

Determinants of Women's Empowerment in Pakistan: Evidence from Demographic and Health Surveys, 2012–13 and 2017–18

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Abstract

Background: Women's empowerment has always remained a contested issue in the complex socio-demographic and cultural milieu of Pakistani society. Women are ranked lower than men on all vital human development indicators. Therefore, studying various determinants of women's empowerment is urgently needed in the Pakistani context.

Methods: The present study empirically operationalized the concept of women's empowerment and investigated its determinants through representative secondary data taken from the Pakistan Demographic and Health Surveys, 2012–13 and 2017–18. The study used simple binary logistic and multivariable regression analysis.

Results: The results of the binary logistic regression highlighted that almost all of the selected demographic, economic, social, and access to information variables were significantly associated with women's empowerment ($p < 0.05$) in both PDHS datasets. In the multivariable regression analysis, the adjusted odds ratios highlighted that reproductive-age women in higher age groups, having children, with a higher level of education and wealth index, involved in skilled work, who were the head of household, and had access to information were reported to be more empowered.

Conclusions: Women's empowerment is determined by a number of social, economic, demographic, and other factors. The study proposes some evidence-based policy options to improve the status of women in Pakistan.

Background

Women's empowerment *per se* involves the creation of an environment within which women can make strategic life choices and decisions in a given context [1]. The concept is so broad that measuring it has always been problematic. Following from this conundrum, various studies have developed different conceptualisation schemes and indicators to measure the complex idea [2]. While differences exist in measuring the concept, similarities can be found in the available literature. In this regard, the main themes used to conceptualize women's empowerment are: household decision-making, economic decision-making, control over resources, and physical mobility [3, 4]. Women's empowerment depends upon cultural values, the social position that a woman holds, and her life opportunities [5]. From this point of departure, the present study attempts to identify and understand various determinants of women's empowerment in Pakistani society. Investigating women's empowerment in Pakistan is important, because of the male dominance and gender gaps which are hindering the progress of women to take an active part in development in Pakistani society [6]. Furthermore, empowerment is a strong determinant for healthcare decision making as well as of physical and mental health in females [7].

The study has adapted the framework developed by Mahmud, Shah, and Becker [8], which conceptualizes empowerment as a dynamic and multi-dimensional process encompassing four major determinants, consisting of demographic, economic, and social factors, along with media exposure. Likewise, this

framework denotes four major dimensions of empowerment: self-esteem, control of resources, decision-making, and mobility.

Because women's empowerment is an idea that acknowledges a woman's control over her own life and personal decisions, it has a strong grounding in human rights propositions [1]. Moreover, women constitute almost half the world's population; hence, women's empowerment is the key factor in achieving the highest levels of desirable development [9].

Despite the widespread acclamation of women's empowerment and the major role of women in the development process, their status is not equal to that of men across most countries of the world [10]. In many parts of the world, women are in a disadvantaged position, and hence most of the time ranked below their male counterparts in the social hierarchy [11]. This disadvantaged position can well be understood through the glaring differences between men and women with respect to many human-rights, cultural, economic, and social indicators. For instance, globally, women spend two to ten times more hours than men on unpaid care work [12]. Similarly, of all the illiterate and poor people across the world, women constitute 65% and 70% respectively [13]. It is reported that only 1% of the world's total assets are held in women's names [14]. Moreover, data also indicates that 70% of the 1.3 billion people living in extreme poverty are women or girls [15]. Owing to these conditions, women enjoy substantially lower status than men [12].

Although gender-based discrimination is a global issue, Pakistan needs special attention in terms of women's empowerment [16]. Pakistani society, in both its normative and existential order, is hierarchical in nature and exhibits unequal power relations between men and women, whereby women are placed under men [17]. The existence of significant gender disparities makes it a non-egalitarian society where gender equality and women's emancipation appear a faraway goal [18]. In this context, the low level of women's empowerment is a factual issue in Pakistan as the country is ranked almost at the bottom of the Gender Gap Index – 151st of 153 studied countries [19]. Similarly, in 2019, the Human Development Index value for females was lower than for males (0.464 vs. 0.622) in the country [20].

The gender disparity highlighted by these measures can be clearly observed through the evidence at hand. For instance, Pakistan has a very low rate of female labour-force participation compared to their male counterparts (25% vs. 82%) [21]. In addition, adult women had less secondary-school education than males (26.7% vs. 47.3%) [20]. Concomitantly, low educational opportunities and poor educational achievement lead to low empowerment among women, particularly those who live in remote areas of the country [22, 23]. The situation is further exacerbated when female parliamentarians in Pakistan appear to be bound by patriarchal beliefs and practices when they could realize empowerment. In such circumstances, the notion of empowerment in Pakistan appears to be only theoretical without any sense of practical embodiment [24].

