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| RESEARCH ARTICLE

Perceptions on Determinants of Women's Empowerment in Bangladesh: A Cross-sectional Study

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| ABSTRACT

The aim of this study is to ascertain the primary elements influencing women's views of empowerment by use of statistical analysis. 560 respondents in all were asked using standardised questionnaires covering sociodemographic factors, economic position, access to rights in healthcare, job, education, and decision-making as well as digital involvement. Although most women express empowerment in areas including healthcare access (90.9%), media freedom (91.8%), and social media use (90.0%), descriptive statistics suggest notable deficits in political activity (1.1%), leadership access (47.1%), and equal respect treatment (31.3%). Chi-square testing allowed one to investigate the relationships between perceived empowerment and categorical factors. Statistically significant correlations (p < 0.05) were revealed by the impression of equal respect, media consumption, voting freedom, urban living, and equal access to school and employment. Binary logistic regression analysis highly predicted perceived empowerment by urban residence (0R = 1.601, p = 0.042), equal respect treatment (0R = 2.51, p = 0.001), voting freedom (0R = 1.796, p = 0.016), and social media freedom (0R = 2.698, p = 0.013). The results underline the several aspects of empowerment shaped by psychological events as well as structural access. Apart from proving how well statistical modelling catches complex social interactions, this work offers proof to direct the creation of policies. Resource-based treatments and norm-changing strategies have to work together to provide inclusive and quantifiable empowerment.

| KEYWORDS

Empowerment of Women, Gender Equality, Role in Bangladesh's Politics, Economic Independence

| ARTICLE INFORMATION

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1. Introduction

Applying women's empowerment is essential for development, notably in Bangladesh, because long-standing culture results in significant gender gaps (Tabassum et al., 2019). Empowering women makes them stronger and more successful in handling inequality and engaging more in social, economic, and political life (Al Mamun & Hoque, 2022). It leads to better health choices, which is important in public policy (Mainuddin et al., 2015). Because these different factors exist, empowerment must be measured by considering each case (Toufique, 2016). There has

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been substantial growth in women's empowerment, including schooling, healthcare, and online access in Bangladesh (Islam, 2021). However, gaps in employment, leadership positions, and political engagement still exist, as Senan et al. (2022) noted. Because these differences still exist, it shows that empowerment is not simple and needs changes in laws and social ways of living (Rashid, 2024). According to Toufique (2016), women gain greater independence and decision-making ability when they have education, income, and resources.

In the same way, female empowerment is enhanced when people are exposed to the media and join political groups because it raises their knowledge and helps them work for their rights (Banerjee et al., 2020). Even if a few advances have happened, women in Bangladesh are still challenged by gender violence, job discrimination, and lack of access to justice (Al-Ayed & Alateeg, 2025). Gender inequality that results in these obstacles is mainly caused by patriarchal social and cultural traditions (Le & Nguyen, 2020). Many organizations have introduced programs and activities to increase women's power in Bangladesh. They include microfinance programs, education scholarships, and laws to defend women's rights and help achieve gender equality (Al-Ayed & Alateeg, 2025; Rashid & Islam, 2023). The reach of these actions varies, so it is important to create strategies that solve the main reasons for gender inequality and bring about genuine change (Yeasmin, 2023). Although microfinance and education stipends for girls are helping, the strong patriarchal customs, along with religious and cultural practices, persist in Bangladesh (Adams, 2015).

The impact of these initiatives changes everywhere, primarily because of how well they help women solve basic social and cultural struggles (Yeasmin, 2023). Empowering women goes beyond ensuring they have the exact numbers or places; it also means challenging the structures that cause gender differences. A multi-pronged approach is required to handle the main reasons behind discrimination and guarantee that women's empowerment reaches all people properly (Njuki et al., 2022). Studies done in Bangladesh about women's empowerment reveal that it is shaped by socio-economic, cultural, and political issues (Islam, 2021; Yeasmin, 2023). The study of Miah & Chowdhury (2019) showed that Bangladesh Rural Development Board's microfinance services help to ease poverty, and women have greater say in family decisions. Despite microfinance and garment work helping women achieve economic independence, they still have to deal with discrimination and poor workplaces (Zafarullah & Nawaz, 2019). Bangladesh's ready-made garment industry mainly offers women jobs and financial independence (Haque et al., 2020).

