The Gender Belief System of Maternal Health Service Stakeholders in Partido, Philippines

Bernadette G. Gumba

Partido State University

DOI: https://dx.doi.org/10.51244/IJRSI.2025.1210000245

Received: 20 October 2025; Accepted: 26 October 2025; Published: 17 November 2025

ABSTRACT

The study analyzed the gender belief system of Maternal Health Service (MHS) stakeholders in the Partido District, Philippines. It surveyed the socio-demographics of respondents; tested their gender bias; and analyzed gender bias score in relation to selected socio-demographic variables. The bias score was analyzed using Pearson's correlation and regression analysis. The respondents were not extremely biased but did not have strong sense of gender equality. Beneficiaries had higher bias score than decision-makers/ implementers. There were outliers among decision-makers/ implementers. Correlation statistics disclosed that a 6.66-point decrease in bias score was expected for every level increase in education. The regression results implied that 19% of the variation in bias score was attributed to education. This may be explained by the exposure of educated individuals to varied, new concepts and theories. Education opens the mind to a whole new set of cultures and norms which may challenge the individual to embrace new belief systems.

Keywords: Gender belief system, gender bias and socio-demographics, maternal health services

INTRODUCTION

Gender disparities are a persistent form of inequality in every country. Despite remarkable progress in some areas, no country in the world—rich or poor—has achieved gender equality. All too often, women and girls are discriminated against in health, in education, at home and in the labour market—with negative repercussions for their freedoms (UNDP, 2020).

According to the 2023 GSNI (Gender Social Norms Index) of the UNDP (2020), about half of the world's men and women feel that men make better political leaders, and over 40 percent feel that men make better business executives and that men have more right to a job when jobs are scarce. Moreover, 28 percent think it is justified for a man to beat his wife. The GSNI measures how social beliefs obstruct gender equality in areas like politics, work, and education, and contains data from 75 countries, covering over 80 percent of the world's population (UNDP, 2020).

A study of the BMGF (Bill and Melinda Gates Foundation, 2020) found substantial support for a relationship between gender-based risk factors and MNH (Maternal and Newborn Health) outcomes and in the use of MNH services. Based on this, the current research tackled the gender belief sytem of beneficiaries, implementers and decision-makers in MHS (Maternal Health Services). It considered the gender beliefs of stakeholders as a gender-based risk factor. It assumed that the mindset of stakeholders is linked with their attitude and behavior toward MHS. Moreover, women and girls are still discriminated against in health service programs (UNDP, 2020). A study of Ghebreyesus (2019) confirmed that women health workers are concentrated into lower status, lower paid and often unpaid roles. Boniol et al. (2019) added that 24 million of the 28.5 million nurses and midwives globally are women. More men reach leadership positions, leaving women underrepresented in senior, higher-paid roles.

The foregoing discussion explains why this study utilized a gender lens as gender is an aspect that is often ignored but deeply embedded in project implementation and evaluation. The study examined the relationship between the gender-based belief system of couples, decision-makers and implementers of MHS vis-à-vis selected sociodemographic variables.

ISSN No. 2321-2705 | DOI: 10.51244/IJRSI |Volume XII Issue X October 2025

Theoretical Framework

This study is anchored on the theories of Rettig (2017), Kite & Deaux (1987), Mencarini (2014), Valved (2021), Hogenboom (2021), Joel (2015) and Rippon (2019) whose assertions are discussed below.

A belief system is a mindset and way of thinking that manifest in a person's behavior, attitude, and way of dealing with people and structures, and formulating opinions and decisions on issues surrounding the individual (Rettig, 2017). In a broad sense, the gender belief system is defined as a set of beliefs and opinions about males and females and about the purported qualities of masculinity and femininity (Kite & Deaux, 1987). This belief system includes stereotypical views about men and women and attitudes toward appropriate gender roles, based on an assumption that what is not feminine is necessarily masculine, and vice versa, and that a person who is either masculine or feminine in one aspect of behavior is similarly masculine or feminine in other aspects of behavior (Mencarini, 2014).

