



Published in final edited form as:

J Epidemiol Community Health. 2013 November 1; 67(11): 953–959. doi:10.1136/jech-2013-202647.

Healthcare Utilisation and Empowerment Among Women in Liberia

Heather Sipsma¹, Tamora A Callands², Elizabeth Bradley³, Benjamin Harris⁴, Billy Johnson⁵, and Nathan B Hansen²

¹Department of Women, Children and Family Health Science, College of Nursing, University of Illinois at Chicago, Chicago, Illinois, USA

²Department of Psychiatry, Yale School of Medicine, New Haven, Connecticut, USA

³Department of Health Policy and Administration, Yale School of Public Health, New Haven, Connecticut, USA

⁴Department of Psychiatry, A.M. Dogliotti College of Medicine, University of Liberia, Monrovia, Liberia

⁵John F. Kennedy Memorial Medical Center, Monrovia, Liberia

Abstract

Background—Many efforts have been undertaken to improve access to healthcare services in low-income settings; nevertheless, underutilisation persists. Women's lack of empowerment may be a central reason for underutilisation, but empirical literature establishing this relationship is sparse.

Methods—We conducted a cross-sectional study using data from the 2007 Liberia Demographic and Health Survey. Our sample included all non-pregnant women who were currently married or living with a partner (N=3925 unweighted). We used multivariate logistic regression to assess the associations between constructs derived from the Theory of Gender and Power (TGP) and healthcare utilisation.

Results—Two-thirds of women (65.6%) had been to a healthcare facility for herself or her children in the past 12 months. Constructs from the three major theoretical structures were associated with healthcare utilisation. Women with no education, compared with women with some education, were less likely to have been to a healthcare facility (OR=0.76; 95% CI 0.62 to 0.93) as were women who had experienced sexual abuse (OR=0.65; 95% CI 0.45 to 0.95) and women who were married (OR=0.69, 95% CI 0.54 to 0.88). Women in higher wealth quintiles, compared with women in the next lower wealth quintile, and women with more decision-making

Correspondence regarding this article should be directed to Dr Heather Sipsma, Department of Women, Children and Family Health Science, College of Nursing, University of Illinois at Chicago, 845 South Damen Avenue (MC 802), Chicago, IL 60612, USA; sipsmah@uic.edu.

Contributors: Drs. Sipsma, Callands, and Hansen conceptualised the study objective and analytic approach. Dr. Sipsma conducted all analyses and Drs. Sipsma, Callands, Bradley, and Hansen interpreted the results. Dr. Sipsma wrote the first draft of the paper, and all authors critically reviewed and edited the paper and approved its final version.

power had greater odds of having been to a healthcare facility (OR=1.22; 95% CI 1.10 to 1.36 and OR=1.10; 95% CI 1.01 to 1.20; respectively).

Conclusions—Strong associations exist between healthcare utilisation and empowerment among women in Liberia, and gender imbalances are prevalent. This fundamental issue likely needs to be addressed before large-scale improvement in health service utilisation can be expected.

INTRODUCTION

Many efforts have been undertaken to improve access to healthcare services in low-income settings, including reducing out-of-pocket expenses, increasing the number of healthcare clinics, improving transportation options and expanding health education.^{1–3} Nevertheless, underutilisation persists. Some researchers have posited that women’s lack of empowerment or ability to make their own choices may be a central reason for underutilisation. Although conceptual models positing a link between women’s empowerment and health behaviour, including healthcare utilisation, are widely endorsed,⁴ empirical literatures establishing this relationship is sparse.

Findings related to women’s empowerment and healthcare utilisation in low-income settings have been inconsistent and are limited in three ways. First, results are derived primarily from a handful of studies that examine utilisation of reproductive health services, such as antenatal care or skilled deliveries,^{5–12} which, although critical to women’s health, provide a narrow scope for understanding this relationship. Furthermore, this association may be confounded by complex and unmeasured effects, such as the strong traditions surrounding pregnancy and childbirth and the ability to travel while pregnant or in labour. Second, methodologies vary substantially within this body of literature and lack a guiding theoretical framework. As a result, the use of sociodemographic variables in particular varies widely between studies, which as one study has shown, can substantially alter observed statistical associations between empowerment and healthcare utilisation.⁵ Third, these studies are largely from Asia and East Africa^{5–16} and thus, may lack generalisability to other low-income areas of the world.

