



HAL
open science

Association between socioeconomic status and adiposity in urban Cameroon.

Leopold Fezeu, Etienne Minkoulou, Beverley Balkau, André-Pascal Kengne,
Paschal Awah, Nigel Unwin, George K. M. M. Alberti, Jean-Claude Mbanya

► **To cite this version:**

Leopold Fezeu, Etienne Minkoulou, Beverley Balkau, André-Pascal Kengne, Paschal Awah, et al..
Association between socioeconomic status and adiposity in urban Cameroon.. International Journal
of Epidemiology, 2006, 35 (1), pp.105-11. 10.1093/ije/dyi214 . inserm-00128648

HAL Id: inserm-00128648

<https://inserm.hal.science/inserm-00128648>

Submitted on 6 Jun 2007

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.

Table 1: Summary of amenities and scores used in the analyses, [and percentage of household with each amenities](#). Cameroon Study¹⁹

Household amenities	Percentage of households with the amenity (%)	Household amenity	Supprimé : s
Electricity	99.8	0.170	Tableau mis en forme
Television	81.6	0.264	
A bicycle	2.8	-0.073	
A car	23.7	0.323	
A gas or electric portable stove		0.171	
Radio	72.9	0.077	
A refrigerator	65.4	0.303	
A motorcycle	4.3	0.068	
A gas or electric oven	18.7	0.309	
A domestic worker not related to household head	6.8	0.020	
Principal type of flooring			Mis en forme : Police :Non Italique
Dirt, earth	2.2	-0.137	
Wood, plank	0.1	-0.099	
Cement	56.1	0.105	
Tile	1.6	0.354	
Other type of flooring	40.0	0.260	
Bucket latrine	30.4	0.074	Tableau mis en forme
Principal household source of water			Mis en forme : Police :Non Italique
Piped drinking water in residence	92.9	0.348	
Well with a hand pump	0.9	-0.100	
River, canal or surface water	0.00	-0.114	
Water piped into the yard	6.1	0.174	
Rain water	0.03	-0.091	
Bottled water	0.07	-0.031	
Own flush toilet	75.8	0.354	
Number per sleeping room	---	-0.006 x (number - 1.920)/1.220	

Table 2a : Clinical characteristics of the study population by sex in urban Cameroonians aged 25 years and above:

Supprimé : Socio-demographic and anthropometric

Characteristics	WOMEN	MEN	P
N	1530	1301	
Age (years)	38.4 (10.3)	39.0 (10.9)	0.2
Body mass index (kg/m ²)	26.7 (4.8)	24.7 (3.3)	< 0.001
<u>Classification of BMI</u>			< 0.001
<u>18.5 kg/m² < BMI < 25 kg/m²</u>	<u>43.8</u>	<u>62.2</u>	
<u>25 kg/m² < BMI < 30 kg/m²</u>	<u>34.6</u>	<u>30.4</u>	
<u>BMI > 30 kg/m²</u>	<u>21.6</u>	<u>7.3</u>	
<u>Waist circumference (cm)</u>	<u>84.8 (12)</u>	<u>83.6 (10)</u>	<u>0.003</u>
<u>Classification of waist</u>			< 0.001
<u>Waist < 80 cm (W) 94 cm (M)</u>	<u>33.7</u>	<u>82.5</u>	
<u>Waist > 80 cm (W) 94 cm (M)</u>	<u>66.3</u>	<u>17.5</u>	
<u>Leisure time physical activity (MET/day)*</u>	<u>11.6 (7.0-15.5)</u>	<u>10.4 (6.1-15.9)</u>	<u>0.3</u>

