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ORIGINAL ARTICLE

Autonomy in family planning decision-making and its predictors among married women: A cross-sectional study at maternal and child health Centre, Nawabshah.

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ABSTRACT... Objective: To investigate the factors influencing family planning use among married women by assessing their decision-making autonomy regarding family planning, identifying household predictors of this autonomy, and determining the association between reproductive health services and decision-making power. **Study Design:** Analytical cross-sectional study. **Setting:** MCH and Family Planning Centre at Nawabshah Sindh. **Period:** January 2025 to March 2025. **Methods:** A total of 345 married women who visited were selected who visited MCH and Family Planning Centre at Nawabshah Sindh. The selection of the sample was done by using a consecutive sampling technique. Researchers collected data using structured and a structured, pre-tested questionnaire through Google Forms. Binary logistic regression and multiple logistic regression analysis were used to identify the associated factors and the oodds ratios with 95% confidence intervals were computed to assess the strength of the association. **Results:** Overall, only 19.4% of married women were found to have decision-making power in family planning. Women of graduate level of education [AOR: 7.156, 95% CI: (1.11 – 48.37)], husband's secondary education [AOR: 0.220, 95% CI: (0.05 – 0.76)], husbands who were shopkeepers [AOR: 4.891, 95% CI: (1.57 – 15.87)], monthly income >100,000 [AOR: 32.06, 95% CI: (1.94 – 1498)] were significantly associated with women's decision-making power in family planning. **Conclusion:** In this study, women had low decision-making power in family planning use. Women's and their husbands' formal education, and husbands' occupational status, and monthly income had effects on women's decision-making power.

Key words: Autonomy, Decision-making Power, Family Planning, Maternal Health, Reproductive Health.

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INTRODUCTION

Women's autonomy contributes significantly to many health advantages for both mothers and their children. Women's autonomy is defined as the ability of women to act independently regarding their health, their children's health, freedom of movement, and control over finances without seeking permission from anyone.[1] In developing nations, women are crucial to family well-being, primarily seen as mothers and homemakers. Their ability to participate in family decisions significantly impacts the overall welfare of the household, and their involvement is essential for achieving equality and harmony. However, in countries like Bangladesh and Pakistan, women's decision-making power is often restricted. They frequently lack autonomy, especially regarding personal movement, family planning, and their children's education.[2] Factors like household structure and size, the joint family system, and the husband's characteristics may influence a woman's use of contraception and ability to realize her reproductive rights.[3] Pakistan has the lowest prevalence of contraceptive use in the South Asian region, but the highest discontinuation rate, possibly due to concerns about side effects of modern contraceptives and intra-family dynamics where husbands and mothers-in-law influence contraception decisions.[4] In previous studies, researchers identified factors affecting women's autonomy in decision-making regarding contraceptive choices at both the individual and community levels, such as place of residence, age, wealth index, women's education and occupation, number of living children, desire to have children, media exposure, and whether they visited a health facility in the last 12 months.[5]

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In many developing countries like Ethiopia, economic, social, and environmental constraints frequently inhibit women from fully exercising their reproductive rights. According to the results of a 2017 Ethiopian study, 52% of the participants demonstrated high decision-making power regarding modern family planning methods.[6] The study conducted across 11 East African countries revealed a significant proportion of women 68.37% possessed autonomy in healthcare decision-making.[7] In 2023, the prevalence of women who independently decided to use family planning was 65.47% in Guinea, on the other hand only 25.1% of Nepalese women had autonomy in making reproductive health decisions.[8,9] The issue of women's empowerment in urban Pakistan, particularly in metropolitan areas like Lahore, is a complex and multifaceted challenge that has garnered increasing attention in recent years. In 2020, 75% of women felt their participation in household decision-making was minimal, reflecting the long-standing patriarchal norms that dominate their socio-cultural context.[10] In Pakistan, where teen pregnancy rates are high and family planning use is low, women's limited control over reproductive choices remains a major concern. This lack of autonomy often leads to larger families than desired, straining household resources and affecting maternal and child health. Despite government efforts to improve maternal care, contraceptive use remains low, especially in rural areas. This study aims to investigate the factors influencing family planning use among married women by assessing their autonomy of decision-making regarding family planning, identifying household predictors of this autonomy, and determining the association between reproductive health services and decision-making power.