However, women in this sector still suffer from low pay, unsafe working places, and discrimination (Al Mamun & Hoque, 2022; Haque et al., 2020). Women's workplace potential and empowerment depend on improved working conditions, better wages, and gender equality in the RMG sector (Al Mamun & Hoque, 2022). NGOs in Bangladesh unite poor women to work towards bigger objectives. Moving ahead means having comprehensive plans to address inequalities, promote gender equality, and oppose unfair norms to allow women to involve themselves in society (Yeasmin, 2023) fully. Enabling women in Bangladesh involves more rights and opportunities, such as learning, financial independence, property ownership, political involvement, and ending gender discrimination (Rahman, 2023; Wei et al., 2021). Working outside the home significantly impacts women's feelings of empowerment in Bangladesh (Al Mamun & Hoque, 2022). Despite some positive developments in Bangladesh, women are still affected by violence, unfair treatment on the job, and weak justice systems (Mainuddin et al., 2015).

The study analyzes what women in Bangladesh think and experience regarding empowerment, with an eye on the socio-demographic traits that affect their independence. It also investigates the connection between personal features and women's independence to discover the leading causes of empowerment and inequality. The outcomes of this study will make it possible to use plans for gender equality and women's empowerment in Bangladesh.

2. Methodology

2.1 Study Design

This study used a descriptive survey to understand women's views on empowerment and independence in the Tangail District of Bangladesh. From January to April 2024, primary data were gathered using a structured questionnaire.

2.2 Study Population and Sampling

The target group participants were picked through purposive random sampling. Once the validity was ensured and data cleaning was complete, this study used Information from 560 women.

2.3 Data Collection Tool and Methods

This questionnaire, which was used mainly to gather data, included closed- and open-ended questions and was grouped into three sections: Personal Information (age, marital status, family size, educational qualification, income), Access in Society (women's roles and use of community resources), and Occupation and Husband (the participant's career and details about her husband).

2.4 Data Quality Control Measures

The questionnaire was translated to assess the accuracy and consistency of the data. To ensure its equivalence and fairness, it was translated into Bengali and reverted to English. We reviewed each filled questionnaire daily to ensure all essential Information was included. After examining the questions, modifications were made to clarify the literacy questions.

2.5 Variables

The dependent variable in this study is feeling more independent, where participants mark Yes or No for their view. The independent variables include different categories for socio-demographic and behavioral traits: age, education level, income, and the number of children (Sultana, 2011). Tabassum et al., 2019). Several Bangladesh research studies use these variables to measure women's empowerment.

2.6 Statistical Analysis

The collected data were evaluated in three stages with the help of SPSS. At the first stage, univariate analysis with descriptive statistics was used to check the distribution of each variable using frequency tables and bar graphs. In the bivariate stage, chi-square tests were used to see if the independent variables were connected with the dependent variable's sense of independence. It was then followed by binary logistic regression to reveal predictors of the outcome, introducing into the multivariable model only variables with a bivariate p-value less than 0.20. Results are offered as adjusted odds ratios with 95% confidence intervals, where statistical significance means p < 0.05. This approach aims to understand the factors related to women's independence in the Tangail District of Bangladesh.

2.7 Ethical Considerations

Participants were informed about the study and asked to consent before any data was collected. Confidentiality and anonymity were maintained throughout the study, and participants were told they could leave without repercussions.

3. Results

Table 1: Background Characteristics of Socio Demographic Variable of the respondents.

Variable	Categories	Frequency
	18-25	476 (85%)
Λ	26-35	54 (9.6%)
Age	36-45	21 (3.8%)
	>45	9 (1.6%)
	Muslim	519 (92.7%)
Religion	Hindu	35 (6.3%)
	Christian	6 (1.1%)
	Uneducated	5 (0.9%)

Variable	Categories	Frequency	
	Primary	9 (1.6%)	
	Secondary	39 (7.0%)	
Education level	HSC	118 (21.1%)	
	Honors	358 (63.9%)	
	Masters	31 (5.5%)	
	Married	134 (23.9%)	
Manifest status	Unmarried	409 (73.0%)	
Marital status	Divorced	13 (2.3%)	
	Widow	4 (0.7%)	
B 11 11 1	Rural	216 (38.6%)	
Residential region	Urban	344 (61.4%)	
	Lower Class	28 (5.0%)	
	Lower Middle Class	90 (16.1%)	
Economic status	Middle Class	374 (66.8%)	
	Upper Middle Class	51 (9.1%)	
	Upper Class	17 (3.0%)	
	Full-time employed	31 (3.5%)	
	Part-time employed	11 (2.0%)	
	Self-employed	31 (5.5%)	
Occupation	Unemployed	12 (2.1%)	
	Student	410 (73.2%)	
	Housewife	56 (10.0%)	
	Businessman	9 (1.6%)	
	<10,000 TK	482 (86.1%)	
	11,000-30,000 TK	44 (7.9%)	
Monthly income	31,000-50,000 TK	23 (4.1%)	
	51,000-80,000 TK	6 (1.1%)	
	>80,000 TK	5 (0.9%)	
	<10,000 TK	54 (9.6%)	
	11,000-30,000 Tk	242 (43.2%)	
Monthly income family	31,000-50,000 TK	157 (28.0%)	
•	51,000-80,000 TK	74 (13.2%)	
	>80,000 TK	33 (5.9%)	
	2-4	263 (47.0%)	
Family members	5-10	297 (53.0%)	

