

Comparative Analyses of Adolescent Nutrition Indicators

Rukundo K. Benedict, PhD The DHS Program

Stakeholders Consultation on Adolescent Girls' Nutrition: Evidence, Guidance, and Gaps _{October 30–31, 2017}





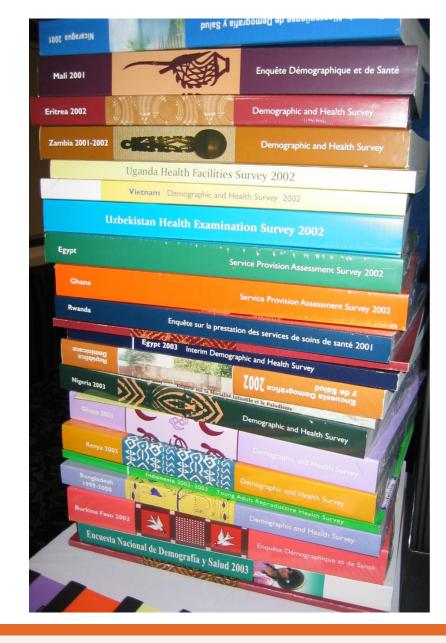




What is The DHS Program?

A 30+ year USAID-funded project that provides technical assistance to developing countries to:

- *improve* the collection, analysis and presentation of population, health, and nutrition data
- facilitate use of these data for planning, policymaking, and program management











How the nutrition portfolio fits in The DHS Program



Quality

Innovations



DHS Fellow Program – Applications Due Nov 10



NEW! CALL FOR APPLICATIONS!

The DHS Program is now accepting applications for the 2018 DHS Fellows Program for Unversity Faculty.

APPLY TODAY

2018 DHS Fellows Program University Faculty from Afghanistan, Cambodia, Ethiopia, Malawi, Myanmar, Nepal, South Africa, Timor-Leste, and Zimbabwe

Objectives

- Describe country and regional prevalence and trends of nutrition indicators in adolescent women age 15-19
 - BMI
 - Anemia
 - Women's Diet Diversity
 Score

- Examine relationships between covariates and nutrition indicators
 - Residence
 - Wealth
 - Education Level
 - Age

