Understanding Women's Sexual Empowerment: Insights from Indonesian Married Women

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Abstract

This study explored factors that influence Indonesian women's ability to negotiate sexual relationships by taking into account the differences between the regions. We employed multivariate logistic regression models using data from the 2017 Indonesian Demography and Health Survey (IDHS) to analyze the determinants of women's capacity to negotiate sexual relationships, including refusing to have sexual intercourse and asking partners to use condoms. According to this study, Indonesian married women were able to refuse sexual intercourse better than to ask their husbands to use condoms. The factors that influenced married women's capacity to navigate sexual relationships differed among regions, in which the Java region shared more similarities with Indonesia's conditions than other regions. In all regions, high participation in making household decisions increased the likelihood that married women would refuse sex, while their approval of husbands' wife-beating decreased the likelihood. Moreover, living in urban areas and wealthier households increased married women's likelihood of negotiating condom use during sexual intercourse. Indonesian married women's current contraceptive use determined both sexual refusal and condom negotiation ability. The findings from this study emphasized the need to address gender inequality regions' socioeconomic and cultural factors that contribute to unequal power dynamics in marital relationships to enhance women's reproductive autonomy and well-being in patriarchal societies.

Keywords

Determinants; gender equality; married women; sexual negotiation ability

Introduction

Married women's ability to negotiate safer sexual relationships affects their health and the well-being of future generations significantly. Empowering married women will not only benefit women, but also families and society (Phan, 2016; Sinha et al., 2012). Yet, gender inequality relegates married women to lower positions than men and limits their ability to safeguard their rights, including those related to sexual and reproductive health (Phan, 2016; Pillai & Gupta, 2011; Putra et al., 2021). Gender inequality may result from patriarchal cultures and other socioeconomic factors that promote unequal power relationships between men and women in the family and community (Clark, 2006; Phan, 2016; Pillai & Gupta, 2011; Rawat, 2014). While patriarchy refers to the social and ideological construct that men are superior to women in social, economic, and health aspects, certain socioeconomic factors can determine women's empowerment in a family (Rawat, 2014).

In patriarchal cultures, married women frequently struggle to manage the consequences of their sexual behaviors and to assert their rights in negotiating sexual relationships with their partners (Kabir et al., 2022; Phan, 2016; Riyani, 2021; Sebayang et al., 2019; Solanke et al., 2023). These conditions have various consequences, such as unwanted pregnancies and a greater vulnerability to sexually transmitted diseases (STDs) (Kabir et al., 2022; Riono & Challacombe, 2020; Riyani, 2021). On the other hand, married women's ability to negotiate sex with their husbands allows them to hold power over their sexual and reproductive health, which can protect them from various reproductive health problems and affect family well-being overall (Clark, 2006). Gender equality's role in improving married women's reproductive health has been recognized widely, in which reproductive rights are the mediating factor (Pillai & Gupta, 2011). According to Shalev (1998), reproductive rights include married women's right to liberty and security and their right to healthcare and information.

Amidst gender inequality, empowering married women to obtain their reproductive rights through the negotiation of safer sexual relationships will benefit both women and the population's health. However, achieving gender equality and empowering married women is an ongoing process in many countries, particularly those with patriarchal cultures. Indonesia is one of the countries still dominated by patriarchal cultures, which leads to poor reproductive health outcomes, in this case, the maternal mortality rate (Riyani, 2021). Despite rapid socioeconomic development, married women in certain conservative communities in Indonesia still hold low positions in society and households (Putra et al., 2021). Moreover, sexuality is perceived to be a sensitive and dangerous topic in Indonesian society because of its personal and moral implications (Riyani, 2021).

As a result, married women in Indonesia are often affected by human immunodeficiency virus or acquired immunodeficiency syndrome (HIV/AIDS) and other STDs disproportionately and have poor access to antenatal and reproductive care services as well (Ministry of Health [Indonesia], 2022; Riono & Challacombe, 2020; Sebayang et al., 2019). According to data from the Ministry of Health Indonesia (2022), people living with HIV/AIDS are predominantly housewives, such that more housewives are living with HIV/AIDS than sex workers. Hasanah and Sulistiadi (2019) found that most housewives acquire HIV from their husbands, as the husband engages in risky sexual behavior during marriage, and women lack knowledge of HIV and still obey their husbands. However, they have suspicions about their husband's sexual behavior (Hasanah & Sulistiadi, 2019). The prevalence of HIV/AIDS among married women is crucial because it will affect the next generation, as more than 90% of new

infections in children aged 0–14 years occur through mother-to-child HIV transmission (Hill et al., 2015; Yitayew et al., 2019). Although vertical HIV transmission and other adverse reproductive health consequences can be prevented by accessing antenatal care, there is a gap in antenatal coverage among Indonesian women with different background characteristics (Ghose et al., 2017; Lamiday & Machmud, 2019). In addition to gender inequality, socioeconomic aspects play significant roles in enabling married women to achieve their reproductive rights.

Several studies have explored the determinants that influence married women's power to negotiate safer sexual relationships to protect against adverse reproductive health outcomes. Across diverse countries, evidence has consistently indicated that married women and their partners' education levels, together with household economic conditions, were significant determinants (Feyisetan & Oyediran, 2019; Putra et al., 2021; Solanke et al., 2023; Ung et al., 2014). Other than these determinants, various other determinants influenced married women's power to negotiate safer sexual relationships, which shows the complexity of achieving gender equality and enabling married women to negotiate these relationships.

