Supply-side factors affecting maternal health care utilization at sub-centers in High Priority blocks of Tribal District Valsad, Gujarat

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Context:

1. Introduction/ Background
2. Review of literature
3. Rationale
4. Operational Definition
5. Hypothesis
6. Objectives
7. Research methodology
8. Result and Discussion
9. conclusion

Background:

- In the public sector, a Sub-center is the most peripheral and first point of contact between the primary health care system and the community. A Sub-center provides interface with the community at the grass-root level, providing all the primary health care services.
- The purpose of the Health Sub-center is largely preventive and promotive, but it also provides a basic level of curative care.
- Valsad district is one of the 33 districts in the Western Indian state of Gujarat. Valsad is one of the 8 HPDs of Gujarat.
- The district's administrative capital is Valsad. The district's largest city is Vapi.
- The district divided into six talukas/blocks: Valsad, Vapi, Pardi, Umargam, Kaparada and Dharampur.

Background:

Table-1 Comparison of Valsad district profile in Rural and Urban area as per census 2011

Description	Rural	Urban
Population (percentage)	62.74	37.26
Total Population	1,070,177	635,501
Male Population	542,644	344,578
Female Population	527,533	290,923
Sex Ratio	972	844
Child Sex Ratio (0-6)	947	885
Average Literacy (percent)	72.32	88.84
Male Literacy (percent)	79.27	92.65
Female Literacy (percent)	65.20	84.31

Review of Literature:

Maternal mortality is unacceptably high. About 830 women die from pregnancy or childbirth-related complications around the world every day. It was estimated that in 2015, roughly 3,03,000 women died during and following pregnancy and childbirth.

Almost all maternal deaths (99 percent) occur in developing countries. Almost one third occur in South Asia. India contributes to one-fifth of the global burden of absolute maternal deaths despite experiencing a sustained decline in maternal mortality in the last two decades (S. Kumar & E. Dansareue, 2014).

Review of Literature (continue):

Women die as a result of complications during and following pregnancy and childbirth. Most of these complications develop during pregnancy and most are preventable or treatable. To improve maternal health, barriers that limit access to quality maternal health services must be identified and addressed at all levels of the health system (WHO, factsheet).

Pregnancy related complications are the leading causes of maternal death and disability for women of reproductive age group. Most of the maternal deaths can be saved by strengthening the healthcare facilities (R.K.Singh & S. Patra, 2013).

Review of Literature (continue):

Reasons why woman die in pregnancy and child birth have many layers. Beside-direct, indirect, and co-incidental causes, there are also logistic causes that is failure in the health care system, lack of transport, lack of manpower and apathy towards patient care. (Sanjay Gole, 2015).

Many factors that affects utilization and provision of health care. These factors operate on both the demand and supply side. The framework identifies three levels of barriers: the community and household level, the health service delivery level, and the health sector policy and strategic management level.(S. Kumar & E. Dansareue, 2014)

Rationale:

- Number of previous studies have identified several demand-side factors as important obstacles to health care utilization in developing countries. However, only a few have truly addressed supply-side barriers. The evidence on how these supply-side factors affect service provision at publicly funded rural health facilities in India was still very sparse (M.P.Roy et al, 2014).

- If taken into the consideration of rural India, Tribal India was also an important part that need more attention than general, and what were the supply-side factors affecting the maternal health care utilization in high priority blocks of the tribal District Valsad.

Operational Definition:

- Maternal Healthcare Utilization: here in study, maternal health care utilization is taken in terms of the number of ANCs registered, number of deliveries conducted and number of PNCs visited.

Hypothesis:

There is an association between supply side factors and maternal healthcare utilization at SC in high priority blocks of tribal district Valsad, Gujarat.

Research question:

- What are the Supply-side factors which affect the maternal health care utilization in terms of number of ANCs registered, number of deliveries conducted and number of PNCs visited at Sub-Centers of high priority blocks of tribal District Valsad, Gujarat?