Against this backdrop of a persistently bleak situation for women's empowerment in the country, the government of Pakistan has launched some targeted actions, such as the National Policy of Development and Empowerment in 2002, which aimed to improve the economic, social, and political

empowerment of women. Additionally, the number of seats reserved for women in both the Senate and the National and Provincial Assemblies has also been increased. Nevertheless, women in Pakistan are still subjected to unequal power relations, and are less authorized to make decisions about their own lives [25]. The country stands among the lowest in the world in terms of women's empowerment, even though almost half its population is made up of women, and empowering them could improve the overall well-being of society. There is a paucity of literature empirically conceptualising women's empowerment and its determinants in Pakistan. For that reason, the present study aimed to identify evidence-based demographic, socio-economic, and other determinants of women's empowerment, which are needed in order to present the policy implications of enhancing women's status in the country.

Methods

This study is based on publicly available secondary data from the Pakistan Demographic and Health Survey (PDHS), 2012–13 and 2017–18 [26]. These are the third and fourth such surveys conducted as part of the MEASURE DHS International Series, whose sample was selected with the help of the Pakistan Bureau of Statistics. Random samples of 13,558 and 15,068 ever-married women of reproductive age were drawn from PDHS 2012–13 and 2017–18, respectively, using a two-stage stratified sampling technique.

Variables: Definitions and construction

Women's empowerment was assessed using two variables, on decision-making and ownership. To measure decision-making, we computed four variables, concerning decision-making about: "spending money husband earns", "major household purchases", "women's healthcare", and "visiting family or relatives". Each of these four decision-making variables had six response categories; namely: "respondent alone" coded as 1, "respondent and husband/partner" coded as 2, "respondent and other person" coded as 3, "husband/partner alone" coded as 4, "someone else" coded as 5, and "other/family elders" coded as 6. For each of the four decision-making variables, data was categorized as women "not involved in decision-making", recoded as "0", when the woman was not involved in decision-making at all, and "involved in decision-making", recoded as "1", when the woman was involved in any of the four variables of decision-making. Subsequently, all the four recoded variables were computed into one variable of "decision-making" with dichotomous categories of "No" coded "0" and "Yes" coded "1" for involvement in decision-making.

Women's ownership of property was computed using two variables: a woman "owns a house alone or jointly" and/or "owns land alone or jointly". We computed these variables into one variable and recoded "0" if a woman did not own a house/land, alone or jointly, and "1" if she did own a house/land, alone or jointly. The two variables "decision-making" and "ownership" were computed into one variable, i.e. "women's empowerment", and recoded into two response categories: "not empowered" coded as "0" if the woman was not at all involved in household decision-making and did not possess a house/land, and "empowered" as "1" if the woman was involved in decision-making and/or owned a house/land. This

variable was used as the dependent variable in the regression analysis with the various predictor variables concerning demographic, economic, and social status, along with access to information.

The present study used independent variables related to access to information and demographic, economic, and familial characteristics. Of these selected variables, three were related to demographic factors: “age”, “sex of household head”, and “area of residence”; three to economic factors: “wealth index”, “women’s paid work”, and “women’s earnings”; two to social factors: “education” and “number of children”; and three were related to access to sources of information: “frequency of watching TV”, “frequency of listening to radio”, and “frequency of reading newspapers”.

The wealth index, consisting of five categories, was measured using monthly income and household possessions, including: total value of household assets, availability of household items such as a car or refrigerator, value of dwelling, and other civic facilities, including access to safe drinking water, sanitation facilities, and dwelling characteristics. Employment status was assessed during the previous 12 months and afterwards dichotomized into “paid” and “unpaid” work categories.

We created a new variable: “access to information”, by computing three categorical variables: “frequency of watching TV”, “frequency of listening to radio”, and “frequency of reading newspapers”. Responses were categorized as “0” if women had “no access” to any source, and “1” if women had access to at least one source of information either daily, weekly, or occasionally. The conceptualisation of all the variables included in the analyses is depicted in Fig. 1.

Data analysis

The data were analysed by using SPSS 21. Descriptive statistics were performed. We ran a simple binary logistic regression analysis to examine the association between women’s empowerment and each of the independent variables in turn. After running the simple binary logistic regression for calculating odds ratios (OR), we applied multivariable logistic regression to predict the dependent variables through independent variables, while controlling the variables for region, earnings, and work. Adjusted odds ratios (AOR) and their 95% confidence intervals (CI) have been calculated. We tested for multicollinearity.

