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Women's Empowerment in the Context of Millennium Development Goal 3: A Case Study of Married Women in Ghana

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Abstract This paper assesses women's empowerment in Ghana in the light of the Millennium Development Goal 3. Data for the study were drawn from the 2008 Ghana Demographic Health Survey with an analytic sample of 1,876 married women aged 15–49. Using binary logistic regression in determining the factors that influence women empowerment, this paper examines the relationship between wealth and women's involvement in household decision-making in the context of healthcare, large household purchases, daily house hold purchases and mobility. The findings show that wealthier married women were significantly more likely to be involved in decision-making on their own healthcare (OR = 2.14, $p \leq 0.001$). Also, age, tertiary education and employment significantly shaped the involvement of married women in household decision-making in Ghana. Surprisingly, married women in the Upper East region (the second poorest) were significantly more likely to be involved in three measures of decision-making except for decisions on large household purchases relative to those in the Greater Accra region (the capital). Policies oriented towards an increase in accessibility to tertiary education, employment equity and the creation of income generating activities for women would enhance women's empowerment in Ghana.

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1 Introduction

In 2000, the United Nations (UN) system developed eight Millennium Development Goals (MDGs) as a basis for measuring progress towards the eradication of global poverty. MDG 3 is aimed at promoting gender equality and women's empowerment. This goal also includes a target on education, women's employment, and political representation. It was agreed by member states of the UN that gender inequality not only decreases the likelihood of achieving the other goals, but also that advancing gender equality and women's empowerment depends on progress made on each of the other goals (UNDG 2010; UNDP 1995). Hence, the eradication of gender inequality and women's empowerment are integral to the attainment of the Millennium Development Goals (MDG Monitor 2007).

There are a number of indices that exist for measuring empowerment; however, there is much debate as to what really constitutes empowerment and how it can be attained (Kabeer 1999). In the broadest sense, empowerment reflects the extent to which women have gained economic and political power. It thus attempts to measure wellbeing and women's role as agents in society (Bardhan and Klasse 1997). Kabeer (1999) explains that women's empowerment can be seen as a process in which the following elements must be considered: awareness/consciousness, choice alternatives, resources, voice, and agency and participation. Agency and participation refers to the ability of women to engage in decision-making. This decision-making reflects women's ability to make choices over both strategic life choices and choices related to daily life. Similarly, Bloom et al. (2001) classified women's autonomy into: control over finances, decision-making, power, and freedom of movement. Subsequently, Charmes and Wieringa (2003) argue that women's empowerment is possible when women act on their own behalf or have agency, which may imply meaningful and purposeful interaction and further, when women are accepted as full and equal partners in all levels of decision-making about their lives. It is within this understanding that we examine the association between empowerment of married women in Ghana and wealth, age, education, employment, region, and place of residence. Married women were chosen as the focus of the study because of the deep-seated cultural views of women as subordinates to their husbands and also as a result of the masculine and paternalistic structures in the country (Adjasi and Osei 2007; Awumbila 2006). Consequently, knowing the determinants of women's empowerment has significant implications for Ghanaian married women and the achievement of MDG 3, in addition to policy options for achieving desired development goals.

Ghana is traditionally a male-dominated society with women's perspective rarely valued (Heenan 2012; USAID 2006). This implies that the power over household decision-making lies with the husband in married couple households, creating a gender disparity in the country. In Ghana's bid to promote gender equality and the empowerment of women (Millennium Development Goal 3), a number of policies have been proposed to bridge the gap existing between men and women. Yet, the implementation of these policies has been slow and there are significant gender disparities in Ghana (CSP 2010; UNDP 2007). Similarly, gender mainstreaming has not yet been fully implemented in the country (Mehra and Gupta 2006). Even though Ghana is a signatory to the UN convention on the elimination of all forms of discrimination against women (CEDAW), there are still several

subtle forms of discrimination against women (CSP 2010). In view of this, much of the research on women's empowerment in Ghana is policy oriented (Kwapong 2007; Chao 1999), but there has been limited work on the actual factors influencing the empowerment of married women in Ghana. Further, the limited work done is mostly descriptive in nature. Hence, this study seeks to understand the determinants of married women's empowerment in Ghana and to assess the geographical variations in empowerment. The specific objective is to investigate women's involvement in household decision-making on issues related to women's own healthcare, large and daily household purchases, and decisions on visits to their family members or relatives. This paper adds to the body of knowledge on factors that predict women's involvement in household decision-making in Ghana.

2 Understanding the Context of Women's Empowerment

Our attempt to explain the determinants of women's empowerment in the Ghanaian context is conceptualized in four inter-related hypotheses. First, we hypothesize that wealthier married women are more likely to be involved in decision-making. Awumbila (2006) and Mehra (1997) argue that women in Ghana have a higher incidence of poverty than men and this leads to their weak autonomy in decision-making. Buor (2004) echoes this view when he finds poverty as a factor preventing women in the Brong Ahafo region of Ghana from accessing health services. Additionally, studies by Njau et al. (2006) and Gwatkin (2005) have also shown that poorer people are often sick and they use the health facilities less frequently than the richer folks. This is further highlighted by Sathar and Kazi (2000) and Khadr (2009) who show that the more affluent and educated women in the society are better informed and have more control over their health than their poorer and uneducated counterparts. Conversely, Acharya et al. (2010) posit that in Nepal, as women get richer, they are less likely to take part in decision-making. On balance, existing studies indicate that the wealthier a woman is, the greater her involvement in decision-making since she is more independent.

We also hypothesize that the relationship between wealth and married women's involvement in decision-making is affected when we control for age. Age influences the autonomy of women's decision-making in developing countries (Sathar and Kazi 2000). According to Acharya et al. (2010), increased age of women is positively associated with women's decision-making on their own healthcare, large household purchases, daily household purchases, and visits to family members or friends. In view of these findings, it is possible that age may ameliorate or exacerbate the relationship between the wealth index of married women and their involvement in decision-making since decision-making improves with age and experience.