Objectives:

1) To find out supply side factors affecting maternal health care utilization in terms of number of ANCs registered, number of deliveries conducted and number of PNCs visited at SCs of high priority block of tribal district Valsad, Gujarat.
2) To find out percent of availability of the ideal requirements of SCs in high priority blocks, Valsad.
3) To analyze the association of supply side factors and utilization of maternal health in terms of number of ANCs registered, number of deliveries conducted and number of PNCs visited at SC of high priority block of tribal district Valsad, Gujarat.

Research Methodology:

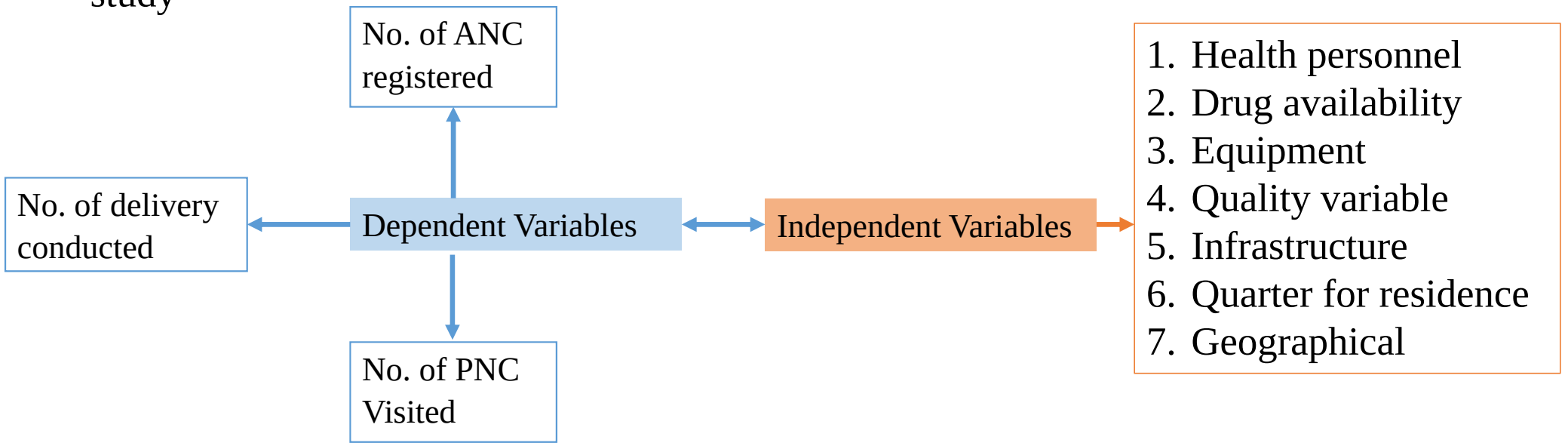
- STUDY DESIGN: A descriptive, Cross-Sectional study design
- STUDY AREA: The study was conducted in subcenters of high priority blocks of Valsad District, Gujarat. Two high priority blocks in Valsad namely Kaparada and Dharampur having 86 and 64 sub-center respectively.
- DURATION OF STUDY: The study is conducted over a period of three months started from 8th Feb 2017 to 7th May 2017.
- SAMPLE SIZE: As this study was facility survey, sample size was taken as 20 percent of total health facilities in the survey. That are 150 Sub-centers in mentioned high priority blocks. 20 percent of 150 is 30. Total **30** Sub-centers were taken up for the study.

Research Methodology (continue):

- SAMPLING TECHNIQUE: Simple random sampling
- DATA COLLECTION PROCEDURE: Face to face interview of FHW/ANM at Sub-Center and use of secondary data from facility register.
- DATA COLLECTION INSTRUMENT: Questionnaire of DLHS-3 Facility Survey under Reproductive and Child Health Project for Sub center modified as per requirements.
- DATA ANALYSIS PROCEDURE: SPSS software version 20. Univariate and bivariate analysis was carried out.