Accordingly, we aim to examine the association between empowerment and healthcare utilisation in Liberia, a low-income country in West Africa. We used the Theory of Gender and Power (TGP) to guide our empirical investigation. Developed by sociologist RW Connell, the TGP suggests that power dynamics between men and women are manifested in three major structures: sexual division of labour, sexual division of power and structure of social exposure and affective attachment (also known as the structure of cathexis).^{17,18} Each of these structures describe gendered relationships between men and women. Sexual division of labour refers to gendered economic inequality; for example, women have a greater tendency to stay at home than men and therefore, have a greater tendency to be unemployed. Additionally, younger age or lower household income may suggest greater dependence on a male partner for financial and instrumental support and therefore, may represent lower levels of empowerment. Sexual division of power refers to male partner dominance and represents the most commonly identified aspects of empowerment, and

structure of social exposure and affective attachment refers to gendered social norms and exposures, such as society's expectations of women with respect to marriage or sexuality. Marriage, for instance, may represent a loss of empowerment as some cultures and religions suggest lower autonomy among married women compared with unmarried women. According to the theory, these structures are distinct yet overlapping, may not be considered in isolation from one another and are maintained through societal and institutional social mechanisms.¹⁸¹⁹

We have chosen to examine this association among women in Liberia, a country whose healthcare infrastructure collapsed following 14 years of civil war. Given the limited healthcare options available, use of health services is dependent on healthcare seeking behaviour. We hypothesised that, consistent with the TGP, gendered power dynamics among Liberian women will be associated with healthcare utilisation and that disempowerment will be linked to lower healthcare utilisation. Findings from this study will inform future efforts for promoting healthcare utilisation and thus affect maternal and child health in Liberia and other low-income settings.

METHODS

Study design and sample

We conducted a cross-sectional study using self-reported data collected during the most recent Liberia Demographic and Health Survey (LDHS) in 2007. The LDHS is a household survey, funded by the US Agency for International Development (USAID) and designed to collect nationally representative estimates of population, health and nutrition indicators. Its sampling uses a two-stage stratified cluster design in which enumeration areas, stratified by region and area type (urban/ rural), are selected and then households are sampled from each of these areas. The women's questionnaire collects data from women ages 15 through 49 on a wide range of reproductive health and background characteristics.

To examine the association between empowerment and healthcare utilisation among women in Liberia, we limited our analytic sample to non-pregnant women who were currently married or living with a partner as they were the subsample for which data on many of our selected variables of interest were available (N=3925 unweighted). We excluded pregnant women from our analysis, because pregnancy is a time of increased healthcare utilisation and utilising health services during pregnancy may be confounded by additional factors. We further limited our sample to those with a valid response on our outcome measure for a total sample size of 3894 (99.2%). This research, as it pertains to publicly available, de-identified data, was exempt from Human Subjects Committee review.

Measures

Our primary outcome measure was derived from a single question asking respondents to report whether or not she had been to a health facility for care for herself or her children in the past 12 months.

Empowerment was measured with a series of items available in the LDHS that conceptually fit in the TGP framework (Figure 1) and followed previous literature that had adapted the TGP to assess HIV risk among women.¹⁸

Sexual division of labour—We assessed aspects of the sexual division of labour with many commonly used sociodemographic characteristics. We followed recommendations by Wingood and DiClemente,¹⁸ who suggest that the social mechanisms derived from the sexual division of labour result in inequities that manifest as economic exposures (income, education, employment) and socioeconomic risk factors (age). We therefore have included respondent age, education level (none or primary or higher) and current employment status (working or not). We also included region and area (urban or rural) of residence as indicators of economic exposures as they may represent access to resources and may thus reflect aspects of empowerment. We also included the LDHS's wealth index as a proxy for income. The wealth index was derived by using a combination of reported household assets, services and amenities and divided into quintiles.

Sexual division of power—We used the respondent's decision-making power, acceptance of intimate partner violence (IPV) and history of abuse to evaluate aspects of the sexual division of power. Five items measured the respondent's decision-making power. Respondents were asked who has the final say on specific household decisions: making large household purchases, making household purchases for daily needs, visits to family or relatives, what to do with the money the husband/partner earns and whether to borrow money and how much. Responses included the respondent alone, the respondent and her husband/partner, her husband/ partner alone or another person. Responses were recoded to indicate whether or not the respondent (alone or with her husband/partner) participates in the decision. We summed the five items to represent the number of decisions in which the respondent participates and divided this number by the number of valid responses. We then multiplied this quotient by 100 for an index ranging from 0% to 100%. Reliability for this measure was acceptable ($\alpha=0.73$).

