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Gender inequities, relationship power, and childhood immunization uptake in Nigeria: a population-based cross-sectional study

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SUMMARY

Background: This study aimed to simultaneously examine the association between multiple dimensions of gender inequities and full childhood immunization.
Methods: A multilevel logistic regression analysis was performed on nationally representative sample data from the 2008 Nigeria Demographic and Health Survey, which included 33 385 women aged 15–49 years who had a total of 28 647 live-born children; 24 910 of these children were included in this study.
Results: A total of 4283 (17%) children had received full immunization. Children of women whose spouse did not contribute to household earnings had a higher likelihood of receiving full childhood immunization (odds ratio (OR) 1.96, 95% confidence interval (95% CI) 1.02–3.77), and children of women who lacked decision-making autonomy had a lower likelihood of receiving full childhood immunization (OR 0.74, 95% CI 0.60–0.91). The likelihood of receiving full childhood immunization was higher among female children (OR 1.28, 95% CI 1.06–1.54), Yoruba children (OR 2.45, 95% CI 1.19–4.26), and children resident in communities with low illiteracy (OR 1.82, 95% CI 1.06–3.12), but lower for children of birth order 5 or above (OR 0.64, 95% CI 0.45–0.96), children of women aged ≤24 years (OR 0.66, 95% CI 0.50–0.87) and 25–34 years (OR 0.79, 95% CI 0.63–0.99), children of women with no education (OR 0.33, 95% CI 0.21–0.54) and primary education (OR 0.66, 95% CI 0.45–0.97), as well as children of women resident in communities with high unemployment (OR 0.34, 95% CI 0.20–0.57).
Conclusions: The woman being the sole provider for her family (i.e., having a spouse who did not contribute to household earnings) was associated with a higher likelihood of fully immunizing the child, and the woman lacking decision-making autonomy was associated with a lower likelihood of fully immunizing the child. These findings draw attention to the need for interventions aimed at promoting women's employment and earning possibilities, whilst changing gender-discriminatory attitudes within relationships, communities, and society in general.

1. Introduction

Childhood immunization, the induction of immunity by applying a vaccine, is among the most effective health interventions to reduce child mortality, morbidity, and disability.[1] Globally, between 2 and 3 million deaths from vaccine-preventable diseases (VPDs) occur annually in children aged less than 5 years, mainly in Africa and Asia[2]; however, childhood vaccinations have been proven to prevent more than 2 million deaths from occurring each year.[3] The dynamics of vaccination uptake remain complex, and are to different degrees dependent on supply and demand factors.[4] Official statistics on the availability of childhood vaccinations in rural and urban areas are lacking; however 38% of children in urban areas are reported to be more than twice as likely as rural children (16%) to be fully vaccinated.[5] Rural–urban inequities in immunization coverage are inevitably linked to supply-related (or provider-related) factors, e.g. accessibility to vaccination facilities, availability of safe needles and syringes, provision of childhood immunization services, and demand-related factors, such as the knowledge and attitude of mothers.[6]

The population of Nigeria is largely rural, and the geographical remoteness of most rural areas tends to influence the availability and effectiveness of immunization campaigns across the country.[7] Immunization in Nigeria is provided through routine vaccination services and immunization programs aimed at reaching children who may have missed routine vaccination. It is free to all children under the age of 5 years, and is provided largely by the public health system (the three tiers of government – federal, state, and local government – playing specific and sometimes duplicating roles)[8] and non-governmental organizations or private providers,

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with wide rural–urban and regional disparities. The public health provision of immunization services is run by Local Government Areas (LGAs), which function ultimately under the directive of the State Ministry of Health (SMOH). Each of the 36 states has its own vaccine store, in addition to the six zonal stores and a national vaccine store.[9]

Supply-related (or provider-related) factors are clearly important; however, the adequate supply of vaccines does not necessarily translate into children being vaccinated. Several studies suggest that factors associated with vaccination demand/uptake and acceptance are even more complex,[10] emphasizing the urgency to eliminate the unnecessary inequities associated with norms and structural factors that may hinder increased vaccination uptake. Determinants of childhood vaccination uptake constitute a myriad of factors at the individual, family, and community levels. These include the socio-cultural context, local perceptions of decisional processes in households and of childhood diseases,[7,11–13] higher socioeconomic position, short distance to health facilities, ethnicity, quality of vaccination services, and the relationship between parents and health workers.[11,14] However, existing studies have not always considered the role of gender in childhood vaccination within the wider social contexts in which parents and their children reside; this study fills that gap.