Within cultures, people develop a shared gender belief system that includes the content of gender stereotypes, masculinity and femininity, and attitudes toward people who deviate from traditional gender roles (Valved et al, 2021). As neuroscientist and author Gina Rippon (2019) explains, the fact that we live in a gendered world itself creates a gendered brain. It creates a culture of boys who feel conditioned to behave in more typically masculine traits and girls to behave in feminine ways, or they may get excluded by peers. If we focus on differences, it also means, as Rippon says, we begin to accept myths such as boys being better at science and girls at caring (Hogenboom, 2021).

In a study analyzing 1,400 brain scans, neuroscientist Daphna Joel et al (2015) found extensive overlap between the distribution of females and males for all grey matter, white matter and connections assessed. That is, overall, females and males are more similar to each other than different. One study even showed that women acted just as aggressively as men in a video game when they were told their gender would not be disclosed, but less so when told the experimenter knew if the participants were male or female. This means that in order for there to be any significant change, people have to first understand their biases and be mindful of when their preconceptions do not fit into the behaviors they see. Even small differences of what they expect of girls versus boys can build up over time (Hogenboom, 2021).

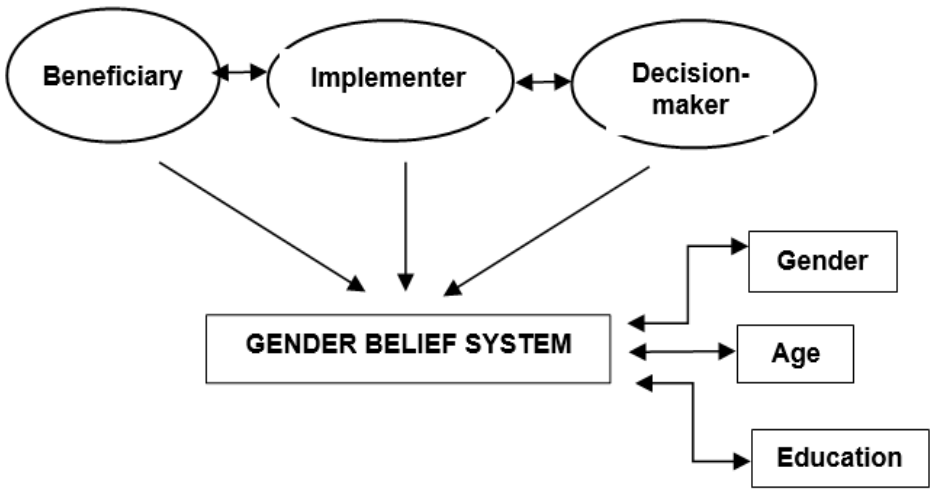

Fig.1. Gender belief system of MHS stakeholders vis-à-vis their socio-demographics

Note: Designed by the author based on the research objectives

As illustrated in Figure 1, this study examined the gender belief system of three major stakeholders in MHS. The decision-maker provides the structure and guideline of the services which become the basis of implementation, the implementer dispenses the services, and the beneficiary receives the services. In the dynamics of their relationship, the gender belief system of individuals influences their behavior, attitude, social interaction and decisions – the policies that the government official makes, the way the services are executed by the implementer, and the response of the beneficiary, as well as how the implementer and beneficiary deal with each other (BMGF, 2020). The study looked into the relationship of gender, age and education with the gender belief system.

ISSN No. 2321-2705 | DOI: 10.51244/IJRSI |Volume XII Issue X October 2025

Objectives

This study analyzed the gender belief system of reproductive-age mothers and fathers, implementers and decision-makers of MHS (Maternal Health Services) in the Partido District, Camarines Sur, Philippines. To accomplish this, the following specific objectives were set:

1. Survey a set of sociodemographic variables of MHS stakeholders;
2. Test the gender belief system of selected reproductive-age mothers, reproductive-age fathers, and reproductive couples through the gender bias score;
3. Test the gender belief system of decision-makers and implementers of MCHS in selected local communities through the gender bias score;
4. Analyze the relationship of selected socio-demographic variables with the gender belief system;

METHODOLOGY

This section presents the details of how the study was conducted, how the measurable indicators were calculated, and how the data was analyzed.