- Supprimé : Waist circumference (cm)
- Supprimé : 84.8 (12)
- Supprimé : 83.6 (10)
- Supprimé : 0.003
- Supprimé : Leisure time physical activity (MET/day)*
- Supprimé : 11.6 (7.0-15.5)
- Supprimé : 10.4 (6.1-15.9)
- Supprimé : 0.3
- Mis en forme : Expositant
- Mis en forme : Soulignement
- Mis en forme : Expositant
- Supprimé : Occupational level (%)
- Supprimé : < 0.001
- Supprimé : Low
- Supprimé : 37
- Supprimé : 29
- Mis en forme : Soulignement
- ... [1]
- Supprimé : High ... [2]
- Supprimé : None ... [3]
- Supprimé : Primary
- Supprimé : 23
- Supprimé : 19
- Mis en forme : Soulignement
- Supprimé : Secondary
- Supprimé : 46
- Supprimé : 44
- Supprimé : Universit... [4]

Data are mean (SD), median* (25th - 75th percentile) or percentages.

Table 2b: Socio-demographic characteristics of the study population by sex in urban Cameroonians aged 25 years and above:

<u>Characteristics</u>	<u>WOMEN</u>	<u>MEN</u>	<u>P</u>
<u>N</u>	<u>1530</u>	<u>1301</u>	
<u>Occupational level (%)</u>			<u>< 0.001</u>
<u>Low</u>	<u>37</u>	<u>29</u>	
<u>Middle</u>	<u>51</u>	<u>50</u>	
<u>High</u>	<u>12</u>	<u>21</u>	
<u>Educational level (%)</u>			<u>< 0.001</u>
<u>None</u>	<u>13</u>	<u>10</u>	
<u>Primary</u>	<u>23</u>	<u>19</u>	
<u>Secondary</u>	<u>46</u>	<u>44</u>	
<u>University</u>	<u>18</u>	<u>27</u>	
<u>Alcohol consumption (%)</u>			<u>< 0.001</u>
<u>Non drinkers</u>	<u>71</u>	<u>63</u>	
<u>< 5 g/day</u>	<u>13</u>	<u>10</u>	
<u>5 - 30 g/day</u>	<u>11</u>	<u>14</u>	
<u>> 30 g/day</u>	<u>5</u>	<u>13</u>	
<u>Tobacco smoking (%)</u>			<u>< 0.001</u>
<u>Non smokers</u>	<u>96.4</u>	<u>91.0</u>	
<u>Ex-smokers</u>	<u>0.6</u>	<u>1.0</u>	
<u>Current smokers</u>	<u>3.0</u>	<u>8.0</u>	

Data are percentages.

Tableau mis en forme

Tableau mis en forme

Table 3: Odds ratios (95% confidence intervals) between overweight, obesity and abdominal obesity and factors by sex in urban Cameroonians aged 25 years and above:

Dependent variables	Women			Men	
	Overweight + Obesity	Obesity	Abdominal obesity	Overweight + Obesity	Obesity
Age classes in years					
25-34	1	1	1	1	1
35-44	2.0 (1.5 – 2.5)	3.5 (2.5 – 4.9)	2.5 (1.9 – 3.2)	3.1 (2.3 – 4.2)	5.1 (2.6 – 10.0)
45-54	2.7 (2.0 – 3.8)	5.9 (4.0 – 8.8)	3.2 (2.2 – 4.5)	4.5 (3.3 – 6.1)	12.0 (6.3 – 21.5)
55 +	1.7 (1.1 – 2.6)	3.2 (1.8 – 5.4)	3.7 (2.2 – 6.2)	2.7 (1.8 – 4.1)	5.4 (2.4 – 11.7)
P*	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Quartiles of leisure time physical activities					
1 st quartile	1	1	1	1	1
2 nd quartile	1.13 (0.84–1.50)	1.4 (1.0 – 2.1)	0.7 (0.5 – 0.9)	1.3 (0.9 – 1.8)	1.4 (0.8 – 2.1)
3 rd quartile	1.10 (0.83–1.48)	1.31(0.89–1.93)	0.9 (0.6 – 1.2)	0.9 (0.6 – 1.2)	0.9 (0.5 – 1.4)
4 th quartile	1.11 (0.84–1.50)	1.32 (0.90–1.94)	0.7 (0.5 – 0.9)	0.7 (0.5 – 0.9)	0.5 (0.2 – 0.9)
P*	0.8	0.3	0.04	0.003	0.01
Tobacco smoking					
Non-smokers	1	1	1	1	1
Smokers	0.6 (0.3 – 1.1)	1.4 (1.0 – 1.9)	0.8 (0.4 – 1.5)	0.7 (0.5 – 1.3)	1.0 (0.6 – 1.6)
P*	0.08	0.03	0.5	0.2	1.0
Alcohol consumption					
Non-drinker	1	1	1	1	1
< 5g/ day	1.7 (1.2 – 2.4)	1.7 (1.2 – 2.6)	1.1 (0.8 – 1.5)	0.8 (0.5 – 1.2)	0.8 (0.4 – 1.4)
5 – 30 g/day	1.3 (0.9 – 1.8)	1.3 (0.8 – 2.0)	1.3 (0.9 – 1.9)	1.1 (0.8 – 1.6)	0.9 (0.5 – 1.4)
> 30 g/day	0.8 (0.4 – 1.3)	1.1 (0.6 – 1.9)	1.2 (0.7 – 1.8)	1.4 (1.0 – 1.9)	1.3 (0.7 – 2.3)
P*	0.006	0.06	0.5	0.1	0.6