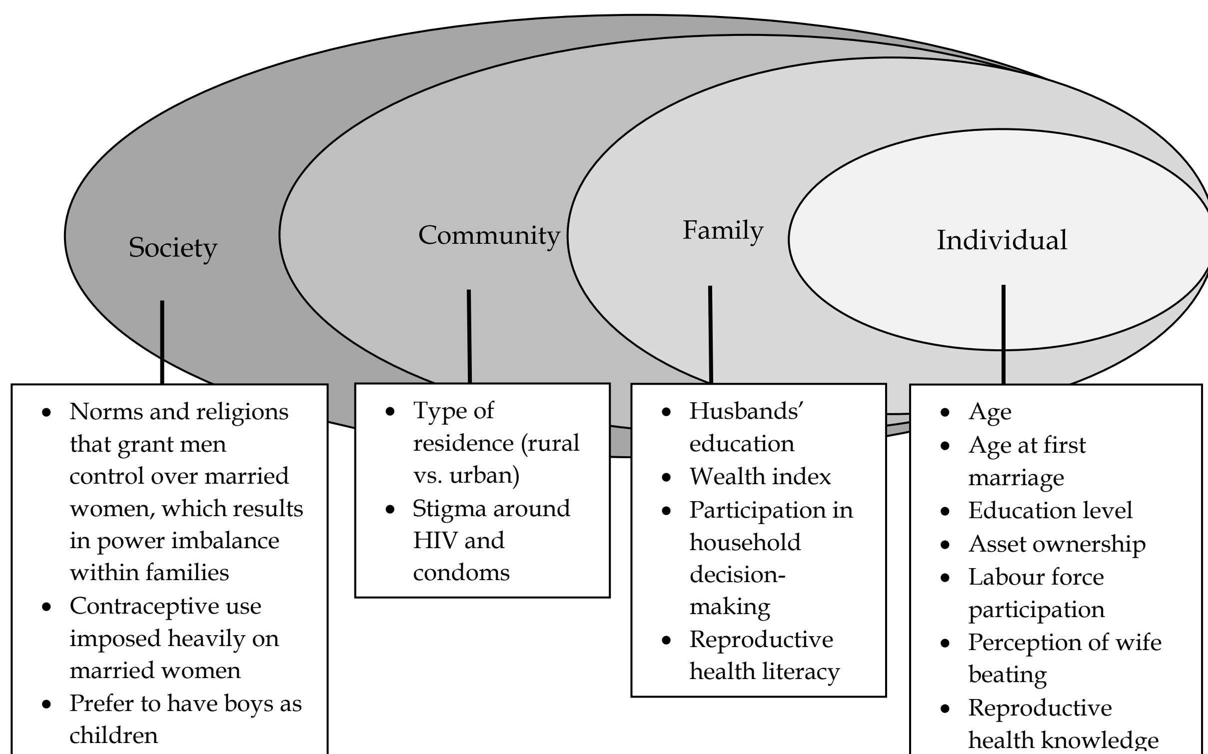
Various studies in Indonesia have investigated married women's empowerment in the context of achieving better reproductive health outcomes (Lamiday & Machmud, 2019; Putra et al., 2021; Sebayang et al., 2019). While Lamiday and Machmud (2019) and Sebayang et al. (2019) focused on married women's empowerment in antenatal care use, Putra et al. (2021) analyzed its role in safer sex negotiation among Indonesian married women, specifically concerning asking their husbands to use condoms when they are aware of their STI status.

On the other hand, this study took a different approach. It used an indicator of safer sexual negotiation, the ability to refuse sex and ask their husbands to use condoms in more general situations, not limited to knowledge of the husband's STI status and taking into account the differences between Indonesia's regions. Because women's empowerment indicators are context-specific, determinants that influence their ability to negotiate sexual relationships may not be universal and vary across many levels, including the individual, family, and community (Mosedale, 2005). While acknowledging gender equality's positive and significant effect on married women's reproductive rights and health, this study's goal was to identify determinants that enhance Indonesian married women's capacity to negotiate sex with their husbands by differentiating between the Indonesian region, Java, and the outside Java region.

Theoretical framework

According to studies, women's empowerment, a multidimensional aspect, can be defined and measured in various ways (Clark, 2006; Feyisetan & Oyediran, 2019; Ghose et al., 2017; Kabir et al., 2022; Lamiday & Machmud, 2019; Pillai & Gupta, 2011; Putra et al., 2021; Sebayang et al., 2019; Solanke et al., 2023; Ung et al., 2014). In our conceptual framework (see Figure 1), we adapted Phan's (2016) model for married women's empowerment and integrated socioeconomic aspects that influence married women's empowerment to obtain their reproductive rights significantly, particularly the ability to negotiate safer sexual relationships. This framework delineates socioeconomic factors across all levels and encompasses individual married women in the societies in which they reside, as shown in Figure 1.

Figure 1: The Socio-ecological Determinants of Women's Ability to Negotiate Safer Sexual Intercourse



Methods

Data source and samples

This study employed data from the 2017 Indonesian Demographic and Health Survey (IDHS) (National Population and Family Planning Board [BKKBN] et al., 2018). The IDHS 2017 used a stratified two-stage cluster sampling technique with 1,970 census blocks representing urban and rural areas. The sample collected from the census blocks totaled 49,250 households. This study examined 35,479 samples of women who met the inclusion criteria of being married and aged 15 to 49 at the time of the survey. Moreover, the IDHS weighting factors were applied to the weight of the sample.

Variables

The outcome variable of this study was women's ability to negotiate sexual relationships with husbands, including their ability to refuse sexual intercourse, as reflected in the question, "Can they say no to their husband if they do not want to have sexual intercourse?" and their ability to ask for condom use, "Can they ask their husband to use a condom?" Determinants of this negotiation ability were drawn from the theoretical framework, with some adjustments because of the variables' availability. Therefore, the independent variables in this study were as follows (Table 1).

