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Male-female differences in households' resource allocation and decision to seek healthcare in south-eastern Nigeria: Results from a mixed methods study

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ABSTRACT

Ability to influence household decision-making has been shown to increase with improved social capital and power and is linked to better access to household financial resources and other services outside the household including healthcare.

To examine the male-female differences in household custody of financial resources, decision-making, and type of healthcare utilised, we used a mixed methods approach of cross-sectional household surveys and focus-group discussions (FGDs). Data was collected between 10 January–28 February 2011. We analyzed a sample of 411 households and a sub-sample of 223 households with a currently married head. We conducted six single-sex FGDs in 3 communities (1 urban, 2 rural) among a random sub-sample of participants in the survey. We performed univariate, bivariate, and logistic regression analyses with a 95% confidence interval. For the qualitative data, we performed thematic analysis where broad themes relevant to the research objective were abstracted.

In all households and in those with a married head, sick male members were less likely to forgo healthcare (aOR_{all}0.87, 95% CI 0.80–0.90; $aOR_{married}$0.52, 95% CI 0.18–0.83) and more likely to utilise formal healthcare relative to female sick members (aOR_{all}3.36, 95% CI 3.20–3.87; $aOR_{married}$19.50, 95% CI 9.62–39.52). Formal healthcare providers are medically trained while informal providers are untrained vendors that dispense medications for profit. There were more reports of sole custody of household resources among men within households with married heads. Joint decision-making on healthcare expenditure improved women's access to healthcare but is not reflective of unhindered access to household financial resources. Qualitatively, women spoke of seeking permission from male household head before expenditure was incurred, while male heads spoke of concealing household financial resources from their spouse.

Gender constructs and male-female differences have important effects on household resource allocation and healthcare utilisation.

1. Introduction

Globally, there is increasing interest in how household factors contribute to healthcare access (Goudge et al., 2009; Monteiro et al., 2017). This is informed by evidence which suggests that household-level factors play an important role in determining household members' access to healthcare (Pylypchuk and Kirby, 2017). While there are many barriers to healthcare access (Goudge et al., 2009), in many low-and-middle income countries (LMICs), economic cost (predominantly user fees and lost income) of healthcare is still a major barrier (Leive and Xu, 2008; Onah and Govender, 2014). Added to this are household-level characteristics including gender, employment status and members' autonomy in decision-making which have been found to exacerbate these barriers to healthcare access, with the most vulnerable being females and children within poor households (Aregbeshola, 2016).

According to the World Health Organization (WHO), gender refers to the "socially constructed characteristics of women and men – such as norms, roles and relationships of and between groups of women and men" (WHO, 2011, pg. 79). By this definition, gender ascribes different value and roles firstly between boys and girls and subsequently between men and women (Dasgupta, 2016). This further creates a male-female divide in the societal values and roles assigned to males and females (Quisumbing, 1996). While there are many enabling effects of male-female ascriptions, in the context of agency and autonomy in LMICs, there is concern that these ascriptions have the potential to create inequalities and inequities between men and women (Bolt and Bird,

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2003; Khera at al., 2014). In addition, these male-female gaps have adverse consequences for the development of women and their access to opportunities including healthcare (Adler at al., 2016).

Economically, in many LMICs, women still lag behind in education, employment, and income generation opportunities hence perpetuating these male-female inequalities (Wiig, 2013). Sen and Östlin (2008) found that a woman's ability to participate in household decision-making and exercise autonomy through unhindered access to household resources is based on her ability to earn enough income to contribute to household economic status. In LMICs, since women earn lower wages, their ability to contribute towards household economic decision-making is restricted (Acharya et al., 2010; Tiwari, 2015). In rural agrarian Nigeria, financial proceeds from farming are held with the male heads who decide on what commodities to consume (NBS, 2009). This has impact on women's autonomy in food and healthcare consumption decisions, and by extension, their health and developmental outcomes (Becker et al., 2006).

Healthcare providers vary considerably in cost and in quality in many LMICs. With the introduction of user-fees in many public health facilities in LMICs including Nigeria, healthcare costs have continued to increase and undermine access for the poor and most vulnerable (Meessen et al., 2009). While there are a few official exemptions to user-fees, informal user fees exist for utilisation of some of these services and non-hospital costs and drug costs have to be paid out-of-pocket (Hone et al., 2017). In addition, households may also be induced to use private sector and alternative providers in situations where public facilities face budgetary difficulties and non-availability of medications (WHO, 2016). We found limited published literature on household utilisation of a mix of healthcare providers as a potential coping mechanism when faced with healthcare costs. While this can help households cope with increasing healthcare expenditure, literature from LMICs have shown that some of these low-cost healthcare providers are unregulated (patent medicine vendors and *chemists*) (Webster, 2017) and hence utilisation can have adverse health consequences (Peters and Bloom, 2012; Uzochukwu et al., 2014). Furthermore, there is limited published literature on the determining effects of male-female differences on type of healthcare utilised during an illness episode.

