

Content

Metabolic syndrome
socioeconomic disparities in
the French West Indies:
mediating effect of diet
quality

Authors : Zoé Colombet,
Caroline Méjean, Marlène
Pérignon, Sophie Drogué,
Marie-Josèphe Amiot-Carlin
(MOISA, INRA, Montpellier);
Benoît Salanave (Santé
Publique France); Edwige
Landais, Yves Martin-Prével
(Nutripass, IRD); Benjamin
Allès (EREN, CRESS)

Launch of the Caribbean
sensory preferences survey
Authors: Katia Rochefort,
Laureen Jean-Louis, Coralee
Burgell (PARM, Le
lamentin), Pascal Schlich
(CSGA, Dijon)

Partners involved in the
project:
MOISA-INRA,CIRAD
ALISS-INRA
CSGA-INRA
DAAF Guadeloupe
DAAF Martinique
PARM (Pole
Agroalimentaire Région
Martinique)
NUTRIPASS-IRD
EREN-CRESS-INRA

Project coordinator:
Caroline Méjean
INRA-MOISA
caroline.mejean@inra.fr

The **NuTWInd** project is a research project funded by the French Research Agency. Its main objective is to elucidate the relationships between characteristics of local food supply and dietary behaviours of populations and to propose strategies to improve nutrition security in the French West Indies.

The **NuTWInd** consortium is composed of 5 highly-experienced research teams, a food technical institute and the French Ministry of Agriculture. The approach is multi-disciplinary, with experts in epidemiology, economics, nutrition, sensory sciences, sociology.

The goal of this newsletter is to present the work in progress.

Metabolic syndrome socioeconomic disparities in the French West Indies: mediating effect of diet quality

Obesity and chronic diseases represent a major health burden in the French West Indies, particularly since a large part of the population belong to low socioeconomic groups (1-2). However, socioeconomic inequalities in chronic diseases are poorly explored in this area and the contribution of diet to explaining these inequalities has not been studied yet.

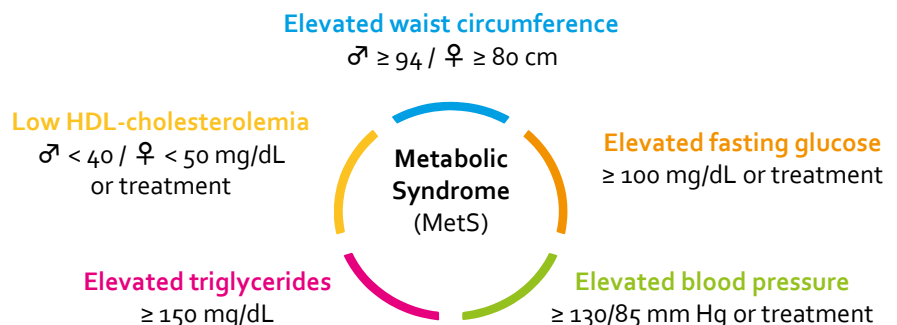
The objective of our study was to identify the socioeconomic disparities associated with Metabolic Syndrome (MetS) and quantify the part of this disparities explained by the mediating effect of diet quality.

The sample included 1144 Guadeloupean and Martinican adults from the Kannari cross-sectional representative survey, conducted in 2013-2014 (3).

Usual food and nutrient intakes were estimated via the Multiple Source Method (MSM) (4) from 24-h dietary recalls and food frequency questionnaire to take into account inter- and intra-individual variation, according to sex and age.

The diet quality was estimated using the Diet Quality Index International (DQI-I) [0 to 100 points] that takes into account several dimensions of diet quality (diversity, adequacy, moderation and balance).

Presence of MetS was determined as having at least 3 of the following criteria, according to Joint Interim Statement(3):



Weighting and stratification were used to take into account the complex survey design. Associations between socioeconomic indicators (education, employment status, social assistance benefits) and prevalence of MetS, and the potential mediating effect of diet quality in this association were assessed using multivariable logistic regression models, adjusted for location (Guadeloupe or Martinique), age, sex, single-parent household, presence of at least one child in the household and body mass index.

MetS prevalence adjusted for age and sex was 21% and 30% among Guadeloupean and Martinican subjects, respectively. Compared to those with a high education level, low- and middle-educated subjects were more likely to be at risk of MetS (OR = 1.9; 95%CI = [1.0-3.6] and OR = 2.7; 95%CI = [1.4-5.1], respectively), as were recipients of social assistance benefits compared to non-recipients (OR = 2.2; 95%CI = [1.1-4.2]). The DQI-I explained 11% of the overall variation in MetS due to education.

References

- 1- Inamo J, Daigre JL, Boissin JL et al. High blood pressure and obesity: disparities among four French Overseas Territories. *J Hypertens* 2011;29:1494-501.
- 2- Jeanne-Rose M, Clarenc P. Enquête Budget de famille 2011 - Le niveau de vie des ménages martiniquais augmente mais les inégalités persistent. *Insee Analyses Martinique*. 2015;4.
- 3- Castetbon K, Ramalli L, Vaidie A et al. Consommations alimentaires et biomarqueurs nutritionnels chez les adultes de 16 ans et plus en Guadeloupe et Martinique. *Enquête Kannari 2013-2014*. *Bull Épidémiologie Hebd*. 2016;4:52-62
- 4- Haubrock, J. *et al*. Estimating usual food intake distributions by using the multiple source method in the EPIC-Potsdam Calibration Study. *J. Nutr.* 141 (2011).

Launch of the Caribbean sensory preferences survey

To study the sensory preferences for the fat, salt and sweet of populations in the French West Indies, the ANR-EpiPref project questionnaire has been adapted to the specificities of the Caribbean diet. It has been administered to the population on the website www.etudenutriparm.fr. To promote the study, a large multimedia campaign, led by the PARM, started at the end of 2018 in Martinique to extend to Guadeloupe in February 2019.

The objective of the study was to obtain at least 1500 participants. We already have over a thousand in Martinique and this objective will be largely exceeded with the participation of Guadeloupe. These data will then be related with those of sensory tests, to which respondents can already register for PARM. Participants are also invited to participate to the Nutrinet-Santé study (www.etudenutrinet-sante) to relate their sensory preferences with their food consumption and their health status.