METHODS

This analytical cross-sectional study was conducted over three months from January 2025 to March 2025, at the Gynae ward, Gynae OPD, and Family Planning Centre of the Maternal and Child Health (MCH) Centre, PUMHSW, Nawabshah. The study population comprised married women aged 18-49 seeking services at the centre. Ethical approval (PUMHSW/SBA/IPH-601) was obtained before collecting the data from the participants. Non-probability consecutive sampling technique was employed, with a sample size of 345 participants. The sample size was determined using a 66% prevalence of autonomy from previous research[11], a 95% confidence level, and a 5% margin of error.

Married women of reproductive age visiting MCH centre were included in the study. Due to the sensitivity of the topic and the presence of husbands or mothers-in-law, which could influence participants' responses, privacy was carefully maintained. Women who consented to participate were respectfully guided to a separate, quiet area where they could respond freely without external pressure or observation. Exclusion criteria were women with comorbidities, pregnancy, previous sterilization, severe cognitive or mental health issues, or inability to provide informed consent. Data were collected through a structured, pre-tested questionnaire covering socio-demographic characteristics, previous reproductive history, decision-making autonomy, and decision-making power. Prior approval was obtained from hospital authorities and informed written consent was secured from all participants.

Data analysis was performed using SPSS v25.0 and GraphPad Prism v9.5. Descriptive statistics were used for categorical data, while chi-square tests examined related frequencies between decision-making autonomy and independent variables. Variables with significant associations were further analyzed using binary and multiple logistic regression to identify predictors and adjust for potential confounders such as income, education, and employment status. A p-value of <0.05 was considered statistically significant, with results presented through tables, charts, and graphs.

RESULTS

The majority were aged between 18–33 years, with 32.8% in the 18–25 age group and 33% in the 26–33 age group. Most participants (90.4%) had a monthly income of less than 50,000 PKR. Over half of the women (55.1%) were illiterate, while only 4.1% had attained graduation-level education. Similarly, 46.1% of the participants' husbands were illiterate. The most common occupation among husbands was labour (46.7%) (Table-I).

Most (46.7%) had a parity of 2–4. Antenatal care (ANC) visits were reported by 75.9% of women, with 58% having fewer than four follow-up visits. Husbands were involved in delivery care in 69.9% of cases. Only 42.3% of women had household decision-making power, and a mere 19.4% had autonomy in family planning decisions (Table-II).

Family planning decision-making was significantly associated with participants' education ($p < 0.001$), husband's education ($p = 0.003$), and husband's occupation ($p = 0.002$). Higher household income was strongly linked to increased decision-making power ($p < 0.001$). Additionally, involvement in financial decisions ($p = 0.001$), household decisions ($p < 0.001$), and greater freedom of movement ($p < 0.001$) were all positively associated with family planning decision-making power (Table-III).

TABLE-I

Participants characteristics:

Study Variables	Total Participants n=345	N (%)
Age (Years)	18-25	113 (32.8%)
	26-33	114(33%)
	34-41	94(27.2%)
	42-49	24(7%)
Monthly Income	<50,000	321(90.4%)
	50,000 - 100,000	27(7.8%)
	>100,000	6(1.7%)
Participant's Education	Illiterate	190(55.1%)
	Primary	64(18.6%)
	Secondary	47(13.6%)
	Higher	30(8.7%)
	Graduation	14(4.1%)
Husband's Education	Illiterate	159(46.1%)
	Primary	67(19.4%)
	Secondary	62(18%)
	Higher	34(9.9%)
	Graduation	23(6.7%)
Husband's Occupation	Labour	161(46.7%)
	Farmer	37(10.7%)
	Shopkeeper	46(13.3%)
	Others	101(29.3%)
Desired Family Size	< 3	65(18.8%)
	3-5	204(59.1%)
	>5	76(22%)

TABLE-II

Reproductive history and utilization of healthcare services:

Study Variables	Total Participants n=345	N (%)
Parity	1	70(20.3%)
	2-4	161(46.7%)
	>4	114(33%)
Had ANC visits	Yes	262(75.9%)
	No	83(24.1%)
Number of ANC Follow-Up (N=281)	< 4	163(58%)
	> 4	118 (42%)
HAD PNC Visits	Yes	100(29%)
	No	245(71%)
Number of PNC Follow-Up (N=100)	< 3	73(73%)
	> 3	27(27%)
Place of Delivery	Government	149(42.2%)
	Health Center	50(14.5%)
	Private	79(22.9%)
	At home	67(19.4%)
Birth Assisted By	Health Professional	279(80.9%)
	TBA	66(19.1%)
Husband's Involvement in Delivery Car	Yes	241(69.9%)
	No	104(30.1%)
Household Decision Power	Yes	146(42.3%)
	No	199(57.7%)
Family Planning Decision Power	Yes	67(19.4%)
	No	278(80.6%)