Research Methodology (continue):

Figure-1 Characteristics of Independent variable and dependent variable taken up for study



Result and Discussion:

1) Supply side factors for the study were selected form the factsheet of DLHS-3(facility survey) and previous studies done using DLHS-3 data in different state, which were:

- Health personnel: ANM/FHW, MHW, additional ANM and others
- Drug Availability: Tab. IFA, Vitamin-A solution and Tab. Misoprostol
- Equipment: instrument sterilizer, AD syringe, hub-cutter, BP Instrument, Weighing machine, examination table, labor table, heamoglobinometer, foetoscope and SIMS speculam

Result and Discussion (continue):

- Quality variable: Integrated skills development training (RCH), Immunization Training and SBA training,
- Infrastructure: designated government building, SC having labour room, Water supply, electricity supply, toilet facility and mobile facility,
- Quarters for residence of ANM/FHW: ANM/FHW quarter attached with SC and where ANM/FHW staying
- Distance of ANM/FHW house from SC.

Result and Discussion (continue):

2)Table-2 Distribution of Sub Center characteristics (n=30, 4 non-response)

Independent Variable		Response	N	Percent
Health personnel	ANM/FHW	Yes	25	96.2
		No	1	3.8
	MHW	Yes	18	69.2
		No	8	30.8
	Additional ANM	Yes	0	0
		No	26	100
	Others	Yes	26	100
		No	0	0
Drug Availability	IFA Tablets	Yes	26	100
		No	0	0
	Vitamin-A Solution	Yes	26	100
		No	0	0
	Tab. Misoprostol	Yes	25	96.2
		No	1	3.8

Table-2 (continue) Distribution of Sub Center characteristics (n=30, 4 non-response)

Independent Variable		Response	N	Percent
Equipment	**Instrument Sterilizer**	**Yes**	**4**	**15.4**
		No	**22**	**84.6**
	AD Syringe	Yes	26	100
		No	0	0
	Hub Cutter	Yes	17	65.4
		No	9	34.6
	Blood pressure Instrument	Yes	26	100
		No	0	0
	Weighing machine (Adult)	Yes	26	100
		No	0	0
	Examination Table	Yes	24	92.3
		No	2	7.7
	Labour Table	Yes	1	3.8
		No	25	96.2
	Heamoglobinometer	Yes	17	65.4
		No	9	34.6
	Foetoscope	Yes	20	76.9
		No	6	23.1
	Sims Spaculam	Yes	15	57.7
		No	11	42.3

Table-2 (continue) Distribution of Sub Center characteristics (n=30, 4 non-response)

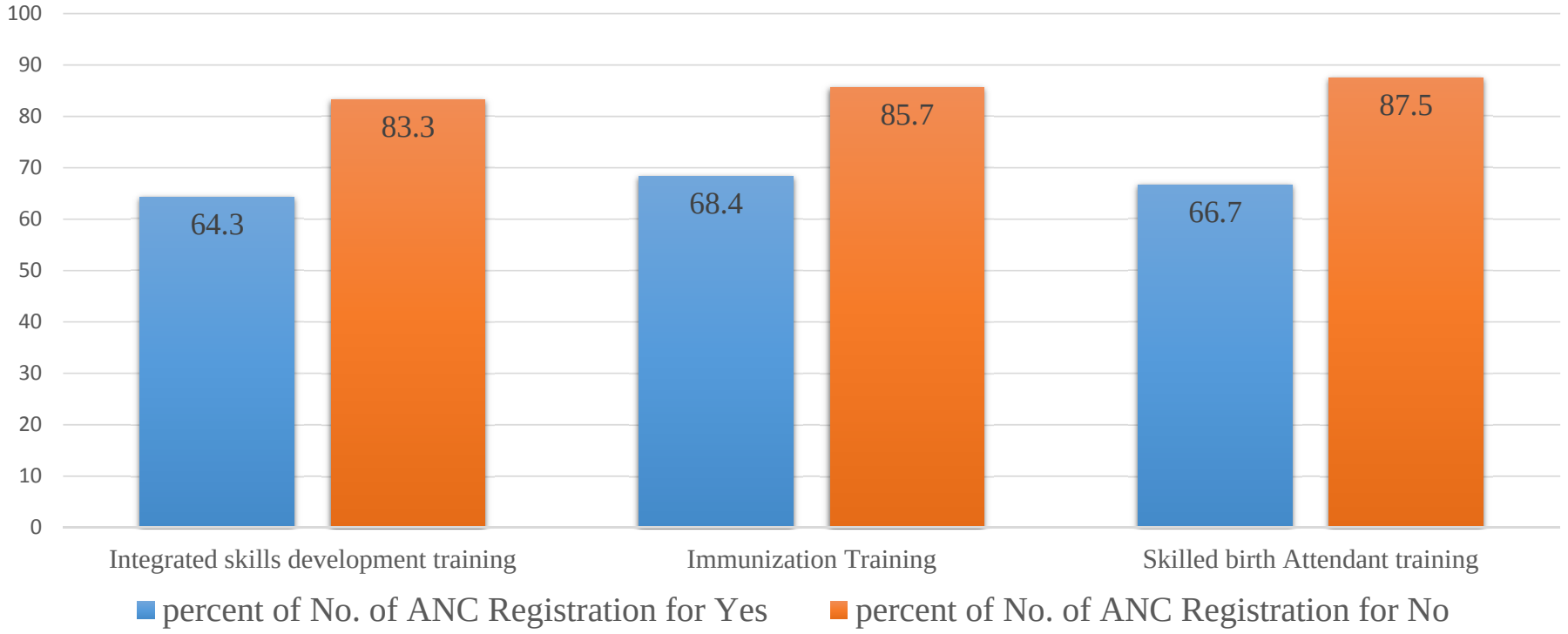
Independent Variable		Response	N	Percent
Quality variables	**Integrated skills development training**	**Yes**	**14**	**53.8**
		No	**12**	**46.2**
	Immunization Training	Yes	19	73.1
		No	7	26.9
	Skilled birth Attendant training	Yes	18	69.2
		No	8	30.8
Infrastructure	Designated Government Building	Yes	15	57.7
		No	11	42.3
	SC having Labour room	Yes	3	11.5
		No	23	88.5
	Water supply	Yes	10	38.5
		No	16	61.5
	Electricity	Regular supply	7	26.9
		Irregular supply	10	38.5
		No connection	9	34.6
	Toilet	Yes	14	53.8
		No	12	46.2
	Mobile facility	Yes	26	100
		No	0	0

