Natural history of wheezing in a cohort of children in Havana, Cuba. "HINASIC"

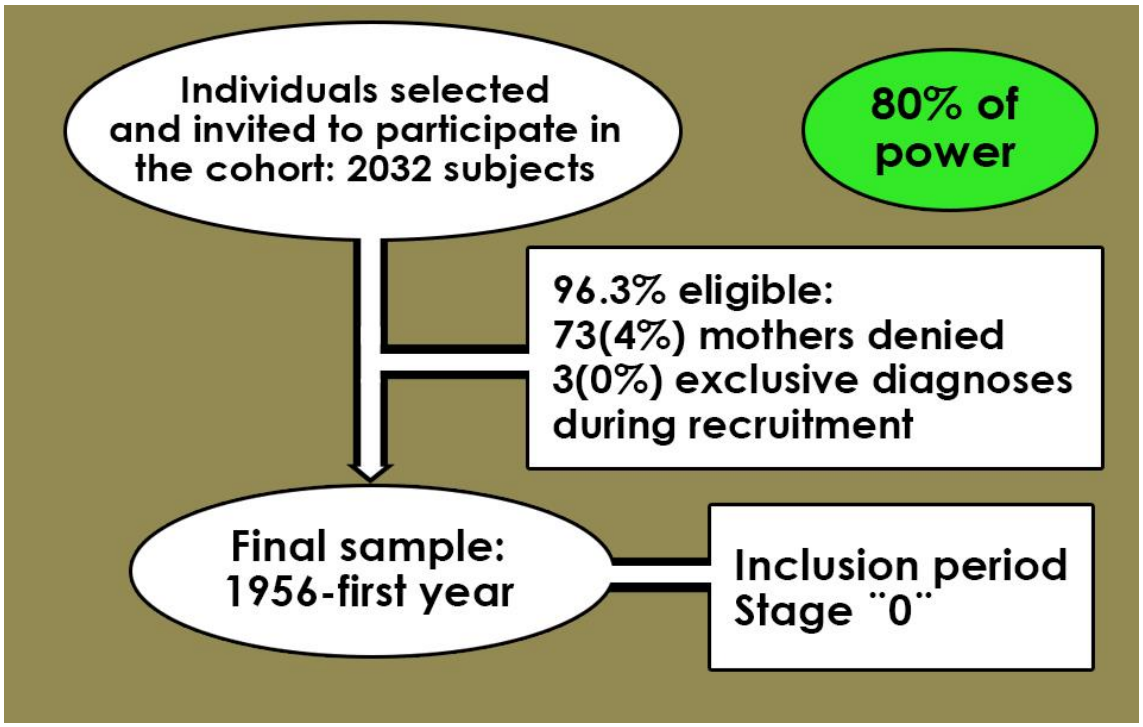
Informational Report # 8 - Nutritional status

The National Institute of Hygiene Epidemiology and Microbiology of Cuba, in collaboration with the University of Nottingham, UK, has lead the study of a cohort of children from birth in order to identify the incidence, characteristics and risk or protective factors associated to wheezing in preschool.

The first results are presented in this report.