Table 1: Determinant of Married Women's Ability to Negotiate Safer Sexual Relationships

No	Variables	Category
1	Age	15–19; 20–24; 25–29; 30–34; 35–39; 40–44; 45–49
2	Women's and husband's education	No education; Primary; Secondary; High
3	Married women's working status	Yes; No
4	Age at marriage (child marriage)	18 years; Less than 18 years
5	Wife-beating approval	Low; Medium; High
6	Decision-making participation	Low; Medium; High
7	Earning gap between wife and husband	Not paid; Less than him; About the same; More than him; Husband doesn't earn money; Do not know
8	Asset ownership	No; Yes
9	Type of residence	Urban; Rural
10	Household wealth*	Poorest; Poor; Middle; Rich; Richer
11	Current contraceptive use	Not using; Using
12	Wife-beating approval (because of arguing with the husband or refusing to have sexual intercourse)	Low (0 for disagreeing with both reasons); Medium (1 for agreeing with one of the reasons); High (2 for agreeing with both reasons)
13	Household decision-making participation in healthcare, large household purchases, and family or relatives' visitation	Low (0, for not being involved); Medium (1, for being involved in one aspect); High (2–3; for being involved in 2 or 3 aspects)
14	HIV knowledge (adopted from Arifin et al., 2022; Putra et al., 2021)	Low (total score 50%; knowledge score 0–5); Medium (51%–74%, knowledge score 6–7); High (75%; knowledge score 8–9)
15	HIV stigma (adopted from Arifin et al., 2022; Putra et al., 2021)	No (stigma score 0–3); Yes (stigma score 4–5)

*Note: *The category uses the definition and calculation results in the IDHS dataset, which is calculated using data on household ownership of selected assets. Then, it is divided into population quintiles, five groups with the same number of individuals, to create breakpoints that determine wealth quintiles.*

Statistical analysis

Both descriptive and inferential analyses were performed to examine determinants of married women's ability to negotiate safer sexual relationships with their husbands. The independent variables associated with the ability to negotiate sexual interactions with husbands were examined using multivariate logistic regression analysis. Multivariate analysis using logistic regression is a suitable approach to this issue, given the complex nature of factors related to married women's negotiation of sexual relationships. In this study, multivariate logistic regression models were used to calculate adjusted odds ratios (AOR) for various factors influencing married women's ability to negotiate safer sexual relationships. Statistical significance was determined using p values, with a significance level set at $p < .05$. After adjusting for other variables, factors associated with negotiating sexual relationships were acquired.

Moreover, the data were analyzed at the national and regional levels. Regions were separated into Java and outside Java based on diverse characteristics and cultures, as well as varied regional development progress. In the first model, we evaluated the factors that influenced married women's capacity to decline sex with their husbands, referred to as the refuse sex model. In the second model, we examined the factors that influenced married women's ability

to negotiate sexual relationships with their husbands by asking their spouses to use a condom during sexual activity. The IDHS reports recommended using descriptive statistics and regression models with complex sample weighting. The data were analyzed with STATA v. 17.0.

Ethics statement

In accordance with the Access Policy, the IDHS 2017 data collected were downloaded from the DHS website without revealing personal identity (BKKBN et al., 2018). MEASURE DHS authorized the access to and use of the datasets. Moreover, the ICF Institutional Review Board (IRB) and an IRB in the host country examined the DHS survey protocols.

Results and discussion

Married women's ability to negotiate sex and condom use

This study found that Indonesian married women were able to refuse sex better than ask their husbands to use condoms. Over half of the sample of Indonesian married women (51.73%) demonstrated the ability to refuse sex, while only one in five (21.96%) felt that they were able to ask their partners to use condoms during sexual intercourse. Indonesian married women's ability to negotiate sexual relationships is still low compared to in other countries, i.e., Cambodia, where the majority of married women could refuse sexual intercourse (90%) and negotiate condom use (87%) (Ung et al., 2014). While both Cambodia and Indonesia are known to have patriarchal cultures, there may be differences in social and cultural aspects because of the different dominant religions in each country, i.e., Islam in Indonesia and Buddhism in Cambodia. Solanke et al. (2023) mentioned religion's significant role among other determinants that allow women to negotiate safer sexual relationships. Because of data restrictions, this study did not consider religion, although it could potentially apply in the Indonesian context.

Moreover, regional differences were observed, in which married women outside Java (62.53%) demonstrated a greater ability to refuse sex compared to those in Java (53.0%) (see Table 2). Negotiation of condom use also showed different patterns in each region; it was higher outside Java than in Java (23.37% vs. 20.98%). Factors such as social norms, the widespread use of contraceptives in Indonesia, and the associated stigma toward condoms, where their use stands at only 3%, may have accounted for these disparities (BKKBN et al., 2018). The following section will further explore the determinants of sexual negotiation among married women in each region.

Characteristics of married women in this study

Table 2 demonstrates the high level of empowerment among the Indonesian married women in this study, in which a majority had secondary education (52%) equal to their husbands (52%), age at marriage over 18 years (72%), possessed assets (70%), participated in the labor force (56%), disapproved of wife-beating (92%), participated actively in making household decisions (87%), and used contraception (64%). All regions shared these characteristics, except Java Island, where more than half of the respondents (59.17%) reported residing there.

However, there were notable differences between the regions concerning the level of prosperity and aspects related to HIV. More married women who lived outside Java were poorer (45.49% vs. 30.63%) and lived in rural areas compared to Java (64% vs. 43%). Further, the prevalence of contraceptive use in Java (65.38%) was higher than outside Java (61.42%). With respect to HIV-related factors, the national average shows that more married women (36.14%) have little HIV knowledge, while 58.78% do not stigmatize HIV. However, compared to those who live in Java (30%), more married women who live outside Java had little HIV knowledge (44%), while the prevalence of HIV stigma was higher in Java (44%) than outside Java (37%).