Table 1 illustrates that the majority of respondents (85%) were aged between 18–25 years, followed by 9.6% aged 26–35 years, indicating a predominantly young population. Most participants identified as Muslim (92.7%), while small proportions identified as Hindu (6.3%) and Christian (1.1%). In terms of education, 63.9% had completed honors-level education, and 21.1% had completed HSC, reflecting a relatively high level of academic attainment. Regarding marital status, 73% were unmarried and 23.9% were married. Urban residents constituted 61.4% of the

sample, with 38.6% from rural areas. Economically, the majority (66.8%) were from middle-class families, followed by 16.1% from lower-middle-class backgrounds. A large portion of respondents (73.2%) were students, with smaller percentages employed full-time (5.5%), self-employed (5.5%), or housewives (10%). In terms of individual monthly income, most respondents (86.1%) earned less than 10,000 TK, while 43.2% of families had a household income between 11,000–30,000 TK. The majority of households (53%) had 5–10 members, and 47% had 2–4 members, indicating moderate to large family sizes.

Table 2: Frequency distribution of the respondents regarding the questions of women independent.

ltems	Response Number (%)		
	Yes	No	
Equal education access	420 (75.00%)	140 (25.00%)	
Equal employment access	316 (56.40%)	144 (43.60%)	
Equal leadership access	264 (47.10%)	296 (52.90%)	
Equal respect treatment	175 (31.30%)	385 (68.80%)	
Access decision making	348 (62.10%)	212 (37.90%)	
Voting freedom	362 (64.60%)	198 (35.40%)	
Political involvement	6 (1.10%)	554 (98.90%)	
Political willingness	45 (8.00%)	515 (92.00%)	
Family discrimination	130 (23.20%)	430 (76.80%)	
Public mobility freedom	391 (69.80%)	169 (30.20%)	
Healthcare freedom	509 (90.90%)	51 (9.10%)	
Family violence experience	131 (23.40%)	429 (76.60%)	
Husband dominance	13 (2.30%)	547 (97.70%)	
Social interest	385 (68.80%)	175 (31.20%)	
Social participation	300 (53.60%)	260 (46.40%)	
Fear solo outing	402 (71.80%)	158 (28.20%)	
Media freedom	514 (91.80%)	46 (8.20%)	
Social media freedom	504 (90.00%)	56 (10.00%)	
Occupation choice freedom	129 (87.80%)	18 (12.20%)	
Workplace mobility freedom	129 (87.80%)	18 (12.20%)	
Job related family violence	24 (16.30%)	123 (83.70%)	
Workplace violence harassment	37 (25.00%)	110 (75.00%)	
Income spending freedom	119 (81.00%)	28 (19.00%)	
Husband property access	43 (30.10%)	100 (69.90%)	

Items	Response N	lumber (%)
	Yes	No
Visit fathers house freedom	83 (58.00%)	60 (42.00%)
Friend meeting freedom	65 (45.50%)	78 (54.50%)
Husband permission for friends	104 (72.70%)	39 (27.30%)
Freedom in groom selection	94 (65.70%)	49 (34.30%)
Major purchase freedom	108 (75.50%)	35 (24.50%)
Daily needs freedom	114 (79.70%)	29 (20.30%)
Household work sharing	100 (69.90%)	43 (30.10%)
Control over husband income	104 (72.20%)	39 (27.30%)
Perceived independence growth	443 (79.10%)	117 (20.90%)

Table 2 shows the findings that reveal a mixed picture of women's empowerment within the community. A majority of respondents agreed that women have equal access to education (75%) and public mobility (69.8%), and a significant proportion reported freedom to seek healthcare (90.9%), use media (91.8%), and engage with social media (90%). However, access to employment (56.4%) and leadership opportunities (47.1%) remains limited, and only 31.3% felt women are treated with the same respect as men. While 62.1% of respondents reported women's access to decision-making, political participation remains extremely low, with only 1.1% reporting current involvement and 8% expressing willingness to participate. Regarding family practices, most respondents did not perceive discrimination (76.8%) or violence due to their job (83.7%), though 23.4% experienced violence within the family. Additionally, 25% reported workplace harassment. In terms of economic autonomy, 81% had the freedom to spend their income, 75.5% could purchase major household items, and 72.2% had decision-making power over their husband's earnings. Social freedoms were more limited: only 45.5% could meet friends freely, and 72.7% had to answer their husband's queries to do so. While 65.7% were allowed to choose their groom, just 30.1% had access to their husband's property. Finally, a large majority (79.1%) believed that women's independence in Bangladesh is gradually increasing, indicating a positive perception of progress despite persistent challenges

