

**Table 2** Determinants of complete immunization in the four major provinces of Pakistan: distribution of children and bivariate analysis of predictors associated with complete immunization (BCG + DTP3 + OPV3 + measles) among children aged 12–23 months (2012–13 Pakistan Demographic and Health Survey)

Variable	Punjab (n = 587)			Sindh (n = 414)			Khyber Pakhtunkhwa (n = 419)			Balochistan (n = 272)		
	Children (%)	Completely immunized (%)	P	Children (%)	Completely immunized (%)	P	Children (%)	Completely immunized (%)	P	Children (%)	Completely immunized (%)	P
<i>utilization of health services</i>												
<b>Sex</b>												
Male	51.5	68.5	0.209	47.2	28.0	0.711	51.8	55.5	0.313	51.4	11.9	0.098
Female	48.5	62.8		52.8	29.8		48.2	50.2		48.6	21.1	
<b>Birth order</b>												
1–3	64.2	68.8	0.003	58.8	37.4	***	62.7	53.2	0.316	60.2	16.6	0.346
4–6	26.9	65.4		25.5	19.1		27.3	56.2		29.1	18.7	
7+	8.9	44.6		15.7	13.5		10.0	42.5		10.7	8.8	
<i>Mother's characteristics</i>												
<b>Age (years)</b>												
15–24	28.3	64.5	0.311	27.7	33.2	0.306	33.2	51.1	0.843	31.8	21.8	0.244
25–34	58.4	68.1		52.9	29.2		49.3	52.6		56.6	14.6	
35+	13.3	58.4		19.4	22.3		17.5	57.6		11.6	10.3	
<b>Education</b>												
None	46.4	52.8	***	62.6	16.8	***	64.7	45.3	***	82.1	14.9	0.352
Some	53.6	77.0		37.4	49.3		35.3	67.1		17.9	23.2	
<i>Household characteristics</i>												
<b>Wealth quintile</b>												
Lowest	14.6	40.9	0.002	39.4	7.5	***	16.0	29.8	***	55.6	10.3	0.049
Second	21.4	67.4		14.8	23.9		32.8	46.6		16.2	14.1	
Middle	21.5	63.3		10.8	28.6		24.3	59.4		16.5	33.4	
Fourth	26.6	69.9		12.7	37.3		17.4	68.5		5.4	45.5	
Highest	15.9	82.7		22.4	65.5		9.4	68.9		6.3	6.1	
<b>Residence</b>												
Rural	68.2	62.0	0.029	59.6	13.7	***	83.9	51.8	0.262	82.8	12.4	0.004
Urban	31.8	73.9		40.4	51.5		16.1	58.9		17.2	35.7	
<i>Utilization of health services</i>												
<b>Mother made 4+ ANC visits during last pregnancy</b>												
Yes	40.2	73.0	0.007	41.7	47.9	***	26.4	69.4	0.001	11.2	20.0	0.693
No	59.8	60.9		58.3	15.4		73.6	47.1		88.8	15.9	
<b>Mother received 2 tetanus toxoid injections during last pregnancy</b>												
Yes	69.8	75.2	*** <sup>1</sup>	48.3	41.8	***	53.9	68.8	***	20.7	38.5	***
No	30.2	44.0		51.7	17.0		46.1	34.4		79.3	10.6	
<b>Last birth was in a health facility</b>												
Yes	54.5	74.8	***	60.6	40.5	***	46.4	59.5	0.005	16.2	31.6	0.024
No	45.5	54.9		39.4	11.2		53.6	47.3		83.8	13.5	
<i>Problems accessing health care</i>												
<b>Getting permission to go for treatment</b>												
Big problem	11.4	59.1	0.269	25.5	14.9	***	37.5	42.7	0.007	59.9	16.5	0.964
Not a big problem	88.6	66.6		74.5	33.8		62.5	59.1		40.1	16.2	
<b>Getting money for treatment</b>												
Big problem	19.0	47.8	0.001	42.0	14.2	***	57.7	47.4	0.041	64.4	16.8	0.889
Not a big problem	81.0	70.0		58.0	39.6		42.3	60.5		35.6	15.7	
<b>Distance to health facility</b>												
Big problem	26.0	49.7	***	50.4	15.0	***	64.1	51.1	0.454	76.7	14.0	0.167
Not a big problem	74.0	71.4		49.6	43.1		35.9	56.3		23.3	24.3	
<b>Not wanting to go alone</b>												
Big problem	49.1	58.2	0.001	63.2	22.7	***	76.9	50.8	0.199	75.5	15.1	0.445
Not a big problem	50.9	73.1		36.8	39.8		23.1	60.3		24.5	20.2	
<b>Management of transport</b>												
Big problem	28.5	54.9	0.009	59.2	18.8	***	61.9	49.2	0.125	78.7	15.1	0.466
Not a big problem	71.5	70.1		40.8	43.7		38.1	59.1		21.3	21.1	
<i>Woman's autonomy</i>												
<b>Woman participates in household decisions on health care, major purchases, visits to family/relatives</b>												
Yes	38.6	65.1	0.748	25.5	36.1	0.129	26.3	54.3	0.775	15.9	15.5	0.898
No	61.4	66.2		74.5	26.5		73.7	52.5		84.1	16.6	

The analysis excludes 16 children from multiple births (14 twins and 2 triplets).

\*\*\* = P < 0.001.

ANC = antenatal clinic.