While studies have investigated the influence of women's agency within households and utilisation of sex-specific healthcare (Matsumura and Gubhaju, 2001; WHO, 2005), fewer studies have investigated the male-female differences in the household-level decision to seek care and type of healthcare provider utilised. This dynamic is important to understand considering that there is even more limited published research in west Africa where there are prevailing norms about roles, agency and healthcare needs for male and females. To contribute to this limited literature, our research objective is to examine the extent to which there are existing male-female differences in access to healthcare services and type of facility utilised by different household members. In addition, we aim to examine the male-female differences in access and custody of resources within households in LMICs like those found in south-eastern Nigeria. We theorize that these differences are more pronounced when there are existing male-female differences in socio-economic status (economic activities, and income-generation abilities) of different household members.

2. Methods

2.1. Study design

This is a cross-sectional mixed-methods study where the quantitative component is a household survey and the qualitative component is focus group discussions (FGDs). The study was approved by the Faculty of Health Sciences human research ethics committee at the University of Cape Town, South Africa (HREC REF: 200/2010). Data was collected between 10 January–28February 2011. All participants were 18 years and older and provided both oral and written consent.

2.2. Study site

The study was conducted in Nsukka Local Government Area (NLGA) in south-eastern Nigeria. NLGA comprises one urban and 14 rural communities, with a population of almost 310,000, comprising approximately 63, 705 households (NBS, 2007). The urban community is a university town with a broader range of healthcare providers which include formal providers (namely public and private hospitals), primary healthcare centres and pharmacies, and informal providers (namely patent medicine vendors, PMVs, and *chemists*). According to the definition proposed by Oladepo and Lucas (2013, pg. 106), a PMV is "a person without formal training in pharmacy and who sells orthodox pharmaceutical products on a retail basis for profit". A *chemist* in this context is defined as a provider (predominantly a nurse) who has a kiosk where orthodox pharmaceutical drugs are sold, in contrast to PMVs who do not have any medical or pharmaceutical training. In the rural communities, primary health centres and PMVs are the predominant healthcare providers. *Chemists* and PMVs are unregulated. If there is need for hospital care, people will need to cover between 18 and 30 km to the nearest urban area.

2.3. Sampling and data collection

To examine the proportion of the population with outcomes of interest in-line with our study objectives, we adopted the following approach to determine the sample size. Since NLGA comprised 63,705 households in 2006, the population and number of households were extrapolated to 2010 figures using an annual 3% population growth-rate (NBS, 2009). Using Taro Yamane sample size specification (Taro, 1967), $n = \frac{N}{1+N(e)^2} = \frac{69,705}{1+69,705(0.05)^2} = 397$ households, the minimum representative sample size required was 397 households within a 5% error margin and 95% confidence interval. The sample size was increased to 411 households to allow for incomplete questionnaires.

A multi-stage sampling method was used to select households for the survey. We classified the one urban and 14 rural communities into enumerator areas (EAs) based on the established EAs used by the Nigerian National Bureau of Statistics (NBS, 2009). To ensure appropriate representation of urban and rural EAs, we stratified NLGA into urban and rural communities to represent 30% and 70% of the population respectively. In total, we selected 24 EAs (3 urban, 21 rural) based on probability-proportional to size (PPS) (Rosén, 1997) and 39 and 21 households were sampled in each of the urban and rural EAs respectively. More households were sampled in urban areas than in rural areas to account for the urban/rural percentage representation. In the second stage, we used a simple systematic random sampling method to identify survey households from each of the EAs. The sample of households was appropriately weighted in analysis using the inverse probability weighting method which denotes the inverse of the probability that the observation is included in the analysis due to the chosen sample design. We administered the questionnaires preferably to the household head or the spouse and in their absence, a senior household member.

Conceptually, we defined a household head as an individual who is identified or self-identifies as the head based on primary-income status and decision-making within households. This strategy combines two popular approaches to eliciting household headship: self-identification, and verification of status (Haddad et al., 1997; Modell and Hareven, 1973). There is no consensus on the processes involved in identifying household heads, age, sex, income, and gender are often used to elicit household headship based on the prevailing cultural and contextual norms within a study setting (Budlender, 2003). Age and sex was not a major consideration in our study since the average age of head of households was 51 years which we considered to fall within the economically productive age group, and over 70% of households had only one adult male member. We determined the head of each household by