Table 2: Sociodemographic Characteristics of Married Women aged 15–49 by Region

Characteristics	**Indonesia**		**Java**		**Outside of Java**	
	***n* (weighted)**	**%**	***n* (weighted)**	**%**	***n* (weighted)**	**%**
Dependent variables						
Refuse Sex						
No	15,210	42.87	9,782	46.60	5,428	37.47
Yes	20,269	57.13	11,211	53.40	9,058	62.53
Use Condom						
No	27,689	78.04	16,588	79.02	11,100	76.63
Yes	7,791	21.96	4,405	20.98	3,386	23.37
Sociodemographic factors						
Age						
15–19	679	1.91	402	1.91	278	1.92
20–24	3,260	9.19	1,913	9.11	1,347	9.30
25–29	5,484	15.46	3,157	15.04	2,326	16.06
30–34	6,562	18.50	3,687	17.56	2,875	19.85
35–39	7,234	20.39	4,351	20.72	2,884	19.91
40–44	6,417	18.09	3,826	18.22	2,591	17.89
45–49	5,843	16.47	3,658	17.42	2,185	15.08
Age at marriage						
No (≥ 18)	25,585	72.11	14,940	71.17	10,645	73.48
Yes (< 18)	9,895	27.89	6,053	28.83	3,842	26.52
Husband education						
No education	655	1.84	346	1.65	309	2.13
Primary	11,875	33.47	7,254	34.55	4,621	31.90
Secondary	18,710	52.74	10,952	52.17	7,759	53.56
Higher	4,240	11.95	2,442	11.63	1,798	12.41
Type of residence						
Urban	17,222	48.54	12,053	57.41	5,169	35.68
Rural	18,258	51.46	8,940	42.59	9,318	64.32
Wealth						
Poorest	6,051	17.06	2,582	12.30	3,469	23.94
Poorer	6,970	19.65	3,849	18.33	3,121	21.55
Middle	7,304	20.59	4,522	21.54	2,782	19.20
Rich	7,599	21.42	4,999	23.81	2,600	17.95
Richer	7,555	21.29	5,041	24.01	2,514	17.36
Women empowerment factors						

Characteristics	Indonesia		Java		Outside of Java	
	n (weighted)	%	*n* (weighted)	%	*n* (weighted)	%
Married women's education						
No education	637	1.79	261	1.24	376	2.59
Primary	12,033	33.91	7,472	35.59	4,561	31.48
Secondary	18,454	52.01	10,976	52.28	7,478	51.62
Higher	4,357	12.28	2,284	10.88	2,072	14.31
Married women's working status						
No	15,690	44.22	9,852	46.93	5,838	40.30
Yes	19,789	55.78	11,141	53.07	8,648	59.70
Wife beating approval						
Low (0)	32,626	91.96	19,692	93.81	12,934	89.28
Medium (1)	2,226	6.28	1,053	5.02	1,173	8.10
High (2)	627	1.77	247	1.18	380	2.62
Decision-making participation						
Low (0)	1,438	4.05	813	3.87	625	4.32
Medium (1)	3,007	8.47	1,828	8.71	1,179	8.14
High (2–3)	31,034	87.47	18,352	87.42	12,682	87.54
Earning Gap (wife-husband)						
Not paid	18,567	52.33	10,873	51.80	7,694	53.11
Less than him	3,156	8.89	2,000	9.53	1,156	7.98
About the same	10,346	29.16	6,094	29.03	4,252	29.35
More than him	2,957	8.33	1,755	8.36	1,201	8.29
Husband doesn't bring in money	235	0.66	136	0.65	100	0.69
Don't know	218	0.61	134	0.64	84	0.58
Asset ownership						
No	10,846	30.57	6,791	32.35	4,055	27.99
Yes	24,634	69.43	14,202	67.65	10,432	72.01
Currently Contraceptive Use						
Not Using	12,856	36.24	7,267	34.62	5,589	38.58
Using	22,623	63.76	13,726	65.38	8,897	61.42
HIV-related factors						
HIV-knowledge						
Low	12,823	36.14	6,410	30.53	6,413	44.27
Medium	13,253	37.35	8,597	40.95	4,657	32.14
High	9,403	26.50	5,986	28.52	3,417	23.59
Stigma						
No	20,854	58.78	11,791	56.17	9,063	62.56
Yes	14,625	41.22	9,202	43.83	5,423	37.44
Total	35,479	100.00	20,993	100.00	14,486	100

According to Table 3, the most common misconceptions about HIV transmission revolved around the importance of always using a condom during sex to reduce the risk of contracting HIV (55.11%). Notably, the percentage of these misunderstandings outside Java (47%) was lower than in Java (60%). The most common stigma among married women was that they were afraid that they would contract HIV from contact with an infected person's saliva. People's reactions to HIV-positive status were the second common cause of stigma, which led

them to hesitate to take HIV tests (68%). These two stigmas were more common than outside Java (Table 3).

