

**Supplementary Table 1: Characteristics of study participants by selected demographic, behavioural and biological risk factors**

Variable	Men % (95% CI) 1611	Women % (95% CI) 1922	Total % (95% CI) 3533
<b>Gender</b>			
Men			50.2(47.6-52.9)
Women			49.8(47.1-52.4)
<b>Age Group</b>			
25 -34	46.8(42.8-50.8)	45.9(42.8-49.1)	46.3(43.9-48.8)
35-44	26.5(24.0-29.2)	27.0(24.3-29.8)	26.7(24.9-28.7)
45-54	16.8(14.7-19.2)	17.6(15.7-19.6)	17.2(15.8-18.7)
55-64	9.9(8.2-11.9)	9.6(7.5-12.1)	9.7(8.2-11.5)
	P<0.937		
<b>Mean age</b>	37.8(37.0-38.6)	37.6(36.8-38.3)	37.7(37.1-38.2)
<b>Marital Status</b>			
Never married	22.6(20.1-25.2)	7.3(5.7-9.4)	15.0(13.4-16.7)
Married	66.4(59.8-72.3)	70.8(63.2-77.4)	68.6(61.9-74.6)
Separated/divorced	2.3(1.7-3.3)	4.8(3.8-6.0)	3.5(2.9-4.4)
Widowed	0.3(0.1-0.9)	5.5(4.2-7.3)	2.9(2.2-3.8)
Cohabiting	8.4(4.3-15.9)	11.6(5.9-21.5)	10.0(5.2-18.5)
	P<0.001		
<b>Ethnicity</b>			
Mandinka	42.1(36.9-47.6)	39.3(33.4-45.6)	40.7(35.6-46.0)
Wollof	16.2(12.1-21.4)	16.1(12.4-20.5)	16.2(12.5-20.7)
Fula	20.7(17.1-25.0)	18.5(15.1-22.4)	19.6(16.4-23.3)
Jola	12.2(8.2-17.8)	15.1(11.1-20.2)	13.6(9.8-18.6)
Other	8.7(6.6-11.5)	11.1(8.5-14.4)	9.9(7.8-12.5)
	P=0.104		
<b>Years spent in school</b>			
≤6 Years	55.0(50.5-59.5)	74.3(69.4-78.6)	64.3(60.1-68.2)
7-12 Years	31.5(28.1-35.2)	22.4(18.7-26.6)	27.1(24.2-30.3)
>12 Years	13.4(11.2-16.0)	3.4(2.3-4.9)	8.6(7.2-10.2)
	P<0.001		
<b>Residence (Local government area) <sup>a</sup></b>			
Banjul	7.8(2.5-21.9)	7.1(2.2-21.0)	7.5(2.4-20.7)
KMC	23.2(15.1-33.9)	28.2(18.9-39.8)	25.7(17.2-36.6)
WCR	35.7(24.3-48.8)	30.9(20.6-45.5)	33.3(22.6-46.0)
LRR	7.6(3.3-16.8)	7.9(3.4-17.6)	7.8(3.4-16.9)
NBR	8.2(4.4-14.6)	10.3(5.6-18.11)	9.2(5.1-16.3)
CRRN	2.5(0.7-8.9)	2.8(0.7-9.9)	2.7(0.7-9.4)
CRRS	6.1(2.5-14.2)	6.4(2.6-14.7)	6.3(2.6-14.2)
URR	8.9(4.1-18.2)	6.4(2.8-14.1)	7.7(3.5-16.0)
	P=0.131		
<b>Residence (Rurality)</b>			
Urban	57.7(48.2-66.6)	56.8(47.8-65.4)	57.2(48.3-65.7)
Semi urban	8.7(4.3-17.0)	6.8(3.1-14.4)	7.8(3.7-15.5)
Rural	33.6(27.4-40.5)	36.4(29.8-43.6)	35.0(28.9-41.7)
	P=0.187		
<b>Physical Activity <sup>b</sup></b>			
≥600METS/week	88.9(84.0-92.5)	80.2(72.1-86.4)	84.6(78.2-89.3)
< 600METS/week	11.1(7.5-16.1)	19.8(13.6-27.9)	15.4(10.7-21.8)
	P<0.001		
<b>Smoking</b>			
Never smokers	57.3(52.3-62.1)	98.1(96.9-98.8)	77.6(74.2-80.6)

