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Women's Decision-Making Autonomy and Use of Maternal Healthcare Services among Filipino Women

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Abstract We examined the association between women's decision-making autonomy and the use of maternal healthcare services among Filipino women. Adequate access to maternal services is essential for optimal health and women's well-being during pregnancy and childbirth. Maternal healthcare services such as antenatal care, skilled birth attendance, and delivery at a health facility are crucial in preventing maternal mortality. Women's decision-making autonomy plays a vital role in the utilization of maternal healthcare services. For the study, we used the Philippines Demographic and Health Survey 2022 dataset (n=7136). Survey design effects were accounted for, and sampling weights were applied. Descriptive statistics and multivariate logistic regressions were run in SPSS ver. 27.0 to analyze the data. The results showed that most Filipino women had 4 or more antenatal care (ANC) visits, gave birth in a health facility, and received the assistance of skilled health personnel during delivery. Also, the majority of Filipino women had high decision-making autonomy. Women with high levels of decision-making autonomy exhibited significantly higher odds of having 4 or more ANC visits than women with fewer ANC visits. However, no significant association was observed between women's decision-making autonomy and skilled birth attendance or health-facility delivery. Among the sociodemographic factors, education, wealth index, and region were significantly associated with maternal healthcare service use. Thus, women's empowerment is essential in enhancing maternal healthcare utilization. Moreover, to achieve equitable maternal health care service use, it is important to target poor women and women with low levels of education in the Philippines.

Keywords Women, Decision-Making Autonomy, Maternal Health, Maternal Healthcare Services, Asia, Philippines

1. Introduction

Adequate access and utilization of maternal healthcare services, such as antenatal care, skilled birth attendance, delivery at a health facility, and postnatal care, are crucial in ensuring the mother's and newborn's overall health and well-being [1]. In 2020, there were 287,000 reported maternal deaths globally. Ninety-five percent of these maternal mortalities were from low- and middle-income countries. Among these, 202,000 deaths occurred in the Sub-Saharan African region, 48,000 in Central and Southern Asia, and 18,000 in Eastern and Southeastern Asia [2]. In the Philippines, it is reported that 2,400 women and girls die every year due to pregnancy and childbirth complications [3]. With 78 maternal mortality rates per 100,000 live births (MMR), in 2020 the Philippines had the 5th largest MMR in the ASEAN region [2]. However, these maternal deaths are preventable or treatable if women have adequate access and use of maternal healthcare services including antenatal care, skilled birth attendance, delivery at a health facility, and postnatal care [4].

Although maternal health services in the Philippines have improved over the years through interventions that include improved infrastructures, increased capacity-building of human resources, and establishment of relevant maternal health policies and regulations [4], it had little effect on maternal mortality reduction [5]. Maternal health is more than just utilizing maternal healthcare services. It encompasses several factors, such as availability, accessibility, quality of service, affordability, social structure, health beliefs, and personal characteristics of end-users [6], which can influence women's decision to seek care [7]. Therefore, women's decision-making autonomy became critical in utilizing maternal healthcare services, especially in improving maternal health outcomes [8,9]. Women's autonomy influences women's uptake of maternal healthcare services because highly autonomous women can make healthcare-related decisions to access and utilize these services [10]. However, in the literature, we have not found studies that examined the association between women's decision-making autonomy and maternal healthcare services utilization in the Philippines from a nationally representative sample. Thus, the objective of the study was to assess the association between women's decision-making autonomy and the use of maternal healthcare services among Filipino women.

2. Materials and Methods

In this cross-sectional study, we used data from the 2022 Philippine Demographic and Health Survey, which covered urban and rural areas of the 17 administrative regions in the country. Data from women aged 15-49 (n=7316) who had given birth in the last 5 years before the survey was conducted was used.