Third, we expect that the relationship between wealth and married women's involvement in decision-making will be attenuated by employment status and level of education since these influence autonomy. Acharya et al. (2010), Becker et al. (2006), Gupta and Yesudian (2006) Heaton et al. (2005) and Jin (1995) assert that there is a positive association between education and women's autonomy in decision-making. The same authors also find a link between employment of women and decision-making. This finding is reiterated by Tebekaw (2011), who reports that women's employment status and their educational attainment are the major pathways through which the decision-making autonomy of women is asserted. Both factors influence how wealth affects married women's involvement in decision-making. In this study, wealth index was constructed without women's employment status and their level of education. This is because both

variables have an independent effect on women's involvement in decision-making (Rutstein and Johnson 2004).

Fourth, we hypothesize that the relationship between wealth and married women's involvement in decision-making is affected by region and place of residence (urban or rural). Mckay and Aryeetey (2004) posit that at an aggregated national level in Ghana, women face higher levels of deprivation compared to men. This presupposes differences in wealth between the men and women across the ten regions in Ghana. This is confirmed by Stewart and Langer (2007) as they affirm that there are significant differences in terms of regional relative wealth in Ghana. The Greater Accra, Western and Ashanti regions have a lower incidence of poverty while the Northern, Upper East and Upper West have a higher incidence of poverty. Between 1992 and 1999, the trend has not changed except for the Northern region, which now has an increase in relative wealth. Breaking down the regions into rural and urban areas, Acharya et al. (2010) and Tebekaw (2011) argued that compared to urban areas, women from rural areas are significantly less likely to be involved in household decision making. The above hypotheses were investigated in the context of other theoretically relevant covariates. The findings have implication for policy and do enhance our understanding of the factors shaping gender inequality and women's empowerment in context.

3 Methods

Data for the analysis are drawn from the 2008 Ghana Demographic Health Survey (GDHS). GDHS is a national-level population and health survey conducted in Ghana as part of the Global Demographic and Health Surveys (DHS) programme. The 2008 survey was administered by the Statistical Service of Ghana in close collaboration with other stakeholders in various sectors of government, research, civil society organisations, and international partners (USAID, UNFPA, and UNICEF). The 2008 DHS sample was randomly collected and representative of the 10 regions in the country. The survey contains information on gender empowerment in Ghana. The GDHS identified 5,096 women aged 15–49 from 11,778 households out of which 4,916 were interviewed, resulting in a response rate of 97 %. Approximately 4,769 eligible men aged 15–59 were also identified, with 4,568 interviewed from the same household resulting in a response rate of 96 % (Ghana Statistical Service 2009). The data are grouped into 8 elements. The segment of couples (N = 1,883) is selected for the purposes of this study, specifically, married women in this segment. The DHS collected information that provides, among other things, predictors of gender empowerment. This includes specific data on women's empowerment such as control or participation in decision-making and control over the use of their own earnings.

Missing data on the various variables used in the study was below 1 % of the total sample (1,883). In view of its insignificant effect on the final analyses, the listwise deletion technique was used. The cases having missing data were deleted directly from the sample. In all, a total of 7 cases with missing data were deleted which adds up to 0.37 % of the total sample for the category of married women. Hence, the analytic sample was 1,876.

3.1 Measures of Outcome Variable

Women's empowerment is the dependent variable. Based on Charmes and Wieringa's (2003) definition of gender empowerment, a proxy of women's empowerment was created

for the purposes of the study. Women's empowerment was assessed through four measures: involvement in decision-making on health care, involvement in decision-making on large household purchases, involvement in decision-making on daily household purchases, and involvement in decision-making on visits to family or relatives.

The original DHS questionnaire asked about four areas of married women's involvement in decision-making. These are own health care, making major household purchases, making purchases for daily household needs and visits to her family or friends. Each question had five responses: (1) respondent alone; (2) respondent and husband/partner; (4) husband/partner alone; (5) someone else and (6) others. To create a binary variable for the analysis, we grouped the first two responses 1 and 2 (in which she has some power) and responses 4-6 (in which she has no say in the decision). For the dichotomous variable, responses 1 and 2, are categorised as involved in decision-making and coded as 1, and responses 4-6 are categorised as not involved in decision-making and coded as 0.

3.2 Explanatory Variables

The key independent variable used in the study is wealth. The wealth index is a composite indicator constructed as a measure of economic status in the DHS data set. The 2008 GDHS constructed the wealth quintile index from weighted scores on household ownership of consumer items and dwelling characteristics. Demographic and Health Surveys do not include direct questions on women's income or expenditure, thus, we measured household wealth by means of an index based on household ownership of consumer durables (such as a television and a bicycle; ownership of agricultural land; materials used for housing construction; and the availability of amenities such as electricity, source of drinking water, and type of toilet facility) that tend to be correlated with women's household economic status. The index, constructed using principal components analysis, is a composite measure of the cumulative living standard of a household, which places individual households on a continuous scale of relative wealth (Acharya et al. 2010). The wealth index is divided into population quintiles, with the lowest quintile representing the poorest 20 % and the highest quintile representing the wealthiest 20 % of households in Ghana. The wealth index defined in this manner captures well the relative economic status within Ghana, and it correlates strongly with the wellbeing of women (Acharya et al. 2010).

The reasons for creating this index are as follows: many people do not know their income or only know it in broad ranges; and people try to hide their income from interviewers, or do not inform other household members of their income. Further, the reporting of unearned income (interest on loans, property rents, or gambling) is problematic. Wealth represents a more permanent status than does income or consumption. Normally, there are two other principal types of variables that are associated with socio-economic status: type of occupation and level of education. These two types are deliberately left out of the set of indicator variables to enable the creation of a pure economic variable. Also, education and occupation have their own effect on health status and the use of health services, which may offset low economic status (Rutstein and Johnson 2004).

The household wealth index in the data set is common to both married men and women. However, it is the household wealth status of married women that is used in the study. Following Rutstein and Johnson (2004), wealth index is differentiated into five different forms: (a) Poorer (b) Poor (c) Middle (d) Richer and (e) Richest. Women's household wealth index served as a key indicator for economic status and this helped us to examine the relationship between the various levels of wealth and the empowerment of married women.

The other covariates were introduced into the analyses in three categories. First, age is considered as a priori variable because much of the research done in the area of women's autonomy has shown that the ages of women are associated with their autonomy in decision-making (Acharya et al. 2010). Second, socio-economic factors such as highest level of education and employment status are positively associated with the empowerment of women. Third, region and place of residence (Rural or Urban) are also added as predictive factors. The subsequent variables were chosen because they could either improve or worsen the relationship between wealth and the empowerment of married women.