* p for difference.

Table 4: Adjusted# odds ratios (95 % CI) associated with markers of adiposity and studied socio-economic variables in urban Cameroonians aged 25 years and above:

Socio-economic variables	Women				n	Overweight + Obesity	OR
	n	Overweight + Obesity	Obesity	Abdominal obesity			
Household amenities quartiles							
First (poorest)	379	1	1	1	330	1	
Second	382	1.5 (1.1 - 2.0)	1.9 (1.2 - 2.8)	1.2 (0.9 - 1.7)	320	1.7 (1.2 - 2.4)	1.5 (1.1 - 2.0)
Third	387	1.5 (1.1 - 2.0)	2.0 (1.3 - 3.0)	1.3 (1.0 - 1.8)	327	1.6 (1.1 - 2.3)	2.1 (1.5 - 2.9)
Fourth (richest)	382	1.5 (1.1 - 2.0)	1.8 (1.2 - 2.8)	1.7 (1.2 - 2.4)	324	2.3 (1.6 - 3.2)	2.4 (1.7 - 3.4)
P*		0.03	0.005	0.03		< 0.001	
Occupational level							
Low	572	1	1	1	376	1	
Middle	769	1.1 (0.9 - 1.4)	1.1 (0.8 - 1.5)	1.0 (0.8 - 1.3)	644	1.2 (0.9 - 1.5)	2.1 (1.5 - 2.9)
High	189	0.8 (0.6 - 1.2)	0.9 (0.5 - 1.4)	0.9 (0.6 - 1.3)	281	1.6 (1.2 - 2.3)	3.8 (2.7 - 5.2)
P*		0.2	0.5	0.7		0.02	

Reference category is normal weight for overweight and obesity, waist < 80 cm (women) and < 94 cm (men).

#Odds ratios are adjusted for age classes, leisure time physical activity quartiles, classes of alcohol consumption, and classes of tobacco smoking.

* p for difference.

Supprimé : 8

Page 21: [1] Supprimé	Kamadjeu	11/06/2004 11:08
Middle	51	50
Page 21: [2] Supprimé	Kamadjeu	11/06/2004 10:55
High	12	21
Educational level (%)		< 0.001
Page 21: [3] Supprimé	Kamadjeu	11/06/2004 10:55
None	13	10
Page 21: [4] Supprimé	Kamadjeu	11/06/2004 10:55
University	18	27
Alcohol consumption (%)		< 0.001
Non drinkers	71	63
< 5 g/day	13	10
5 - 30 g/day	11	14
> 30 g/day	5	13
Tobacco smoking (%)		< 0.001
Non + ex-smokers	97	92
Current smokers	3	8