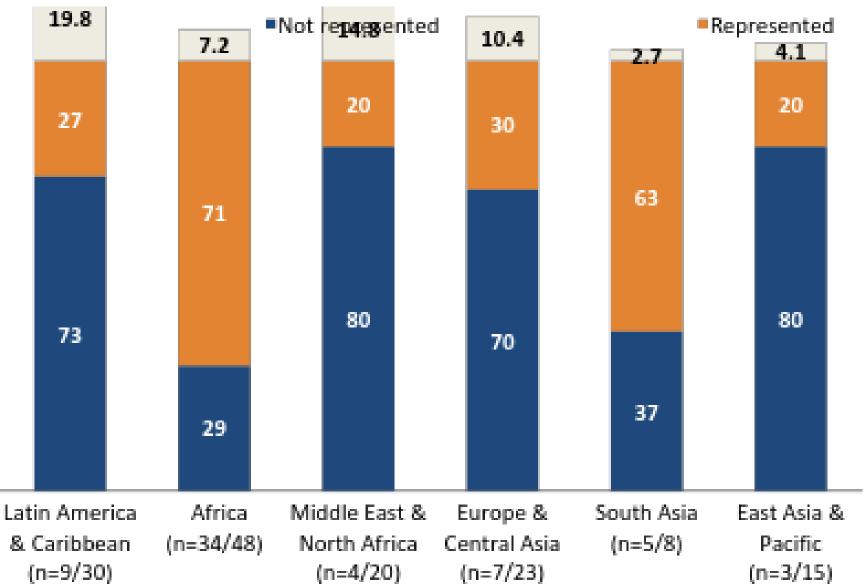




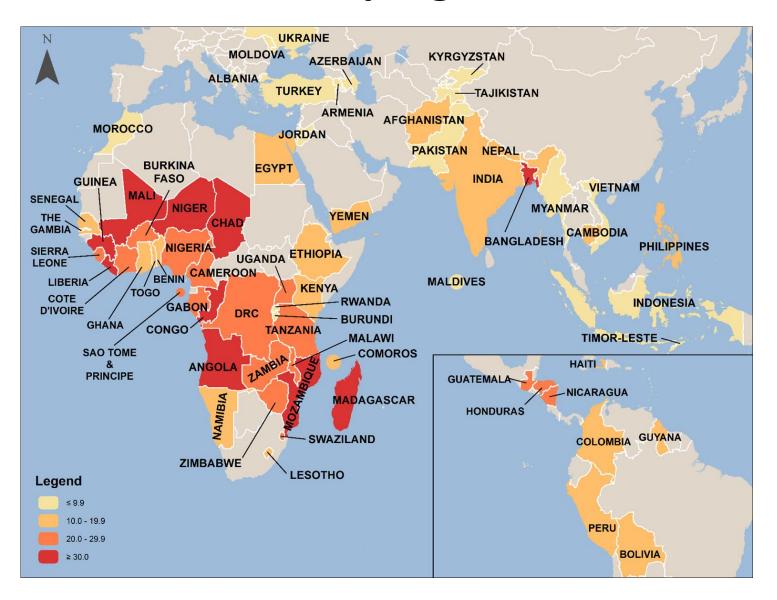




DHS survey representativeness by world region, 2000-2016



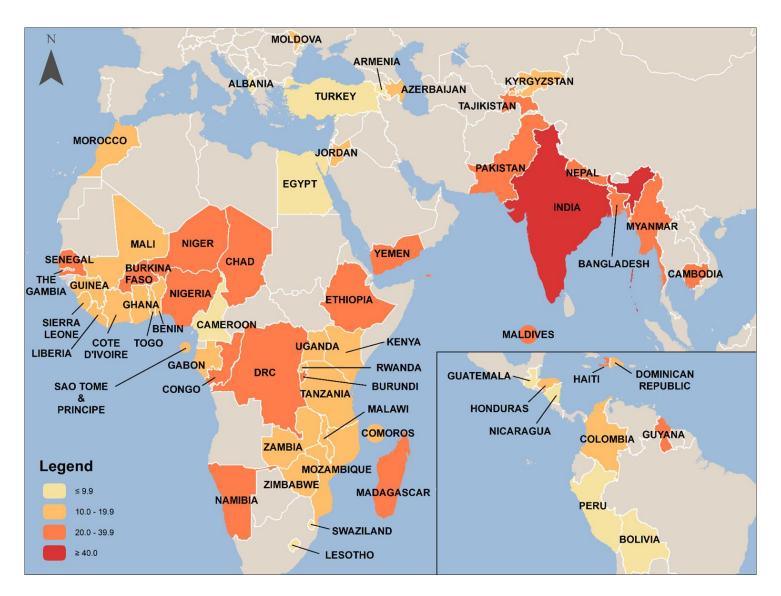
Prevalence women age 15-19 who had a child or are pregnant



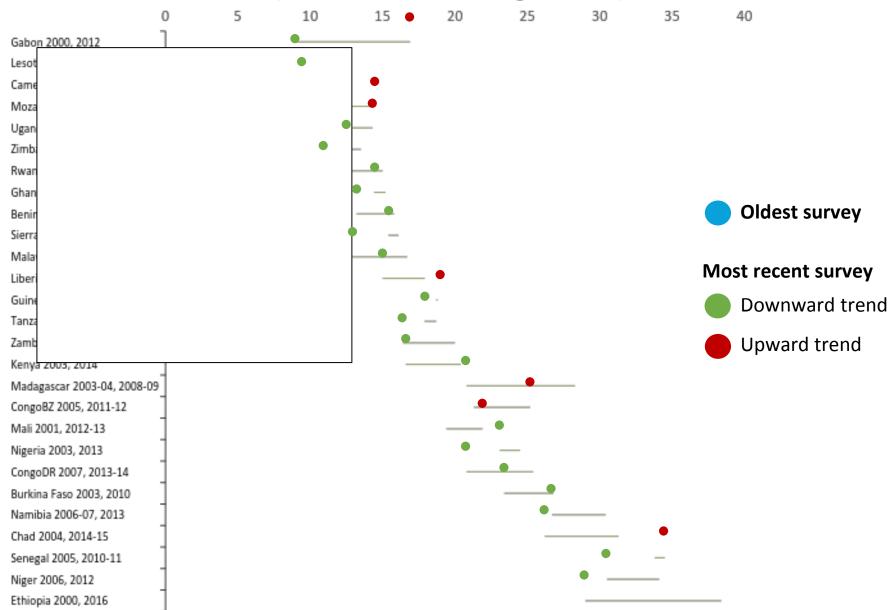
Prevalence women age 15-19 across BMI categories, World regions