Results

Sample characteristics

The results from the two datasets, taken from PDHS 2012–13 and PDHS 2017–18, corroborated each other. The mean age of the respondents was almost the same in 2012–13 and 2017–18 (32.7 vs. 32.1 years). Similarly, the majority of ever-married women had children. In nearly all households, males were indicated as the household head (91.5% in 2012–13 and 89.0% in 2017–18). The results indicated that there was a slight improvement in education, with 56.2% being uneducated in 2012–13, reducing to 50.6% in 2017–18. The data revealed that more than three-quarters of women during both 2012–13 and 2017–18 had not done any paid work during the previous 12 months (78.0% vs. 84.6%). Among the total

responses about earnings (2,243 in 2012–13 and 1,866 in 2017–18), only 18.1% and 17.0% of working women, respectively, were earning more than their husbands. Just over two-thirds (67.9%) of women had no access to sources of information (such as TV, radio, or newspapers) in 2012–13, and this figure had increased to 80.6% in 2017–18 (Table 1).

Table 1
Sample characteristics (n = 13,558 in PDHS 2012–13 and n = 15,068 in PDHS 2017–18)

	PDHS 2012–13		PDHS 2017–18	
	n	%	n	%
Number of children				
No children	1,695	12.5	2,048	13.6
1–3 children	5,957	43.9	7,096	47.1
4–6 children	4,412	32.5	4,682	31.1
7–9 children	1,321	9.7	1,088	7.2
≥ 10 children	173	1.3	154	1.0
Age in years^a				
15–19	567	4.2	728	4.8
20–24	2,048	15.1	2,220	14.7
25–29	2,723	20.1	3,146	20.9
30–34	2,438	18.0	2,853	18.9
35–39	2,300	17.0	2,738	18.2
40–44	1,808	13.3	1,821	12.1
45–49	1,674	12.3	1,562	10.4
Wealth index				
Poorest	2,486	18.3	2,886	19.2
Poorer	2,586	19.1	3,240	21.5
Middle	2,589	19.1	2,966	19.7
Richer	2,657	19.6	2,878	19.1
Richest	3,240	23.9	3,098	20.6
Region				
Punjab	3,800	28.0	3,400	22.6

^a Standard deviation ± 8.54; Mean 32.69 for 2012–13 / Standard deviation ± 8.43; Mean 32.11 for 2017–18

^b including separated, divorced and widowed women

	PDHS 2012–13		PDHS 2017–18	
Sindh	2,941	21.7	2,739	18.2
KPK	2,695	19.9	2,378	15.8
Balochistan	1,953	14.4	1,724	11.4
GB	1,216	9.0	984	6.5
Islamabad (ICT)	9,53	7.0	1,111	7.4
AJK	-		1,720	11.4
FATA	-		1,012	6.7
Sex of household head				
Male	12,409	91.5	13,412	89.0
Female	1,149	8.5	1,656	11.0
Respondent's education				
No education	7,625	56.2	7,627	50.6
Primary	1,831	13.5	2,103	14.0
Secondary	2,415	17.8	3,132	20.8
Higher	1,687	12.4	2,206	14.6
Type of place of residence				
Urban	6,351	46.8	7,254	48.1
Rural	7,207	53.2	7,814	51.9
Work				
No paid work	10,567	78.0	12,745	84.6
Paid work in last 12 months	2,975	22.0	2,320	15.4
Access to information				
No	9,169	67.9	12,148	80.6
Yes	4,344	32.1	2,918	19.4
Earning				

^a Standard deviation \pm 8.54; Mean 32.69 for 2012–13 / Standard deviation \pm 8.43; Mean 32.11 for 2017–18

^b including separated, divorced and widowed women

	PDHS 2012–13		PDHS 2017–18	
Earns less than husband	1,838	81.9	1,548	83.0
Earns more than husband	405	18.1	318	17.0
Occupation of respondent				
Unemployed	10,591	78.1	12,748	84.6
Unskilled	1,491	11.0	999	6.6
Skilled	1,085	8.0	791	5.2
Managerial	390	2.9	522	3.5
Husband's education				
No education	4,215	31.1	4,007	27.6
Primary	1,819	13.4	1,922	13.3
Secondary	4,301	31.8	5,094	35.1
Higher	3,176	23.0	3,474	24.0
Marital status^b				
Living with partner	13,010	96.0	14,502	96.2
Without partner	548	4.0	566	3.8
^a Standard deviation ± 8.54; Mean 32.69 for 2012–13 / Standard deviation ± 8.43; Mean 32.11 for 2017–18				
^b including separated, divorced and widowed women				