3.3 Analysis

Logistic regression was conducted using STATA version 11. A binary logistic regression model is used when the dependent variable is dichotomous (Agresti and Finlay 2009). An internal consistency reliability test was conducted for the measures of women's empowerment. A Cronbach's alpha of 0.71 was obtained, which shows that the measure was moderately reliable. Associations between the predictive variables (Socio-demographic) factors and four proxy variables of women's empowerment were explored using cross tabulations and Chi squared tests. An alpha level of 0.05 was used as the threshold of statistical significance. The procedure used for including the covariates in the model was based on the forward selection approach and theoretical underpinnings. This procedure begins with none of the variables, and adds one variable at a time to the model until reaching a point where no remaining variable not yet in the model makes a significant partial contribution to predicting *Y*. At each step, the variable added is the one that is most significant, having the smallest *p* value (Agresti and Finlay 2009).

4 Results

4.1 Descriptive Analyses

Table 1 shows the percentage of married women who report being empowered by either making a specific household decision alone or by making the decision jointly with their husbands. Cross-tabular results show a significant relationship between women's empowerment and the socio-demographic factors. From Table 1, 63.20 % of the total sample is involved in decision-making concerning their own health care. About 57 % of these married women are also involved in decision-making on large household purchases. This can be compared to 76.20 % of married women who are involved in decision-making on daily household purchases and 80.70 % of those who are involved in decision-making on visits to family members or relatives. Overall, a greater percentage of women are involved in decision-making either pertaining to their own health or in regards to decisions on household issues.

Participation in 'own healthcare' decision-making is positively correlated with wealth, age, and level of education. With regards to wealth, involvement in decision-making on 'own healthcare' increased from 67.8 % for those in the middle quintile, to 73.7 % for those in the richer quintile. This positive relationship is consistent with decision-making on large household purchases (48.3–65.2 %) and daily household purchases (74–80.2 %) but not consistent with decision-making on visits to family or relatives.

Table 1 Summary Statistics of predictor variables of women empowerment (involvement in decision making) in percentages from 2008 Ghana demographic health survey (2008) (N = 1876)

Independent variables	Own health care	Large household purchases	Daily household purchases	Visits family/ relatives
Key independent variable				
Wealth index				
Poorest	61.3	48.3	74.0	77.4
Poorer	58.9	54.9	75.9	80.6
Middle	67.8	61.0	77.3	84.5
Richer	73.7	62.4	79.3	83.0
Richest	72.3	65.2	80.2	84.1
Control variables region				
G. Accra	61.7	59.0	73.9	82.0
Central	76.2	61.4	77.2	83.2
Western	66.8	59.7	77.6	78.1
Volta	66.2	65.6	84.1	82.2
Eastern	74.3	60.9	79.9	84.9
Ashanti	71.9	70.3	80.2	88.0
Brong Ahafo	47.2	51.4	63.9	71.5
Northern	67.9	58.2	72.8	82.8
Upper East	75.0	38.9	91.1	92.9
Upper West	51.3	41.2	69.0	63.6
Education				
No education	62.3	49.8	75.2	80.3
Primary	66.8	55.7	73.9	76.5
Secondary	67.9	63.9	79.5	84.1
Tertiary	84.2	77.2	89.5	93.0
Employment (past 12 months)				
Not employed	50.0	42.1	54.2	62.5
Employed	68.0	58.9	79.9	83.7
Age				
15–19	42.3	25.0	55.8	65.4
20–24	61.0	48.9	68.1	76.2
25–29	65.9	55.2	76.3	78.1
30–34	67.2	57.6	79.2	82.7
35–39	67.1	62.0	77.9	85.3
40–44	69.8	61.3	83.0	83.0
45–49	70.4	65.6	83.3	87.1
Residence				
Urban	70.5	61.4	79.4	83.9
Rural	63.4	54.5	75.5	79.7
Total	63.2 %	56.6 %	76.2 %	80.7 %

All Chi square(χ^2) test showed statistically significant association with $p \leq 0.05$ at 95 % CI

There is a consistent increase in the proportion of married women who are involved in decision-making on all four measures of women's empowerment, when age is considered. For autonomy over own health care, the proportion of married women increased from 42.3 % for married women aged 15–19 to 70.4 % for those aged 45- 49. The proportion of married women who have autonomy over large household purchases increased from 25 % for women aged 15–19 to 65 % for women aged 45–49. Similar to this is married women's involvement in decision-making on visits to their family members or relatives. The proportion of married women increased from 65.4 % for women aged 15–19 to 87.1 % for women aged 45–49. Surprisingly, there is a drop in the proportion of women within the ages 40–44 making decisions on large household purchases and visits to family members or relatives.

The proportion of employed women involved in decision-making is higher than the proportion of unemployed women involved in decision-making on all four measures of empowerment. For instance, with regards to involvement in decision-making on own healthcare, the proportions of employed and unemployed married women are 68 and 50 %, respectively. In terms of decisions on large household purchases, the proportions are 58.9 and 42.1 %, and in the case of decisions on daily household purchases, the proportions are 79.9 and 54.2 %, respectively. In relation to decisions on visits, the proportions are 83.7 and 62.5 %, respectively.

There is a consistent increase in the proportion of married women involved in decision-making with an increase in educational levels. For autonomy over own health care, the proportion of married women increased from 62.3 % for married women with no education to 84.2 % for those with tertiary education. The proportion of married women who have autonomy over large household purchases increased from 49.8 % for women with no education to 77.2 % for women with tertiary education. Similar to this is married women's involvement in decision-making on daily household purchases; the proportion of married women increased from 75.2 % for women with no education to 89.5 % for women with tertiary education.

The percentage of urban women is more likely to be involved in decision-making on all four measures relative to their rural counterparts. For instance, regarding involvement in decision-making on own health care, the proportions of urban and rural married women are 70.5 and 63.4 %, respectively. In terms of decisions on large household purchases, the proportions are 61.4 and 54.5 %, and in the case of decisions on daily household purchases, the proportions are 79.4 and 75.5 %, respectively.