In contrast to 'sex', which is determined by biology and the ability to bear a child, 'gender' refers to socially constructed roles, norms, and behaviors attributed to men and women in a given society.[15] Gender inequities refer to the unequal distribution of resources, power, responsibilities, and rights to women. Gender inequities are unfair, avoidable, and unnecessary, with underlying social structures and political, economic, and legal institutions systematically rendering women (and their children) vulnerable to varying health outcomes.[16] The structural factors that influence gender inequities determine how relationship power is embedded in social hierarchy; these structural factors may be similar across societies, but their manifestations vary within different social contexts with beliefs, norms, and practices.[17] Thus, the social contexts in which women reside are important determinants of health outcomes among them and their children.[18]

1.1. Conceptual framework

In 1998 Diderichsen and Hallqvist proposed a framework that integrates the wider structural social contexts within which individuals reside with the processes that place them in subordinate positions (in this case gender inequities), resulting in health outcomes.[19] This study uses an adaptation of that framework in explaining how childhood immunization (or the lack thereof) is a result of the gender power dynamics between societal- and individual-level factors that place women in disadvantaged positions to men (Figure 1). The social contexts or structural processes govern societal gender power dynamics and result in gender inequities.[16,17]

The social context in which women reside stratifies them into different social positions by generating and distributing power and risks differently, thereby demarcating distinct roles for men and women.[20] This gender discrimination, which is often rooted in patriarchal attitudes, systematically values the social status of men over women while marginalizing women, normalizing inequalities and indifference or barriers towards girls and women.[20] Social

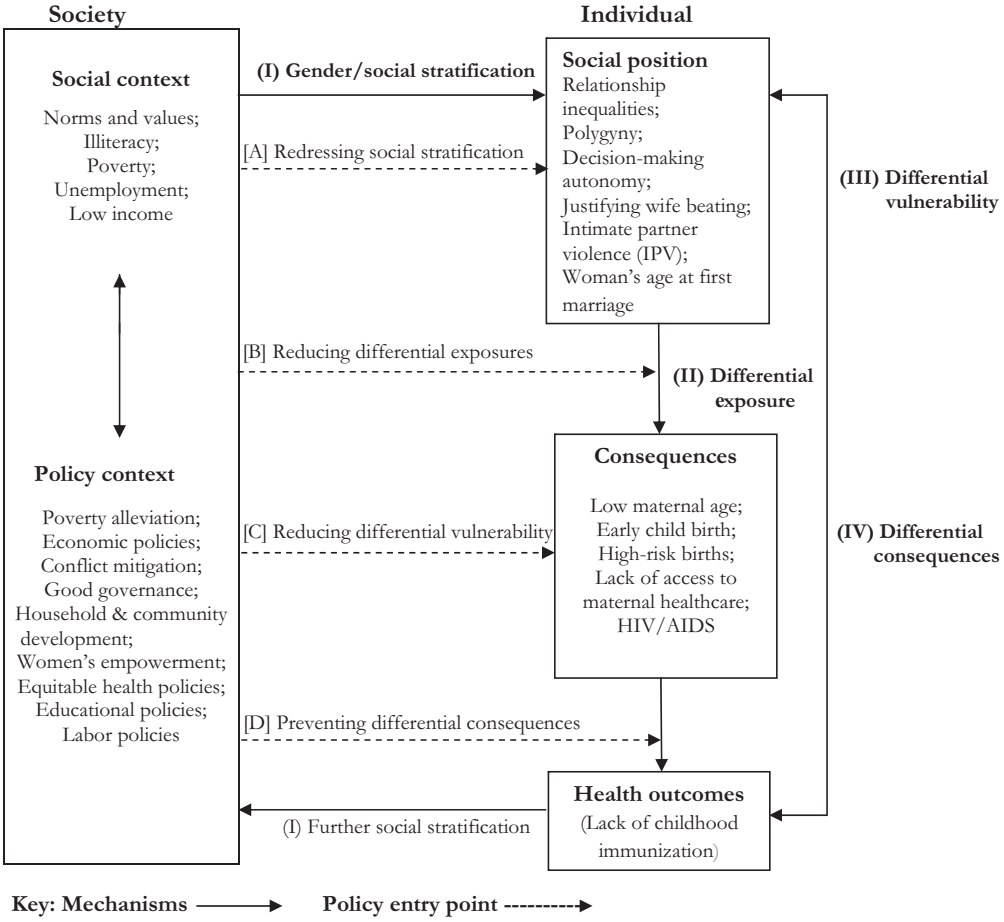

Figure 1. Theoretical framework for gender inequities and childhood immunization uptake.