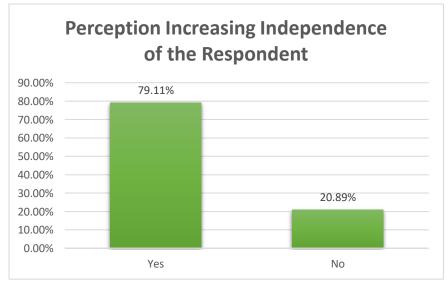


Figure 1: Respondents' Perception of Increased Independence Due to Empowerment

Figure 1 shows that the majority of respondents (79.11%) perceive an increase in their independence, while 20.89% do not. This suggests that empowerment initiatives in Bangladesh are having a positive impact on many women. However, the notable number of women who do not feel more independent highlights the need for more inclusive and targeted efforts to reach all segments of the population.

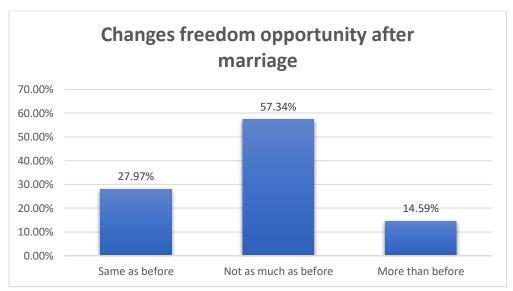


Figure 2: Changes freedom opportunity after marriage

From **Figure 2**, changes in freedom and opportunity after marriage, the majority of individuals report experiencing freedom and opportunity "Not as much as before," comprising approximately 57.34% of the total count. Those reporting "Same as before" represent 27.97%, while "More than before" accounts for 14.69%. Additionally, there are instances where individuals report changes both "before marriage and after marriage," indicating fluctuations in freedom and opportunity across life stages

Table 3: Association between Perception increasing independence with selected variables

Covariates	Category	Perception increasing independence		χ^2	P value
	_	Yes	No	_	
	18-25	371	105		
	26-35	45	9	2 120	0.271
age	36-45	19	2	3.138	0.371
	>45	8	1		
	Muslim	414	105		
religion	Hindu	24	11	2.553	0.279
_	Christian	5	1		
	Uneducated	5	0		0.2
	Primary	9	0		
Education level	Secondary	32	7	C 0CC	
Education level	HSC	87	31	6.066	0.3
	Honors	285	73		
	Masters	25	6		
	Married	103	31		
NA	Unmarried	324	85	2.027	0.471
Marital status	Divorced	12	1	2.837	0.471
	Widow	4	0		

Residential region	Rural Urban	160 283	56 61	5.389	0.025
	Lower Class	22	6		
	Lower Middle	72	17		
	Class	73	17		
Economic status	Middle Class	294	80	0.402	0.982
	Upper Middle	40	11		
	Class	40	11		
	Upper Class	14	3		
	Full-time	29	2		
	employed	23	2		
	Part-time	21	20		
	employed				
Occupation	Self-employed	10	2	12.177	0.058
	Unemployed	44	12		
	Student	319	91		
	Housewife	44	12		
	Businessman	9	0		
	<10,000	372	110		
	11,000-30,000	42	2		
Monthly income	31,000-50,000	21	2	14.666	0.005
	51,000-80,000	3	3		
	>80,000	5	11		
	<10,000	39	15		
	11,000-30,000	193	49		
Family Monthly income	31,000-50,000	129	28	6.543	0.162
	51,000-80,000	53	21		
	>80,000	29	4		
Family members	2-4	210	53	0.165	0.755
•	5-10	233	64		
Equal education access	No	96	44	12.537	0.000
	Yes	347	73		
Equal employment access	No	180	64	7.451	0.006
	Yes	263	53		
Equal leadership access	No	225	71	3.636	0.057
	Yes	218	46		
	No	288	97	13.795	0.000
Equal respect treatment	Yes	155	20		
	No	157	55	5.265	0.025
Access decision making	Yes	286	62		
	No	140	58	13.077	0.000
Voting freedom	Yes	303	59		
	No	413	101	4.711	0.030
Political willingness	Yes	30	15		
	No	124	45	4.816	0.028
Public mobility freedom	Yes	319	72		
	No	34	17	5.254	0.022
Healthcare freedom	Yes	409	100		
Family violence	No	348	81	4.491	0.034
experience	Yes	95	36		