4.2 Bivariate Analyses

Table 2 illustrates the bivariate relationships between all the predictor variables and the four levels of women's empowerment. Starting from the key independent variable, each of the four outcome measures of women's empowerment is significantly associated with the wealth quintile ($p \leq 0.05$). Thus, the richer and the richest married women, compared to the poorest, have higher odds of autonomy over decision-making on their own healthcare, large household purchases, and visit to family or relatives ($p \leq 0.05$). Similarly, age is significantly associated with all four measures of women's empowerment. Older married women, when compared with the younger married women, are more likely to have autonomy in all four dimensions of decision-making. Thus, women between the ages of 45–49 have higher odds of involvement in decision-making than women between the ages of 15–19. Further, employed married women are more likely to be involved in decision-making on all four measures ($p \leq 0.001$) than those who are unemployed. Again, married

Table 2 Bivariate analysis of women empowerment (involvement in decision making) & predictor variables in the Ghana Demographic Health Survey (2008) N = 1876

Independent variables	Own health care		Large household purchases		Daily household Purchases		Visits family/ relatives	
	Odds ratios	SE	Odds ratios	SE	Odds ratios	SE	Odds ratios	SE
Key Independent variable								
Wealth index[a]								
Poorer	0.90	(0.12)	1.30*	(0.17)	1.11	(0.17)	1.22	(0.20)
Middle	1.33	(0.21)	1.67***	(0.25)	1.20	(0.21)	1.59*	(0.31)
Richer	1.77***	(0.27)	1.78***	(0.25)	1.36	(0.22)	1.43*	(0.25)
Richest	1.64***	(0.24)	2.00***	(0.28)	1.43*	(0.24)	1.54*	(0.28)
Control variables								
Region[e]								
Central	1.99*	(0.54)	1.10	(0.27)	1.20	(0.34)	1.08	(0.35)
Western	1.25	(0.26)	1.03	(0.21)	1.22	(0.28)	0.78	(0.19)
Volta	1.22	(0.27)	1.32	(0.28)	1.87*	(0.50)	1.01	(0.28)
Eastern	1.79**	(0.39)	1.08	(0.22)	1.40	(0.34)	1.24	(0.34)
Ashanti	1.59*	(0.32)	1.64*	(0.32)	1.43	(0.32)	1.61	(0.43)
Brong Ahafo	0.55**	(0.12)	0.73	(0.16)	0.63*	(0.14)	0.55*	(0.14)
Northern	1.31	(0.25)	0.97	(0.18)	0.94	(0.19)	1.06	(0.25)
Upper East	1.86**	(0.41)	0.44***	(0.09)	3.63***	(1.10)	2.82**	(0.95)
Education[d]								
Primary	1.22	(0.16)	1.27	(0.16)	0.94	(0.13)	0.80	(0.12)
Secondary	1.28*	(0.14)	1.78***	(0.19)	1.28*	(0.16)	1.30	(0.18)
Tertiary	3.23**	(1.20)	3.41***	(1.11)	2.81*	(1.24)	3.26*	(1.72)
Employment (past 12 months)[c]								
Employed	2.13***	(0.31)	1.97***	(0.29)	3.36***	(0.50	3.08***	(0.48)
Age[b]								
20–24	2.13*	(0.65)	2.87**	(0.98)	1.69	(0.52)	1.70	(0.55)
25–29	2.64***	(0.79)	3.70***	(1.24)	2.56**	(0.78)	1.90*	(0.60)
30–34	2.79***	(0.84)	4.08***	(1.37)	3.01***	(0.93)	2.52**	(0.81)
35–39	2.79***	(0.84)	4.90***	(1.66)	2.80***	(0.86)	3.06***	(1.00)
40–44	3.14***	(0.99)	4.75***	(1.65)	3.87***	(1.27)	2.58**	(0.88)
45–49	3.25***	(1.05)	5.72***	(2.03)	3.97***	(1.35)	3.57***	(1.30)
Residence[f]								
Urban	1.38**	(0.14)	1.33**	(0.13)	1.25	(0.15)	1.32*	(0.17)

Reference categories:

[a] Poorest

[b] 15–19 years

[c] Not employed

[d] No Education

[e] Greater Accra

[f] Rural

OR odds ratio

Numbers in parenthesis () are standard errors

* $p \leq 0.05$; ** $p \leq 0.01$; *** $p \leq 0.001$

women who are educated above the primary level are more likely to be involved in decision-making than those who do not have any education ($p \leq 0.05$). The only exception is found on involvement in decision-making on visits to family members or relatives.

In Ghana, the proportion of married women in the highest wealth quintile and highly educated category is greatest in the Greater Accra region. Ghana's capital city is located in this region; hence, Greater Accra is used as the reference category. However, a consistent significant relationship cannot be found in all four measures of decision-making, relative to the Greater Accra region. Invariably, married women from the Central, Eastern, Ashanti, and Upper East region are more likely to be involved in decision-making regarding their own healthcare, while those from the Upper West region are less likely to be involved in such decision-making, relative to those in the Greater Accra region. On women's involvement in decision-making on large household purchases, women from the Ashanti region relative to those in the Greater Accra region are more likely to be involved in decision-making, while those in the Upper East and Upper West region are less likely to be involved in this form of decision-making. Further, married women in the Volta region and Upper East region are more likely to be involved in decision-making on daily household purchases relative to those from the Greater Accra region ($p \leq 0.05$), while those from the Brong Ahafo region are less likely to be involved in such decision-making when compared to those from the Greater Accra region. Also, women from the Upper East region of Ghana are more likely to be involved in decision-making on visits to family members or relatives when compared to those from Greater Accra, while women from the Brong Ahafo and Upper West regions are significantly less likely to be involved in such decision-making. Married women from the urban areas, relative to those from the rural areas, are significantly more likely to be involved in decision-making on own healthcare, large household purchases, and visits to family members or relatives. Conversely, there is no significant relationship between women in the urban areas and decision-making on daily household purchases when compared with those in the rural areas.

4.3 Multivariate Analyses

The effect of the covariates on the relationship between wealth and each dimension of decision-making was examined. Tables 3, 4, 5 and 6 present the results from four logistic regressions for each measure of women's empowerment. The first column (model 1) presents a model that contains women's wealth index and age. The second column (model 2) adds the socio-economic variables of employment status and level of education. The final column (model 3) adds region and type of residence (Rural/Urban). The three models correspond to the last three hypotheses.