Study Design

The study utilized quantitative method to determine the gender belief system through a gender bias test. One-on-one interview was conducted to facilitate the test using a structured questionnaire culled from the Harvard University's Implicit Gender-Career Bias Test (Harvard, 2011) and the 2015 Commonwealth of Learning Gender-Bias Quiz (COL, 2022). The test was composed of yes-or-no questions, with 61 items for a female respondent and 63 for male. The tools were consolidated and revised to fit the context of rural and relatively low-income living, and translated to Bicol language. Correlation statistics was used to analyze the relationship between selected sociodemographic variables and gender bias scores. Qualitative method was employed to examine the sociodemographics and results of the gender bias test.

Study Population

The respondents were selected from three of the poorest municipalities in the Province of Camarines Sur, Philippines – Siruma, Garchitorena and Presentacion. The respondents were clustered as beneficiaries, decision-makers and implementers. For the beneficiaries, there were 100 sample respondents. For the decision-makers, there were 30 who were officials directly involved in health committees. For the implementers, 30 rural health personnel or barangay health workers were selected. Respondents were selected at random using multi-stage sampling method and the random tool of the Microsoft Excel Program.

Sample Size

The table below shows the total number of households per municipality covered, the number of sample barangays for each, the number of sample beneficiaries, decision-makers and implementers. The household data were taken from the website of the Philippine Statistics Authority (PSA, 2016). The distribution of samples was based on the percentage share of each municipality on the total number of households i.e. 40% for Garchitorena, 31% for Presentacion and 29% for Siruma.

The sample size of the beneficiaries was determined based on the Criteria Sampling Technique (Shaheen et al., 2018). This sampling method was used to collect data from purposeful samples which, in the context of this study, were the reproductive-age mothers and fathers as defined earlier. This specific criterion excluded a relatively substantial portion of the population such as those outside the reproductive age, or those whose children are already beyond five years old, or those who have no children. According to Shaheen et al. (2018), this sampling method is strategic because it yields the best information and impact on the findings. Logical generalizations were made from the evidence provided by the sample.

The sample size of the decision-makers and implementers was much fewer, which was determined based on the Typical Case Sampling (Shaheen et al., 2018). The typical cases were the knowledgeable participants. In the

ISSN No. 2321-2705 | DOI: 10.51244/IJRSI |Volume XII Issue X October 2025

context of this study, the matters faced by the decision-makers on health services and the job description of health personnel were generally similar, and therefore these individuals knew what was typical insofar as their functions were concerned.

Study Plan

The study combined written document analysis with examination of data from primary sources. One-on-one interviews were conducted with three clusters of respondents using a structured questionnaire which includes a gender bias test culled from existing literature. The gender bias scores were correlated with selected socio-demographic variables of respondents and with the indicators of MCHS.

The gender-based beliefs were surveyed in three clusters: the beneficiaries of the maternal and child health services, the decision-makers and the implementers of the program. The beneficiaries were selected from reproductive-age mothers, reproductive-age fathers and reproductive couples. The decision-makers in turn were selected from among the barangay officials while the program implementers from the personnel of the Rural Health Unit or Barangay Health Station.

The results of the gender bias test were assessed based on the theories of Rippon (2019), Hogenboom (2021) and Joel (2015). In the study, "Yes" answers were a manifestation of a belief system that is biased. Rippon (2019) theorized about a gendered brain which focuses on the differences or myths, such as boys are better at science while girls at caring. Hogenboom (2021) theorized about gendered ideas and self-assumptions which creates a belief system that draws a line between what a male or female is not, cannot do, or should not do, and thereby reflects a mindset that espouses differences among individuals mainly because of gender. On the other hand, "No" answers demonstrated a conviction toward gender equality which is open to all possibilities and opportunities in life regardless of gender. "No" answers were therefore a manifestation of a belief system that is relatively gender equal. As Joel (2015) theorized, overall, females and males are more similar to each other than different.