Decision-making, ownership, and empowerment

Decision-making about healthcare showed mixed results, with almost half of the women (48.1% in 2012–13 and 48.2% in 2017–18) being involved in this domain of decision-making. Likewise, in 2012–13 and 2017–18, more than half of women (56.9% vs. 58.5%) were not involved in decision-making about large household purchases. In both 2012–13 and 2017–18, around half of the women (47.1% vs. 46.4%) were involved in decision-making about visiting family or relatives. Comparably, not being involved in decision-making regarding spending the money earned by their husband was a little higher in 2012–13 than in 2017–18 (59.7% vs. 50.2%). The vast majority of women did not own a house or land in either 2012–13 or 2017–18 (82.3% vs. 82.6%). Thus, the data indicates that more than half of the women in 2012–13 and 2017–18 were reported as not being empowered (58.4% vs. 53.2%) (Table 2).

Table 2
Decision making, ownership, and empowerment at household (n = 13,558 in PDHS 2012–13 and n = 15,068 in PDHS 2017–18)

	PDHS 2012–13		PDHS 2017–18	
	n	%	n	%
Decision making about healthcare				
Not involved in decision making	6,746	51.9	7,507	51.8
Involved in decision making	6,243	48.1	6,993	48.2
Decision making about large household purchases				
Not involved in decision making	7,393	56.9	8,488	58.5
Involved in decision making	5,599	43.1	6,012	41.5
Decision making about visits to relatives				
Not involved in decision making	6,878	52.9	7,767	53.6
Involved in decision making	6,114	47.1	6,733	46.4
Decision making about the money husband earns				
Not involved in decision making	7,716	59.7	6,203	50.2
Involved in decision making	5,201	40.3	6,161	49.8
House/land ownership				
No ownership	11,142	82.3	12,440	82.6
Ownership	2,392	17.7	2,622	17.4
Empowerment				
No	7,535	58.4	6,578	53.2
Yes	5,367	41.6	5,781	46.8

Simple binary logistic regression

We used simple binary logistic regression to find the prediction for each of the independent variables on the dependent variable in both datasets. It was found that the likelihood of empowerment increased with an increase in the woman's age. Similarly, in relation to the wealth index, the likelihood of empowerment was highest for the richest women. The data indicated that women with higher education were more empowered (OR = 2.20, 95% CI: 1.97–2.45 in 2012–13; OR = 1.69, 95% CI: 1.44–1.99 in 2017–18) than women with no or less education. Likewise, the data also highlighted that women earning more than their

husbands were more likely to be empowered than those earning less (OR = 2.00, 95% CI: 1.59–2.52 in 2012–13; OR = 1.64, 95% CI: 0.66–4.04 in 2017–18). The simple binary logistic regression also showed that almost all of the predictor variables were significantly associated ($p < 0.05$) with women's empowerment (Table 3).

Table 3

Simple binary logistic regression analysis of factors associated with women empowerment ($n = 13,558$ in PDHS 2012–13 and $n = 15,068$ in PDHS 2017–18)

Variables	PDHS 2012–13			PDHS 2017–18		
	OR	95% CI		OR	95% CI	
		Lower	Upper		Lower	Upper
Number of children						
No children (reference)						
1–3 children	2.20***	1.94	2.50	1.29***	1.12	1.47
4–6 children	3.46***	3.03	3.95	1.35***	1.16	1.57
7–9 children	2.85***	2.42	3.35	1.05	0.85	1.28
≥ 10 children	2.06***	1.46	2.91	0.93	0.62	1.38
Age in years						
15–19 (reference)						
20–24	2.11***	1.61	2.76	1.20	0.93	1.54
25–29	3.39***	2.60	4.40	1.64***	1.28	2.09
30–34	5.09***	3.92	6.62	2.17***	1.69	2.79
35–39	6.97***	5.36	9.06	2.45***	1.90	3.16
40–44	9.70***	7.43	12.68	3.02***	2.31	3.93
45–49	9.23***	7.05	12.09	3.85***	2.93	5.06
Wealth index						
Poorest (reference)						
Poorer	1.68***	1.49	1.90	1.33***	1.17	1.52
Middle	1.88***	1.66	2.12	1.35***	1.17	1.56
Richer	2.20***	1.96	2.48	1.35***	1.15	1.59
Richest	2.82***	2.51	3.16	1.35*	1.13	1.62
Region						
Punjab (reference)						
Sindh	0.66***	0.60	0.73	1.35***	1.20	1.53
KPK	0.40***	0.36	0.45	0.38***	0.33	0.43