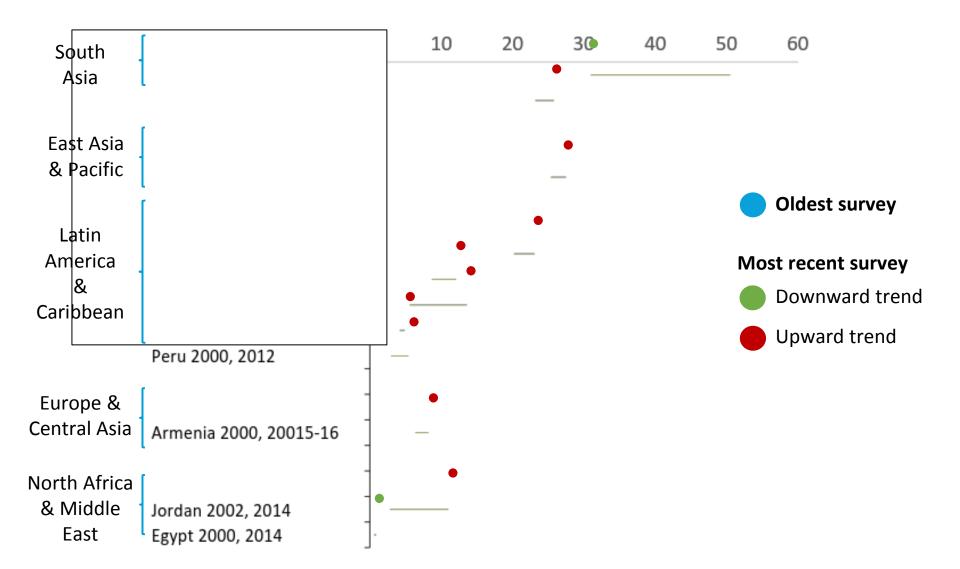
Prevalence women age 15-19 who are thin (BMI <18.5kg/m2)



Trends in prevalence women age 15-19 who are thin (BMI <18.5kg/m2), Africa

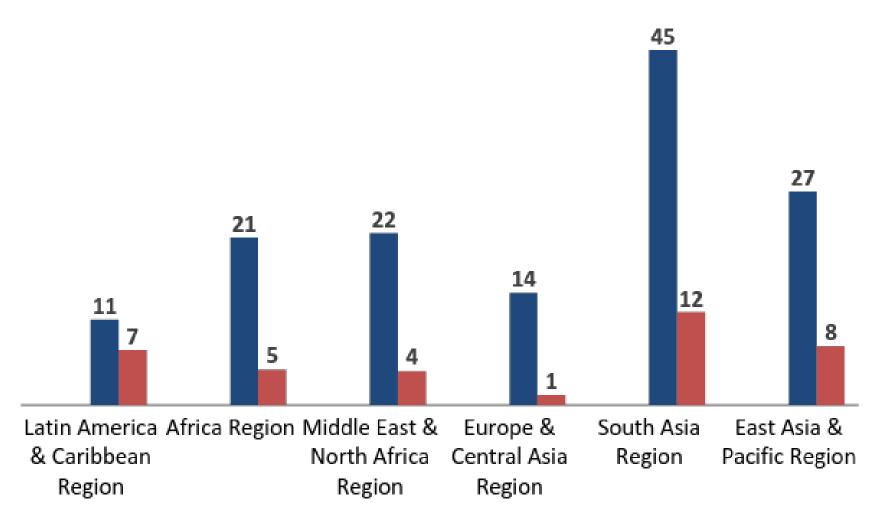


Trends in prevalence women age 15-19 who are thin (BMI <18.5kg/m2), Other regions

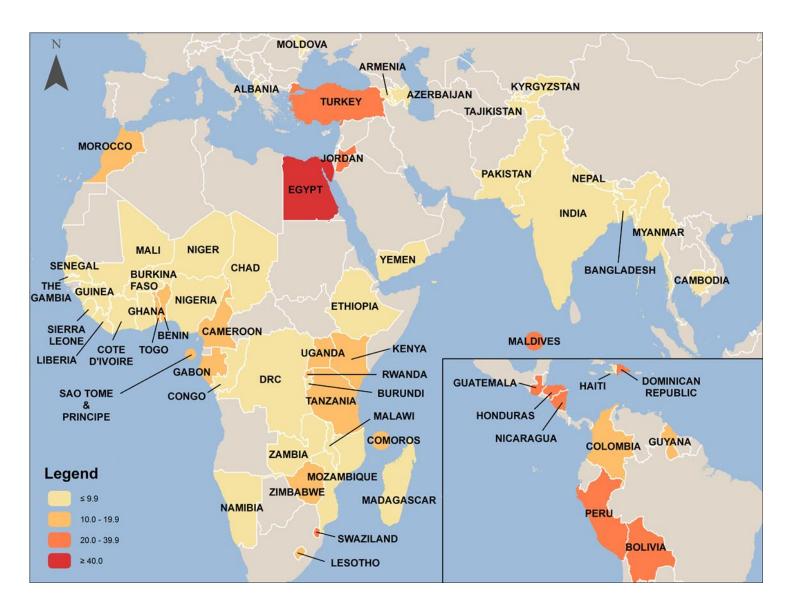


Prevalence women age 15-19 who are thin (<18.5kg/m2) and prevalence short stature(<145cm)