The gender bias score was calculated as follows – number of items with "Yes" answer / total number of items. Based on the foregoing discussion, high scores reflect high degree of gender bias. The scores were classified according the following levels:

76-100	High bias
51-75	Higher-middle bias
26-50	Lower-middle bias
0-25	Low bias

RESULTS AND DISCUSSION

This section tackles the socio-demographic profile of selected stakeholder-respondents, the gender bias score, the results of statistical analysis, and the interpretation of results.

Profile of Respondents

Table 1. Profile of the decision-maker, implementer and beneficiary

Indicator		Decision-maker	Implementer	Beneficiary
Gender	Female	14	27	50
	Male	16	3	50
	Total	30	30	100
Age	16-25	1	0	20
	26-35	5	11	45
	36-45	7	12	31

ISSN No. 2321-2705 | DOI: 10.51244/IJRSI |Volume XII Issue X October 2025

	46-55	10	4	4
	56-above	7	3	0
	Total	30	30	100
Education	Elementary	1	2	30
	High school	7	10	55
	College	19	18	14
	Graduate degree	3	0	1
	Total	30	30	100

Source: Data gathered from the study

The cluster of decision-makers was composed of the local chief executive, members of the local health health board, coordinator of the municiplan planning and development, and representative of the health department. The investigation intended that among the respondents, one-half were female and one-half were male. However, during the data-gathering, the researcher found that this group was dominated by males. This confirms the study of Ghebreyesus (2019) and Boniol et al. (2019). So the females had to be targeted. Despite the targeting, the total respondents were still 53% male. Moreover, majority of the decision-makers were 46 years and above, and had college education.

The group of implementers was composed of the barangay health workers, human resource health personnel, municipal nutrition action officer, and local nurses. The intention of getting 50% female and 50% male among the respondents was not fulfilled because this category was dominated by females. This confirms the study of Ghebreyesus (2019) and Boniol et al. (2019). Despite tracing the male implementers, the total respondents were 90% female. Additionally, majority were 26-45 years old, and had college education.

The beneficiaries were those of reproductive age and married or with partner. They have children of 0-5 years old and/or expecting to be a parent within nine months when the study was conducted. As intended, there were 50 females and 50 males and majority were 26-40 years old. Furthermore, majority had elementary and high school education.

Gender Belief System

Table 2. Average gender bias score of decision-maker/ implementer and beneficiary, municipal level

	Garchitorena	Presentacion	Siruma	Average
Decision-maker/ Implementer	52	45	31	43
Beneficiary	65	72	62	66
Average	59	59	47	55

Overall, the beneficiaries had higher average gender bias score than the decision-makers/ implementers. The belief system of the former was more inclined toward a presumed difference among individuals because of gender. This finding was consistent across the three municipalities, with those in Presentacion exhibiting the highest average bias score of 72, followed by Garchitorena with 65 and Siruma with 62. Among the decision-makers/ implementers, those in Siruma showed the lowest average bias score of 31, followed by Presentacion with 45 and Garchitorena with 52. Collectively, the beneficiaries had a high average bias score of 66 as compared with only 43 among the decision-makers/ implementers.

None among the decision-makers and implementers of Garchitorena and Siruma had above 75 bias score, while there was one in Presentacion with a bias score of 100. Siruma had the greatest number of 16 beneficiaries with high bias score. One of whom had a score of 97, one had 94 and two had 86. This was followed by Presentacion with 15 beneficiaries having high gender bias. Three of whom had 87 and two had 86. In Garchitorena, there were nine beneficiaries with high gender bias. Among these, one had 97, one had 92, one had 90, one had 87, and one had 86.