	PDHS 2012–13			PDHS 2017–18		
Balochistan	0.32***	0.29	0.36	0.37***	0.32	0.43
GB	0.54***	0.47	0.62	0.61***	0.51	0.73
Islamabad (ICT)	1.21***	1.04	1.40	1.13*	0.97	1.33
Azad Jammu Kashmir	-			0.98	0.85	1.12
FATA	-			0.16	0.12	0.21
Sex of household head						
Male (reference)						
Female	2.02***	1.76	2.32	2.42***	2.11	2.79
Respondent's education						
No education (reference)						
Primary	1.33***	1.20	1.48	1.25***	1.10	1.42
Secondary	1.46***	1.33	1.61	1.30***	1.15	1.47
Higher	2.20***	1.97	2.45	1.69***	1.44	1.99
Type of place of residence						
Rural (reference)						
Urban	1.65***	1.54	1.77	0.93	0.85	1.02
Work						
No paid work (reference)						
Paid work in last 12 months	1.70***	1.56	1.85	1.46***	1.33	1.66
Access to information						
No (reference)						
Yes	1.65***	1.53	1.78	1.16**	1.05	1.30
Earning						
Earns less than husband (ref)						
Earns more than husband	2.00***	1.59	2.52	1.64**	0.66	4.04
Occupation of respondent						
Unemployed (reference)						
Unskilled	1.39***	1.24	1.56	1.18*	0.99	1.40

	PDHS 2012–13			PDHS 2017–18		
Skilled	1.70***	1.49	1.94	1.56***	1.33	1.84
Managerial	3.92***	3.11	4.94	1.96***	1.54	2.49
Husband's education						
No education (reference)						
Primary	1.05	0.94	1.18	0.87	0.76	0.99
Secondary	1.09	1.00	1.20	0.98	0.88	1.10
Higher	1.55***	1.41	1.71	1.15*	1.00	1.31
<i>OR = Odds ratio, CI = Confidence interval (*p < 0.05; **p < 0.01; ***p < 0.001)</i>						

Multivariable logistic regression analysis

The results of the multivariable logistic regression model indicated that, after adjustment, almost all of the predictor variables were significantly associated with women's empowerment. It was revealed that women with children were more empowered than women with no children. The data indicated that women with 4–6 children were most likely to be empowered (AOR = 1.90, 95% CI: 1.63–2.22 in 2012–13; AOR = 1.17, 95% CI: 1.01–1.36 in 2017–18). The likelihood of women's empowerment increased if a woman was the head of household (AOR = 2.18, 95% CI: 1.89–2.53 in 2012–13; AOR = 2.46, 95% CI: 2.16–2.81 in 2017–18). Similarly, 2012–13 data indicated that women living in urban areas were 1.18 (95% CI: 1.08–1.29) times more likely to be empowered than those living in rural areas. The results highlighted a significant association between occupation and women's empowerment, wherein women in both skilled and unskilled employment were more likely to be empowered than unemployed women.

Access to information was positively associated with women's empowerment. The husband's education and women's empowerment did not appear to be significantly associated in the adjusted odds ratio model, although a husband with higher education was significantly associated in the binary logistic regression (Table 4).

Table 4

Multivariable logistic regression of factors associated with women empowerment ($n = 13,558$ in PDHS 2012–13 and $n = 15,068$ in PDHS 2017–18)

	PDHS 2012–13			PDHS 2017–18		
	AOR	95% CI		AOR	95% CI	
		Lower	Upper		Lower	Upper
Number of children						
No children (reference)						
1–3 children	2.20***	1.57	3.08	1.22**	1.07	1.39
4–6 children	2.68***	1.83	3.93	1.17**	1.01	1.36
7–9 children	1.60*	0.99	2.60	0.82*	0.67	1.00
≥ 10 children	1.36	0.53	3.48	0.76	0.52	1.11
Age in years						
15–19 (reference)						
20–24	1.33	0.69	2.56	1.31*	1.02	1.67
25–29	2.22**	1.16	4.23	1.77***	1.40	2.25
30–34	3.00***	1.54	5.86	2.45***	1.92	3.12
35–39	4.26***	2.15	8.43	2.82***	2.21	3.62
40–44	7.31***	3.52	15.18	3.55***	2.74	4.59
45–49	4.35***	2.11	8.96	4.88***	3.75	6.36
Sex of household head						
Male (reference)						
Female	2.05**	1.28	3.28	2.46***	2.16	2.81
Wealth index						
Poorest (reference)						
Poorer	1.60***	1.20	2.13	1.19**	1.05	1.34
Middle	1.58**	1.14	2.19	1.27***	1.11	1.46
Richer	1.63*	1.10	2.42	1.31***	1.13	1.52