The level of women's decision-making autonomy was the independent variable analyzed. It was measured through participants' responses to the following questions: 1) Who usually makes decisions about your healthcare? 2) Who usually makes decisions about making major household purchases? 3) Who usually makes decisions about visits to your family or relatives? The responses to these questions were: (1) respondent alone, (2) respondents and husband/partner, (3) respondent and other persons, (4) husband/partner alone, (5) someone else, and (6) other persons. The aggregated scores were categorized as 'Yes = 1' if the respondent participated in the decision-making alone or with their husband/partner (high decision-making autonomy) or 'No = 0' if otherwise (low decision-making autonomy). The outcome variables were maternal healthcare services, namely the number of antenatal care (ANC) visits, births assisted by skilled health personnel, and delivery at a health facility. ANC visits were categorized as '0' for 0-3 ANC visits during their pregnancies and '1' if they had 4+ ANC visits (considered adequate per WHO). Delivery at health facilities was categorized as '1' if delivery happened in public or private hospitals/clinics, rural or urban health centers, and barangay health stations, and '0' for delivery at home. Births attended by skilled health personnel (namely doctors, nurses, or midwives) were classified as '1' and '0' for births not attended by skilled health personnel [4]. Sociodemographic factors such as women's current age, place of residence, region of residence, highest educational attainment, wealth index, and occupation were included as covariates.

The relationship between women's decision-making autonomy and utilization of maternal healthcare services was analyzed using the statistical program SPSS ver. 27.0 with modules for complex survey design. Descriptive statistics was used to determine the prevalence of utilization of maternal health services and levels of women's decision-making autonomy among Filipino women. The association between decision-making autonomy and the use of maternal healthcare services was analyzed using multivariate logistic regression models, after sampling weight was applied and the effect arising from sample design was accounted for. A p-value of <0.05 was used to determine the statistical significance.

3. Results

Most Filipino women (84.5%, 95% CI= 82.9, 86.0) had more than four antenatal visits for their most recent live births. While 89.3% (95% CI= 87.6, 90.8) of women who gave birth in the past five years did so in a healthcare facility, and 90.3% (95% CI= 88.6-91.8) of women had their birth assisted by skilled health personnel such as doctors, midwives, or nurses. Also, 91.6% (95% CI= 90.1, 92.5) of women had high decision-making autonomy (Table 1).

After controlling for the sociodemographic factors, multivariate analysis of the relationship between women's decision-making autonomy and the use of maternal healthcare services showed that women with high levels of decision-making autonomy were 1.55 times more likely to have adequate ANC contacts (i.e., four or more ANC contacts or visits) compared to women with low decision-making autonomy. However, no significant associations were found between women's decision-making autonomy and births attended by skilled health professionals or delivery at a health facility. The models explained 26.6%, 41.5%, and 38.3% of the variation in ANC visits, births attended by skilled health personnel, and delivery at a health facility, respectively (Table 2). Among the sociodemographic variables analyzed, only education, wealth index, and region of residence were significantly associated with maternal healthcare services, such as antenatal care, births attended by skilled health professionals, and delivery at a health facility (Table 3).

Table 1. Prevalence of the utilization of maternal healthcare services and women's decision-making autonomy

Maternal healthcare services and women's decision-making autonomy	N	Estimate %	95% CI
Number of antenatal visits[a]			
0-3 visits	640.0	15.5	14.0–17.1
4+ visits	3496.0	84.5	82.9–86.0
Total	4136.0	100.0	
Birth attended by skilled health personnel[b]			
No	438.0	9.7	8.2–11.4
Yes	4070.0	90.3	88.6–91.8
Total	4508.0	100.0	
Delivery place[b]			
Home	480.0	10.7	9.2–12.4
Health facility	4028.0	89.3	87.6–90.8
Total	4508.0	100.0	
Women's decision-making autonomy[c]			
Low	631.0	8.6	7.5–9.9
High	6685.0	91.6	90.1–92.5
Total	7316.0	100.0	

[a]Number of antenatal visits for the most recent live births; [b]Live births in the last five years before the survey; [c]For all women interviewed, 15–49 years of age; all numbers are weighted.