There was a total of 10 decision-makers and implementers with low gender bias. Most of whom were in Siruma, seven of them – one with a bias score of 11 and one with 15. Two of the 10 were in Presentacion – one with a

ISSN No. 2321-2705 | DOI: 10.51244/IJRSI |Volume XII Issue X October 2025

bias score of 16 and one with 23. The other one of the 10 was in Garchitorena with a bias score of 8. None among the beneficiaries of Garchitorena and Presentaction had a low gender bias score, while there were two in Siruma, one with a bias score of 15 and one with 20.

Table 3. Distribution of respondents according to gender bias score

Score	Level of bias	Sub-totals		Totals
		Decision- maker/ Implementer	Beneficiary	
76-100	High	1	30	32
51-75	Higher-middle	24	56	79
26-50	Lower-middle	25	12	37
0-25	Low	10	2	12
Totals		60	100	160

As illustrated in the table, 25 percent of decision-makers/ implementers had lower-middle bias score and a total of 49 percent with lower-middle and higher-middle. Of the beneficiaries, 56 percent had gender bias score of higher-middle and a total of 86 percent with higher-middle and high.

Relationship Between Socio-Demographic Variable and Gender Bias Score

The results of the linear regression or Ordinary Least Square regression are given in Table 10. OLS regression was used because the dependent variable, gender bias score, is continuous. As shown in the table, only education had highly significant coefficient at 5% level of significance and is considered as significant predictor of bias score. Age and gender are not significant predictors.

As observed, the education variable had a negative coefficient of -6.66, which suggests that an increase in the level of educational attainment will result in lower bias score. Furthermore, a 6.66 decrease in bias score is expected for every level increased in education. Hence, this study revealed that respondents with higher educational attainment are more likely to have lower bias score.

The regression model is significant ($p=0.0002$) with R2 of 0.19, which implies that 19% of the variation in gender bias score is attributed to the independent variables, particularly, educational attainment contributing significantly to bias score. All assumption of the OLS regression were satisfied with normality of data (Kolmogorov test, $p=0.5113$), heteroscedasticity, $p>0.05$ and non-violation of multicollinearity (VIFs< 10).

CONCLUSIONS

Results of the gender bias test revealed many remarkable findings. First, majority of the respondents were able to decide swiftly which item in the test they agreed or disagreed with. The respondents took an average of 15-20 minutes to complete the tool. Second, it may be concluded that collectively, beneficiaries, implementers and decision-makers were not extremely gender biased but also did not have strong sense of gender equality. Respondents held a conviction that women and men are different in behavior, attitude and thinking, which extends to a belief that women and men do not have equal opportunies to lead the life they want.

A third observation was that the beneficiaries had higher bias score than the decision-makers and implementers. Fourth, there were notable outliers among the decision-makers and implementers. Outliers were respondents with abnormally high or low bias score. The study posted the following remarkably low bias – a Municipal Mayor with only 8 points, a Rural Sanitation Inspector with 11 points, a Municipal Health Officer who holds a medical degree with 15 points and a Registered Nurse with 16 points. This was a good sign because the mindsent of decision-makers and implementers significantly influence the disposition of MNH as claimed in the study of BMGF (2020). However, the study also recorded alarmingly high bias score among decision-makers and implementers – a Barangay Health Worker registered a score of 100 points, a Registered Nurse with 75 and a Barangay Captain with 75.

Correlation statistics disclosed that a 6.66-point decrease in bias score was expected for every level increase in education. Hence, this study concluded that respondents with higher educational attainment were more likely to

ISSN No. 2321-2705 | DOI: 10.51244/IJRSI |Volume XII Issue X October 2025

have lower bias score. The results of regression analysis implied that 19% of the variation in the gender bias score was attributed to educational attainment. This may be explained by the exposure of educated individuals to varied, new concepts and theories particularly in the social sciences. Education opens the mind to a whole new set of cultures and norms from within and outside the country which may challenge the individual to embrace new belief systems that would maximize her/his potentials.