Variable	Men % (95% CI) 1611	Women % (95% CI) 1922	Total % (95% CI) 3533
Current smokers	33.0(29.0-37.2)	1.2(0.7-1.8)	17.2(14.8-19.8)
Ex-smokers	9.8(7.7-12.4)	0.8(0.3-1.7)	5.3(4.1-6.9)
	<b>P&lt;0.001</b>		
<b>Servings of fruits and vegetables</b>			
≥5 /day	24.0(18.2-30.9)	23.8(18.1-30.6)	23.9(18.4-30.4)
< 5/day	76.0(69.1-81.9)	76.2(69.4-81.9)	76.1(69.6-81.6)
	P= 0.934		
<b>BMI<sup>c</sup></b>			
Underweight	56.2(50.8-61.4)	46.6(42.8-50.5)	51.4(47.6-55.2)
Normal	9.7(7.6-12.4)	7.6(6.19-5)-	8.7(7.2-10.4)
Overweight	26.0(21.1-31.6)	28.8(25.8-31.9)	27.4(24.0-31.1)
Obese	8.1(6.0-11.0)	17.0(14.7-19.7)	12.6(10.5-14.9)
	<b>P&lt;0.001</b>		
<b>Mean height (cm)</b>	166.9(165.1-168.7)	160.5(159.5-161.5)	163.7(162.4-165.0)
<b>Mean weight (kg)</b>	65.2(64.1-66.3)	65.5(63.8-67.3)	65.4(64.2-66.5)
<b>Mean BMI(kg/m<sup>2</sup>)</b>	23.6(23.1-24.1)	25.6(24.9-26.3)	24.6(24.1-25.1)
<b>Waist circumference<sup>d</sup></b>			
Normal	89.7(86.7-92.2)	54.2(47.4-60.7)	72.3(67.8-76.3)
High	10.3(7.8-13.4)	45.9(39.3-52.6)	27.7(23.7-32.2)
<b>Mean waist circumference</b>	72.1(65.1-75.0)	76.0(72.9-79.1)	74.0(71.1-76.9)
<b>Waist-to-Hip Ratio<sup>e</sup></b>			
Normal	83.2(79.4-86.4)	60.6(54.8-66.1)	72.1(68.1-75.8)
High	16.8(13.6-20.6)	39.4(33.9-45.2)	27.9(24.2-31.9)
	<b>P&lt;0.001</b>		
<b>Waist-Height Ratio</b>			
Normal (≤0.5)	81.9(77.9-85.4)	59.9(53.2-66.3)	71.1(66.2-75.6)
High (>0.5)	18.1(14.6-22.1)	40.1(33.7-46.8)	28.9(24.4-33.8)
	<b>P&lt;0.001</b>		
<b>Mean Hip Circumference (cm)</b>	89.3(87.0-91.6)	94.2(92.1-96.3)	91.7(89.7-93.8)

Note: Data shown have been weighted for non-response and the analysis took into account the complex survey design.

<sup>a</sup> KM=Kanifing Municipality; WCR =West Coast Region; LRR= Lower River Region; NBR =North Bank Region; CRRN = Central River Region North, CRRS=Central River Region South; URR =Upper River Region

<sup>b</sup> METS =Metabolic equivalents

<sup>c</sup> BMI is categorised into underweight (BMI<18.5kg/m<sup>2</sup>), normal (18.5-24.9 Kg/m<sup>2</sup>), overweight (25.0-29.9kg/m<sup>2</sup>) and obese (BMI ≥30kg/m<sup>2</sup>).