4.3.1 Decision-Making on Health Care

Table 3, illustrates how the relationship between wealth and married women's involvement in decision-making on their own healthcare is affected when we control for socio-demographic factors. With a significant relationship between wealth index and involvement in decision-making already established in Table 2, when we control for age in model 1 of Table 3, the wealthier (richer and richest) married women are more likely than the poorest married women to be involved in decision-making on their own healthcare ($p \leq 0.001$). However, the richer women have higher odds ratio (1.77) than the richest women (1.56). Age has a significant positive association with involvement in decision-making at this level; the older a woman is, the greater her odds ratio compared to those between 15 and 19 years. In

Table 3 Multivariate analysis of women empowerment (involvement in decision making on own health care) on wealth index & predictor variables in the Ghana Demographic Health Survey (2008) (N = 1876)

Independent variables	Model 1		Model 2		Model 3	
	OR	SE	OR	SE	OR	SE
Key independent variable						
Wealth index[a]						
Poorer	0.90	(0.12)	0.89	(0.13)	0.92	(0.14)
Middle	1.31	(0.21)	1.29	(0.23)	1.31	(0.25)
Richer	1.77***	(0.27)	1.75***	(0.30)	2.14***	(0.46)
Richest	1.56***	(0.24)	1.50*	(0.27)	2.06**	(0.53)
Control variables						
Age[b]						
20–24	1.96*	(0.61)	1.94*	(0.61)	2.25*	(0.07)
25–29	2.46**	(0.75)	2.28**	(0.70)	2.67**	(0.84)
30–34	2.53**	(0.77)	2.28**	(0.70)	2.65**	(0.84)
35–39	2.56**	(0.78)	2.22*	(0.69)	2.49**	(0.79)
40–44	2.94***	(0.93)	2.60**	(0.84)	3.09***	(1.03)
45–49	3.00***	(0.98)	2.65**	(0.88)	3.04***	(1.04)
Employment(past 12 months)[c]						
Employed			2.12***	(0.32)	1.93***	(0.30)
Education[d]						
Primary			1.16	(0.16)	1.23	(0.18)
Secondary			1.03	(0.14)	1.10	(0.16)
Tertiary			2.40*	(1.10)	2.77*	(1.12)
U Region[e]						
Central					2.78***	(0.83)
Western					1.89**	(0.45)
Volta					2.07**	(0.53)
Eastern					2.81***	(0.72)
Ashanti					2.24***	(0.50)
Brong Ahafo					0.87	(0.22)
Northern					2.87***	(0.70)
Upper East					3.82***	(1.04)
Upper West					1.42	(0.36)
Residence[f]						
Urban					1.03	(0.16)
Wald Chi square (χ^2)					76.65	
Prob > χ^2					0.001	
Pseudo R^2	0.019		0.032		0.061	

Reference categories:

[a] Poorest

[b] 15–19 years

[c] Not employed

[d] No Education

[e] Greater Accra

[f] Rural

OR odds ratio

Numbers in parenthesis () are standard errors

* $p \leq 0.05$; ** $p \leq 0.01$; *** $p \leq 0.001$

Table 4 Multivariate analysis of women empowerment (involvement in decision making on large house hold purchases) on wealth index & predictor variables in the Ghana Demographic Health Survey (2008) (N = 1876)

Independent variables	Model 1		Model 2		Model 3	
	OR	SE	OR	SE	OR	SE
Key independent variable						
Wealth index[a]						
Poorer	1.32*	(0.18)	1.17	(0.17)	1.06	(0.16)
Middle	1.66***	(0.26)	1.39*	(0.23)	1.24	(0.23)
Richer	1.79***	(0.26)	1.41*	(0.23)	1.39	(0.28)
Richest	1.90***	(0.27)	1.36	(0.24)	1.40	(0.34)
Control variables						
Age[b]						
20–24	2.62**	(0.90)	2.55**	(0.89)	2.67**	(0.93)
25–29	3.41***	(1.16)	3.13***	(1.07)	3.34***	(1.16)
30–34	3.62***	(1.23)	3.34***	(1.14)	3.41***	(1.18)
35–39	4.51***	(1.54)	4.02***	(1.38)	4.15***	(1.45)
40–44	4.32***	(1.51)	3.95***	(1.40)	4.21***	(1.51)
45–49	5.25***	(1.88)	4.80***	(1.74)	4.92***	(1.81)
Employment (past 12 months)[c]						
Employed			1.88***	(2.29)	1.87***	(0.29)
Education[d]						
Primary			1.23	(0.17)	1.19	(0.17)
Secondary			1.57***	(0.21)	1.46**	(0.21)
Tertiary			2.94**	(1.03)	3.06**	(1.09)
Region[e]						
Central					1.19	(0.32)
Western					1.13	(0.25)
Volta					1.58	(0.39)
Eastern					1.15	(0.27)
Ashanti					1.82**	(0.39)
Brong Ahafo					0.92	(0.22)
Northern					1.59*	(0.36)
Upper East					0.65	(0.16)
Upper West					0.75	(0.18)
Residence[f]						
Urban					0.88	(0.13)
Wald Chi square (χ^2)					**147.5**	
Prob > χ^2					0.001	

Table 4 continued

Independent variables	Model 1		Model 2		Model 3	
	OR	SE	OR	SE	OR	SE
Pseudo R^2	**0.028**		**0.041**		**0.058**	

Reference categories:

[a] Poorest

[b] 15–19 years

[c] Not employed

[d] No Education

[e] Greater Accra

[f] Rural

OR odds ratio

Numbers in parenthesis () are standard errors

* $p \leq 0.05$; ** $p \leq 0.01$; *** $p \leq 0.001$

model 2, when we control for employment status and level of a woman's education, wealthier married women are 1.75 times more likely of being involved in decision-making on their own health than the poorer and the poorest women. Richer women still have higher odds ratio (1.75) than the richest women (1.5). The effect of wealth was slightly attenuated by employment and education. Nonetheless, employed married women and married women with tertiary education have higher odds of participating in decision-making on their own healthcare, relative to the unemployed women and women with no education. In model 3, when we hold constant region and place of residence, the relationship between the wealthier women (richer and the richest) and involvement in decision-making remains the same as in model 2. The wealthier married women are more likely to be involved in decision-making on their own health than the poorer women ($p \leq 0.01$). Unexpectedly, the odds ratios for both the richer and the richest quintile increase by 0.39 and 0.56 respectively. This indicates the greater effect of region and urban residence on wealth. Married women in the Central, Western, Volta, Eastern, Ashanti, Northern and Upper East region have higher odds of being involved in decision-making concerning their own health care than those in the Greater Accra region. In examining the overall model, the likelihood ratio Chi square of 147.06 with p value of 0.001 tells us that the model fits significantly better than a model with no predictors.