N =WT_N =Thin(<18.5 kg/m2) =Height (<145cm)</p>

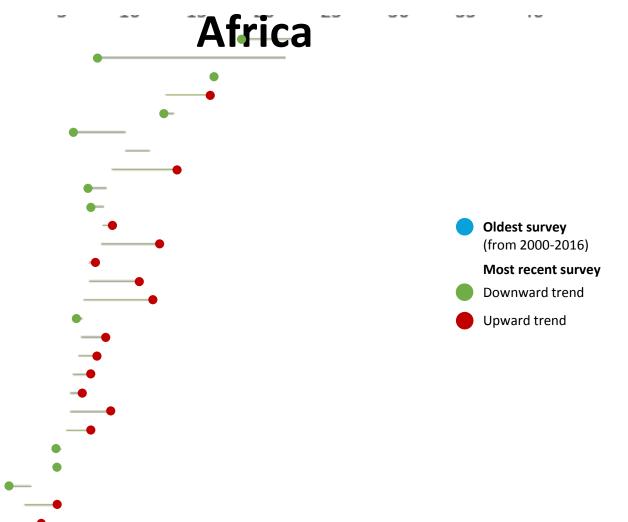


Prevalence women age 15-19 who are overweight/obese (BMI ≥25.0kg/m2)

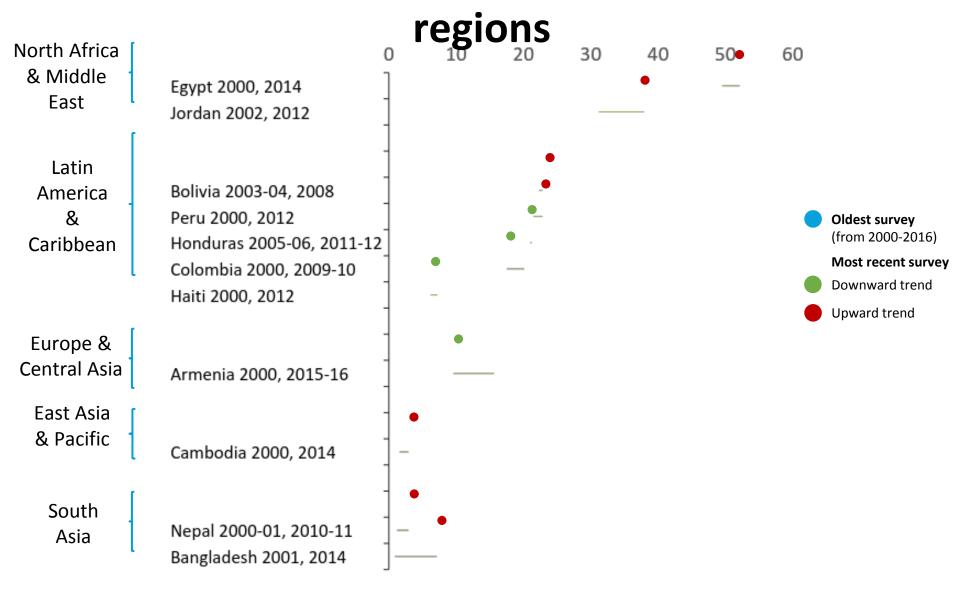


Trends in prevalence women age 15-19 who are overweight/obese (BMI ≥25.0kg/m2),

Lesotho 2004-05, 2014 Sierra Leone 2008, 2013 Cameroon 2004, 2011 Gabon 200, 2012 Zimbabwe 2010-11, 2015 CongoBZ 2005, 2011-12 Uganda 200-01, 2011 Rwanda 2000, 2014-15 Mozambique 2003-04, 2011 Liberia 2006-07, 2013 Ghana 2003, 2014 Kenya 2003, 2014 Namibia 2006-07, 2013 Tanzania 2004-05, 2015-16 Benin 2001, 2011-12 Nigeria 2003, 2013 Guinea 2005, 2012 CongoDR 2007, 2013-14 Senegal 2005, 2010-11 Mali 2001, 2012-13 Zambia 2001-02, 2013-14 Malawi 200, 2015-16 Burkina Faso 2003, 2010 Chad 2004, 2014-15 Madagascar 2003-04, 2008-09 Niger 2006, 2012 Ethiopia 2000, 2016