Table 3: Percentage of HIV-related Knowledge and HIV Stigma Among Married Women by Region

Variables	Percentage (%)		
	Indonesia (n = 35,479)	Java (n = 20,993)	Outside Java (n = 14,486)
HIV related-knowledge			
Reduce the risk of getting HIV: always use a condom during sex	55.11	60.51	47.28
Reduce risk of getting HIV: have one sex partner only, who has no other partners	67.36	72.62	59.73
Cannot get HIV from mosquito bites	70.43	70.33	70.58
Cannot get HIV by sharing food with a person who has AIDS	65.69	64.03	68.10
A healthy-looking person can have HIV	66.26	71.67	58.41
People get the AIDS virus by sharing an unsterilized needle	75.03	79.72	68.23
HIV transmitted during pregnancy	69.95	74.96	62.70
HIV transmitted during the delivery	62.22	67.33	54.83
HIV transmitted during breastfeeding	67.68	73.03	59.93
HIV Stigma			
Would be ashamed if someone in the family had HIV	39.91	40.86	38.53
Would want HIV infection in the family to remain secret	35.31	39.13	29.77
People talk badly about people with or believed to have HIV	65.27	69.37	59.33
Would be afraid to get HIV from contact saliva from an infected person	68.06	71.19	63.52
People hesitate to take HIV tests because of the reaction of other people if positive	67.19	72.47	59.53

Determinants of married women's ability to negotiate safer sexual relationships

This study identified the factors that influenced the ability of Indonesian women, who reside largely in Java, to negotiate safer sexual relationships with their husbands. The determinants differed between Indonesia, Java, and outside Java, and the Java region shared more similarities with Indonesia than outside Java. It demonstrated the way that diverse socioeconomic and cultural contexts, both in and outside Java regions, affected the determinants that empower women to negotiate their sexual relationships. The results of the logistic regression are presented in Table 4.

Table 4: Logistic Regression of Factors Associated with the Ability to Negotiate Sexual Relationships Among Married Women Aged 15–49 Years by Region

Characteristic	Indonesia				Java				Outside Java			
	Refuse sex		Ask for condom		Refuse sex		Ask for condom		Refuse sex		Ask for condom	
	AOR	*p* value	AOR	*p* value	AOR	*p* value	AOR	*p* value	AOR	*p* value	AOR	*p* value
Sociodemographic factor												
Age												
15–19	1		1		1		1		1		1	
20–24	1.02(0.82–1.28)	0.84	1.10(0.82–1.47)	0.53	1.00(0.72–1.38)	0.97	1.23(0.75–2.01)	0.42	1.02(0.77–1.35)	0.91	0.99(0.70–1.39)	0.94
25–29	1.07(0.87–1.32)	0.50	1.26(0.94–1.68)	0.12	1.06(0.79–1.43)	0.68	1.58(0.97–2.58)	0.07	1.03(0.77–1.35)	0.81	0.98(0.70–1.37)	0.90
30–34	1.11(0.89–1.37)	0.35	1.28(0.96–1.70)	0.09	1.08(0.79–1.47)	0.63	1.53(0.94–2.49)	0.08	1.05(0.80–1.37)	0.74	1.03(0.74–1.42)	0.87
35–39	1.00(0.81–1.24)	0.99	1.27(0.95–1.68)	0.10	0.99(0.73–1.35)	0.96	1.59(0.98–2.56)	0.06	0.93(0.71–1.23)	0.61	0.96(0.69–1.34)	0.81
40–44	1.06(0.85–1.31)	0.61	1.38(1.04–1.84)	0.02	0.99(0.73–1.35)	0.95	1.79(1.11–2.91)	0.02	1.05(0.80–1.39)	0.71	1.00(0.72–1.40)	0.98
45–49	1.01(0.81–1.25)	0.94	1.15(0.86–1.54)	0.34	1.00(0.73–1.35)	0.98	1.51(0.93–2.46)	0.09	0.95(0.72–1.27)	0.74	0.82(0.59–1.15)	0.26
Age at marriage												
No (≥ 18)	1		1		1				1		1	
Yes (< 18)	1.05(0.97–1.13)	0.20	0.89(0.81–0.97)	0.01	1.12(1.01–1.24)	0.04	0.90(0.79–1.02)	0.10	1.00(0.91–1.08)	0.91	0.90(0.81–1.00)	0.04
Husband education												
No education	1		1		1		1		1		1	
Primary	0.97(0.79–1.18)	0.73	0.93(0.68–1.28)	0.65	0.74(0.55–1.01)	0.06	0.84(0.52–1.35)	0.46	1.34(1.06–1.69)	0.01	1.03(0.70–1.51)	0.87
Secondary	0.97(0.79–1.19)	0.75	1.22(0.88–1.68)	0.23	0.72(0.53–0.99)	0.05	1.17(0.72–1.90)	0.53	1.24(0.98–1.57)	0.07	1.15(0.78–1.69)	0.48
Higher	1.01(0.81–1.26)	0.92	1.58(1.13–2.22)	0.01	0.75(0.53–1.06)	0.10	1.77(1.06–2.97)	0.03	1.26(0.97–1.63)	0.09	1.17(0.78–1.76)	0.45
Type of residence												
Urban	1		1		1				1		1	
Rural	1.03(0.96–1.11)	0.41	0.69(0.63–0.76)	0.00	0.87(0.77–0.98)	0.02	0.66(0.56–0.77)	0.00	0.99(0.90–1.08)	0.80	0.62(0.56–0.69)	0.00
Wealth												
Poorest	1		1		1				1		1	
Poorer	0.96(0.87–1.06)	0.41	1.25(1.12–1.40)	0.00	1.09(0.94–1.27)	0.24	1.39(1.14–1.69)	0.00	0.97(0.87–1.08)	0.58	1.27(1.11–1.44)	0.00
Middle	1.02(0.92–1.13)	0.66	1.31(1.16–1.48)	0.00	1.29(1.11–1.50)	0.00	1.46(1.18–1.81)	0.00	0.98(0.86–1.11)	0.75	1.42(1.24–1.63)	0.00
Rich	0.98(0.88–1.10)	0.77	1.38(1.22–1.56)	0.00	1.28(1.09–1.50)	0.00	1.56(1.25–1.93)	0.00	0.98(0.86–1.11)	0.77	1.54(1.35–1.77)	0.00
Richer	0.87(0.77–0.97)	0.01	1.59(1.40–1.82)	0.00	1.19(1.00–1.41)	0.04	1.75(1.39–2.21)	0.00	0.88(0.76–1.01)	0.07	1.88(1.61–2.19)	0.00