LITERATURE CITED

1. BMGF, 2020. Gender Equality Toolbox. Contributors: Krishna A., Petroni, S., Eaton, J., Levi, J., Hastings M.B., Kincaid, M., Taukobong, H., Bill & Melinda Gates Foundation (BMGF), February 2020. https://ph.search.yahoo.com/search?fr=mcafee&type=E210PH91215G0&p=BMGF_Gender-MNCH-Report_Hi-Res-1.pdf
2. Boniol, M. et al. (2019). Gender equity in the health workforce: Analysis of 104 countries. Health Worforce Working Paper 1. March 2019. © World Health Organization 2019. https://www.who.int/publications/i/item/gender-equity-in-the-health-workforce-analysis-of-104-countries
3. COL (2022). Gender Bias Quiz. © 2025 Commonwealth of Learning. https://oasis.col.org/server/api/core/bitstreams/4a358ff8-2683-4918-9dc3-bda71ee03c01/content
4. Ghebreyesus. T.A. (2019). Female health workers drive global health. World Health Organization (WHO). March 20, 2019. https://www.who.int/news-room/commentaries/detail/female-health-workers-drive-global-health
5. Harvard (2011). Gender Career Bias Test. Project Implicit. Harvard University. Harvard University's Implicit Gender Career Bias Test. https://implicit.harvard.edu/implicit/user/agg/blindspot/services.html
6. Hogenboom, M. 2021. The gender biases that shape our brains. May 25, 2021. https://www.bbc.com/future/article/20210524-the-gender-biases-that-shape-our-brains
7. Joel, D. et al (2015). Sex beyond the genitalia: Human brain mosaic. Proceedings of the National Academy of Sciences, vol. 112, issue 50, pp. 15468-15473. National Academy of Sciences. 12/15/2015
8. Kite, M. E., & Deaux, K. (1987). Gender Belief Systems: Homosexuality and the Implicit Inversion Theory. Psychology of Women Quarterly, 11(1), 83-96. https://doi.org/10.1111/j.1471-6402.1987.tb00776.x
9. Mencarini, L. (2014). Gender-Role Beliefs. In: Michalos, A.C. (eds) Encyclopedia of Quality of Life and Well-Being Research. Springer, Dordrecht. https://doi.org/10.1007/978-94-007-0753-51140
10. PSA (2016). Highlights on household population, number of households snd average household size of the Philippines. Reference no. 2016-173, December 29, 2016. https://psa.gov.ph/content/highlights-household-population-number-households-and-average-household-size-philippines
11. Rettig, T. (2017). Belief systems: What they are and how they affect you. Intercultural mindset. 8 December 2017. https://medium.com/intercultural-mindset/belief-systems-what-they-are-and-how-they-affect-you-1cd87aa775ff
12. Rippon, G. (2019). The gendered brain. Pantheon Books, New York. August 2019. pantheonbooks.com
13. Shaheen, M., Pradhan, S., Ranajee (2019). Sampling in Qualitative Research. IGI Global. Copyright ©2019.DOI:10.4018/978-1-5225.ch002.pp.32-33. https://www.researchgate.net/publication/345131737_Sampling_in_Qualitative_Research
14. UNDP, 2020. 2020 Gender Social Norms Index (GSNI): Tackling Social Norms: A game changer for gender inequalities. New York. Posted on March 05, 2020. United Nations Development Programme. https://hdr.undp.org/system/files/documents/hdp-document/gsni202303.pdf
15. Valved, T., Kosakowska-Berezecka, N., Besta, T., & Martiny, S. E. (2021). Gender belief systems through the lens of culture—Differences in precarious manhood beliefs and reactions to masculinity threat in Poland and Norway. Psychology of Men & Masculinities, 22(2), 265-276. https://doi.org/10.1037/men0000331