Five items were also used to measure the respondent's acceptance of IPV; respondents were asked if wife beating was justified in the following situations: if she goes out without telling her husband/partner, if she neglects the children, if she argues with her husband/partner, if she refuses to have sex with her husband/partner and if she burns the food. Responses included agree, disagree and do not know; do not know responses were set to missing. We similarly computed a percentage of the scenarios in which respondents reported believing IPV was acceptable. Reliability for this measure was good ($\alpha=0.80$).

Physical abuse was a composite variable representing whether or not respondents had experienced any severe violence from her current husband/partner, including if he had ever kicked, choked or threatened or attacked her with a weapon. Sexual abuse represented whether or not respondents had experienced any sexual violence from her husband/partner, including if he had ever forced her to have sexual intercourse or engage in other sexual acts.

Structure of social exposure and affective attachment—These variables described the partnership and included the partner's age relative to the respondent's age. For analysis,

we created a variable to represent whether or not the partner was older than the respondent. We also considered marital status (married or not), whether or not the partner lives in the house with the respondent and partner's education relative to the respondent (less or equal or more).

Covariates—We also accounted for the influence of two additional control variables based on hypothesised associations with healthcare utilisation for the respondent or her children over the past 12 months: total number of household members and total number of children under five in her household. We hypothesised that more children in the household would increase the likelihood or need for seeking healthcare services and that more household members would reduce the likelihood that the mother would be the one responsible for seeking healthcare for her children.

Statistical analysis

We first generated weighted means and frequencies to describe our sample characteristics based on the TGP. We then assessed the unadjusted associations between these variables and healthcare utilisation using bivariate regression models and Rao-Scott χ^2 tests for continuous and categorical variables, respectively. To assess the adjusted associations between constructs from the TGP and healthcare utilisation, all covariates were simultaneously entered into a multivariate logistic regression model.

All analyses were weighted and accounted for the complex survey design. Because approximately 10% of responses were missing in our multivariate model, we used multiple imputations to generate missing values based on the other explanatory variables in our multivariate model. We generated 10 different datasets with imputed data using PROC MI in SAS V.9.2 (Carey, North Carolina, USA) and then used PROC MIANALYZE to derive overall estimates for our regression model. SAS V.9.2 was used to complete all analyses.

RESULTS

Sample characteristics from the TGP

Sexual division of labour—The average age of women in our sample was 33 years (Table 1). Approximately half (53%) had no education, 69% were working, 35% lived in urban areas and most lived in either Monrovia or the North Central region. Fairly equal proportions of our sample comprised the wealth quintiles.

Sexual division of power—Women in our sample frequently reported participating in decisions on household purchases for daily needs (91%), visits to family or relatives (79%) and large household purchases (75%; Table 2). Women were less likely to participate in decisions regarding the use of money, including what to do with the money the husband earns (68%) and whether to and how much money to borrow (59%). On average, women participated in 74% of these decisions, where applicable (Table 1). Almost half of our sample believed IPV was justified if she goes out without telling him (45%), if she neglects the children (49%) or if she argues with him (48%). One in four believed that IPV was justified if she refuses to have sex with him (26%), and 14% if she burns the food. Women

believed IPV was justified in an average of 37% of these situations. Approximately 16% of women had experienced severe physical abuse and 10% had experienced sexual abuse.

Structure of social norms and affective attachment—Most partners were older than the respondents (89%); 85% of them lived with the respondent and approximately 47% had education levels higher than the respondents.

Healthcare utilisation

Two-thirds of women (66%) had been to a healthcare facility for herself or her children in the last 12 months. Bivariate analysis indicated having been to a healthcare facility was significantly associated with aspects of the sexual division of labour (younger age, more education, living in an urban area, living in Monrovia and more wealth), the sexual division of power (greater decision-making power and not having experienced sexual abuse) and the structure of social exposure and affective attachment (living together instead of being married; all $p < 0.05$; Table 1).