Characteristic	Indonesia				Java				Outside Java			
	Refuse sex		Ask for condom		Refuse sex		Ask for condom		Refuse sex		Ask for condom	
	AOR	*p* value	AOR	*p* value	AOR	*p* value	AOR	*p* value	AOR	*p* value	AOR	*p* value
Women empowerment factor												
Married women's education												
No education	1		1		1				1		1	
Primary	1.32(1.06–1.64)	0.01	1.11(0.78–1.60)	0.55	1.28(0.91–1.81)	0.15	1.10(0.56–2.14)	0.79	1.39(1.06–1.82)	0.02	1.21(0.82–1.79)	0.33
Secondary	1.56(1.25–1.96)	0.00	1.57(1.09–2.27)	0.02	1.38(0.97–1.97)	0.08	1.59(0.81–3.15)	0.18	1.62(1.22–2.14)	0.00	1.47(1.00–2.18)	0.05
Higher	1.64(1.29–2.10)	0.00	2.22(1.52–3.25)	0.00	1.36(0.93–1.98)	0.11	2.16(1.07–4.37)	0.03	1.56(1.15–2.22)	0.00	1.95(1.29–2.95)	0.00
Married women's working status												
No	1								1		1	
Yes	1.13(1.04–1.22)	0.00	0.95(0.87–1.04)	0.28	1.05(0.94–1.18)	0.37	0.95(0.82–1.10)	0.49	1.10(1.00–1.22)	0.06	0.90(0.80–1.00)	0.05
Wife beating approval												
Low (0)	1		1						1		1	
Medium (1)	0.87(0.78–0.97)	0.01	0.94(0.82–1.07)	0.34	0.79(0.67–0.94)	0.01	0.85(0.68–1.08)	0.19	0.88(0.77–0.99)	0.04	0.96(0.83–1.11)	0.56
High (2)	0.91(0.76–1.09)	0.30	0.98(0.78–1.24)	0.87	0.72(0.50–1.02)	0.06	0.90(0.57–1.42)	0.66	0.97(0.80–1.18)	0.75	0.95(0.74–1.23)	0.71
HH decision-making participation												
Low (0)	1		1		1				1		1	
Medium (1)	1.14(0.96–1.36)	0.14	0.72(0.58–0.88)	0.00	1.30(1.00–1.67)	0.05	0.61(0.44–0.84)	0.00	0.96(0.77–1.20)	0.73	0.86(0.67–1.11)	0.26
High (2-3)	1.34(1.15–1.56)	0.00	0.88(0.73–1.06)	0.18	1.33(1.05–1.69)	0.02	0.79(0.60–1.04)	0.09	1.36(1.14–1.62)	0.00	0.99(0.79–1.25)	0.96
Earning Gap (wife-husband)												
Not paid	1		1		1				1		1	
Less than him	1.07(0.96–1.19)	0.25	1.13(0.99–1.29)	0.08	1.14(0.98–1.32)	0.09	1.15(0.95–1.40)	0.15	1.10(0.94–1.28)	0.25	1.18(1.00–1.41)	0.05
About the same	0.97(0.89–1.05)	0.39	1.06(0.97–1.17)	0.20	1.01(0.90–1.15)	0.81	1.02(0.88–1.18)	0.78	0.98(0.89–1.08)	0.64	1.16(1.04–1.30)	0.01
More than him	1.08(0.96–1.21)	0.21	1.06(0.93–1.20)	0.41	1.15(0.97–1.36)	0.10	1.11(0.91–1.35)	0.31	1.05(0.90–1.22)	0.52	1.02(0.87–1.20)	0.79
Husband doesn't bring in money	1.20(0.86–1.67)	0.28	1.07(0.72–1.57)	0.74	1.10(0.68–1.77)	0.69	0.97(0.53–1.77)	0.91	1.37(0.89–2.10)	0.15	1.18(0.76–1.85)	0.46
Don't know	0.94(0.65–1.37)	0.76	0.85(0.56–1.29)	0.44	0.97(0.55–1.68)	0.90	0.69(0.36–1.32)	0.26	1.03(0.66–1.61)	0.90	1.13(0.68–1.90)	0.63
Asset ownership												
No	1		1		1				1		1	
Yes	1.00(0.94–1.07)	1.00	0.99(0.91–1.07)	0.78	0.95(0.86–1.04)	0.24	1.04(0.92–1.17)	0.56	1.02(0.94–1.11)	0.67	0.88(0.80–0.97)	0.01
Currently Contraceptive Use												
Not Using	1		1		1				1		1	
Using	1.17(1.10–1.24)	0.00	1.23(1.15–1.32)	0.00	1.21(1.11–1.31)	0.00	1.17(1.05–1.30)	0.00	1.18(1.09–1.27)	0.00	1.36(1.25–1.48)	0.00

Characteristic	Indonesia				Java				Outside Java			
	Refuse sex		Ask for condom		Refuse sex		Ask for condom		Refuse sex		Ask for condom	
	AOR	*p* value	AOR	*p* value	AOR	*p* value	AOR	*p* value	AOR	*p* value	AOR	*p* value
HIV-related factor												
HIV-knowledge												
Low	1		1		1				1		1	
Medium	1.04(0.96–1.12)	0.29	1.46(1.34–1.60)	0.00	1.01(0.90–1.13)	0.89	1.44(1.25–1.66)	0.00	1.24(1.13–1.36)	0.00	1.62(1.46–1.79)	0.00
High	1.03(0.95–1.12)	0.43	1.55(1.41–1.71)	0.00	1.02(0.91–1.15)	0.71	1.47(1.26–1.71)	0.00	1.19(1.08–1.32)	0.00	1.84(1.66–2.05)	0.00
Stigma												
No	1		1		1				1		1	
Yes	1.09(1.03–1.16)	0.00	1.01(0.95–1.09)	0.68	1.08(0.99–1.17)	0.08	1.00(0.91–1.10)	0.99	1.13(1.04–1.22)	0.00	1.04(0.96–1.14)	0.32

Note: Significance level set at $p < .05$.