Past family violence	No	407	98	6.878	0.009
experience	Yes	36	19		
	No	25	21	18.589	0.000
Media freedom	Yes	418	96		
	No	31	25	21.235	0.000
Social media freedom	Yes	412	92		
	No	124	34	0.052	0.819
Fear solo outing	Yes	319	83		

A chi-square analysis was conducted to examine the relationship between the perception of increasing women's independence in Bangladesh and various sociodemographic and empowerment-related variables. **Table 3** reveals several statistically significant associations. Respondents' residential region showed a significant association (p = 0.025), with urban residents more likely to perceive increasing independence. Monthly personal income was also significant (p = 0.005), suggesting higher income levels are linked with more positive perceptions. However, other demographic factors such as age, religion, education level, marital status, occupation, family income, and family size were not significantly associated (p > 0.05). Significant associations were found between the perception of increasing independence and empowerment-related experiences. These include access to education (p < 0.001), employment (p = 0.006), decision-making (p = 0.025), healthcare (p = 0.022), and freedom of public mobility (p = 0.028). Furthermore, respondents who reported equal treatment of women (p < 0.001), participation in voting (p < 0.001), and willingness to engage in politics (p = 0.030) were significantly more likely to perceive increasing independence. Experience-related factors also showed significant relationships. Respondents who had not faced family violence (p = 0.034) or past violence (p = 0.009) were more likely to perceive growing independence. Additionally, those with freedom to enjoy media (p < 0.001) and social media (p < 0.001) expressed higher agreement with the notion of increasing women's independence.

Overall, the perception of increasing independence among women appears to be strongly linked to both structural opportunities and personal freedoms, rather than to basic sociodemographic factors alone. These findings highlight the importance of expanding women's access to education, mobility, media, and decision-making to foster a broader sense of empowerment.

Table 4: Binary logistic regression analysis

				95% C		S CI
Covariates	Category	P value	Odds ratio	Lower	Upper	
Residential region	Rural ^{RF}					
	Urban	0.042	1.601	1.018	2.516	
Equal education access	No RF					
	Yes	0.088	1.669	0.926	3.006	
Equal employment access	No RF					
	Yes	0.881	0.957	0.537	1.705	
Equal leadership access	No RF					
	Yes	0.633	0.875	0.506	1.513	
Equal respect treatment	No ^{RF}					
	Yes	0.003	2.515	1.369	4.621	
Access decision making	No RF					
3	Yes	0.937	1.020	0.623	1.669	

Covariates				95% CI	
	Category	P value	Odds ratio	Lower	Upper
Voting freedom	No ^{RF}				
	Yes	0.016	1.796	1.117	2.886
Political willingness	No RF				
	Yes	0.001	0.271	0.128	0.573
Public mobility freedom	No RF				
·	Yes	0.290	1.322	0.788	2.217
Healthcare freedom	No RF				
	Yes	0.147	0.508	0.203	1.270
Family violence experience	No RF				
	Yes	0.491	1.241	0.672	2.293
Past family violence	No RF				
experience	Yes	0.793	0.896	0.397	2.024
Media freedom	No ^{RF}				
	Yes	0.127	1.951	0.827	4.600
Social media freedom	No ^{RF}				
	Yes	0.013	2.698	1.235	5.895

RF = Reference Category

Table 4 shows that respondents from urban areas were significantly more likely to perceive an increase in women's independence compared to their rural counterparts (OR = 1.601, p = 0.042; 95% CI: 1.018-2.516), indicating the relatively progressive nature of urban environments regarding women's rights and freedoms. Perception of equal treatment of women in the community was a strong predictor (OR = 2.515, p = 0.003), suggesting that individuals who acknowledged gender-equitable treatment were 2.5 times more likely to believe in the increasing independence of women.

Voting participation was also significantly associated with the outcome. Respondents who had the freedom to vote were 1.8 times more likely to perceive women's independence as increasing (OR = 1.796, p = 0.016). Similarly, freedom to enjoy social media was significantly associated with increased perceived independence (OR = 2.698, p = 0.013), highlighting the role of digital inclusion and online engagement in fostering awareness and autonomy among women.

Interestingly, willingness to engage in politics was negatively associated with the perception of increasing independence (OR = 0.271, p = 0.001), implying that those who were hesitant or unwilling to enter political spaces may perceive the societal environment as becoming more supportive of women, even without direct involvement. Other variables, such as access to education (OR = 1.669, p = 0.088) and freedom to enjoy media (OR = 1.951, p = 0.127), although not statistically significant, showed positive associations.

In contrast, factors like access to employment, leadership roles, decision-making participation, and experience of violence did not show statistically significant associations in the adjusted model, though they were significant in bivariate analyses. This indicates possible intercorrelations or the effect of confounding variables when adjusting for multiple predictors simultaneously.