4.3.2 Decision-Making on Large Household Purchases

Table 4, illustrates how the relationship between wealth and married women's involvement in decision-making on large household purchases is affected when we control for socio-demographic factors. Similar to the bivariate findings, in the context of wealth, older women are more likely to be involved in decisions regarding large household purchases. Thus, the wealthier a married woman is, relative to the poorest, the greater her likelihood of being involved in this type of decision-making. Model 1, shows a significant positive association between age and involvement in decision-making on large household purchases ($p \leq 0.001$). There is, however, a decrease in the odds ratios of women between ages 40 and 44 by 0.18. In model 2, when the employment status of women and their level of education are kept constant, only the middle and the richer married women are

Table 5 Multivariate analysis of women empowerment (involvement in decision making on daily house hold purchases) on wealth index & predictor variables in the Ghana Demographic Health Survey (2008) (N = 1876)

Independent variables	Model 1		Model 2		Model 3	
	OR	SE	OR	SE	OR	SE
Key independent variable						
Wealth index[a]						
Poorer	1.11	(0.17)	1.08	(0.18)	1.19	(0.21)
Middle	1.17	(0.21)	1.10	(0.21)	1.16	(0.25)
Richer	1.38	(0.23)	1.27	(0.24)	1.45	(0.35)
Richest	1.32	(0.22)	1.16	(0.24)	1.37	(0.39)
Control variables						
Age[b]						
20–24	1.60	(0.49)	1.48	(0.47)	1.62	(0.54)
25–29	2.45**	(0.74)	2.07*	(0.65)	2.30*	(0.75)
30–34	2.84***	(0.88)	2.27*	(0.72)	2.58**	(0.85)
35–39	2.66**	(0.82)	2.01*	(0.64)	2.21*	(0.73)
40–44	3.67***	(1.21)	2.82**	(0.96)	3.16***	(1.12)
45–49	3.78***	(1.30)	2.93**	(1.04)	3.27***	(1.20)
Employment (past 12 months)[c]						
Employed			3.20***	(0.50)	3.02***	(0.49)
Education[d]						
Primary			0.94	(0.14)	0.98	(0.16)
Secondary			1.26	(0.20)	1.33	(0.23)
Tertiary			2.88*	(1.37)	3.02*	(1.46)
Region[e]						
Central					1.38	(0.43)
Western					1.45	(0.39)
Volta					2.50**	(0.77)
Eastern					1.64	(0.46)
Ashanti					1.70*	(0.42)
Brong Ahafo					0.81	(0.22)
Northern					1.63	(0.43)
Upper East					5.98***	(2.09)
Upper West					1.42	(0.39)
Residence[f]						
Urban					1.20	(0.22)
Wald Chi square(χ^2)					**155.33**	
Prob > χ^2					**0.001**	
Pseudo R^2	**0.019**		**0.049**		**0.077**	

Reference categories:

[a] Poorest

[b] 15–19 years

[c] Not employed

[d] No Education

[e] Greater Accra

[f] Rural

OR odds ratio

Numbers in parenthesis () are standard errors

* $p \leq 0.05$; ** $p \leq 0.01$; *** $p \leq 0.001$

Table 6 Multivariate analysis of women empowerment (involvement in decision making on visit to family/ relatives) on wealth index & predictor variables in the Ghana Demographic Health Survey (2008) (N = 1876)

Independent variables	Model 1		Model 2		Model 3	
	OR	SE	OR	SE	OR	SE
Key independent variable						
Wealth index[a]						
Poorer	1.23	(0.20)	1.25	(0.22)	1.38	(0.26)
Middle	1.56*	(0.31)	1.55*	(0.33)	1.58*	(0.37)
Richer	1.43*	(0.26)	1.38	(0.28)	1.31	(0.33)
Richest	1.47*	(0.27)	1.32	(0.29)	1.16	(0.36)
Control variables						
Age[b]						
20–24	1.60	(0.52)	1.43	(0.48)	1.66	(0.58)
25–29	1.80	(0.57)	1.46	(0.48)	1.72	(0.59)
30–34	2.34**	(0.76)	1.80	(0.60)	2.14*	(0.75)
35–39	2.91**	(0.96)	2.14*	(0.73)	2.63**	(0.94)
40–44	2.43**	(0.83)	1.76	(0.62)	2.11*	(0.78)
45–49	3.37***	(1.23)	2.46*	(0.93)	2.91**	(1.14)
Employment (past 12 months)[c]						
Employed			2.99***	(0.49)	2.88***	(0.49)
Education P[d]						
Primary			0.74	(0.12)	0.77	(0.13)
Secondary			1.18	(0.20)	1.21	(0.22)
Tertiary			3.22*	(1.80)	3.38*	(1.91)
Region[e]						
Central					1.00	(0.35)
Western					0.71	(0.20)
Volta					0.99	(0.31)
Eastern					1.11	(0.35)
Ashanti					1.65	(0.47)
Brong Ahafo					0.60	(0.18)
Northern					1.37	(0.41)
Upper East					3.57***	(1.37)
Upper West					0.50*	(0.15)
Residence[f]						
Urban					1.14	(0.23)
Wald Chi square(χ^2)					**151.75**	
Prob > χ^2					**0.001**	
Pseudo R^2	0.018		**0.047**		**0.084**	

Reference categories:

[a] Poorest

[b] 15–19 years

[c] Not employed

[d] No Education

[e] Greater Accra

[f] Rural

OR odds ratio

Numbers in parenthesis () are standard errors

* $p \leq 0.05$; ** $p \leq 0.01$; *** $p \leq 0.001$

significantly more likely to be involved in decision-making on large household purchases relative to poorest married women. Consequently, employed married women are significantly more likely to be involved in decision-making at this level, relative to the unemployed ($p \leq 0.001$). Women having secondary education and above are 1.57 times more likely to be involved in decision-making on large household purchases than women with no education ($p \leq 0.01$). In model 3, when we hold constant region and place of residence (rural/urban), there is no significant association between women's wealth index and their involvement in decision-making on large household purchases even though wealthier married women continue to be more likely to have autonomy than the poorer women. Conversely, age continues to have a positive significant association with women involvement in decision-making on large household purchases ($p \leq 0.001$). Employed married women and married women with secondary education and above continue to maintain significant association. It is only women from the Ashanti and Northern region relative to those in the Greater Accra region that are significantly more likely to be involved in decision-making on large house hold purchases. Consequently, it can be concluded that age, employment status, and a woman's level of education are better predictors of a married woman's involvement in decision-making on large hold purchases than their wealth index.

4.3.3 Decision-Making on Daily Household Purchases

Table 5 illustrates how the relationship between wealth index and women's involvement in decision-making on daily household purchases is affected when we control for socio-demographic factors. Having confirmed a significant relationship at the bivariate level, adding age to wealth index gives us our first model. Model 1, from Table 5, shows no significant relationship between any of the levels of wealth index and involvement in decision-making on daily household purchases even though the odds ratios show a greater likelihood. On the contrary, age is significantly associated with involvement in decision-making on daily household purchases ($p \leq 0.01$). Thus, there is a greater likelihood that older married women are involved in decision-making at this level compared to women between the ages of 15–19. In model 2, when we hold constant the employment status of women and their level of education, there is still no significant relationship between women's wealth and their involvement in decision-making on daily household purchases. Age continues to have a significant association with involvement in decision-making at this level with a marginal decrease in the odds ratios at every age category compared to those aged (15–19). Additionally, employed married women and married women with a tertiary level of education are significantly more likely to be involved in decision-making on daily household purchases relative to the unemployed and women with no education ($p \leq 0.001$/ $p \leq 0.05$). In model 3, when we hold constant region and place of residence (rural/urban), there is still no significant relationship between married women's wealth index and their involvement in decision-making on daily household purchases. Consequently, age continues to be significantly associated with women involvement in decision-making at this level. What is noted is the fact that the odds ratios at each age level increase quite significantly when we hold constant region and place of residence. Further, women from the Volta region, Ashanti and Upper East regions are significantly more likely to be involved in decision-making on daily household purchases than women in the Greater Accra region.

4.3.4 Decision-Making on Visits to Family Members or Relatives

Table 6, illustrates how the association between wealth index and women's involvement in decision-making on visits to family members or relatives is affected when we control for socio-demographic factors. Having confirmed a significant relationship at the bivariate level, adding age to wealth index gives us our first model. Model 1, from Table 6, continues to show a significant relationship at all the three levels of wealth index relative to the poorest and involvement in decision-making on visits to family members or relatives. However, with regards to the levels of wealth, women in the middle quintile have a higher odds ratio (1.56) than women with the higher (1.43) and highest (1.47) quintile. Further, women within the age range 30–34 and above are significantly ($p \leq 0.05$) more likely to be involved in decision-making on visits to family members or relatives than women within the age range 15–19. Surprisingly, women between the ages of 35–39 have higher odds ratio (2.91) than women between the ages of 40–44 (2.43). In model 2, when employment status of women and their level of education are kept constant, only women in the middle quintile, relative to those in the lowest quintile, have a significant likelihood of being involved in decision-making on visits to family members or relatives. Women within the ages 35–39 and 45–49 are the only categories that are significantly more likely to be involved in decision-making on visits to family members or relatives. Further, employed married women and married women with tertiary education are significantly more likely to be involved in decision-making on visits to family members or relatives compared to the unemployed and women with no education ($p \leq 0.001$ and $p \leq 0.05$). In model 3, when we hold constant region and place of residence (rural/urban), there is no significant association between women's wealth quintile and their involvement in decision-making on visits to family members and relatives. Rather, married women between the ages 30–34 and above have a significant likelihood of being involved in this type of decision-making. Again, women between the ages 30–34 and 35–39 have higher odds ratios than women within the ages 40–44. Employed married women and tertiary educated women continue to have a more significant likelihood of being involved in decision-making on visits to family members or relatives, relative to unemployed women and women with no education. Women from the Upper East region compared to those from the Greater Accra region are significantly more likely to be involved in decision-making on visits to family members or relatives while women from the Upper West region are significantly less likely to be involved in this kind of decision-making, compared to the women from the Greater Accra region.

In all of the multivariate models, after controlling for education level in addition to employment, the effect of wealth reduces, suggesting that the effect of wealth is at least partly the result of the differences in education and employment across wealth levels. Links between socioeconomic conditions, such as wealth and education, and women's empowerment are clearly complex. A major analytical challenge is to define the causal pathways operating from distal socioeconomic factors to proximal individual behaviours and ultimately psychosocial factors. Different socioeconomic factors may affect women empowerment at different times in their life course.

5 Discussion

The results showed that wealthier married women are more likely to be involved in decision-making on their own healthcare. Moreover, age, tertiary education, and being

employed, relative to their reference categories, do shape all four dimensions of married women's empowerment significantly.

Consistent with the findings of Buor (2004) and Awumbila (2006), poorer women have weaker autonomy in decision-making. This relationship is, however, influenced by a number of socio-demographic factors such as age, employment, education, region of origin, and place of residence (Rural/Urban). This is also consistent with existing literature which shows that more affluent women have greater control over their health care (Njau et al. 2006; Khadr 2009). This notwithstanding, we found that women in the richer class are more likely to report greater control over decision on their health care as compared to those in the richest class. This could be attributed to the fact that, although both richer and richest married women have greater access to the National Health Insurance Scheme (Dixon et al. 2011), the richest women can afford to employ the services of personal doctors. By so doing, the richest married women entrust major decisions concerning their own heath care to their personal doctors, and hence they assume lesser responsibility and control over decisions on their healthcare and wellbeing compared to the richer women.