Table 2. Adjusted odds ratio (aOR) and 95% confidence interval (CI): Women's decision-making autonomy and utilization of maternal healthcare services

Variable	Antenatal Visit		Birth attended by skilled birth personnel		Delivery at a health facility	
Decision-making autonomy	aOR	95% CI	aOR	95% CI	aOR	95% CI
Low	1.000	-	1.000	-	1.000	-
High	1.555*	1.035–2.335	0.988	0.594–1.643	0.767	0.489–1.202
Nagelkerke (R^2) =	0.266		0.415		0.383	

*$p<0.05$

Table 3. Adjusted odds ratio (aOR) and 95% confidence interval (CI): Maternal healthcare services utilization by sociodemographic factors

	Antenatal cared		Birth attended by skilled health personnel		Delivery at a health facility	
	aOR	95% CI	aOR	95% CI	aOR	95% CI
Age						
15–24	1.000		1.000		1.000	
25–34	1.065	0.785–1.447	0.974	0.667–1.421	0.890	0.604–1.310
35–49	1.143	0.790–1.654	0.788	0.525–1.182	0.685	0.455–1.031
Residence						
Urban	1.000		1.000		1.000	
Rural	1.249	0.936–1.667	0.982	0.656–1.471	1.024	0.707–1.485
Wealth Index						
Poor	1.000		1.000		1.000	
Middle	1.539*	1.067–2.220	3.247*	2.015—5.231	3.105*	2.006–4.805
Rich	2.626*	1.715–4.020	7.554*	3.686–15.483	3.877*	2.100–7.159
Education						
≤Primary education	1.000		1.000		1.000	
Secondary education	2.206*	1.567–3.105	2.940*	2.022–4.277	2.500*	1.753–3.563
Higher education	2.738*	1.841–4.072	5.981*	3.756–9.525	6.133*	3.780–9.952
Respondent currently working						
No	1.000		1.000		1.000	
Yes	1.135	0.852–1.511	1.154	0.797–1.670	1.024	0.710–1.479
Region						
National Capital Region	1.000		1.000		1.000	
I- Ilocos	1.104	0.439–2.776	2.862	0.334–24.545	4.398	0.522–37.039
II- Cagayan Valley	0.531	0.248–1.134	1.653	0.321–8.504	1.392	0.389–4.987
III- Central Luzon	1.506	0.688–3.297	2.236	0.755–6.625	2.945	1.072–8.096
IVA- CALABARZON	2.213*	1.075–4.559	1.514	0.497–4.606	1.139	0.420–3.091
V- Bicol	0.414	0.217–0.788	1.202	0.425–3.400	1.500	0.532–4.228
VI- Western Visayas	0.908	0.463–1.780	1.175	0.426–3.242	1.493	0.549–4.059
VII- Central Visayas	2.572*	1.140–5.803	1.455	0.440–4.812	3.059	0.856–10.927
VIII- Eastern Visayas	1.587	0.818–3.077	1.220	0.454–3.277	1.258	0.498–3.176
IX- Zamboanga Peninsula	1.471	0.724–2.987	0.319	0.127–0.806	0.448	0.180–1.118
X- Northern Mindanao	1.007	0.521–1.944	1.162	0.409–3.300	1.455	0.520–4.070
XI- Davao	2.322	0.984–5.480	0.825	0.304–2.239	1.071	0.99–2.878
XII- SOCCKSARGEN	0.702	0.371–1.330	0.443	0.166–1.180	0.617	0.231–1.651
CAR- Cordillera Administrative Region	0.604	0.310–1.176	3.073	0.862–10.952	0.964	0.273–3.407
BARMM- Bangsamoro Autonomous Region in Muslim Mindanao	0.105	0.060–0.184	0.077	0.033–0.181	0.087	0.038–0.202
Caraga	2.498*	1.237–5.045	1.142	0.420–3.105	1.423	0.537–3.769
MIMAROPA	0.544	0.285–1.041	0.415	0.162–1.064	0.486	0.191–1.237

[d]Reference: 0-3 visits; [e]Reference: No; [f]Reference: Home; *p<0.05

4. Discussion

Overall, 84.5% of Filipino women had adequate ANC contacts, while 89.3% of births occurred in a health facility, and skilled health professionals assisted 90.3% of births. The findings are similar to the twenty-year study on the progress of maternal health services in the Philippines, which showed a 34.3% and 23.4% increase in ANC visits and skilled birth attendance, respectively [11]. The existing laws and national policies surrounding maternal health and its services in the country may have contributed to the high prevalence of the utilization of ANC checkups, skilled birth attendance, and delivery at a health facility [12, 13]. In addition, the expansion of the national health insurance program, which has a maternity benefit package, may have also contributed to the improved coverage of maternal healthcare services in the country [14]. The improved maternal health coverage was not limited to the Philippines but was also observed in several countries in Southeast Asia [15], although the improvement maternal health coverage did not lead to reduced maternal mortality in the region [15]. The existing intercountry maternal health coverage inequities, such as rural-urban and wealth gaps, may have contributed to differences in maternal outcomes [16].

