

Lists of figures and Tables presented in the manuscript.

Look figure1, Conceptual framework developed after reviewing literatures(8,14,18,20,21,23,26–29)

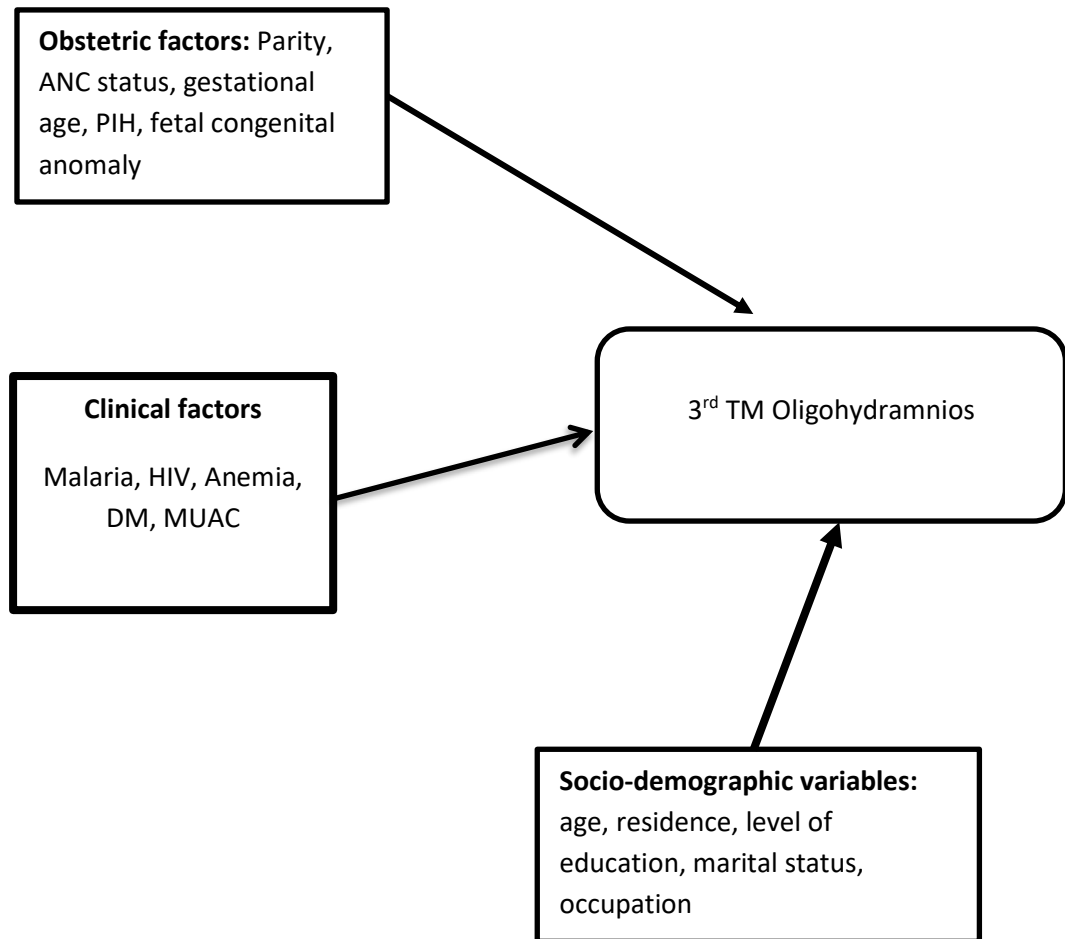


Figure 1: Conceptual framework to assess risk factors of 3rd TM oligohydramnios among pregnant women at public hospitals of Southwest Ethiopia, 2024(8,14,18,20,21,23,26–29)

Table 1: Sample size calculation for risk factors of 3rd trimester Oligohydramnios among pregnant women at public hospitals of southwest Ethiopia, 2024

Variables	Proportion in non-exposed	Proportion in exposed	Power of study	Crude OR	Sample size	Total sample size after considering 10% non-response rate (18)
History of malaria (18)	8.4%	31.6%	80	5.1	108	119
Primigravida (18)	5.1%	15.2%	80	3.3	318	350
Gestational age >40 weeks (18)	5.2%	24.4%	80	5.9	126	139
Hypertension (8)	29.45	54.2%	80	2.8	140	154
History of Abortion (8)	29.3%	56.5	80	3.1	116	128

Look figure 2.