4. Discussion

The present study examined the perception of increasing independence among women in Bangladesh and the socio-demographic and empowerment-related factors influencing this perception. The findings suggest that while a significant proportion of women perceive an improvement in their independence, several structural and socio-cultural barriers continue to persist. These observations align with earlier studies that have reported mixed progress regarding women's empowerment in South Asia, particularly in patriarchal societies like Bangladesh (Kabeer, 1999).

Our study also found noticeable differences between rural and urban women in terms of perceived empowerment. Urban women were generally more likely to report increased independence, possibly due to better access to education, employment, and social networks, whereas rural women still face more traditional barriers and limited opportunities for exercising autonomy. This finding aligns with previous studies (e.g., Kabeer, 2001; Malhotra et al., 2002) that have similarly highlighted the urban advantage in women's empowerment due to better resource availability and social mobility.

Consistent with previous research, our study found that women with access to education, healthcare, and incomegenerating opportunities were more likely to perceive an increase in their independence (Malhotra et al., 2002; Mahmud et al., 2012). These factors are well-documented in the literature as essential contributors to women's empowerment, providing them with greater autonomy and decision-making power both within the household and in public spheres. Moreover, our findings support earlier observations that employment plays a crucial role in enhancing women's self-perception of independence (Naved & Persson, 2005). Employment not only provides financial resources but also enhances women's bargaining power and agency, which can translate into improved self-esteem and mobility.

One important contribution of this study is its focus on the perception of independence rather than only structural indicators of empowerment. Our results highlight that while institutional access (e.g., to education and healthcare) has improved, societal attitudes toward women's leadership, political participation, and equal respect remain largely unchanged. This is argue that cultural norms and traditional gender roles continue to restrict women's participation in leadership and politics, despite formal rights being in place (Cislaghi & Heise, 2020).

Furthermore, the association between perception of independence and mobility-related factors, such as freedom to use social media and ability to travel without permission, is consistent with findings from Van Der Vlugt et al., (2022). These aspects of mobility and access to information are emerging as modern indicators of empowerment, especially in digitally evolving societies. Yet, the persistence of family violence and control over women's movements also reported by Mamun & Hoque, (2022) indicates that many women still face significant personal and domestic restrictions, regardless of broader social progress.

Interestingly, our study did not find a significant relationship between some traditional demographic variables such as marital status or education level and perceived independence. This diverges from some earlier studies that reported a strong correlation between higher education and empowerment (Sitar-Tăut et al., 2024). One possible explanation could be that education alone is not sufficient unless accompanied by enabling environments and supportive socio-cultural contexts that allow women to exercise their rights and choices meaningfully.

Finally, although a majority of respondents expressed the belief that women's independence in Bangladesh is increasing, a considerable minority disagreed. This discrepancy may reflect the uneven distribution of empowerment gains across regions, age groups, or social classes. Particularly, married women in our study often reported reduced freedom after marriage, a finding corroborated by (Amin & Lloyd, 1998), who emphasized the restrictive nature of marital dynamics in shaping women's autonomy.

5. Conclusion

Empowerment of women is social, cultural, financial, and personal. This study looked at women's perspectives on the variables impacting their empowerment. Data analysis reveals both great development and ongoing difficulties. Urban life greatly influences the constant longing for freedom. Urban women are empowered by education, employment, healthcare, internet access, and other aspects. Given the urban-rural gap, rural policy must be more inclusive and resource-rich. Many feel that knowledge teaches skills, levels society, and empowers individuals. Stronger women are equally educated. Education helps women to show their autonomy by giving them the tools, knowledge, confidence, and networks they need to negotiate public life and fight for their rights. Women have to be revered. Family, societal, and professional respect forms most of the basis for empowerment. Empowerment is about dignity, value, and agency as much as money and services. Women feel empowered in caring and respectful surroundings regardless of their money. Media and digital freedoms empower women. Social media brings women's voices and presence in society front and centre. On these websites, advocate, educate, network, and express yourself to challenge gender stereotypes and assist underprivileged voices. Still, certain areas generate problems. Political participation and access remain shockingly low given only 1.1% of women in politics and fewer than half feeling that leadership roles are achievable. These results show the need of structural changes and the exclusion of women from public and political decision-making. Political participation is a major determinant of empowerment even with minimal desire; consequently, empowering women is guite important. Regular violence and fear lower empowerment. While 25% of respondents claim job harassment, 71.8% of respondents say they experience domestic abuse and fear going out alone. These results show how dangerous surroundings and patriarchal legislation restrict movement, autonomy, and self-determination. Respect, family, security, education, income, internet access, and safety knowledge empower women. One-dimensional answers don't help anyone. It promotes a combined strategy that questions social conventions and power systems restricting women's rights and actual inequalities. True independence for women is still far off even if education, healthcare, and internet freedom have progressed. Changing institutions, society's perspective of women, and her self-awareness, empowerment has to transcend personal achievement. To empower every woman, future projects should give government reform, cultural re-education top priority together with grassroots involvement.