Women with graduation-level education had 7 times higher odds of having family planning decision-making power compared to those who were illiterate (AOR: 7.15; CI: 1.11–48.7; $p = 0.039$). Similarly, women whose husbands had secondary education were significantly less likely to have decision-making power compared to those whose husbands were illiterate (AOR: 0.22; 95% CI: 0.05–0.76; $p = 0.023$). Women whose husbands were shopkeepers had nearly 5 times higher odds of autonomy compared to those whose husbands were labourers (AOR: 4.89; CI: 1.57–15.8; $p = 0.006$). Additionally, participants with a monthly income exceeding 100,000 PKR had 32 times higher odds of having decision-making power than those earning less than 50,000 PKR (AOR: 32.0; CI: 1.94–1498; $p = 0.035$) (Table-IV).

TABLE-III

Frequency of decision making power of family planning with participants characteristics and household decisions

Study Variables	Categories	Yes	No	P-value <0.05
		N (%)	N(%)	
Age (Years)	18-25	22(32.8%)	91(32.7%)	0.814
	26-33	23(34.3%)	91(32.7%)	
	34-41	19(28.3%)	75(26.9%)	
	42-49	3(4.4%)	21(7.5%)	
Participant's Education	Illiterate	24 (43.6%)	166 (59.7%)	<0.001*
	Primary	12 (21.81%)	52 (18.7%)	
	Secondary	13 (23.63%)	34 (12.2%)	
	Higher	11 (20%)	19 (6.83%)	
	Graduation	7 (12.7%)	7 (2.51%)	
Participant's Husband Education	Illiterate	24 (35.8%)	135 (48.5%)	0.003
	Primary	15 (22.3%)	52 (18.7%)	
	Secondary	7 (10.4%)	55 (19.7%)	
	Higher	12 (17.9%)	22 (7.91%)	
	Graduation	9 (13.4%)	14 (5.0%)	
Husband's Occupation	Labour	23 (34.3%)	138 (49.6%)	0.002
	Farmer	3 (4.47%)	34 (12.2%)	
	Shopkeeper	16 (23.8%)	30 (10.7%)	
	Others	25 (37.3%)	76 (27.3%)	
Household Income	<50,000	56 (73.6%)	256 (92.0%)	<0.001*
	50,000 - 100,000	6 (7.89%)	21 (7.5%)	
	>100,000	5 (6.57%)	1 (0.35%)	
ANC Visits	Yes	61 (91.0%)	201 (72.3%)	<0.001*
	No	6 (8.95%)	77 (27.6%)	
Number of ANC Visit	> 4	28 (44.4%)	90 (41.2%)	<0.011
	<4	35 (55.5%)	128 (58.7%)	
Financial Decisions	Yes	53 (79.1%)	130 (46.7%)	<0.001*
	No	14 (20.89%)	148 (53.2%)	
Household Decisions	Yes	54 (80.59%)	136 (48.9%)	<0.001*
	No	13 (19.4%)	142 (51%)	
Freedom of Movement	Yes	30 (44.7%)	53 (19%)	<0.001*
	No	37 (55.2%)	225 (80.9%)	

DISCUSSION

This study investigates the autonomy of decision-making power in family planning among married women of reproductive age. It aims to understand how factors influence women's reproductive health choices and assess the extent of women's decision-making autonomy in family planning. Overall, 19.4% had decision-making power, aligning with a study from Senegal (17.9%).[12] However, this is lower than findings from South Ethiopia (67.2%), Addis Ketema (73.3%), and Dinsho Woreda (52%).[13,14,6] These differences may be attributed to variations in socioeconomic and demographic factors, study design, and sample sizes.