Note: All these variables were adjusted for region, income, and employment to perform multivariable logistic regression analysis to obtain adjusted odds ratios. AOR = Adjusted odds ratio, CI = Confidence interval

	PDHS 2012–13			PDHS 2017–18		
Richest	1.56*	0.94	2.60	1.33***	1.13	1.57
Respondent's education						
No education (reference)						
Primary	1.05	0.75	1.48	1.58***	1.40	1.78
Secondary	1.86**	1.20	2.87	1.66***	1.48	1.87
Higher	2.51***	1.55	4.05	2.33***	1.99	2.71
Occupation of respondent						
Unemployed (reference)						
Unskilled	1.97***	1.74	2.24	1.76***	1.39	2.22
Skilled	1.91***	1.66	2.19	1.43***	1.21	1.69
Managerial	2.09***	1.63	2.69	2.00***	1.71	2.34
Access to information						
No (reference)						
Yes	1.34*	1.02	1.77	1.25***	1.13	1.39
Type of place of residence						
Rural (reference)						
Urban	0.72*	0.54	0.95	0.94	0.86	1.03
Husband's education						
No education (reference)						
Primary	1.46	0.50	4.25	0.98	0.86	1.12
Secondary	1.42	0.49	4.13	1.02	0.92	1.14
Higher	1.89	0.65	5.50	1.10	0.97	1.25
<i>Note: All these variables were adjusted for region, income, and employment to perform multivariable logistic regression analysis to obtain adjusted odds ratios. AOR = Adjusted odds ratio, CI = Confidence interval</i>						

Discussion

The results of this study reveal that women's empowerment is well predicted by demographic, economic, social, and other variables. It was noted that women having higher education, living in urban areas, and

having access to information were more likely to be empowered. Likewise, women having children, belonging to an older age group, earning more than their husbands, being the head of household, involved in paid work, and belonging to the rich class were more likely to be empowered.

The results highlighted a significant association between a woman's age and her empowerment, i.e. women's empowerment increased with increasing age. These results are also supported by various other studies conducted in South Asia, including Nepal [27], Bangladesh [28], and India [29]. One of the reasons identified for this trend in age and empowerment is attributed to power relations within the household [30]. In the case of Pakistan, marriages are usually arranged at a young age – almost half of all women are married before the age of 20 years [31]. In this context, childbearing, particularly before the age of 18 years, is detrimental to both mother and child, due not only to adverse reproductive health outcomes but also to social adjustments [32]. These women are mostly deprived of the opportunity to pursue other activities, such as schooling or employment [33].

Women's place of residence was also significantly associated with empowerment. Similar to previous studies, the results highlighted that women living in urban areas were more empowered than their rural counterparts [34, 35]. Poverty-stricken rural women face a lack of economic opportunities and independence that pushes them another step away from decision-making [36].

The findings highlighted women's education as a very strong predictor of empowerment. Since education enhances empowerment through increased skills, self-confidence, and knowledge [37, 38], and improves employment opportunities, as well as bringing income and healthcare-seeking mobility [39], highly educated women were found to be more empowered than those with low or no education. Arguably, housewifery is an expected gender role for women in Pakistan that diminishes educational opportunities for many young girls, particularly in rural areas [40, 41]. The study's findings revealed that education of both spouses has a significant association with women's empowerment [42]. By the same token, higher levels of education for both spouses result in more egalitarian decision-making within the household [43].

One of the most important results was the significant association between number of children and empowerment. Women with children, as compared to women without children, were more empowered, with the most highly empowered being those who had 4–6 children. The DHS data for Namibia and Zambia also highlight similar trends [44]. Similarly, DHS from Zimbabwe highlights a positive association between the number of male children and women's empowerment [45]. Although the number of children, especially male ones, may solidify familial bonds and bring out a rather empowered guardian of her children aspect in a mother's personality, it certainly cannot be taken as a policy outlook of empowerment in the same way as education, employment, and political participation.

Women's empowerment increased consistently with increasing household wealth index. Similar results have also been reported from various other Southeast Asian countries, including Cambodia, Indonesia, the Philippines, and Timor-Leste [28]. In Pakistan, women stand low on the wealth index because their rights to inheritance and the ownership and management of property are poorly realized [25, 46]. Concomitantly, research indicates that women's access to property and household resources does not

guarantee empowerment; rather, it is control over those resources – ownership – that empowers women [47].