<sup>d</sup> Based on the definition of the International Diabetes Federation (High waist circumference, indicating abdominal obesity defined as ≥90 cm in men or ≥80 cm in women)

<sup>e</sup> Based on the WHO definitions (high WHR defined as >0.90 in men and >85 in women)

NB: The p value indicates the statistical significance of the difference in proportions between men and women obtained using Pearson's chi-squared test

Supplementary Table 2: Prevalence of BMI categories by selected socio-demographic, behavioural and biological factors in men <sup>a, b, c</sup>

Variable	Normal (desirable) % (95% CI)	Underweight % (95% CI)	Overweight % (95% CI)	Obese % (95% CI)	$\chi^2$ P value
<b>Total</b>	56.2(50.8-61.4)	9.7(7.6-12.4)	26.0(21.1-31.6)	8.1(6.0-11.0)	
<b>Age Group</b>					
25 -34	59.0(52.2-65.6)	11.6(8.4-15.9)	22.0(16.3-29.0)	7.3(4.9-10.7)	<b>0.003</b>
35-44	54.0(47.3-60.6)	7.3(4.9-10.8)	32.4(25.7-39.8)	6.4(4.1-9.7)	
45-54	48.7(40.5-56.9)	9.3(5.7-14.8)	29.6(23.4-36.7)	12.4(8.8-17.3)	
55-64	61.0(53.4-68.1)	8.0(5.1-12.3)	21.8(16.0-29.0)	9.1(4.6-17.4)	
<b>Marital status</b>					
Never married	55.1(45.1-64.7)	11.9(7.4-18.4)	24.3(16.0-35.2)	8.7(4.8-15.2)	0.222
Married	56.1(50.7-61.4)	7.9(6.0-10.4)	27.7(23.1-32.9)	8.2(5.8-11.6)	
Separated	49.6(34.1-65.2)	14.6(5.7-32.4)	32.1(19.4-48.0)	3.8(0.8-15.6)	
Widowed	63.3(17.6-93.3)	36.8(6.7-82.4)	0.0	0.0	
Cohabiting	60.4(48.7-71.0)	16.3(8.6-29.0)	16.2(9.6-25.8)	7.1(3.5-13.9)	
<b>Ethnicity</b>					
Mandinka	56.8(50.5-62.8)	11.5(8.6-15.1)	25.5(19.1-33.1)	6.3(4.1-9.6)	<b>0.042</b>
Wolof	46.8(38.0-55.8)	10.8(6.2-17.9)	32.3(24.4-41.4)	10.2(6.2-16.4)	
Fula	59.1(50.8-66.9)	8.4(5.3-13.1)	25.2(18.3-33.5)	7.3(4.2-12.2)	
Jola	62.6(52.8-71.4)	8.2(4.7-14.1)	22.1(15.3-30.8)	7.1(3.5-13.9)	
Others	55.0(45.2-64.4)	4.8(2.3-9.9)	23.8(16.0-33.7)	16.5(9.8-26.4)	
<b>Residence (LGA) <sup>d</sup></b>					
Banjul & KM	33.4(25.4-42.8)	3.2(1.7-6.0)	47.2(37.6-57.0)	16.2(11.0- 23.1)	<b>&lt;0.001</b>
WCR	68.5(63.5-73.2)	15.3(11.7-19.7)	11.9(9.0-15.4)	4.4(2.9-6.6)	
URR	49.6(38.9-60.3)	4.2(2.0-8.6)	32.4(26.1-39.3)	13.8(8.9-20.9)	
NBR	65.6(54.9-74.9)	13.9(9.1-20.6)	19.1(13.0-27.1)	1.5(1.6-3.4)	
CRR	67.1(54.1-77.9)	15.5(9.6-23.9)	15.6(10.1-23.4)	1.9(0.7-4.4)	
LRR	75.9(62.0-85.9)	5.7(3.0-10.7)	17.9(8.5-34.0)	0.5(0.1-3.1)	
<b>Residence (Rurality)</b>					
Urban	49.1(41.2-57.1)	9.2(6.2-13.5)	30.9(23.2-39.9)	10.7(7.4-15.4)	<b>0.001</b>
Semi urban	54.1(40.1-67.5)	8.4(3.3-19.5)	27.7(17.6-40.8)	9.8(4.7-19.1)	
Rural	68.8(62.6-74.3)	10.9(8.1-14.6)	17.1(13.0-22.2)	3.2(1.8-5.6)	
<b>Education level</b>					
No formal education	59.4(54.4-64.1)	9.3(7.1-12.0)	24.9(20.5-29.8)	6.5(4.6-9.3)	<b>0.007</b>