Women's participation in household decision-making in the study area was 42.3%, which is lower than southern Ethiopia (56%)[15], but lower than East Africa (68.37%) and Ghana (75.26%).[7,16] These differences may stem from study settings, as the referenced studies focused on rural areas, while this study included both rural and urban communities in Nawabshah. Data on women's household decision-making shows limited autonomy, particularly in finances and mobility. While 64% had free access to money similar to a North Indian city (60%)[17] this was lower than in Lahore (77%)[10], likely due to differences in population settings. In this study, 72.5% of women had autonomy in small decisions, 53.9% in major ones, and 63.8% required permission to leave home. Restrictions on movement were reported by 58.6%.

TABLE-IV

Predictors of family planning decision-making power

Covariates & Ref: Category	Categories	Odds ratio	CI (95%) (Lower-upper)	P-Value	AOR	CI (95%) (Lower-Upper)	P-Value <0.05
Participants' Education Ref: Illiterate	Primary	1.596	0.72 - 3.36	0.227	1.58	0.56-4.32	0.368
	Secondary	2.64	1.20 - 5.65	0.013	3.09	0.98-9.83	0.053
	Higher	4.00	1.66 - 9.37	0.001	1.51	0.36-5.99	0.557
	Graduation	6.917	2.19	21.92	7.15	1.11-48.7	0.039
Husband's Education Ref: Illiterate	Primary	1.623	0.77 - 3.31	0.187	1.46	0.56 - 3.76	0.427
	Secondary	0.715	0.27 - 1.68	0.465	0.22	0.05 - 0.76	0.023
	Higher	3.06	1.31 - 6.97	0.007	1.20	0.31 - 4. 78	0.746
	Graduation	3.61	1.37 - 9.22	0.007	0.62	0.11 - 3.03	0.563
Husband's Occupation Ref: Labour	Farmer	0.529	0.12 - 1.63	0.322	0.58	0.11 - 2.30	0.475
	Shopkeeper	3.200	1.49 - 6.77	0.002	4.89	1.57 - 15.8	0.006
	Others	1.974	1.04 - 3.73	0.034	1.35	0.51 - 3.53	0.554
Monthly Income Ref: <50,000	50,000 - 100,000	1.306	0.46 - 3.20	0.582	0.91	0.22 – 3.42	0.893
	>100,000	22.86	3.59 - 442.2	0.004	32.0	1.94 - 1498	0.035
Living Children Ref: 1	2-4	1.116	0.58 - 2.20	0.746	1.20	0.45 – 3.28	0.704
	>4	0.360	0.15 - 0.82	0.016	0.51	0.14 – 1.82	0.307
Control Over Finance Ref: Yes	No	0.232	0.11 - 0.42	0.000	0.58	0.22 – 1.45	0.253
Decision-Making Power Ref: Yes	No	0.230	0.11 - 0.42	0.000	0.42	0.16 – 1.02	0.060
Freedom of Movement Ref: Yes	No	0.290	0.16 - 0.51	0.000	0.59	0.23 – 1.47	0.263

These figures are lower than in a North Indian city, where 81% made small decisions, 92% could go out alone, and 58% could visit parents.[17] Differences may be due to socio-cultural norms, religious views, and economic development.

In our study, 33% of women were aged 26–33, 32% were 18–25, 27% were 34–41, and only 7% were 42–49. No association was found between age and family planning decision-making autonomy. In contrast, studies from Malawi, East Africa, and Senegal reported a positive link between older age and autonomy.[18,7,12] This discrepancy may be due to the smaller proportion of older women in our sample. 55.1% of women were illiterate, while only 4.1% were graduates, among whom 50% had decision-making autonomy. Women with secondary or higher education (27.7% and 36.7%) showed greater autonomy compared to those with no (12.6%) or primary education (18.8%). A significant association was found between education and decision-making power. This aligns with findings from East African countries and Ghana[7,16], possibly because education improves women's understanding of health issues of health issues and their ability to make informed decisions. Our study found a significant association between the husband's education and women's decision-making power in family planning. Autonomy increased from 15.1% with illiterate husbands to 39.1% with graduate husbands, suggesting higher male education supports women's empowerment. This aligns with findings from Senegal.[12]

Women whose husbands are shopkeepers reported the highest decision-making power (34.8%), while those with farmer husbands had the lowest (8.1%). Overall autonomy remained low at 19.4%, reflecting ongoing socio-cultural barriers. These findings align with studies from East African countries.[7] Our study found that women with a monthly household income >100,000 (83.3%) have greater autonomy in decision-making compared to those with <50,000 (17.9%). A similar study in the Bale zone also showed that women with higher socioeconomic status had better access to decision-making autonomy over their health.[19]

Women with 2-4 children showed greater participation in decision-making (26.8%) than those with >4 children (9.6%). However, these figures are lower than those in a similar study in Zambia[49], possibly due to differences in socio-cultural contexts or data collection methods, as the Zambian study used previous demographic survey data.

