

Supplementary File 1: Bivariate analysis of factors associated with severe malaria

Variables	Central			Bunyoro		
	Yes n(%)	No n(%)	COR (95% CI)	Yes n(%)	No n(%)	COR (95% CI)
Health Facility						
Health center II	237(48.7)	45(29.8)	Reference	98(20.6)	34(25.2)	Reference
Health center III	250(51.3)	106(70.2)	2.23(1.51, 3.30)***	148(31.2)	39(28.9)	0.76(0.45, 1.28)
Health center IV	-	-		229(48.2)	62(45.9)	0.78(0.48, 1.26)
Marital status						
Single	78(16.0)	29(19.2)	Reference	45(9.5)	8(5.9)	Reference
Married	368(75.6)	105(69.5)	0.77(0.47, 1.23)	399(84.0)	119(88.2)	1.67(0.77, 3.66)
Divorced	8(1.6)	4(2.6)	1.34(0.37, 4.81)	17(3.6)	0(0)	-
Widowed	33(6.8)	13(8.6)	1.06(0.49, 2.28)	14(2.9)	8(5.9)	3.21(1.01, 10.14)*
Religious affiliation						
Anglican	161(33.1)	51(33.8)	Reference	153(32.2)	48(35.6)	Reference
Catholics	148(30.4)	52(34.4)	1.11(0.71, 1.73)	242(50.9)	63(46.7)	0.83(0.54, 1.27)
Muslim	87(17.8)	25(16.6)	0.91(0.53, 1.56)	20(4.2)	11(8.2)	1.75(0.78, 3.92)
Born again	82(16.8)	21(13.9)	0.81(0.45, 1.43)	33(6.9)	9(6.7)	0.87(0.39, 1.95)
SDA	7(1.4)	1(0.6)	0.45(0.05, 3.75)	12(2.5)	1(0.7)	0.26(0.03, 2.10)
Others	2(0.4)	1(0.6)	1.57(0.14, 17.77)	15(3.2)	3(2.2)	0.64(0.78, 2.30)
Education Level						
Nonformal	44(9.0)	20(13.3)	Reference	76(16.0)	24(17.8)	Reference
Primary	315(64.7)	106(70.2)	0.74(0.42, 1.31)	319(67.2)	93(68.9)	0.92(0.55, 1.54)
Secondary	116(23.8)	22(14.6)	0.42(0.21, 0.84)*	69(14.5)	17(12.6)	0.78(0.40, 1.57)
Tertiary/ University	12(2.5)	3(2.0)	0.55(0.14, 2.17)	11(2.3)	1(0.7)	0.29(0.04, 2.35)
Occupation						
Unemployed	32(6.6)	16(10.6)	Reference	23(4.8)	7(5.2)	Reference
Peasant	346(71.1)	113(74.8)	0.65(0.35, 1.23)	411(86.5)	116(85.9)	0.93(0.39, 2.22)
Self employed	97(19.9)	17(11.3)	0.35(0.16, 0.77)**	37(7.8)	11(8.2)	0.97(0.33, 2.88)
Professional	12(2.5)	5(3.3)	0.83(0.25, 2.78)	4(0.8)	1(0.7)	0.82(0.08, 8.60)
Structure of house						
Grass thatched	36(7.4)	22(14.6)	Reference	210(44.2)	79(58.5)	Reference
Made of mud	77(15.8)	22(14.6)	0.47(0.23, 0.95)*	67(14.1)	17(12.6)	0.67(0.34, 1.22)
Semi-	143(29.4)	47(31.1)	0.54(0.29, 1.00)	91(19.2)	22(16.3)	0.64(0.38, 1.10)