POPULATION PARTICIPATING 2010-2011

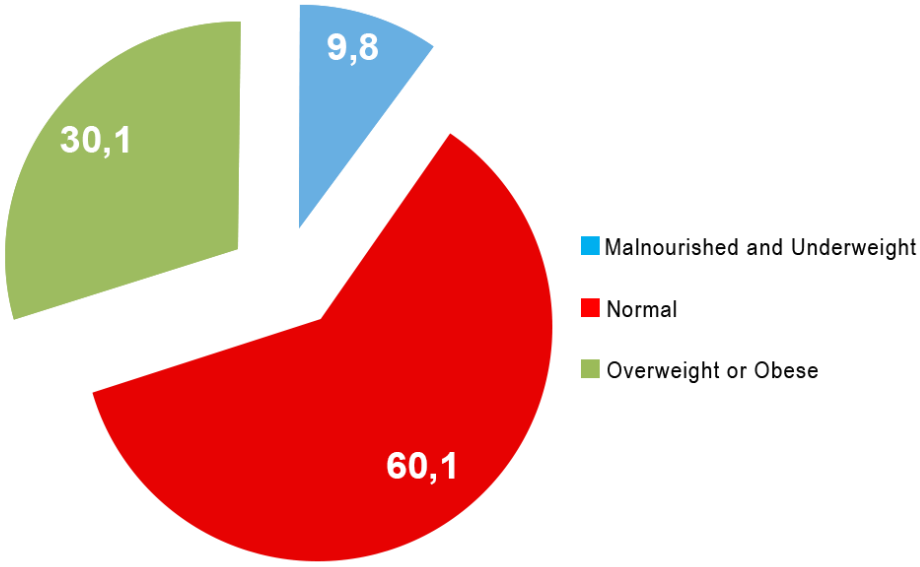
Recruitment diagram



During the period 2010-2011 was requested the agreement of parents or guardians of selected children representative of Havana, Cuba, to participate in the HINASIC study. ISAAC questionnaire was applied, with the addition of questions by interest of the researchers, were carry out laboratory tests (stool, total IgE, eosinophil full count and complete blood count with differential) and anthropometric measurements. Used the Cuban charts of weight by age to classify children as: malnourished, underweight, normal weight, overweight and obese. (Jordan J. National Research and Development Growth Cuba 1972-1974 Rev Cubana Pediatr 1977; 49 (4)).

Results (years 2010-2011)

Classification of nutritional status (%). HINASIC, 2010- 2011.



Predominance of normal weight (60.1%) in one-year-old infants. One third of the infants were classified as overweight or obese (30.1%).

Pathological nutritional status by sex. HINASIC, 2010- 2011.

Sex	Nutritional Status					
	Deficiency			Excess		
	No (%)	IC	OR	No (%)	IC	OR
Male	56 (2.9)	2.08-3.64	1.00	384 (19.6)	8.48-12.49	1.00
Female	136 (6.9)	5.47-8.44	2.91 (2.06-4.09)	205 (10.5)	17.03-22.24	0.46 (0.37-0.58)
Total	192 (9.8)	8.11-11.52	-	589 (30.1)	26.80-33.42	-

Deficiency: malnourished + under weight
Excess: overweight + obese
OR = Female vs. Male

There is an association between nutritional status and sex. From a total of 1956 one-year-old infants, 192 (9.8%) were declared with a malnourished or underweight nutritional status, female were 2.91 times more disadvantaged than males. Overweight or obese were present in 589 (30.1%) of the infants, female were protected compared to males.

Pathological nutritional status according to skin color. HINASIC, 2010-2011.

Skin color	Nutritional status					
	Deficiency			Excess		
	No (%)	IC	OR	No (%)	IC	OR
White	88 (4.5)	3.29-5.70	1.00	265 (13.6)	11.66-15.43	1.00
Mixed	70 (3.58)	2.61-4.56	0.91 (0.64-1.28)	250 (12.8)	10.30-15.26	0.89 (0.67-1.19)
Black	34 (1.74)	0.99-2.48	1.54 (0.96-2.45)	74 (3.8)	2.94-4.62	0.97 (0.70-1.33)

Deficiency: malnourished + underweight
Excess: overweight +obese

In both nutritional status (deficiency or excess) the behavior of infants with white and mixed skin color was similar compared to black skin color.

Conclusions

Regardless of the vast majority of one-year-old infants have a normal nutritional status, a considerable number of them have already qualified with some alteration, mainly overweight or obese. Sex should be taken into account in the implementation of future interventions. Further studies should be performed to identify the factors that create inequalities and to perform strategies with a scientific basis.

References

Jordán J, Bebelagua A, Rubén M, Hernández J. Investigación nacional sobre crecimiento y desarrollo, Cuba 1972-1974. Rev. Cubana Pediatr. jul.-ago. 1977;49(4): 367-90.

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