Our multivariate analysis demonstrated similar results (Table 3). In the fully adjusted model, two constructs from the sexual division of labour, education and wealth, were significantly associated with healthcare utilisation for herself or her children in the last 12 months. Women with no education were less likely than women with a primary or higher level of education to have been to a healthcare facility in the past year (OR=0.76; 95% CI 0.62 to 0.93). Additionally, women in higher wealth quintiles had greater odds of having been to a healthcare facility compared with women in lower wealth quintiles (OR=1.22; 95% CI 1.10 to 1.36). Two constructs from the sexual division of power were also associated with healthcare utilisation. Women with more decision-making power had higher odds of having been to a healthcare facility (OR=1.10; 95% CI 1.01 to 1.20), and women who had experienced sexual abuse had significantly lower odds of having been to a healthcare facility in the past year (OR=0.65, 95% CI 0.45 to 0.95). One construct from the structure of social exposure and affective attachment was associated with healthcare utilisation. Women who were married had lower odds of having been to a healthcare facility in the past year (OR=0.69, 95% CI 0.54 to 0.88). Last, women who lived with more household members had significantly lower odds of having been to a healthcare facility (OR=0.95; 95% CI 0.91 to 0.99) and women with more children had significantly higher odds of having been to a healthcare facility for herself or her children in the last 12 months (OR=1.23; 95% CI 1.11 to 1.37).

DISCUSSION

Our findings suggest low healthcare utilisation overall and strong associations between healthcare utilisation and empowerment among our sample of non-pregnant women in relationships living in Liberia. Furthermore, our results suggest that the TGP may be an appropriate theoretical framework for conceptualising empowerment. This study is thus one of the first to use a theoretical framework and nationally representative data to document these findings in western Africa.

Gender power imbalances are high in Liberia and thus there is increased potential for women to be dependent on male partners. More than half of women in our sample had no education and lived in rural areas that lack access to many of the resources found in urban areas. Decision-making power was relatively high on average. Women believed wife beating overall is justified approximately one-third of the time; this index however, masks variation between items. For instance, almost half of women in our sample believed wife beating is justified if she goes out without telling him, neglects the children or argues with him, but only 14% believed wife beating is justified if she burns the food. Additionally, approximately 16% of women have suffered from physical abuse and almost 10% have suffered from sexual abuse from their own partner. These rates are striking as they do not represent lifetime prevalence estimates. Last, although only 64% of women were married, 85% of them lived with their partner, which could exacerbate gendered power imbalances.

These power imbalances from the three major structures of the TGP were significantly associated with healthcare utilisation. Findings from the sexual division of labour suggest that education and wealth are both independently associated with healthcare utilisation. These findings add to literature that has generally found associations between the use of health services and one or the other but not both simultaneously.¹⁰¹³¹⁵²⁰

From the sexual division of power, more decision-making power and not experiencing sexual abuse from one's partner were significantly associated with healthcare utilisation, suggesting that wealth and education are insufficient proxies of empowerment, similar to conclusions of earlier research.⁵¹⁰ As a result, education or economic empowerment in isolation may not have the intended effects for empowering women in relationships. Empowerment within the context of relationships, including decision-making power and IPV, must also be addressed. Furthermore, although experiencing physical abuse is not significant at $p < 0.05$, it is marginally significant and appears to be associated with greater healthcare utilisation. This association suggests that physical abuse victims visit healthcare facilities, and healthcare providers should therefore be trained to care for and provide resources for these women.

Last, findings from the structure of social exposure and affective attachment suggest that women who are not married experienced more empowerment than those who are married. This association, importantly, is significant even when accounting for other characteristics. Married women therefore may be an appropriate target population for interventions aiming to improve empowerment and promote healthcare utilisation in Liberia and in other similar populations.

Despite the strengths of this study, including using a nationally representative sample, a theoretical framework and a broad measure of healthcare utilisation, there are limitations for consideration. First, data are self-reported and therefore, particularly with respect to the constructs described by the sexual division of power, may be subject to misclassification. In addition, because whether or not a woman had an older partner was derived using age in years, there is probably some misclassification as a result. Furthermore, some measures, such as experiences of abuse, may be subject to social desirability bias and may be under-reported. Second, our analysis is cross-sectional and therefore, we cannot assert causality or

direction of effect. Third, our outcome variable, healthcare utilisation, captures use of services for the woman and her children. This variable therefore may not accurately represent the healthcare utilisation of the mother herself. It may also capture visits for reproductive health services, because although these women were non-pregnant, they may have been pregnant in the past year. Additionally, women could have received care outside of a healthcare facility. In Liberia, this scenario is unlikely, however, given the poor health infrastructure and the lack of community health workers. These results may be less generalisable to settings with large networks of trained community workers. Given the level of training of community health workers; however, women are likely to have to attend a healthcare facility at least once a year for herself or one of her children. Last, variables used to represent constructs from the TGP were not developed specifically to do so and thus may not fully fit the intended construct.