In the case of inheritance of property, Muslim countries, including Pakistan and Muslim-dominated areas of various other countries, enshrine the Islamic law of inheritance (Sharia) alongside the state laws [48]. Nonetheless, as in Pakistan, woman's right to inheritance is poorly realized in the majority of the most populous Muslim countries/communities. This is mainly due to patriarchal customs and socio-cultural dynamics that give preference to men over women. Against the given backdrop, there is a dire need to introduce legal reforms, accompanied by viable administrative actions, across the Muslim countries, and particularly in Pakistan. Such an affirmative action could help to reduce gender-based discrimination and improve a range of socio-economic outcomes for women [49, 50].

Additionally, women's productive employment is abysmally low, particularly in white-collar jobs and in rural areas [51]. Mostly, women are engaged in the informal economy, which usually does not allow them to play an equal role with men to add to their family's wealth [52]. Moreover, women in the bottom strata of society struggle merely to cope with their sheer poverty and to manage their subsistence [53]. There is a strong need to enforce existing laws of ownership and inheritance and devise policies that encourage women's employment.

According to the study results, women's paid work had a positive and significant association with empowerment. Women involved in paid work were more likely to be empowered within the household than women with no paid work. The study's findings also revealed that women working as skilled labourers and in managerial positions were the most empowered. These findings are supported by numerous studies, including DHS data from various Southeast Asian countries [28, 54]. The greater empowerment of skilled working women can be attributed to their greater freedom of movement and financial independence [55].

By contrast, women who undertake unpaid work as part of sharing or shouldering responsibilities are usually neither recognized by their family nor taken into account as a contribution to the household or state economy [56]. In this context, the "gender-disaggregated analysis of impact of the budget on time use" is one of the tools of "gender responsive budgeting" (GRB), which stipulates that time spent by women in so-called "unpaid work" is taken into account in budgetary policy analysis [57]. In this context, in a society like Pakistan, where the work done by women is mostly taken for granted and not accounted for, there is a need to adopt GRB in order to elevate women's status.

Women residing in female-headed households were more likely to be empowered than their counterparts dwelling in male-headed households. A study conducted with rural Nigerian women showed similar results [58]. Likewise, another study using data from the Pakistan Integrated Household Survey established that women living in female-headed households were more empowered than those living in male-headed households, mostly owing to their greater participation in household decision-making [59]. A woman-headed household does not imply the absence of men or their support in the household. The

literature indicates that the involvement of both men and women in household decision-making contributes to the improved wellbeing of both the household and society [60].

The findings of this study establish an association between women's access to information and empowerment within the household. It was noted that women having access to various information sources, including radio, television, and newspapers, were more likely to be empowered than women with no access to information. Nonetheless, women's access to information in Pakistan is typically very low compared to that of their male counterparts. This is very likely to result in a lack of women's decision-making within the household. In principle, women with more information can be better aware of household needs and contribute more positively to household decision-making for the welfare of their family, particularly children [19]. Hence, information is a potent ingredient in ensuring women's greater awareness and participation in public affairs [61].

The limitations that apply to this study are due to its cross-sectional design, which does not allow us to draw any causal conclusions. However, temporality can be established between empowerment and most of the risk factors examined here. For instance, age, parity, education, occupation, wealth etc. are established before the interview date, when empowerment is assessed. A further limitation is that data was assessed by a self-administered questionnaire. Therefore, socially desirable answers given by the women may lead to bias. However, further bias are reduced due to the fact trained interviewers were employed for data collection.

Conclusions

This study has been able to provide useful insights into women's empowerment and its various determinants within Pakistan. The results are drawn from a large, and hence generalisable, body of data, which consistently predicts a significant association between the studied demographic, economic, familial, and information-exposure factors, and women's empowerment. The results of the present study suggest the importance of enforcing policies to restrict girl-child marriages, which adversely affect girls' reproductive health and social well-being. The feminized poverty in Pakistan also needs to be alleviated through targeted action, particularly in rural areas where women's access to information, employment, and inheritance is mostly denied. Women's education and employment are the areas identified as requiring gender-based equal opportunities initiatives through a policy to enhance the socioeconomic status of women and achieve development at the national scale. Therefore, greater efforts are required to improve women's access to employment and educational opportunities. There is also an urgent need to use mass communication and education campaigns to change community norms and values that discriminate against women. These campaigns must convey the potential contribution of women to the overall welfare of both their families and the wider society.

Abbreviations

AOR: Adjusted odds ratio

CI: Confidence interval

DHS: Demographic and Health Survey

GRB: Gender Responsive Budgeting

ICT: Islamabad Capital Territory

OR: Odds ratio

PDHS: Pakistan Demographic and Health Survey

SPSS: Statistical Package for Social Sciences

TV: Television

Declarations

Ethics approval and consent to participate

The research used publicly available secondary data from two waves of PDHS. Hence, ethical approval was not required. Written informed consent was obtained from participants.