Sociodemographic factors

Table 4 shows that age was not associated with married women's ability to negotiate safe sex with their partners. However, a woman's age at marriage was correlated with her ability to negotiate safe sex. At the national level, women who married under the age of 18 were less likely to ask their husbands to use condoms (AOR = 0.89, p = 0.01), indicating a significant negative association. Married women outside Java also exhibited this pattern. On the other hand, women who married under the age of 18 in Java were more likely to be able to negotiate to refuse sex (AOR = 1.12, p = 0.04), indicating a significant positive association. However, their ability to ask their husbands to use condoms did not differ based on their age at marriage. Women who marry under the age of 18 may have limitations in various aspects that can hinder their ability to negotiate with their husbands to use condoms. In contrast, those who marry after the age of 18 have greater awareness, a higher education, and broader access to resources and decisions that support women's rights and reproductive health, and thus, they have a greater ability to negotiate.

Moreover, in Java, women with secondary-educated husbands were less likely to refuse sex than those whose husbands had no education (AOR = 0.72, p = 0.05), indicating a significant negative association. However, women were more likely to ask their husbands to use condoms when their husbands were highly educated than when they were uneducated (AOR = 1.77, p = 0.03), indicating a significant positive association. Outside of Java, husbands with a primary education were 1.34 times more likely to negotiate sexual relationships than those who had no education. However, asking partners to use condoms showed no differences in each husband's education level.

The data also confirmed that the type of residence was associated significantly with married women's negotiations to ask their partners to use condoms. Living in rural areas was associated with a lower likelihood of negotiating condom use both nationally and regionally (AOR = 0.69, p = 0.00 in Indonesia; AOR = 0.66, p = 0.00 in Java), indicating a highly significant negative association. Further, this research showed that married women in Java and those living in rural areas tend to be less likely to be able to refuse sex with their partner than those who live in urban areas (AOR = 0.87, p = 0.02), indicating a significant negative association. Javanese society's culture, which relegates women to the second class, may also have an adverse influence on Javanese married women's decision to refuse sexual relations (Putra et al., 2021; Riyani, 2021). They may not have the freedom to make decisions about reproduction and reproductive health.

In addition, there was a significant correlation between the level of wealth and married women's ability to negotiate for their partners to use condoms. The wealthier the women, the higher the likelihood that they could negotiate condom use with their partners. Women from the richest groups were more likely to ask their husbands to use condoms than those from the poorest groups both nationally and regionally (AOR = 1.59, p = 0.00 in Indonesia; AOR = 1.75, p = 0.00 in Java; AOR = 1.88, p = 0.00 in Outside Java), indicating a highly significant positive association. However, a high wealth index decreased the likelihood that they would refuse sexual requests from their husbands, except for married women living on Java Island. Ung et al. (2014) observed that the wealth index was a significant predictor of whether women would ask their husbands to use a condom. This finding confirmed that a high wealth index guarantees gender equality and may empower women in a specific situation, such as giving financial autonomy to married women in the family.

Women empowerment factors

In this study, there were significant associations seen consistently, both nationally and regionally, between the factor of contraceptive use and married women's negotiation skills in sexual activity with partners and their ability to ask their husbands to use a condom. At the national level, married women who use contraception were significantly more able to negotiate to refuse sex (AOR = 1.17, p = 0.00) and more able to ask their husbands to use condoms than those who do not use birth control (AOR = 1.46, p = 0.00). Solanke et al. (2023), who conducted a similar study in Nigeria, observed a higher proportion of contraceptive users among women who demonstrated the ability to negotiate safer sexual relationships compared to non-users. According to Solanke et al., women's choice to use contraceptives can be a form of empowerment if they choose to do so freely with thorough knowledge of contraception.

However, in a patriarchal society, women frequently faced the burden of contraception, which led them to feel pressured to use it without understanding its potential health consequences fully. Other socioeconomic factors and gender inequality in society that influence both contraceptive use and the ability to negotiate sexual relationships are forms of women's empowerment (Phan, 2016). Moreover, high contraceptive use in Indonesia may influence both forms of sexual negotiation, as married women believe that it protects them from pregnancy already. However, Indonesian women's dominance as contraceptive users (64% of women vs. < 4% of men) may show gender inequality, as women are seen to be the only ones in charge of fertility arrangements in a family (BKKBN et al., 2018).

This study also found that nationwide, highly educated married women were more able to refuse sex with their husbands and more able to ask their partners to use condoms than uneducated women (AOR = 1.64, p = 0.00 for refuse sex; AOR = 2.22, p = 0.00 for ask for condom use), indicating a highly significant positive association. This pattern was also observed outside of Java but not in Java. Education had no significant effect on whether women could refuse sex with their husbands. However, highly educated married women were more likely to ask their partner to use a condom than uneducated women (AOR = 2.16, p = 0.03), indicating a highly significant positive association.