Several implications emerge from this empirical work. First, the prevalence of gender imbalance is substantial in Liberia, despite the country taking steps to improve the situation of women. This fundamental issue likely needs to be addressed before large-scale improvement in health service utilisation can be expected. Embedding gender-based dialogue or other interventions that address gender imbalance might be a fruitful avenue for developing more effective health systems strengthening interventions in the future. Second, two-thirds of these women do visit healthcare facilities. Interventions to promote empowerment could therefore be implemented at healthcare facilities if physicians and other clinical staff were trained appropriately. Although additional research is needed to identify the most effective strategies for promoting empowerment in these settings, the health system could be a point of entry for addressing gender imbalances. Last, although our research focused on women, efforts to address these issues will most likely have to include men to educate them about the importance of health services to promote and maintain the family's health. The work suggests that such health educational efforts must target men and women together, particularly if the woman is married, as the men's views may be very impactful on the women's behaviours.

What is already known on this subject

Many efforts have been undertaken to improve access to healthcare services in low-income settings, but underutilisation persists. Women's lack of empowerment may be a central reason for underutilisation; however, empirical evidence linking women's empowerment and healthcare utilisation is limited.

What this study adds

•Gender power imbalances are high in Liberia and strong associations exist between healthcare utilisation and empowerment among non-pregnant women in relationships. Constructs from each of the three major structures of the Theory of Gender and Power were significantly associated with healthcare utilisation thus providing possible evidence for this comprehensive and theoretical approach. Results suggest several recommendations for future research, policy, and practice.

REFERENCES

1. Burgert C, Bigogo G, Adazu K, et al. Impact of implementation of free high-quality care on health facility attendance by sick children in rural western Kenya. *Trop Med Int Health*. 2011; 16:711–720. [PubMed: 21447057]
2. Criel B, Van der Stuyft P, Vanberghe W. The Bwamanda hospital insurance scheme: effective for whom? A study of its impact on hospital utilization patterns. *Soc Sci Med*. 1999; 48:897–911. [PubMed: 10192557]
3. Wilkinson D, Gouws E, Sach M, et al. Effect of removing user fees on attendance for curative and preventive primary health care services in rural South Africa. *Bull World Health Organ*. 2001; 79:665–671. [PubMed: 11477970]
4. Ostlin P, Eckermann E, Mishra U, et al. Gender and health promotion: a multisectorial policy approach. *Health Promot Int*. 2007; 21:25–35. [PubMed: 17307954]
5. Bloom S, Wypij D, Das Gupta M. Dimensions of women's autonomy and the influence on maternal health care utilization in a north Indian city. *Demography*. 2001; 38:67–78. [PubMed: 11227846]
6. Chattopadhyay A. Men in maternal care: evidence from India. *J Biosoc Sci*. 2012; 44:129–153. [PubMed: 22004658]
7. Fotso J, Ezeh A, Essendi H. Maternal health in resource-poor urban settings: how does women's autonomy influence the utilization of obstetric care services? *Reprod Health*. 2009; 6:9. [PubMed: 19531235]
8. Haque S, Rahman M, Mostofa G, et al. Reproductive health care utilization among young mothers in Bangladesh: does autonomy matter? *Womens Health Issues*. 2012; 22:e171–e180. [PubMed: 21968029]
9. Woldemicael G. Do women with higher autonomy seek more maternal health care? Evidence from Eritrea and Ethiopia. *Health Care Women Int*. 2010; 31:599–620. [PubMed: 20526926]
10. Woldemicael G, Tenkorang E. Women's autonomy and maternal health-seeking behavior in Ethiopia. *Matern Child Health J*. 2010; 14:988–998. [PubMed: 19882240]
11. Dalal K, Shabnam J, Andrews Chavez J, et al. Economic empowerment of women and utilization of maternal delivery care in Bangladesh. *Int J Prev Med*. 2012; 3:628–636. [PubMed: 23024852]
12. Mumtaz Z, Salway S. 'I never go anywhere': extricating the links between women's mobility and uptake of reproductive health services in Pakistan. *Soc Sci Med*. 2005; 60:1751–1765. [PubMed: 15686807]
13. Burton D, Flannery B, Onyango B, et al. Healthcare-seeking behaviour for common infectious disease-related illnesses in rural Kenya: a community-based house-to-house survey. *J Health Popul Nutr*. 2011; 29:61–70. [PubMed: 21528791]
14. Furuta M, Salway S. Women's position within the household as a determinant of maternal health care use in Nepal. *Int Fam Plan Perspec*. 2006; 32:17–27.
15. Taffa N, Chepngeno G, Amuyunzu-Nyamongo M. Child morbidity and healthcare utilization in the slums of Nairobi, Kenya. *J Trop Pediatr*. 2005; 51:279–284. [PubMed: 16000345]
16. Malhotra C, Malhotra R, Ostbye T, et al. Maternal autonomy and child health care utilization in India: results from the National Family Health Survey. *Asia Pac J Public Health*. 2012
17. Connell, R. *Gender and Power*. Stanford, CA: Stanford University Press; 1987.
18. Wingood G, DiClemente R. Application of the Theory of Gender and Power to examine HIV-related exposures, risk factors, and effective interventions for women. *Health Educ Behav*. 2000; 27:539–565. [PubMed: 11009126]
19. Pulerwitz J, Gortmaker S, DeJong W. Measuring sexual relationship power in HIV/STD research. *Sex Roles*. 2000; 42:637–660.
20. Ahmed S, Cranga A, Gillespie D, et al. Economic status, education and empowerment: implications for maternal health service utilization in developing countries. *PLoS ONE*. 2010; 5:e11190. [PubMed: 20585646]