Table-2 (continue) Distribution of Sub Center characteristics (n=30, 4 non-response)

Independent Variable		Response	N	Percent
Quarter for residence	**ANM quarter attached with SC**	**Yes**	**4**	**15.4**
		No	**22**	**84.6**
	ANM Staying	Within the Village of SC	3	11.5
		Outside the Village of SC	23	88.5
Other variable	ANM/FHW's Residence from Sub-center	< 5 km	3	11.5
		5-20 km	13	50
		21-40 km	5	19.2
		>40 km	5	19.2

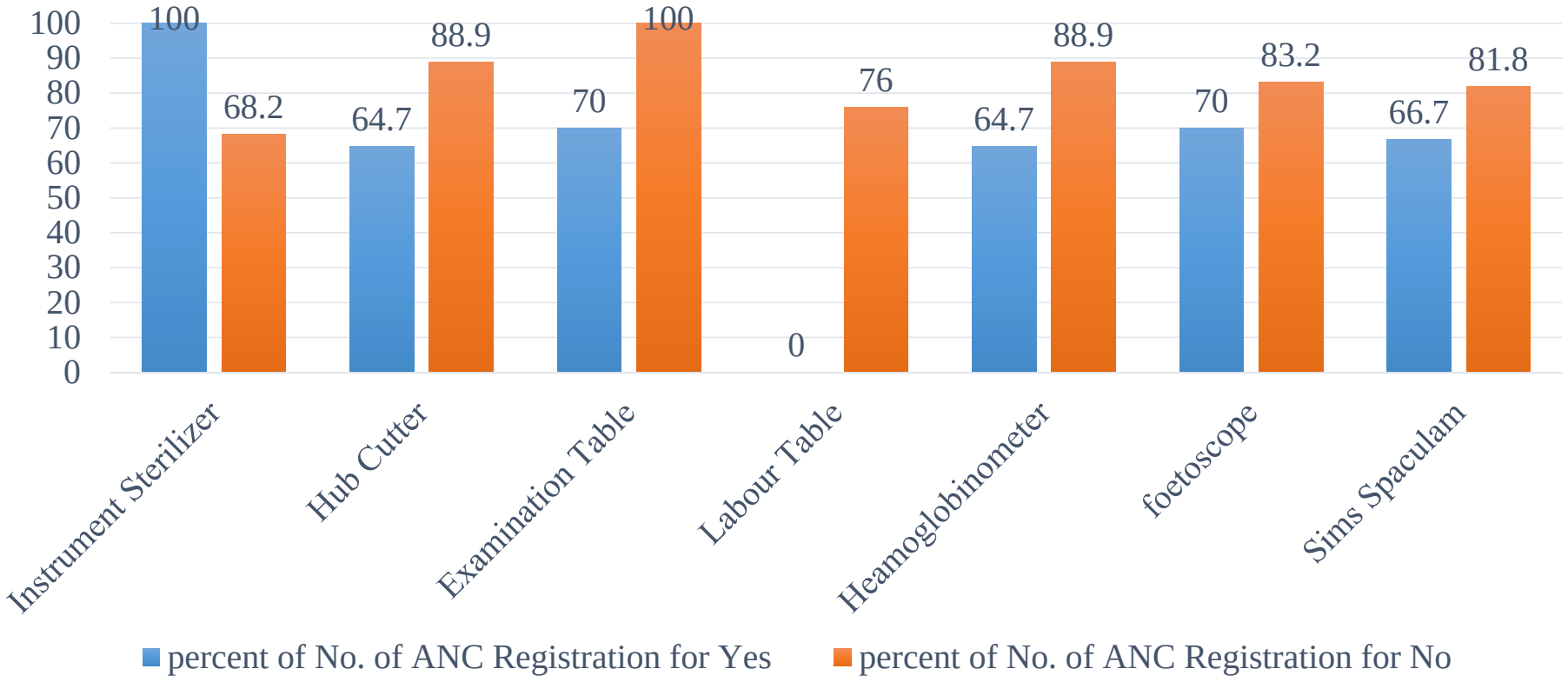
3) Association between dependent and Independent Variables are as follows:

Graph-1 Association between No. of ANC registration and Quality variables (n=19)

