived risk of infection and strategies to prevent the disease. Indeed, the Zika epidemic has disproportionately affected women's reproductive health, especially that of low educated women. In fact, the least educated women are doubly disadvantaged: not only do they lack the means to protect themselves against infection, but they are also more often subject to their partner's will (Marteleto et al. 2017). In this paper we review the consequences of Zika for Brazilian women's sexual and reproductive health.

METHODS

We used two sources of qualitative data. First, to understand women's sexual and reproductive behavior during the epidemics and women's views of public health campaigns related to Zika, and to examine the relationship between gender ideology and Zika and pregnancy prevention, we used data from 16 focus groups conducted with women of reproductive age (18-40) in the cities of Belo Horizonte and Recife. The former is in the more developed southern state of Minas Gerais; while the latter is in the less developed northeastern state of Pernambuco. Focus groups were stratified by socioeconomic status and environmental risk (proximity to bodies of water, high buildings). During the focus groups, women were asked a broad range of open-ended questions related to their personal knowledge of and experiences with the Zika virus, the related experiences of

their friends and acquaintances, their primary sources of information, their perceptions of public health campaigns, and women's contraceptive use. Gender ideology arose organically during most conversations but was not an explicit question included in the focus group protocol.

Second, to assess whether public health campaigns reinforced heteronormative gender ideologies, we analyzed 75 pieces of mass communication campaigns produced by the federal, state (Minas Gerais and Pernambuco) and municipal level governments (Belo Horizonte and Recife). These materials were collected over the course of one year, and comprise the first campaigns promoting Zika awareness via TV, radio, internet, bus placards, pamphlets, and other means. They were publically available for download and disseminated on various government websites. The campaigns were coded according to the institutions that produced them, the channels through which they were broadcast, the perceived audience for which they were produced, their main topic (e.g. information about symptom or about how to prevent Zika, etc), the characters illustrated in the material (e.g. pregnant women, mosquitos, etc.), specific actions being called for, and whether microcephaly was referenced (Appendix A).

RESULTS

With the focus group data we find that women fear being infected with the virus and report postponing pregnancy plans or knowing other women who have done so. We also find a large gap between low and high SES's vulnerability to Zika and microcephaly in Brazil. Most first pregnancies of low SES women were unwanted. In a context of Zika virus, unexpected pregnancies could delay the start of the protection against the infection (e.g. use of repellents, long sleeved clothing) which could increase the vulnerability of the fetus to microcephaly. Low SES women are more vulnerable to the infection and consequently to microcephaly due to their worse living conditions and their lack of empowerment when it comes to demanding contraceptives. We also find that young high SES women feel certain about their ability to prevent pregnancies by using and demanding contraceptives. The proximity to the end of the reproductive age, however, appear as an excuse why some women of high SES and no children ever born report getting pregnant or trying to conceive during the Zika epidemics. This selected group feels capable of protecting themselves against mosquito bites and indeed live in areas with less accumulation of standing water where the mosquito breeds.

We also find that abortion is highly restricted in Brazil, but both low and high SES women report resorting to or knowing someone who got an abortion, prior or during the epidemics. In all focus groups, regardless of SES or geographic location, women felt that the threat of the Zika virus would result in an increase in abortion rates. While high SES report their own private doctors as sources for safe, secret abortions, low SES and their friends could only count on unsafe options, such as purchasing abortion pills on the black market, visiting clandestine clinics or using herbs and teas to induce abortion.

In relations to the campaigns, we find that public health campaigns against Zika reinforce heteronormative gender ideologies by focusing on women's role in the prevention of the disease, so they are not useful to raise the population's attentions for the male's role in the sexual transmission of the infection and their shared importance in the elimination of the diseases. Those more concerned about Zika are the ones intending to become pregnant or who are already pregnant, and no campaign seek to raise awareness for the enormous

number of unwanted pregnancies. Women who possess heteronormative gender ideologies view Zika and pregnancy prevention as an extension of their responsibilities for childcare and familial reproduction, either taking the entire responsibility for prevention or foregoing any special care. We also find that women with low SES are more likely to express views in line with traditional gender ideologies but have fewer means of negotiating condom use with their partners and are thus more vulnerable to both unwanted pregnancy and Zika infection.

DISCUSSION

One of the main recommendation for woman is to postpone pregnancy until the Zika epidemics has ceased. It is virtually impossible to achieve such thing in a context where a large part of pregnancies are unwanted. It is adamant to increase the debate surrounding the obstacles to contraceptive use, gender inequality, the challenges of the sexual and reproductive health services, and to legalize abortion services. Policymakers must address barriers to contraception for low-income women, including: disseminating information about effective contraceptive use, providing long-acting reversible forms of contraception in public clinics, and making contraceptives available in pharmacies more affordable.

As abortion is restricted in Brazil but Zika might increase a demand for abortion services, women, especially the low SES who do not have access to private, high quality doctors, might be more likely to suffer the consequences of an unsafe and clandestine procedure, such as hemorrhage, secondary infertility, and death.

The extensive focus on microcephaly and on the transmission by mosquito (and none on sexual transmission) given by public health campaigns drives away non-pregnant women and men, who do not feel they are vulnerable or responsible for any kind of care. This female protagonism clashes with women inability to realize their preferences even during the epidemics.

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