Results also showed that Filipino women participated in household decision-making processes examined and thus were highly autonomous. This high level of decision-making autonomy reflects the country's position in the 2023 Global Gender Gap Index, which ranked the Philippines 16th out of 146 countries [17]. The results also mirrored the government's continued effort to empower and protect women, promote women's rights, and eliminate gender discrimination through national policies [18].

Autonomy is an integral part of health-related decision-making process, influencing women's protective health-seeking behavior and decision as to what kind of maternal health services to obtain [19]. The results of the findings are consistent with previous studies that highly autonomous women were more likely to access and use maternal healthcare services [10, 20, 21]. Women who participated in deciding major household purchases were more likely to have adequate antenatal checkups and opted for skilled birth attendance and delivery in a health facility [10, 22]. In households where the husband or partner solely decided on the women's healthcare, major household purchases, and visits to family/friends, women had reduced odds of having adequate antenatal care [23].

However, the study showed that women's decision-making autonomy had no significant association with skilled birth attendance and delivery at a health facility. Possibly, highly autonomous women choose not to avail of maternal healthcare services they think are inadequate and unnecessary [24]. These results are consistent with other studies that reported no significant association [21, 24]. It is also possible that women, regardless of whether they have high or low autonomy, may have realized the importance of utilizing maternal healthcare services to improve maternal health outcomes.

Among sociodemographic factors, only education, wealth index, and region where the woman resides were significantly associated with utilizing ANC checkups, skilled birth attendance, and delivery at a health facility. According to the World Bank, the Philippines is classified as a lower middle-income country with a per capita annual income of USD 3500 and a population over 115 million [25]. In the Philippines context, women residing in urban areas were more likely to be categorized in higher wealth indices compared to their counterparts in rural areas, who were more likely to fall into lower wealth quintiles. According to the 2022 Philippine Demographic and Health Survey, 54% of urban women were classified in the two highest wealth indices, whereas 57% of rural women fell within the two lowest wealth quintiles. Additionally, 64% of women have completed secondary education or higher, contributing to the Philippines' 99% literacy rate among women. [4].

The findings of this study are consistent with those from previous studies, which reported that, among other factors, higher educational attainment and greater wealth were significantly associated with better uptake of all maternal healthcare services [26-28]. The results of the study also agree with a study conducted in Nepal, where women with high educational attainment and those from the wealthiest wealth quintile were more likely to have four or more ANC contacts during pregnancy [29]. Although the region of residence was significantly associated with the use of maternal healthcare services, there were no significant regional variations. This finding indicates that regional health inequities in accessing maternal healthcare services are improving.

The results of the study also showed that women's decision-making autonomy should be considered when improving maternal health programs in the Philippines. The use of incentive-based and mobile maternal health programs targeting women who live in the most remote places may improve the use of maternal health services.

5. Conclusions

Most Filipino women had high decision-making autonomy and maternal healthcare service use. Women with high decision-making autonomy were significantly more likely to visit antenatal care four or more times during their pregnancies. However, the level of women's decision-making was not associated with their use of skilled birth attendants and delivery at health facilities. Sociodemographic factors, specifically, women's education and wealth, were significantly associated with maternal healthcare utilization. Overall, the results showed the importance of women's empowerment in enhancing maternal healthcare utilization, especially among impoverished women and women with low levels of

education.

The results of this research suggest that it is important to incorporate women's decision-making autonomy into maternal healthcare programs across all regions of the Philippines. Additionally, addressing the social determinants of health and implementing incentive-based interventions aimed at women in the poorest quintile who seek maternal healthcare services. Using mobile technologies in the promotion of maternal health and education can be scaled up to the most remote areas of the country as these measures could enhance the utilization of maternal healthcare services.

6. Strengths and Limitations

The large and nationally representative sample size with rigorous quality control measures during the data collection phase are some of the strengths of study. The predictive limitations of cross-sectional studies along with biases related to face-to-face interviews are some of the limitations of the study.

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Conflict of Interest

We have no conflict of interest to declare.

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