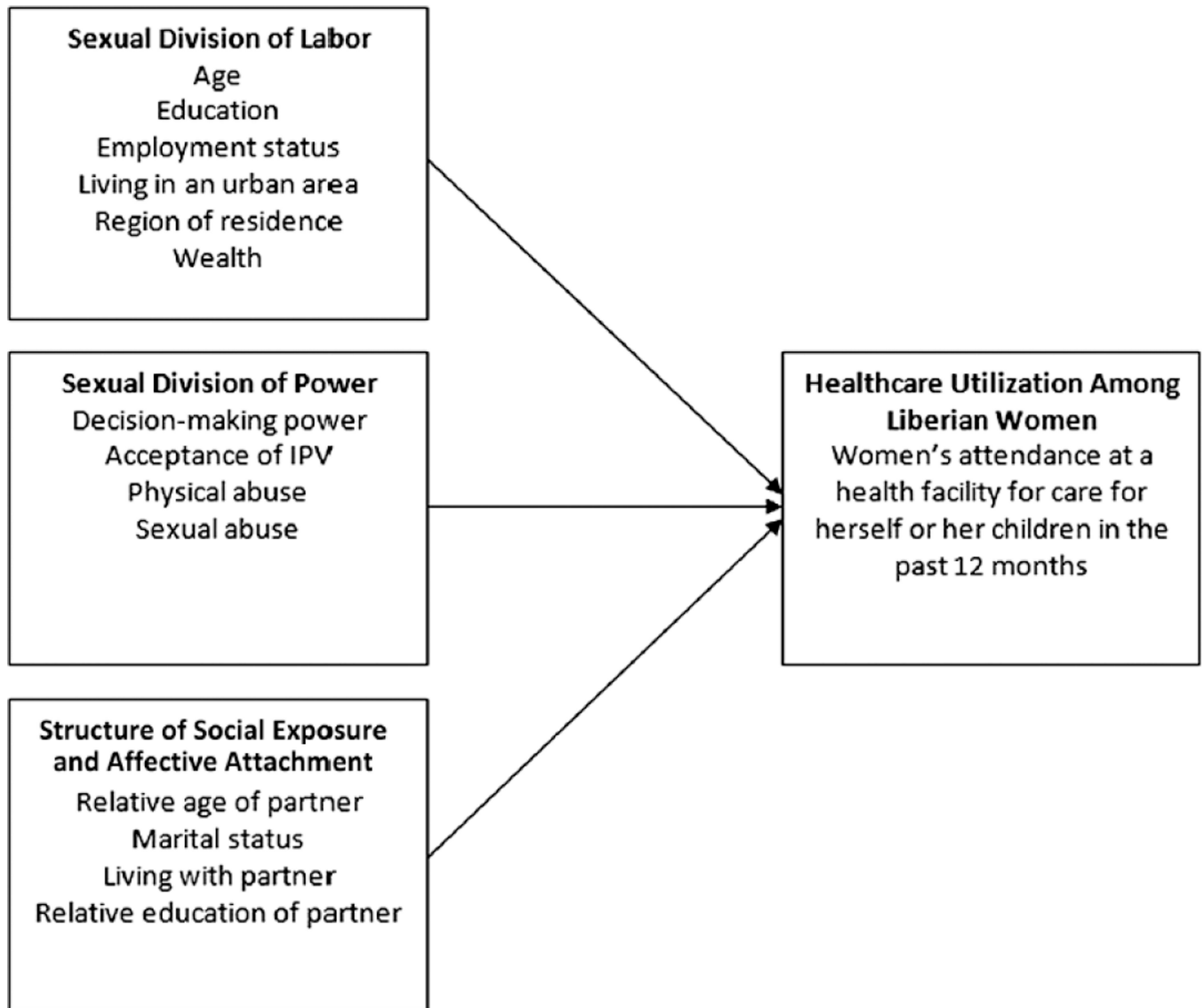


Figure 1.
The Theory of Gender and Power adapted for examining healthcare utilisation among women with the Liberia Demographic Health Survey.

Table 1Sample characteristics of non-pregnant women in Liberia who are currently married or living with a partner[†]

	Overall (N=3894)	Used healthcare facility in last 12 months (65.6%)	Did not use healthcare facility in last 12 months (34.4%)	p Value [‡]
<i>Sexual division of labour</i>				
Age	33.1 (0.19)	32.6 (0.22)	34.1 (0.28)	<0.001
Education [§]				<0.001
No education	52.5%	47.8%	61.3%	
Primary or higher	47.5%	52.2%	38.8%	
Currently working [¶]				0.945
Yes	68.7%	68.7%	68.8%	
No	31.3%	31.3%	31.2%	
Area				<0.001
Urban	35.0%	40.1%	25.4%	
Rural	65.0%	59.9%	74.6%	
Region				<0.001
Monrovia	26.1%	30.5%	17.6%	
North Western	7.6%	6.2%	10.4%	
South Central	15.6%	15.5%	15.9%	
South Eastern A	6.1%	5.4%	7.5%	
South Eastern B	6.2%	5.6%	7.3%	
North Central	38.4%	36.8%	41.4%	
Wealth index				<0.001
Poorest	20.0%	16.1%	27.4%	
Poorer	21.7%	20.1%	24.6%	
Middle	21.1%	21.1%	21.2%	
Richer	19.8%	23.0%	13.8%	
Richest	17.4%	19.8%	13.0%	
<i>Sexual division of power</i>				