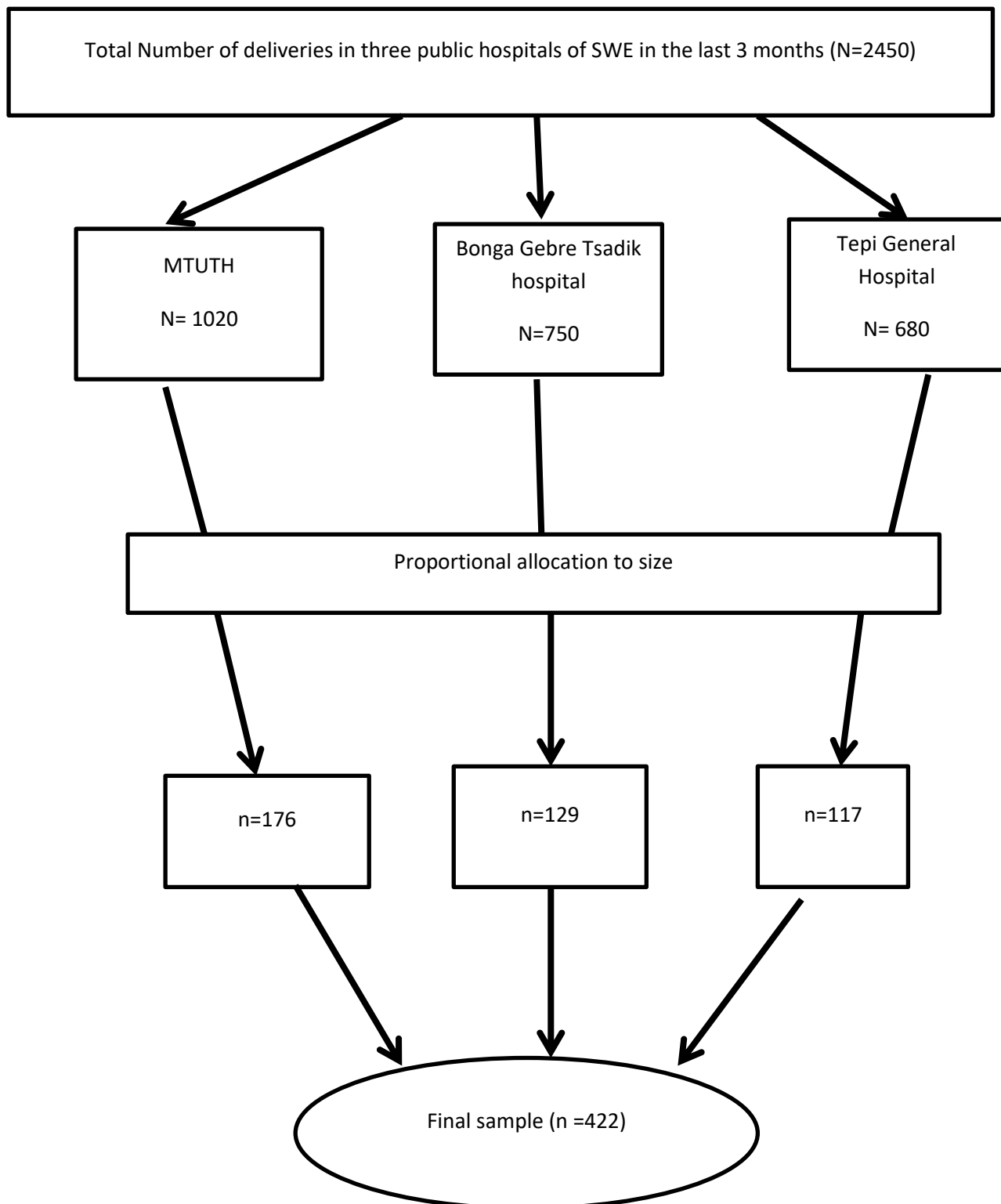


Figure 2 : schematic presentation of sampling procedure to assess magnitude and risk factors of third trimester oligohydramnios among pregnant women at public hospitals of Southwest Ethiopia, 2024.

Table 2; Sociodemographic characteristics of the study participants and their association with Oligohydramnios among pregnant women at public hospitals of southwest Ethiopia, 2024 G.C.