Most studies on women's ability to negotiate safer sexual relationships have mentioned that their education level is a significant factor (Feyisetan & Oyediran, 2019; Putra et al., 2021; Solanke et al., 2023; Ung et al., 2014). However, this study found that women's education level is not significant in Java. This region is home to more than half of the Indonesian people (BPS-Statistics Indonesia, 2019), and the social and cultural aspects may overcome the influence of women's education. For instance, the majority of Indonesian married women view marital sexual relations as a duty rather than a right, and their father, who serves as the family's head, makes all decisions, including those related to reproduction and sexuality (Riyani, 2021).

Rawat (2014) also mentioned that patriarchal cultures may overwhelm the effect of women's educational level on their empowerment, such that their educational level does not affect their empowerment. However, involvement in household decision-making appeared to influence women's ability to negotiate a safer sexual relationship with their husbands. This finding was consistent with those in studies from Nigeria that reported that women's ability to refuse sex requests from their husbands increased with their participation in household decision-making (Feyisetan & Oyediran, 2019).

Every region exhibited a correlation between married women's involvement in household decision-making, their attitudes on wife-beating, and their ability to negotiate sexual refusal but not condom use. The results showed that married women who participated in 2–3 household decisions were more likely to be able to refuse sex (AOR = 1.34, p = 0.00), indicating a significant positive association. Further, those who justified husbands abusing their wives were less likely to negotiate not having sex than those who disagreed with husband abusing their wives. At the national level, married women's employment status was another determinant of their ability to refuse sex with their husbands, but this was not evident at the regional level. Employed married women were more likely to be able to refuse sex (AOR = 1.13, p = 0.02), indicating a significant positive association.

Ung et al. (2014) mentioned that women's involvement in household decision-making may have translated into trust and risk compensation. It may not be significant to ask their husband to use a condom because women assume that using other contraception is sufficient. However, the use of contraceptives may undermine the importance of asking their husbands to use condoms, as other contraceptive methods cannot protect women from STIs. The community's understanding of contraception and STIs must be enhanced to help them make the most informed decisions to safeguard their reproductive health.

There were also other determinants of married women's ability to ask their husbands to use condoms, including the income gap between the husband and wife and women's ownership of assets. These factors were shown only outside Java, not at the national or Java level. If the husband and wife had the same income, then married women were more likely to be able to ask their husbands to use a condom (AOR = 1.16, p = 0.01 outside Java), indicating a significant positive association. However, married women who had assets were less likely to ask their husbands to use a condom (AOR = 0.88, p = 0.01 outside of Java), indicating a significant negative association. This finding is different from several studies conducted in African countries, which found no association between women's asset ownership and their ability to negotiate sexual relationships (Mosedale, 2005; Solanke et al., 2023; Tolmay et al., 2022). More research may be necessary to explain this finding.

HIV-related factors

Further, a married woman's knowledge of HIV influenced her ability to ask her spouse to use a condom. At the national level, the study showed that women with good HIV knowledge were more likely to ask their husbands to use condoms during intercourse (AOR = 1.55, p = 0.00), indicating a significant positive association. This positive pattern appeared among married women in Java and elsewhere (AOR = 1.47, p = 0.00 in Java; AOR = 1.84, p = 0.00 outside Java). However, HIV stigma had a significant effect only on married women's ability to refuse sex at the national level. Married women with a high HIV stigma were more likely to refuse sex with their husbands (AOR = 1.09, p = 0.00), indicating a significant positive association. These findings were similar to those of other studies conducted in Indonesia and Nigeria that reported good HIV knowledge's considerable influence on women's ability to negotiate safer sexual relationships (Feyisetan & Oyediran, 2019; Putra et al., 2021; Ung et al., 2014). In particular, Feyisetan and Oyediran (2019) highlighted the importance of HIV transmission knowledge in empowering women to decline their husbands' sex requests. While this study reported that married women had certain misunderstandings about HIV transmission, it is vital to enhance the community's knowledge of HIV transmission to help them protect their reproductive rights and improve their reproductive health.

Study's strengths and limitations

Lastly, like all studies, this study had both strengths and limitations. While it used data that represent Indonesian married women and are valid and reliable as well, the study did not consider the women's culture, beliefs, or religion that may influence their ability to negotiate safer sexual relationships. Moreover, these variables would provide richer information that might influence policymakers' approach to future interventions. More qualitative approaches to describe married women's perspectives and experiences in negotiating safer sexual relationships with their husbands are needed to understand their sexual empowerment fully.

Conclusion and recommendations

In conclusion, this study shed light on the determinants of women's ability to negotiate safer sexual relationships with their husbands, highlighting some significant socioeconomic factors at national and regional levels. The findings suggested that these determinants vary by region, challenging the universality of women's empowerment indicators. Socioeconomic factors and the patriarchal culture, which are different across Indonesia's regions, may influence gender inequality in the context of enabling married women to negotiate safer sexual relationships. Nationally, married women who work, have a higher education level, and participate in household decision-making tended to have the ability to refuse sexual intercourse, while married women with a higher education level and a higher wealth index whose husbands had higher educational attainment were more able to ask their husbands to use condoms. However, these determinants varied across Indonesia's regions, with Java Island having more similarities with Indonesia's conditions, except for married women's education level.

Stakeholders must consider various determinants in Indonesia's regions and their underlying factors to enhance married women's ability to negotiate safer sexual relationships with their husbands. Health services and other related institutions should provide education and resources to married women in order to address gender inequality, empower them to negotiate safer sex, and protect their reproductive health. Specifically, some recommendations to improve married women's ability to negotiate safer sexual relationships include providing education and resources to do so, encouraging married women's empowerment by promoting education, employment, and participation in household decision-making, and involving academicians and practitioners to address gender inequality and promote married women's reproductive health.

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