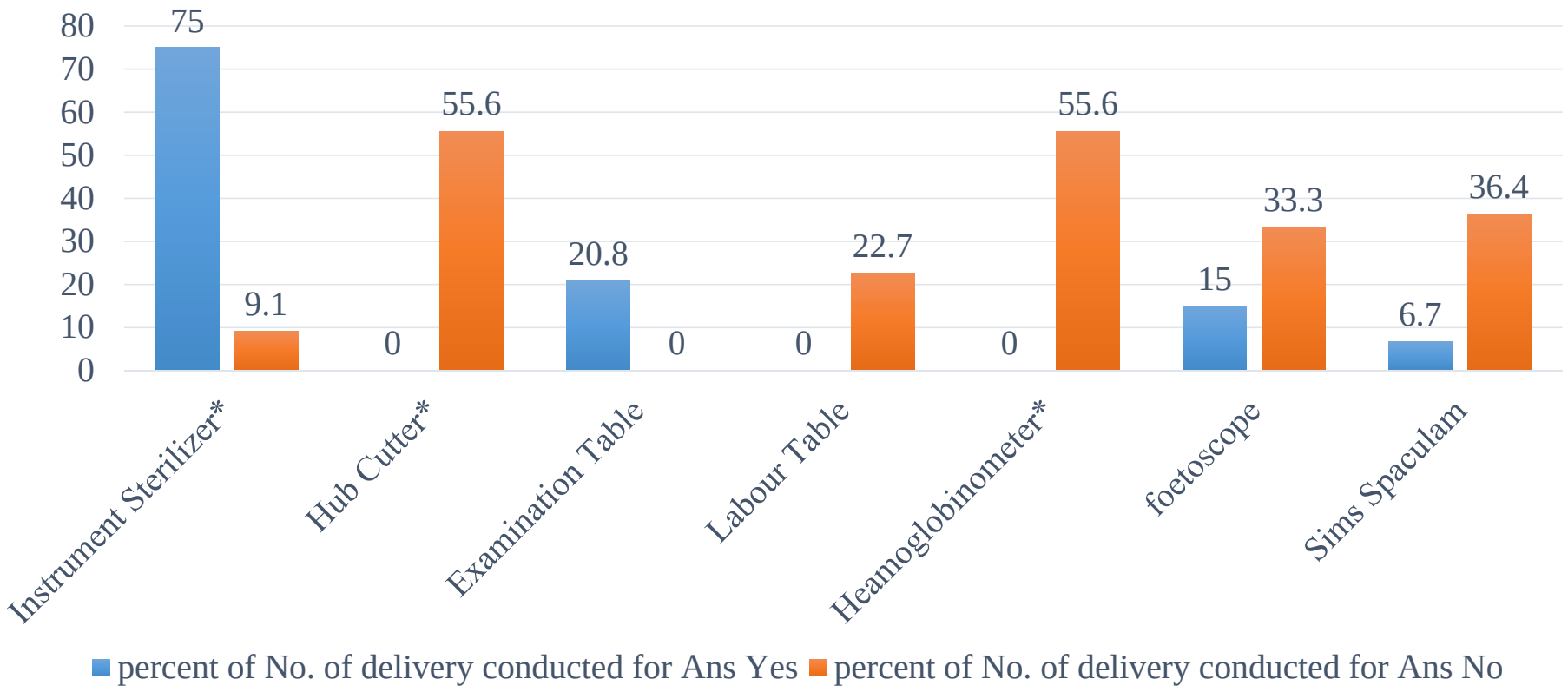


* Total number of quality variables in Yes and No category in above mentioned variables are as follow 1) Integrated skill development training Y- 14, N-12 2) Immunization Training Y-19, N-7 and 3) SBA Training Y-18 and N-8

Graph-2 Association between No. of ANC registration and equipment variables (n=19)