5.1 Recommendations

These recommendations come from the analysis of the study:

- Promote Education and Skill Development: Set up training initiatives to help women gain better jobs.
 Women who live in the countryside and belong to vulnerable groups should have equal chances to get an education.
- 2. Enhance Economic Opportunities: Promote women's economic strength by supplying credit, teaching them business skills, and creating more jobs. Promote fair policies in offices and help women-run companies.
- 3. Strengthen Legal and Policy Frameworks: Ensure that women's rights and equality laws are enforced. Introduce have roles in decision-making throughout society. Encourage women's participation in new laws to fix legal gaps and allow women to access justice equally.
- 4. Address Socio-Cultural Barriers: Work with the public to share Information and get communities to help fight negative ideas and spread positive attitudes towards women's empowerment. Work with men and boys to help achieve gender equality.
- 5. Promote Political Participation: Make sure women are involved in political roles and leadership roles using extraordinary measures like quotas.
- 6. Strengthen Institutional Mechanisms: Strengthen the government and community groups to help them achieve women's empowerment. Give these organizations enough money and assistance to do good work for women's empowerment.
- 7. Further Research: Look at women's empowerment in various contexts and find the best ways to promote gender equality. Measuring the effects of policies and programs over a longer time will clearly show their benefit for women's empowerment.

Taking these steps in Bangladesh will help advance gender equality and help women do well, which will help the country develop and grow.

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References

- [1] Adams, N. (2015). Religion and Women's Empowerment in Bangladesh. https://repository.library.georgetown.edu/handle/10822/1052072
- [2] Al Mamun, M. A., & Hoque, M. M. (2022). The impact of paid employment on women's empowerment: A case study of female garment workers in Bangladesh.
- [3] Al-Ayed, S. I., & Alateeg, S. (2025). Women economic empowerment leads towards social innovation in rural setting of Saudi Arabia. Cogent Economics & Finance, 13(1). https://doi.org/10.1080/23322039.2025.2481228
- [4] Banerjee, S., Alok, S., & George, B. (2020). Determinants of Women Empowerment as Measured by Domestic Decision-Making: Perspective from a Developing Economy. In International symposia in economic theory and econometrics (p. 1). Emerald Publishing Limited. https://doi.org/10.1108/s1571-038620200000027001
- [5] Haque, M. F., Sarker, Md. A. R., Rahman, Md. S., & Rakibuddin, M. (2020). Discrimination of Women at RMG Sector in Bangladesh. Journal of Social and Political Sciences, 3(1). https://doi.org/10.31014/aior.1991.03.01.152
- [6] Islam, A. (2021). Women Participation and Empowerment System under Government Institutions and Constitution from 1971-2020. Scholedge International Journal of Multidisciplinary & Allied Studies ISSN 2394-336X, 7(8), 164. https://doi.org/10.19085/sijmas070801
- [7] Jhuma, C. F., & Biswas, S. K. (2023). Women Empowerment Sustainability in Informal Economic Activities: The Role of Microcredit in the Sub-urban Areas in Sylhet, Bangladesh.
- [8] Le, K., & Nguyen, M. (2020). How Education Empowers Women in Developing Countries. The B E Journal of Economic Analysis & Policy, 21(2), 511. https://doi.org/10.1515/bejeap-2020-0046
- [9] Mainuddin, A., Begum, H., Rawal, L., Islam, A., & Islam, S. M. S. (2015). Women Empowerment and Its Relation with Health Seeking Behavior in Bangladesh. DOAJ (DOAJ: Directory of Open Access Journals), 9(2), 65. https://doaj.org/article/f3cff2aba7a24c59a4e437fe210a4d1d
- [10] Miah, Md. U., & Chowdhury, M. S. (2019). The experience of microfinance recipients of Bangladesh Rural Development Board: a case study on Integrated Rural Women Development Programme. Bangladesh Journal of Public Administration, 27(1). https://doi.org/10.36609/bjpa.v27i1.9
- [11] Njuki, J., Melesse, M., Sinha, C., Seward, R., Renaud, M. C., Sutton, S., Nijhawan, T., Clancy, K., Thioune, R. M., & Charron, D. (2022). Meeting the challenge of gender inequality through gender transformative research: lessons from research in Africa, Asia, and Latin America. Canadian Journal of Development Studies/Revue Canadienne d Études Du Dévelopment, 44(2), 206. https://doi.org/10.1080/02255189.2022.2099356
- [12] Rahman, R. (2023). Women Empowerment in Bangladesh NGOS. The National University Journal of Humanities Social Sciences and Business Studies, 111. https://doi.org/10.3329/naujhssbs.v8i1.68084
- [13] Rashid, A. (2024). Untitled. https://doi.org/10.55277/researchhub.vq5dnd6h
- [14] Rashid, Md. M., & Islam, R. (2023). Involvement of Women in Politics and Their Empowerment: A Sociological Study in Madaripur District, Bangladesh. Advances in Applied Sociology, 13(3), 219. https://doi.org/10.4236/aasoci.2023.133014
- [15] Senan, A., Tarek, Md. O. R., Amit, S., Rahman, I., & Kafy, A. A. (2022). Re-opening the Bangladesh economy: search for a framework using a riskimportance space. Spatial Information Research, 30(4), 539. https://doi.org/10.1007/s41324-022-00450-9
- [16] Sultana, A. M. (2011). Factors Effect on Women Autonomy and Decision-Making Power within the Household in Rural Communities.
- [17] Tabassum, M., Begum, N., Rana, M. S., Faruk, M. O., & Miah, M. M. (2019). Factors Influencing Women's Empowerment in Bangladesh. Science Technology & Public Policy, 3(1), 1. https://doi.org/10.11648/j.stpp.20190301.11
- [18] Toufique, M. M. K. (2016). The Context Specific Factors Affecting Women Empowerment and Empowerment's Implications for Resource Allocation, Awareness and Fertility: An Econometric Analysis. SSRN Electronic Journal. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3018600