Variable	Normal (desirable) %(95% CI)	Underweight %(95% CI)	Overweight %(95% CI)	Obese %(95% CI)	$\chi^2$ P value
Primary/ Middle	61.3(51.9-69.9)	13.4(8.3-21.0)	19.4(13.4-27.4)	5.9(3.0-11.2)	
Secondary/Tertiary	47.7(38.6-56.9)	8.0(4.6-13.7)	32.1(23.6-42.1)	12.1(8.2-17.7)	
<b>Years spent in school</b>					
≤6 Years	60.5(55.7-65.1)	9.4(7.3-12.1)	23.7(19.6-28.3)	6.4(4.6-8.9)	<b>0.003</b>
7-12 Years	49.7(41.7-57.8)	13.3(8.6-19.9)	27.9(20.1-37.2)	9.1(5.8-14.1)	
> 12 Years	48.5(35.4-61.7)	4.3(2.2-8.5)	34.3(24.8-45.3)	12.9(7.1-22.4)	
<b>Smoking</b>					
Never smokers	53.1(46.8-59.3)	7.0(5.1-9.7)	30.1(24.3-36.7)	9.8(6.8-13.8)	<b>&lt;0.001</b>
Current smokers	61.6(54.8-68.1)	13.8(11.0-17.3)	18.8(13.5-25.4)	5.8(3.9-8.7)	
Ex-smokers	55.5(46.8-63.9)	11.8(6.7-20.0)	26.4(18.3-36.6)	6.3(3.2-12.1)	
<b>Servings of fruits and vegs</b>					
≥ 5/day	61.8(54.1-68.8)	9.1(6.5-12.7)	23.3(17.7-29.9)	5.8(3.5-9.6)	0.321
< 5/day	54.1(47.2-60.8)	10.5(7.6-14.3)	27.8(21.5-35.1)	7.8(5.1-10.1)	
<b>Physical Activity<sup>e</sup></b>					
<600METS/week	46.5(36.3-57.0)	4.7(2.3-9.4)	31.3(22.7-41.4)	17.5(11.5-25.7)	<b>&lt;0.001</b>
≥600METS/week	56.8(51.0-62.3)	10.5(8.1-13.5)	25.7(20.2-32.0)	7.1(5.2-9.7)	
<b>Waist circumference<sup>f</sup></b>					
Normal	57.4(51.3-63.2)	10.9(8.4-14.1)	24.2(18.6-30.7)	7.6(5.3-10.7)	<b>&lt;0.001</b>
High	43.2(34.4-52.4)	1.5(0.5-4.7)	41.5(33.2-50.3)	13.8(8.8-21.6)	

Note: Data shown have been weighted for non-response and the analysis took into account the complex survey design.

<sup>a</sup> BMI is categorised into underweight (BMI<18.5kg/m<sup>2</sup>), normal (18.5-24.9 kg/m<sup>2</sup>), overweight (25.0-29.9kg/m<sup>2</sup>) and obese (BMI ≥30kg/m<sup>2</sup>).

