

The Existence of Double-Burden of Malnutrition in the Same Households in Eastern Indonesia: Analysis using Global vs. Alternative Asian BMI Cut-off Points



Avita A Usfar, Peter Agnew,
Kartika S Juniwaty, Fiona Howell

Secretariat of the National Team for the Acceleration of Poverty Reduction
(TNP2K), Office of the Vice President the Republic of Indonesia, Jakarta

INTRODUCTION

Double Burden of Malnutrition (DBM) → the co-existence of undernutrition and overnutrition within the same population, household or individual

Global problem

- Children U5: 27% stunted vs. 7% overweight & obese
- Adult: 10% thin vs. 34% overweight & 12% obese

Indonesia 2010

- Children U5: 36% stunted vs. 14% overnourished (WFH)
- Adult women: 12% underweight vs. 11% overweight & 16% obese

Child undernourished – mother overnourished pair Indonesia (2002-2003): 11%

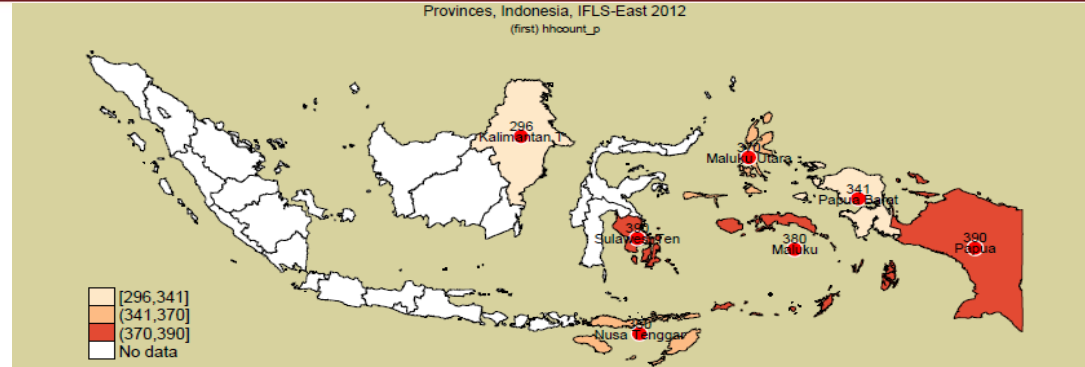
Aim of the study:

- Complement Indonesia DBM – WB assessment utilizing IFLS East data
- Review implications of Asian Cut-off for BMI in Indonesia

Courtesy Atmarita



METHODOLOGY



E Kalimantan, Maluku, N Maluku, E Nusa Tenggara, Papua, W Papua, SE Sulawesi

- Indonesian Family Life Survey (IFLS) East 2012, covering 7 provinces, 52 districts, 91 sub-districts, 99 villages, 2457 households
- Sub-set anthropometric data of 1,035 children U5 and 842 of their biological mothers from 824 households -> 842 child-mother pairs
- Analysis
 - Using BMI Global vs. alternate Asian Cut-off points; overweight 25 vs 23; obese 30 vs 27
 - Comparisons of well nourished and BMI child-mother pairs
 - Review of potential contributing factors



RESULTS

Socio-economic & demographic characteristics

- Most households in rural areas (70%)
- Most nuclear families (64%)
- 25% of the population is U5 and 48% are adult
- Mean household size 5.4 (range 2-16)
- Mean age of father 34 years, mother 30 years
- 84% of the children live with their biological parents
- 79% of mothers have only one child U5 (max 3)
- Mean years of schooling of fathers & mothers 9 years
- Most mothers work (67%)
- Mean expenditure per capita per month USD 86



RESULTS – child-mother pair

	Global cut-offs:		Asian cut-offs:
Both undernourished:	6%	➔	6%
Both well-nourished:	32%	➔	25%
DBM:	13%	➔	19%
Both overnourished:	none	➔	none

Comparison of DBM pairs using Global vs. Asian cut-offs:

- No statistical difference was found in socio-economic-demographic characteristics, nutritional status, food intake, health condition, environmental health, and access to health care
- No statistical difference was found using the 14 poverty criteria set out by BPS



RESULTS - Well-nourished vs. DBM child-mother pair

By using Asian cut-offs, more indicators are found to be significant

	Global Cut-off:	Asian Cut-off:
Statistical significant ($p < 0.01$)	none	<ul style="list-style-type: none">• Maternal short stature• Mother is not working
Statistical significant ($p < 0.05$)	Maternal short stature	<ul style="list-style-type: none">• Mother is working in informal sector• Child's birth weight• Child's dietary diversity



DISCUSSION

- Use of Asian Cut-off BMI yields many more DBM households and highlights some potential contributing factors.
- Maternal stature is positively correlated to both classification standards of DBM.
- Limitation of the data & analysis: non-representativeness, lack of information on range of NCDs, data on role of food intake is limited, poverty needs to be explored further.



POLICY IMPLICATIONS

- Raise awareness of the risks of obesity, as well as undernutrition, at all levels and stakeholders
- Investigate the potential for use of BMI as a tool for screening.
- Strengthen current MOH programs to simultaneously tackle undernutrition and overnutrition
- Target nutrition programs - women of child bearing age, pregnant women and children under two.
- Foster an environment that supports healthy eating and lifestyle Interventions - physical activity
- Tackle both supply and demand sides of the problems, nutrition education, capacity building, supply side strengthening
- Further analysis of national data of the magnitude of household and individual DBM and
- Conduct cultural research into the causes of DBM and obesity





Thank you for your kind attention

avita.usfar@tnp2k.go.id

www.tnp2k.go.id