Variables and category	Overall (N = 422), n (%)	Oligohydramnios		P value
		Yes(57)	No (365)	
Age category				0.259
< 25 years	177	37(15%)	208(85%)	
≥ 25 years	245	20(11%)	157(89%)	
Residence				0.813
Urban	268	37(13.8%)	231(86.2%)	
Rural	154	20(13%)	134((87%)	
Marital status				0.707
Married	352	50(14.2%)	302(85.8%)	
Single	2	4((10.8%)	35(89.2%)	
Widowed	31	3(9.7%)	3(90.3%)	
Divorced	37	-	2(100%)	
Educational status				0.604
Cannot write and read	61	6(9.8%)	55(90.2%)	
Elementary	141	20(14.2%)	121(85.8%)	
High school	165	21(12.7%)	144(87.3%)	
Diploma and above	55	10(18.2%)	45(81.8%)	
Occupation				0.341
House wife	215	24(11.2%)	191(88.8%)	
Farmer	39	4(10.3%)	35(88.8%)	
Self employe	120	21(17.5%)	99(82.5)	
Government employe	48	8(16.7%)	40(83.3%)	

Table 3: Clinical and obstetric characteristics of study participants and their association with Oligohydramnios among pregnant women at public hospitals of southwest Ethiopia, 2024 G.C.

Variables and category	Overall (N = 422), n (%)	Oligohydramnios		P value
		Yes (57)	No (365)	
Gravidity				0.116
1	251(59.5%)	27(10.8%)	224(89.2%)	
2-4	156(37%)	26(16.7%)	130(83.3%)	
>=5	15(35.5%)	4(26.7%)	11(73.3%)	
GA in weeks				< 0.001
28-32	89(21.1%)	5(5.6%)	84(94.4%)	
33-36	122(29%)	13(10.7%)	109(89.3%)	
37-39	145(34.4%)	16(11%)	129(89%)	
>=40	66(15.6%)	23(34.8%)	43(65.2%)	
Abortion history				0.09
Yes	65(15.4%)	44(12.3%)	313(87.7%)	
No	357(84.5%)	13(20%)	52(80%)	
ANC visit				0.678
1	84(20%)	10(11.9%)	74(88.1%)	
2	129(30.5%)	21(16.3%)	108(83.7%)	
3	94(22.3%)	13(13.8%)	81(86.2%)	
>=4 visit	115(27.2%)	13(11.3%)	102(88.7%)	
HIV in pregnancy				0.079
Yes	9(2.13%)	3(33.3%)	6(67.7%)	
No	413(97.87%)	54(13.1%)	359(86.9%)	
Malaria during pregnancy				<0.001
Yes	111(26.3%)	34(30.6%)	77(69.4%)	
No	311(73.7)	23(7.4%)	288(92.6%)	
Anemia during pregnancy				0.011
Yes	81(19.2%)	18(22.2%)	63(77.8%)	
No	341(80.8%)	39(11.4%)	302(88.6%)	
History of hypertension				0.039
Yes	26(6.2%)	7(26.9%)	19(73.1%)	
No	396(93.8%)	50(12.6%)	346(87.4%)	
Fetal congenital anomaly				0.086
Yes	8(2%)	3(37.5%)	5(62.5%)	
No	414(98%)	54(13%)	360(87%)	
MUAC				<0.001
<23 cm	17(4%)	8(47.1%)	9(52.9%)	
>=23 cm	405(96%)	49(12.1%)	356(87.9%)	

Table 4 Bivariable analysis on factors associated with third trimester Oligohydramnios among pregnant women at public hospitals of southwest Ethiopia, 2024 G.C