<sup>b</sup> Results adjusted for complex survey design and weighted for non-response

<sup>c</sup> Row percentages are presented, i.e the prevalence of being in that BMI category for people with that socio-demographic and behavioural or biological characteristic

N= unweighted sample/observations

<sup>d</sup> KM= Kanifing Municipality; WCR =West Coast Region; URR =Upper River Region.; NBR =North Bank Region ; CRRS=Central River Region South ; CRRN = Central River Region North ; LRR= Lower River Region. Regions ordered from most to least urban

<sup>e</sup> METS =Metabolic equivalents

<sup>f</sup> Based on the definition of the International Diabetes Federation (High waist circumference, indicating abdominal obesity defined as ≥90 cm in men or ≥80 cm in women)

Supplementary Table 3: Prevalence of BMI categories by selected socio-demographic, behavioural and biological factors in women <sup>a, b, c</sup>

Variable	Normal (desirable) %(95% CI)	Underweight %(95% CI)	Overweight %(95% CI)	Obese %(95% CI)	$\chi^2$ P value
Total	46.6(42.8-50.5)	7.6(6.1-9.5)	28.8(25.8-31.9)	17.0(14.7-19.7)	
<b>Age Group</b>					
25 -34	51.6(46.9-56.2)	8.3(6.3-10.9)	27.4(23.7-31.5)	12.8(10.0-16.2)	<b>0.001</b>
35-44	46.1(39.5-52.9)	6.3(4.4-8.9)	28.5(22.9-34.8)	19.1(14.9-24.2)	
45-54	43.3(35.9-51.0)	6.4(3.8-10.5)	32.6(26.5-39.2)	17.7(12.5-24.4)	
55-64	30.3(22.6-39.2)	10.1(5.5-17.9)	29.3(20.3-40.4)	30.3(20.9-41.7)	
<b>Marital status</b>					
Never married	46.8(36.0-57.9)	6.3(3.1-12.7)	36.2(26.4-47.2)	10.7(6.3-17.4)	<b>0.001</b>
Married	46.6(42.3-51.0)	6.9(5.2-9.1)	27.9(24.7-31.3)	18.6(15.8-21.8)	
Separated	32.5(22.5-44.4)	9.6(4.5-19.2)	40.8(29.6-53.1)	17.1(9.3-29.5)	
Widowed	37.1(26.6-48.9)	6.0(2.6-13.4)	30.4(21.0-41.8)	26.5(16.1-40.5)	
Cohabiting	57.6(46.8-67.6)	12.5(7.9-19.2)	22.7(16.1-31.1)	7.3(4.8-10.7)	
<b>Ethnicity</b>					
Mandinka	51.1(46.0-56.2)	9.0(6.7-11.9)	26.4(22.6-30.7)	13.5(10.7-16.8)	0.066
Wolof	42.4(33.1-52.4)	4.8(2.7-8.2)	29.3(22.7-36.9)	23.5(17.8-30.4)	
Fula	44.6(37.8-51.6)	7.7(5.2-11.3)	31.7(26.5-37.4)	16.0(12.2-20.6)	
Jola	45.1(37.0-53.4)	8.9(5.1-15.0)	26.4(20.0-33.9)	19.7(13.4-28.0)	
Others	42.5(32.4-53.3)	4.8(2.8-8.1)	34.4(26.8-42.8)	18.3(12.5-26.1)	
<b>Residence (LGA) <sup>d</sup></b>					
Banjul & KM	32.6(27.2-38.4)	2.3(1.1-4.6)	38.8(33.1-44.8)	26.3(22.1-31.1)	<b>&lt;0.001</b>
WCR	49.8(42.8-56.7)	11.4(8.1-15.7)	25.4(20.3-31.2)	13.5(10.0-18.1)	
URR	53.9(45.9-61.6)	9.5(4.7-18.2)	22.7(15.1-32.7)	13.9(8.5-21.8)	
NBR	53.8(46.8-60.6)	13.4(8.2-20.9)	20.9(16.0-26.8)	12.0(9.5-15.2)	
CRR	67.3(51.3-80.1)	7.5(5.0-11.0)	17.7(10.6-27.9)	7.6(3.1-17.1)	
LRR	57.9(44.8-70.0)	7.4(2.9-20.9)	25.6(17.1-36.3)	9.1(4.4-17.9)	
<b>Residence (Rurality)</b>					
Urban	38.0(33.1-43.2)	5.1(3.3-7.7)	34.2(29.7-39.0)	22.7(19.3-26.6)	<b>&lt;0.001</b>
Semi urban	43.5(37.5-49.7)	4.2(2.8-6.3)	35.2(30.0-40.8)	17.1(13.8-21.1)	
Rural	60.6(54.9-66.1)	12.1(9.3-15.6)	19.1(15.6-23.2)	8.1(6.1-10.6)	
<b>Education level</b>					
No formal education	49.5(45.3-53.7)	7.6(5.9-9.9)	27.4(24.1-31.0)	15.6(12.9-18.4)	<b>0.002</b>
Primary/ Middle	46.7(39.9-53.6)	8.2(5.4-12.4)	27.2(21.6-33.7)	17.9(13.2-23.9)	