- [19] Wei, W., Sarker, T., Żukiewicz-Sobczak, W., Roy, R., Alam, G. M. M., Rabbany, Md. G., Hossain, M. S., & Aziz, N. (2021). The Influence of Women's Empowerment on Poverty Reduction in the Rural Areas of Bangladesh: Focus on Health, Education and Living Standard. International Journal of Environmental Research and Public Health, 18(13), 6909. https://doi.org/10.3390/ijerph18136909
- [20] Yeasmin, S. N. (2023). Gender Equality and Women's Empowerment in Bangladesh: Development and Change.
- [21] Zafarullah, H., & Nawaz, F. (2019). Pathways to women's empowerment in Bangladesh. Asian Education and Development Studies, 8(4), 387. https://doi.org/10.1108/aeds-11-2018-0168
- [22] Amin, S., & Lloyd, C. (1998). Women's lives and rapid fertility decline: Some lessons from Bangladesh and Egypt. Population Council. https://doi.org/10.31899/pgy6.1018
- [23] Cislaghi, B., & Heise, L. (2020). Gender norms and social norms: Differences, similarities and why they matter in prevention science. *Sociology of Health & Illness*, 42(2), 407–422. https://doi.org/10.1111/1467-9566.13008
- [24] Kabeer, N. (1999). Resources, Agency, Achievements: Reflections on the Measurement of Women's Empowerment. *Development and Change*, 30(3), 435–464. https://doi.org/10.1111/1467-7660.00125
- [25] Mahmud, S., Shah, N. M., & Becker, S. (2012). Measurement of Women's Empowerment in Rural Bangladesh. *World Development*, 40(3), 610–619. https://doi.org/10.1016/j.worlddev.2011.08.003
- [26] Mamun, M. A. A., & Hoque, M. M. (2022). The impact of paid employment on women's empowerment: A case study of female garment workers in Bangladesh. *World Development Sustainability*, 1, 100026. https://doi.org/10.1016/j.wds.2022.100026
- [27] Naved, R. T., & Persson, L. Å. (2005). Http://www.jstor.org Factors Associated with Spousal Physical Violence against Women in Bangladesh. *Studies in Family Planning*, *36*(4), 289–300.
- [28] Sitar-Tăut, D.-A., Mican, D., & Moisescu, O.-I. (2024). To be (online) or not to be? The antecedents of online study propensity and e-learning-dependent dropout intention in higher education. *Technological Forecasting and Social Change*, 207, 123566. https://doi.org/10.1016/j.techfore.2024.123566
- [29] Van Der Vlugt, A.-L., Curl, A., & Scheiner, J. (2022). The influence of travel attitudes on perceived walking accessibility and walking behaviour. *Travel Behaviour and Society*, 27, 47–56. https://doi.org/10.1016/j.tbs.2021.11.002
- [30] Malhotra, A., Schuler, S. R., & Boender, C. (2002, June). Measuring women's empowerment as a variable in international development. In *background paper prepared for the World Bank Workshop on Poverty and Gender: New Perspectives* (Vol. 28, p. 58). Washington, DC: The World Bank.
- [31] Kabeer, N. (2001). Conflicts over credit: Re-evaluating the empowerment potential of loans to women in rural Bangladesh. *World development*, *29*(1), 63-84.