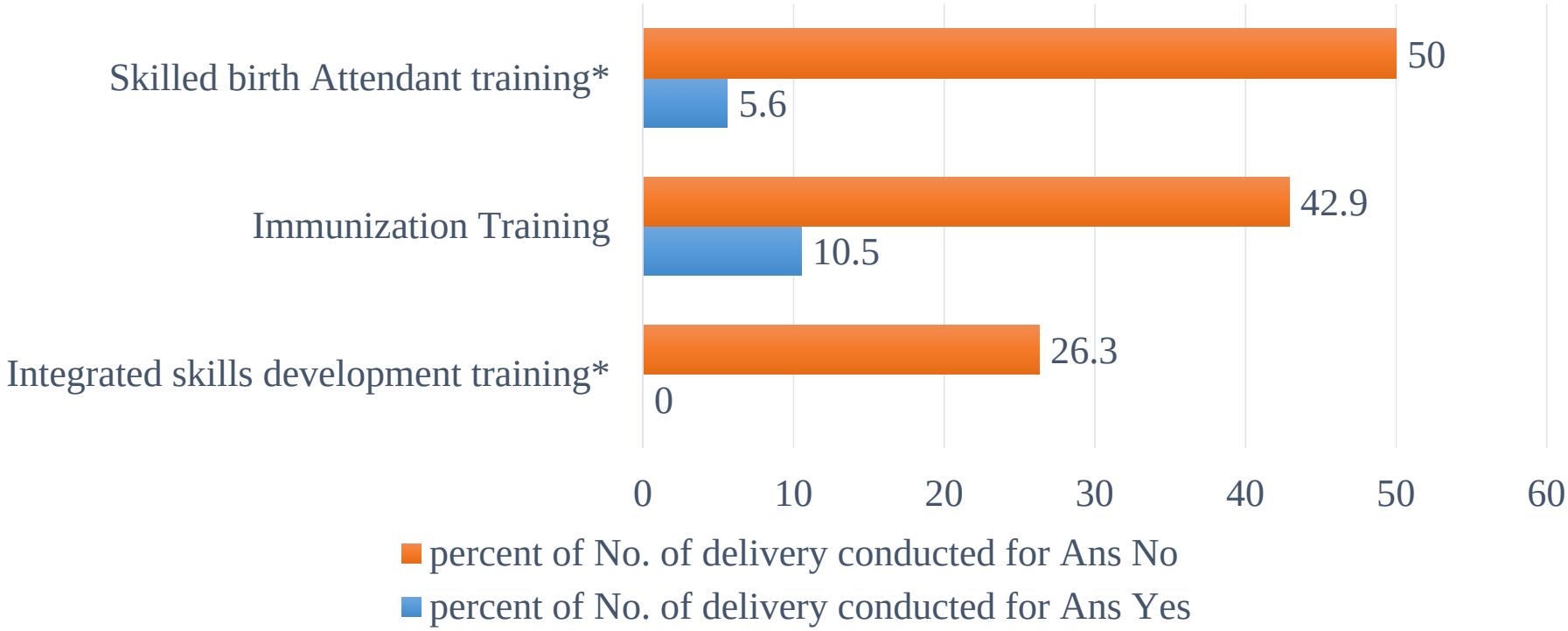


Graph-3 Association between No. of Delivery Conducted and equipment variables (n=5)