Variable	Normal (desirable) %(95% CI)	Underweight %(95% CI)	Overweight %(95% CI)	Obese %(95% CI)	$\chi^2$ P value
Secondary/Tertiary	32.0(25.0-39.8)	6.3(4.0-9.5)	37.9(30.8-45.5)	23.9(17.7-31.6)	
<b>Years spent in school</b>					
≤6 Years	49.2(45.2-53.2)	8.0(6.3-10.1)	26.9(23.8-30.3)	15.9(13.5-18.6)	<b>0.012</b>
7-12 Years	38.5(31.0-46.7)	5.6(3.3-9.3)	35.5(28.8-43.0)	20.4(15.1-26.9)	
>12 Years	31.0(18.9-46.5)	7.5(3.0-17.8)	41.5(26.7-57.9)	20.0(9.1-38.3)	
<b>Servings of fruits and vegs</b>					
≥ 5/day	45.1(39.8-50.6)	9.5(6.0-14.7)	27.9(22.7-33.8)	17.5(12.9-23.2)	0.621
< 5/day	46.2(41.3-51.3)	7.0(5.2-9.4)	29.6(26.1-33.4)	17.2(14.5-20.3)	
<b>Physical activity</b>					
<600METS/week	39.0(32.6-45.8)	5.7(3.2-9.9)	31.6(23.8-40.5)	23.7(18.4-30.1)	<b>0.022</b>
≥600METS/week	48.3(43.5-53.0)	8.0(6.3-10.4)	28.0(24.9-31.3)	15.7(13.1-18.6)	
<b>Waist circumference<sup>e</sup></b>					
Normal	51.8(46.1-57.5)	10.3(7.7-13.8)	24.5(20.1-29.3)	13.4(9.6-18.4)	<b>&lt;0.001</b>
High	39.7(34.2-45.4)	4.7(3.1-7.1)	34.3(29.9-39.1)	21.3(17.8-25.2)	

Note: Data shown have been weighted for non-response and the analysis took into account the complex survey design.

<sup>a</sup> BMI is categorised into underweight (BMI<18.5Kg/m<sup>2</sup>), normal (18.5-24.9 Kg/m<sup>2</sup>), overweight (25.0-29.9Kg/m<sup>2</sup>) and obese (BMI ≥30Kg/m<sup>2</sup>).

<sup>b</sup> Results adjusted for complex survey design and weighted for non-response

<sup>c</sup> Row percentages are presented, i.e the prevalence of being in that BMI category for people with that socio-demographic, behavioural or biological characteristic

N= unweighted sample/observations

<sup>d</sup> KM= <sup>a</sup> KM=Kanifing Municipality; WCR =West Coast Region; URR =Upper River Region.; NBR =North Bank Region ; CRRS=Central River Region South ; CRRN = Central River Region North ; LRR= Lower River Region. Regions ordered from most to least urban

<sup>e</sup> METS =Metabolic equivalents

<sup>f</sup> Based on the definition of the International Diabetes Federation (High waist circumference, indicating abdominal obesity defined as ≥90 cm in men or ≥80 cm in women)