Further, decision-making on large household purchases is attenuated by employment status and education, while the relationship between the richest women and their involvement in decision-making became non-significant when the region and place of residence are controlled for. This finding is consistent with the results of Acharya et al. (2010) that as women get richer they are less likely to be involved in decision-making on large household purchases. In Ghana, the wealthier married women often have maid-servants/helpers who are in-charge of the household purchases and for which reason they do not partake in decisions on such activities (Chao 1999). The relationship between wealth index and married women's involvement in decision-making on large household purchases disappears when type of residence and region are accounted for. This could be attributed to first, the type of family structure of the woman (Brown 1994), and secondly, the large disparities of the incidence of relative wealth that exist between the various regions in Ghana (Stewart and Langer 2007).

Wealthier women in Ghana rarely go on visits to family members or relatives. They are rather visited by other family members or relatives who often become dependents on them (Wringley-Asante 2008). Women of wealth in the Ghanaian society are accorded much prestige, and for this reason, paying visits to other family members would be seen as a deviation from the norm. Empowerment programmes in the country are more geared towards women's ability to have control over their health which reinforces the health of their children.

There is a significant positive association between age and all of the four measures of women's empowerment. Consistent with the findings of Acharya et al. (2010), increased age of women is positively associated with women's decision-making on their own health, large household purchases, daily household purchases and visits to family members or relatives. This finding also fits into the notion that age influences the autonomy of women in developing countries. Another reason that could explain this finding is the fact that the household responsibilities of women increase with age (Brown 1994; Chao 1999). This is because women in Ghana are most often married to much older men who cede decision-making responsibilities to the women with time. Women aged 40–44 years show odds ratios that are lower than those aged 35–39 years in relation to decisions on large household purchases and visits to family members or relatives. Most parents aged between 40 and 44 years usually have children in the Senior High Schools or the Universities for which reason money intended for large household purchases is often channelled into taking

care of their children. This happens for 4 years, after which parents begin to plan for their retirement, hence the increase in the odds ratios.

Employed married women have consistently shown that they are significantly more likely to be involved in decision-making in all the measures of women's empowerment than their unemployed counterparts. This is consistent with the findings of Tebekaw (2011) that women's employment status is a major determinant of women's autonomy. It can also be argued that, although Ghana is predominantly patriarchal, women who are employed end up contributing so much to the household and this is used as leverage in decision-making. This presupposes that if a woman loses her job and becomes dependent on the man, she might lose her status as a player in decision-making.

For all the measures of women's empowerment, married women who are educated to the tertiary level have more autonomy in decision-making than those without any education. This is in line with the findings of Acharya et al. (2010), Becker et al. (2006), Heaton et al. (2005), and Tebekaw (2011). Hence, tertiary education for the married woman comes with intergenerational benefits since they are also able to keep their children in school to at least the level they got to, especially the female child (Shabaya and Konadu-Agyemang 2004). It also creates better employment opportunities for building the autonomy of women and increasing their economic status at both the family level and in the society (Shabaya and Konadu-Agyemang 2004).

Compared to the Greater Accra region, women from all the other regions except Brong Ahafo and Upper West regions are significantly more likely to be involved in decision-making on their own health care. Married women from the Ashanti region are more likely to be involved in decision-making on issues concerning their own health care, large household purchases, and daily household purchases relative to those in the Greater Accra region. This could be attributed to the matrilineal culture of the region, which values women's participation in decision-making (NCWD 1994). Married women from the Northern and Upper East regions are more likely to be involved in decision-making on their own health care and in large household purchases compared to women in the Greater Accra region. This could be attributed to the increasing scope of micro-credit schemes that have been implemented in the region to reduce the incidence of poverty among women (Littlefield 2003; Norwood 2011; Schindler 2006), and the strong regard for gendered roles in the two regions. Thus, women are solely responsible for issues that pertain to the household (Brown 1994). These issues include daily household purchases, visitation to their family members and relatives, assistance with childcare, and assistance during funerals or any other festivities. This serves as a means of social capital that builds their autonomy (Stacey 2006).

This study is not without limitations. There is paucity of longitudinal nationally representative data tracking women's empowerment and a lack of a comprehensive measure of economic status. Regarding the latter, different aspects of economic status are likely to behave differently. The relationship between wealth and women's empowerment is dynamic and may change over time. Although single item measures are easy to measure and understand, and may have high validity within a culture, they are not without drawbacks. For instance, they are simplistic, determined by expectations, and with the possibility of response bias. Also, the four measures of women's empowerment used in this study do not account for all the indicators that measure women's empowerment. Other proxy measures could include: participation in local and national politics, control over men's earnings, women's attitude towards domestic abuse, and sexual autonomy of women. Furthermore, we were unable to conduct a hierarchical analysis because all of our variables and subsequent hypotheses were at the household level. Despite these limitations,

the results presented in this paper create spaces for implementing specific policy recommendations aimed at improving women empowerment in Ghana.

6 Conclusion

This paper sought to understand the possible factors that influence women's empowerment in Ghana. By assessing the influence of wealth on the empowerment of married women, the paper unearths the key issues that require immediate policy attention. Wealthier women are more likely to be involved in decision-making on their own health care, which may have a positive intergenerational spill-over effect. This necessitates the continuation of diverse programmes to economically empower women, since their health is central to their wellbeing. Alleviating poverty is central to making this a possibility. Employed married women are also more likely to have autonomy in all areas of household decision-making. The implementation of income generating activities in the poorer regions for women will, therefore, enhance their autonomy.

Further, married women with tertiary education, have greater autonomy on all measures of household decision-making than those who have only primary and secondary level education. This reinforces the concern of the UN that the gender gap in access to education has narrowed, but disparities remain high in university-level education in some developing regions. Currently, basic education is free in Ghana unlike secondary and tertiary education. The number of women who have attained tertiary education is disproportionately lower compared to those who have attained primary education. This calls for a step-up in the enrolment of more women in the various tertiary institutions in the country and also an increase in the community-based adult learning schools. It is imperative to bridge the enrolment gap by implementing policies intended to reduce cost and consequently, enhance access to tertiary education. Tertiary education will provide married women with greater opportunities of employment that could lead to more empowerment. Hence, an increased economic status coupled with access to tertiary education is the pathway to the empowerment of married women in Ghana.

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