permanent						
Permanent	231(47.4)	60(39.7)	0.43(0.23, 0.78)**	107(22.5)	17(12.6)	0.42(0.24, 0.75)*
Age of child						
0 to 1	114(23.4)	49(32.5)	Reference	159(33.5)	36(26.7)	Reference
1 to 2	97(19.9)	27(17.9)	0.65(0.37, 1.11)	92(19.4)	28(20.7)	1.34(0.77, 2.35)
2 to 3	114(23.4)	30(19.9)	0.61(0.36, 1.03)	80(16.8)	32(23.7)	1.77(1.02, 3.05)*
3 to 4	102(20.9)	28(18.5)	0.64(0.37, 1.10)	89(18.7)	21(15.6)	1.04(0.57, 1.89)
4 to 5	60(12.3)	17(11.3)	0.66(0.35, 1.24)	55(11.6)	18(13.3)	1.45(0.76, 2.75)
Sex of child						
Male	234(48.1)	82(54.3)	Reference	240(50.5)	67(49.6)	Reference
Female	253(51.9)	69(45.7)	0.78(0.54, 1.12)	235(49.5)	68(50.4)	1.04(0.71, 1.52)
Health Facility						
Health center II	-	-		76(19.1)	12(21.8)	Reference
Health center III	154(100)	30(100)		321(80.4)	41(74.6)	0.81(0.41, 1.61)
Health center IV	-	-		2(0.5)	2(3.6)	6.33(0.81, 49.31)
Marital status						
Single	3(2.0)	2(6.7)	Reference	17(4.3)	1(1.8)	Reference
Married	138(89.6)	25(83.3)	0.27(0.04, 1.71)	366(91.7)	53(96.4)	2.46(0.32, 18.88)
Divorced	7(4.6)	0(0)	-	4(1.0)	0(0)	-
Widowed	6(3.9)	3(10.0)	0.75(0.08, 7.21)	12(3.0)	1(1.8)	1.42(0.08, 24.95)
Religious affiliation						
Anglican	51(33.1)	11(36.7)	Reference	141(35.3)	25(45.5)	Reference
Catholics	56(36.4)	14(46.7)	1.16(0.48, 2.79)	166(41.6)	19(34.6)	0.65(0.34, 1.22)
Muslim	1(0.7)	0(0)	-	31(7.8)	6(10.9)	1.10(0.41, 2.90)
Born again	39(25.3)	5(16.7)	0.59(0.19, 1.85)	55(13.8)	5(9.1)	0.51(0.19, 1.41)
SDA	7(4.6)	0(0)	-	3(0.8)	0(0)	-
Others	-	-	-	3(0.8)	0(0)	-
Education Level						
Nonformal	24(15.6)	1(3.3)	Reference	27(6.8)	8(14.6)	Reference
Primary	98(63.6)	25(83.3)	6.12(0.79, 47.46)	261(65.4)	38(69.1)	0.49(0.21, 1.16)
Secondary	29(18.8)	3(10.0)	2.48(0.24, 25.44)	101(25.3)	8(14.6)	0.27(0.09, 0.78)*
Tertiary/ University	3(2.0)	1(3.3)	8.00(0.39, 164.01)	10(2.5)	1(1.8)	0.33(0.04, 3.05)
Occupation						
Unemployed	5(3.3)	0(0)	Reference	17(4.3)	5(9.1)	Reference
Peasant	136(88.3)	26(86.7)	-	347(86.9)	46(83.6)	0.45(0.16, 1.30)
Self employed	12(7.8)	4(13.3)	0.57(0.17, 1.92)	34(8.5)	4(7.3)	0.40(0.09, 1.68)
Professional	1(0.7)	0(0)	-	1(0.3)	0(0)	-
Structure of						

house						
Grass thatched	4(2.6)	1(3.3)	Reference	182(45.6)	24(43.6)	Reference
Made of mud	70(45.5)	16(53.3)	0.91(0.10, 8.74)	21(5.3)	2(3.6)	0.72(0.16, 3.27)
Semi-permanent	63(40.9)	9(30.0)	0.57(0.06, 5.70)	121(30.3)	16(29.1)	1.00(0.51, 1.96)
Permanent	17(11.0)	4(13.3)	0.94(0.08, 10.87)	75(18.8)	13(23.6)	1.31(0.64, 2.72)
Age of child						
0 to 1	36(23.4)	10(33.3)	Reference	136(34.1)	15(27.3)	Reference
1 to 2	39(25.3)	7(23.3)	0.65(0.22, 1.88)	90(22.6)	10(18.2)	1.01(0.43, 2.34)
2 to 3	36(23.4)	5(16.7)	0.50(0.16, 1.61)	73(18.3)	16(29.1)	1.89(0.93, 4.25)
3 to 4	36(23.4)	6(20.0)	0.60(0.20, 1.83)	33(8.3)	8(14.6)	2.19(0.86, 5.62)
4 to 5	7(4.6)	2(6.7)	1.03(0.18, 5.75)	67(17.8)	6(10.9)	0.81(0.30, 2.19)
Sex of child						
Male	79(51.3)	17(56.7)	Reference	217(54.4)	24(43.6)	Reference
Female	75(48.7)	13(43.3)	0.81(0.37, 1.77)	182(45.6)	31(56.4)	1.54(0.87, 2.72)

p<0.05, **p<0.01, *p<0.001*