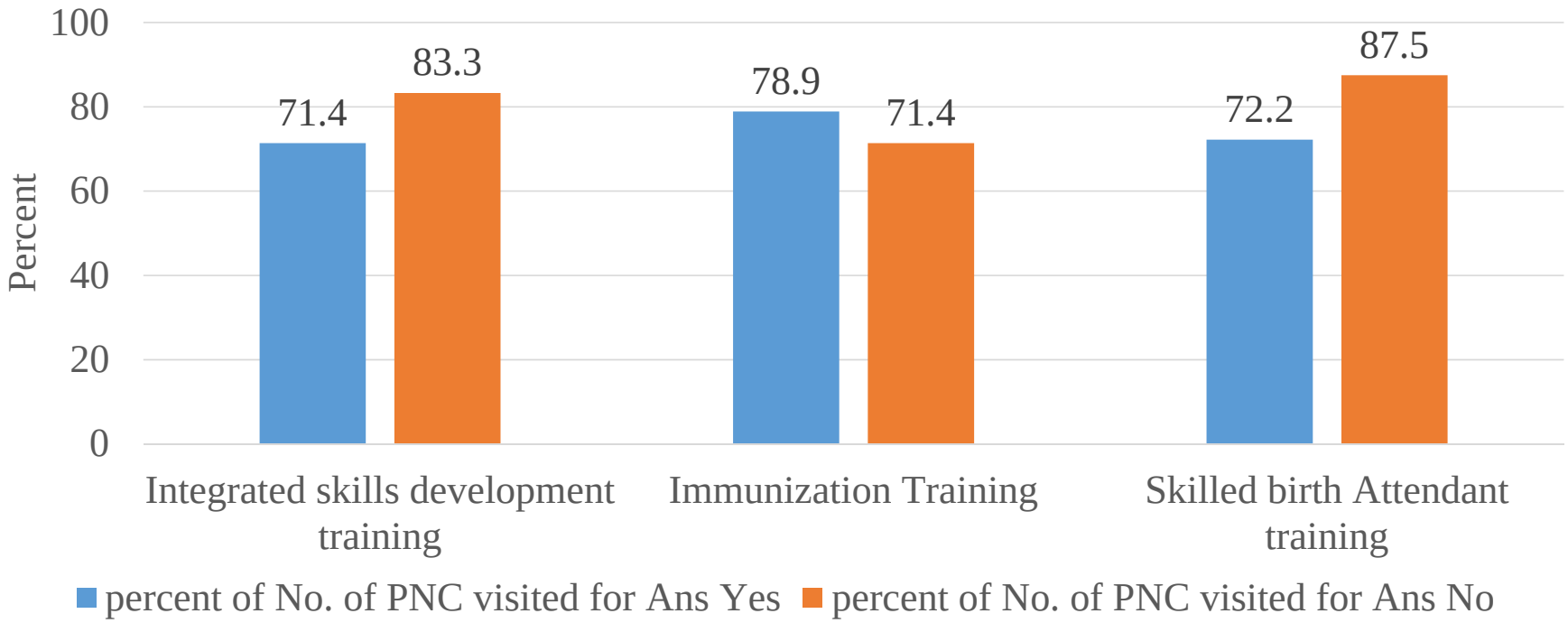
*p value < 0.05

Graph-4 Association between No. of Delivery Conducted and Quality variables (n=5)