Percentage of household decisions in which respondent participates ^{¶¶}	74.3 (0.88)	75.8 (0.92)	71.6 (1.50)	0.011
Percentage of scenarios in which IPV is justifiable ^{††}	36.7 (0.80)	35.8 (1.02)	38.4 (1.25)	0.105
History of abuse				
Physical abuse ^{‡‡}	16.1%	17.2%	14.0%	0.059
Sexual abuse ^{§§}	9.9%	8.4%	12.7%	0.011
<i>Structure of social norms and affective attachment</i>				
Older partner ^{¶¶}				0.731
Yes	88.8%	88.9%	88.4%	
No	11.2%	11.1%	11.6%	
Marital status				<0.001
Married	64.3%	60.2%	72.1%	

	Overall (N=3894)	Used healthcare facility in last 12 months (65.6%)	Did not use healthcare facility in last 12 months (34.4%)	p Value [‡]
Living together	35.7%	39.8%	27.9%	
Partner lives in the house ^{†††}				0.531
Yes	85.1%	84.8%	85.8%	
No	14.9%	15.2%	14.2%	
Partner's education compared to respondent ^{†††}				0.328
Less education	5.8%	5.9%	5.5%	
Equal education	47.3%	47.9%	46.3%	
More education	46.9%	46.2%	48.2%	
<i>Additional controls</i>				
Number of household members	6.3 (0.11)	6.3 (0.12)	6.3 (0.15)	0.899
Number of children 5 years old or younger in household	1.4 (0.04)	1.5 (0.04)	1.4 (0.06)	0.085

[†] Values presented are weighted means and SEs for continuous variables and weighted percents for categorical variables.