Variables	Category	Oligohydramnios		COR(95%CI)	P value
		Yes	No		
Age in years	<25	37(15%)	208(85%)	1	0.261
	>=25	20(11%)	157(89%)	1.39(0.78-2.49)	
Residence	Urban	37(13.8%)	231(86.2%)	1	0.813
	Rural	20(13%)	134((87%)	0.93(0.520-1.671)	
Marital status	Married	50(14.2%)	302(85.8%)	1	0.571
	Divorced	4((10.8%)	35(89.2%)	0.732(0.249-2.156)	
	Widowed	3(9.7%)	3(90.3%)	0.647(0.190-2.209)	
	Single	-	2(100%)	1	
Education status	Cannot write and read	6(9.8%)	55(90.2%)	0.491(0.166-1.454)	0.199
	Elementary	20(14.2%)	121(85.8%)	0.744(0.323-1.710)	0.486
	Secondary	21(12.7%)	144(87.3%)	0.656(0.288-1.496)	0.316
	Diploma and above	10(18.2%)	45(81.8%)	1	
Occupation	House wife	24(11.2%)	191(88.8%)	0.628(0.263-1.499)	0.295
	Farmer	4(10.3%)	35(88.8%)	0.571(0.158-2.062)	0.393
	Self-employee	21(17.5%)	99(82.5)	1.061(0.434-2.591)	0.897
	Government employee	8(16.7%)	40(83.3%)	1	
Gravidity	1	27(10.8%)	224(89.2%)	1	0.087
	2-4	26(16.7%)	130(83.3%)	1.659(0.929-2.964)	
	>=5	4(26.7%)	11(73.3%)	3.017(0.898-10.137)	
Abortion history	No	44(12.3%)	313(87.7%)	1	0.099
	Yes	13(20%)	52(80%)	1.78(0.897-3.527)	
Gestational age in weeks	28-32	5(5.6%)	84(94.4%)	1	0.203
	33-36	13(10.7%)	109(89.3%)	2.004(0.687-5.841)	
	37-39	16(11%)	129(89%)	2.084(0.736-5.902)	
	>=40	23(34.8%)	43(65.2%)	8.986(3.193-25.286)	

ANC visit	1	10(11.9%)	74(88.1%)	1.060(0.441-2.549)	0.896
	2	21(16.3%)	108(83.7%)	1.526(0.726-3.206)	0.265
	3	13(13.8%)	81(86.2%)	1.259(0.553-2.866)	0.583
	>=4	13(11.3%)	102(88.7%)	1	
HIV in pregnancy	No	54(13.1%)	359(86.9%)	1	
	Yes	3(33.3%)	6(67.7%)	3.324(0.807-13.685)	0.096
Anemia during pregnancy	No	39(11.4%)	302(88.6%)	1	
	Yes	18(22.2%)	63(77.8%)	2.171(1.167-4.036)	0.014
Malaria during pregnancy	No	23(7.4%)	288(92.6%)	1	
	Yes	34(30.6%)	77(69.4%)	5.529(3.078-9.933)	<0.001
History of HTN	No	50(12.6%)	346(87.4%)	1	
	Yes	7(26.9%)	19(73.1%)	2.549(1.020-6.371)	0.045
Fetal congenital anomaly	No	54(13%)	360(87%)	1	
	Yes	3(37.5%)	5(62.5%)	4(0.929-17.218)	0.063
MUAC	>=23 cm	49(12.1%)	356(87.9%)	1	
	<23 cm	8(47.1%)	9(52.9%)	6.458(2.380-17.521)	<0.001

Table 5 Bivariable and multivariable logistic regression analysis of factors associated with third trimester Oligohydramnios among pregnant women at public hospitals of southwest Ethiopia, G.C

Variables and category	Oligohydramnios		COR (95%CI)	AOR (95%CI)	P value
	Yes	No			
Gestational age in Weeks					
28-32	5(5.6%)	84(94.4%)	Ref		
33-36	13(10.7%)	109(89.3%)	2.004(0.687-5.841)	3.467(1.025-11.729)	0.046
37-39	16(11%)	129(89%)	2.084(0.736-5.902)	2.165(0.669-7.002)	0.197
>=40	23(34.8%)	43(65.2%)	8.986(3.193-25.286)	11.78(3.532-39.32)	<0.001
Malaria during Pregnancy					
No	23(7.4%)	288(92.6%)	Ref		
Yes	34(30.6%)	77(69.4%)	5.529(3.078-9.933)	5.448(2.669-11.120)	<0.001
History of HTN					
No	50(12.6%)	346(87.4%)	Ref		
Yes	7(26.9%)	19(73.1%)	2.549(1.020-6.371)	3.211(1.082-9.524)	0.035
Fetal congenital Anomaly					
No	54(13%)	360(87%)	Ref		
Yes	3(37.5%)	5(62.5%)	4(0.929-17.218)	6.668(1.198-37.11)	0.030
MUAC					
>=23cm	49(12.1%)	356(87.9%)	Ref		
<23cm	8(47.1%)	9(52.9%)	6.458(2.380-17.521)	19.141(5.413-67.689)	<0.001