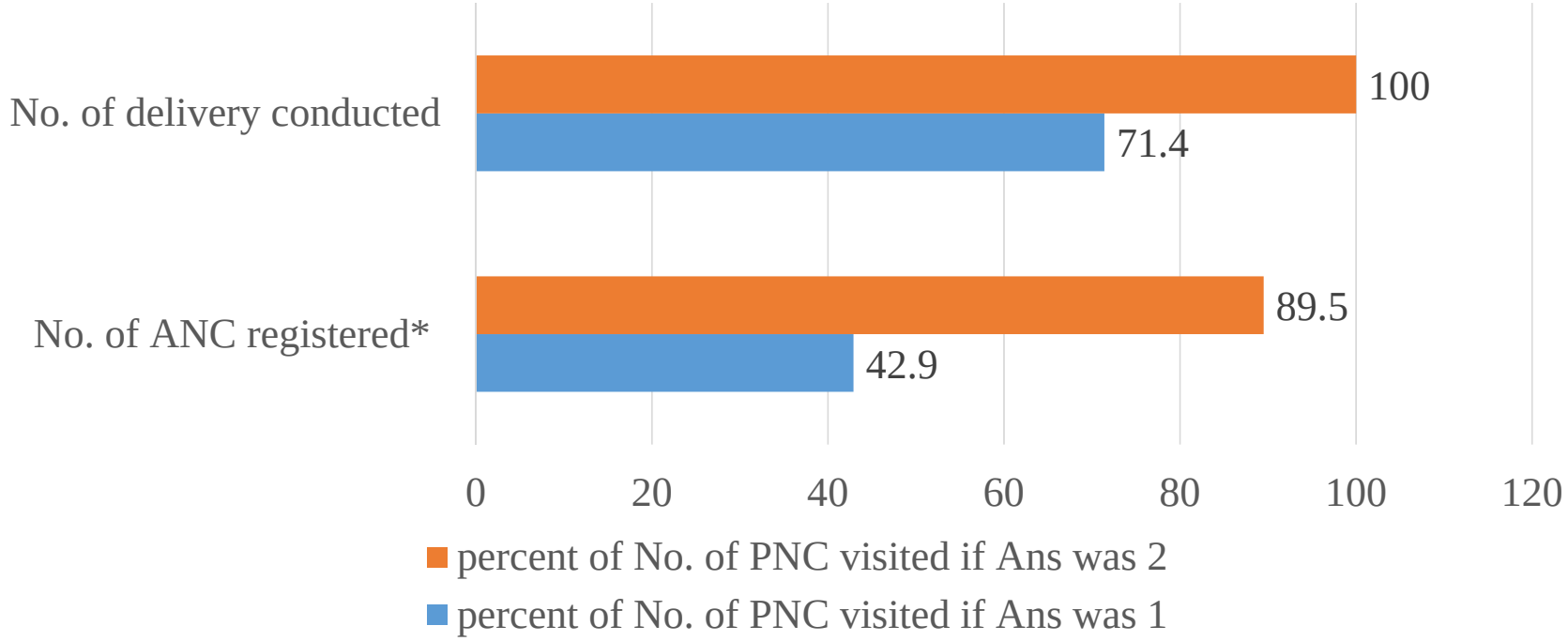


*p value < 0.05

Graph-5 Association between No. of PNC visited and Quality variables (n=20)



Graph-6 Association between No. of PNC visited and no. of ANC registered and no. of delivery conducted (n=20)



*p value < 0.05 and for no. of ANC registered ans.1 that was <5 and ans.2 5 or more likewise for no. delivery conducted ans.1 Was no/zero and ans.2 was yes

Conclusion:

- Supply side factors were not acting as barriers or hurdles in maternal healthcare utilization except a few that were instrument sterilization. This result shows that to establish this fact further study needs to be carried out because the sample size of study may affect the overall result.

- Supply side factors that were considered in this study, it can be said that only these factors were not taken to know the utilization of maternal health, there may be chances of other factors that may influence the maternal healthcare utilization and to establish this fact further study needed.

Thank You