[‡] p Values derived from Rao-Scott χ^2 tests for categorical variables and weighted linear regression models for continuous variables to determine unadjusted differences between those who have and have not been to a healthcare facility in the last 12 months.

[§] 5 Responses are missing.

[¶] 20 Responses are missing.

^{††} 26 Responses are missing.

^{†††} 879 Responses are missing.

^{§§} 878 Responses are missing.

^{¶¶} 134 Responses are missing.

^{†††} 47 Responses are missing.

^{††††} 108 Responses are missing.

IPV, intimate partner violence.

Table 2

Description of sexual division of power among non-pregnant women in Liberia who are currently married or living with a partner[†]

	Overall (N=3894)	Used healthcare facility in last 12 months (65.6%) (%)	Did not use healthcare facility in last 12 months (34.4%) (%)	p Value [‡]
Respondent participates in decisions about ... [§]				
Making large household purchases	75.2	77.7	69.8	<0.001
Making household purchases for daily needs	90.9	91.9	88.8	0.035
Visits to family or relatives	79.3	82.1	75.4	<0.001
What to do with money husband earns	68.4	68.9	66.7	0.429
Whether to borrow money and how much	58.7	59.0	57.4	0.613
Wife beating justified if... [¶]				
She goes out without telling him	45.3	44.6	46.6	0.469
She neglects the children	48.8	48.3	49.7	0.529
She argues with him	48.4	47.1	50.9	0.135
She refuses to have sex with him	25.5	23.5	29.1	0.003
She burns the food	14.2	14.4	13.8	0.698
History of abuse				
Physical abuse ^{††}	16.1	17.2	14.0	0.059
Sexual abuse ^{‡‡}	9.9	8.4	12.7	0.011

[†] Values presented are weighted percents.

[‡] p Values derived from Rao-Scott weighted χ^2 tests.

[§] Missing values range from 24 to 135.

[¶] Missing values range from 42 to 71.

^{††} 879 Responses are missing.

^{‡‡} 878 Responses are missing.

Table 3

Weighted logistic regression models using constructs derived from the Theory of Gender and Power to explain healthcare utilisation in the past 12 months among non-pregnant women in Liberia who are currently married or living with a partner

	OR (95% CI) N=3894
<i>Sexual division of labour</i>	
Age	0.99 (0.98 to 1.00)
Education	
No education	0.76 (0.62 to 0.93) **
Primary or higher	1.00
Currently working	1.18 (0.97 to 1.43)
Urban area	1.27 (0.90 to 1.79)
Region	
Monrovia	1.00
North Western	0.69 (0.39 to 1.22)
South Central	1.02 (0.66 to 1.58)
South Eastern A	0.90 (0.57 to 1.43)
South Eastern B	0.81 (0.52 to 1.27)
North Central	1.00 (0.66 to 1.51)
Wealth index	1.22 (1.10 to 1.36) **
<i>Sexual division of power</i>	
Percentage of household decisions in which respondent participates [†]	1.10 (1.01 to 1.20) *
Percentage of scenarios in which IPV is justifiable [†]	0.97 (0.90 to 1.05)
History of abuse	
Physical abuse	1.25 (0.93 to 1.69)
Sexual abuse	0.65 (0.45 to 0.95) *
<i>Structure of Social exposure and affective attachment</i>	
Older partner	0.93 (0.67 to 1.29)
Married	0.69 (0.54 to 0.88) **
Partner lives in the house	1.07 (0.83 to 1.37)
Partner's education compared to respondent	
Less education	0.93 (0.61 to 1.42)
Equal education	1.05 (0.87 to 1.27)
More education	1.00
<i>Additional controls</i>	
Number of household members	0.95 (0.91 to 0.99) *
Number of children 5 years old or younger in household	1.23 (1.11 to 1.37) **

* p<0.05.

** p<0.01.

[†] Estimate is per 25% increase.

IPV, intimate partner violence.