Consent for publication

Not applicable

Availability of data and materials

The present study used raw data of the Pakistan Demographic and Health Survey 2012–13 and 2017–18. The data that support the findings of this study are freely available from Measure DHS to authors upon submission of request.

Competing interests

The authors declare no conflict of interest.

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Authors' contributions

SA and RZ conceptualized the study. SA led the analysis, interpretation of the study findings, and manuscript writing. All authors contributed to data analysis, drafting or revising the article. All authors

read and approved the final version of the manuscript.

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Figures

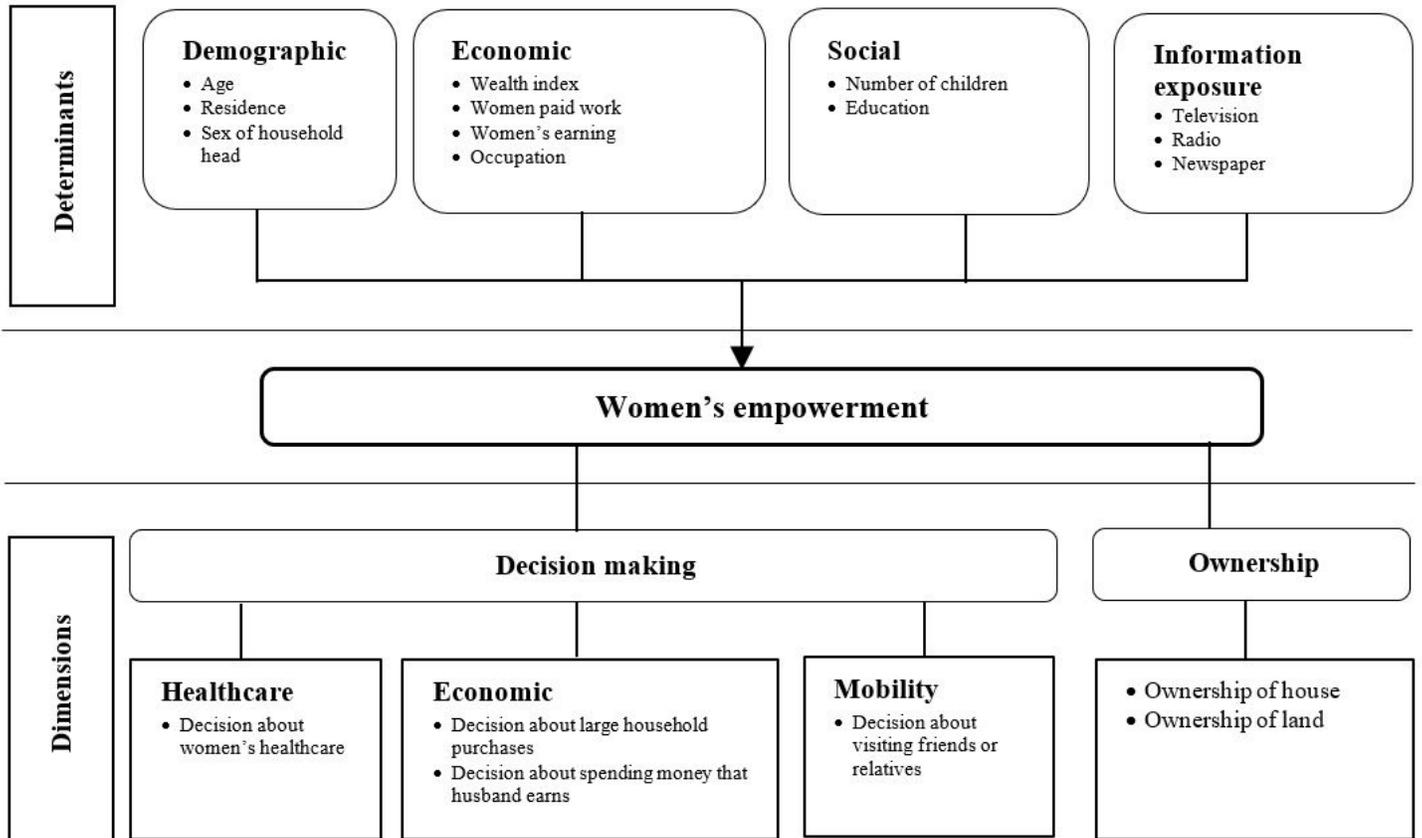


Figure 1

Conceptualization of determinants and dimensions of women's empowerment