The binary logistic analysis reveals that women's household decision-making power in Nawabshah is influenced by education, economic status, healthcare access, and husband's involvement. Women's education is a key predictor, with secondary education (OR=2.64) and graduation-level education (OR=6.91) significantly increasing decision-making power. Husband's education also positively impacts decision-making, with graduates showing (OR=3.61) higher odds of their wives participating in decisions. Occupational and economic factors are crucial; with women whose husbands are shopkeepers having (OR=3.20) higher odds of decision-making power. Households earning above 100,000 show (OR=22.86) higher odds compared to those earning below 50,000. Healthcare access also influences autonomy, with women attending >4 antenatal care visits showing (OR=1.138) higher odds of decision-making power. Several variables, including control over finance (OR=0.232, P-value 0.000), decision-making power (OR=0.230, P-value 0.000), freedom of movement (OR=0.290, P-value 0.000), and household decision-making autonomy (OR=0.235, P-value 0.000), show positive associations.

In our analysis, we compared the results of binary logistic regression (BLR) and multiple logistic regression (MLR) to understand the factors associated with women's decision-making power in family planning. While both models identified several significant predictors, the MLR revealed variations and changes in the strength and significance of these associations when controlling for other variables.

After adjusting for variables, women's education remained a significant predictor of decision-making power, with higher education levels, particularly graduation, showing increased odds (AOR=7.15). This suggests the impact of education is amplified when controlling for other factors. A notable change was observed in the effect of the husband's education. The BLR showed a positive association for higher education (OR=3.06), but the adjusted model revealed a negative association (AOR=0.220), indicating women with highly educated husbands were less likely to have decision-making power when accounting for other variables. This underscores the importance of considering confounding factors. Both models consistently identified the husband's occupation as a significant predictor. Women whose husbands were shopkeepers had higher odds of decision-making power, with the adjusted model showing a slightly higher odds ratio (AOR=4.89) compared to the BLR (OR=3.20). A strong positive association was also found between monthly income and decision-making power, especially for households earning above 100,000. After adjustment, this association strengthened (AOR=32.06) compared to the (OR=22.86). Having more than four living children was associated with lower odds of decision-making power, but this was not statistically significant in either model. Variables related to women's autonomy, such as control over finance, decision-making power, and freedom of movement, remained non-significant after adjustment, though their association strength varied slightly compared to the BLR. Variables related to women's autonomy, such as control over finance, decision-making power and freedom of movement, remained non-significant predictors after adjustment. However, the strength of these associations varied slightly compared to the BLR.

There are several limitations to this study, Primarily, it only surveyed women, neglecting the views of their spouses, this restricts how widely the findings can be applied to the general population. Additionally, while various demographic factors were considered, the study had relatively small numbers of older women, educated women, and high-income families, which could distort the results.

CONCLUSION

The magnitude of women's decision-making power in family planning among married women was found to be low (19.4%) in our study. Factors such as women's and husbands' secondary-level education and above, monthly income, and occupational status of husbands were found to be statistically significant by controlling the effect of all other variables related

to the decision-making power. While women were autonomous in some areas of decision-making, in other domains, like control over finance, decision-making in small and large household decisions, and freedom of movement, they had limited autonomy. This study suggests a multifaceted approach to improve women's decision-making power in family planning. Economic empowerment initiatives, such as income-generating opportunities such as skill-enhancement programs, market access, and financial support, can help women build on their existing talents and skills and can also enhance women's autonomy.

ETHICAL APPROVAL

This study was reviewed and approved by the ethical research committee of the Institute of Public Health, Faculty of Community Health Sciences under reference number (PUMHSW/SBA/IPH 601). The study adhered to the Helsinki Declaration, as well as national, international, and institutional ethical standards at all stages, given the involvement of human participants.

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CONFLICT OF INTEREST

The authors declare no conflict of interest.

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3	**Syeda Khadija Zehra:** Initial writing, data analysis.
4	**Kiran Iqra:** Interpretation of results.
5	**Aliza Chandio:** Data collection, analysis, proofreading.
6	**Lareb Nawaz:** Data collection, analysis.