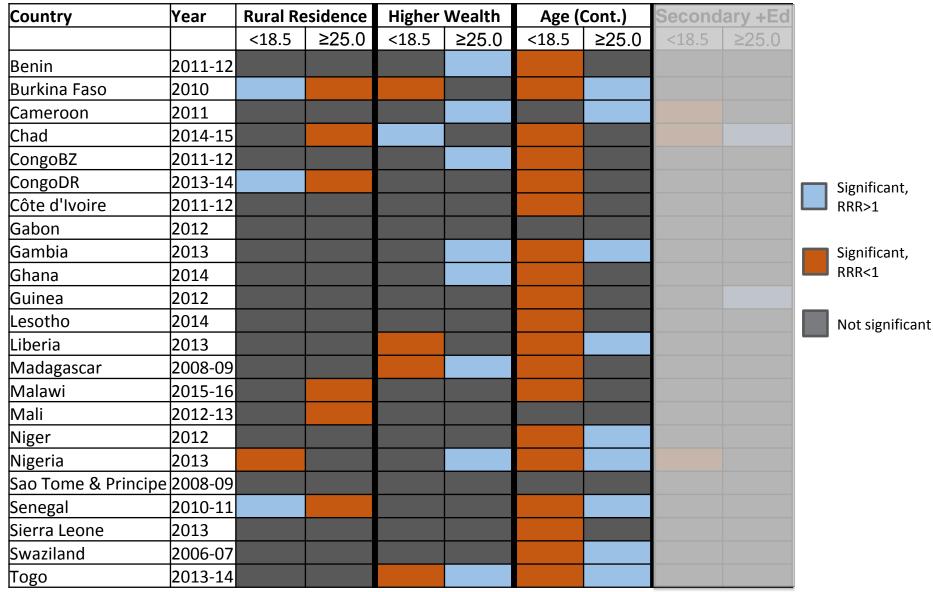


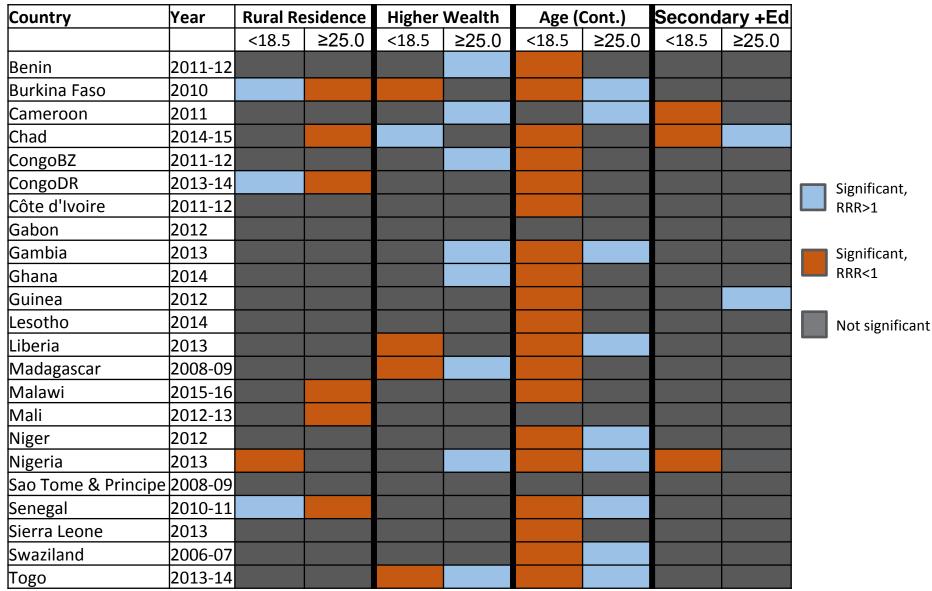
Trends in prevalence women age 15-19 who are overweight/obese (BMI ≥25.0kg/m2), Other



Country	Year	Rural Re	sidence	Higher	Wealth	Age (Cont.)	Second	ary +Ed		
		<18.5	≥25.0	<18.5	≥25.0	<18.5	≥25.0	<18.5	≥25.0		
Benin	2011-12										
Burkina Faso	2010										
Cameroon	2011										
Chad	2014-15										
CongoBZ	2011-12										
CongoDR	2013-14										Significant,
Côte d'Ivoire	2011-12										RRR>1
Gabon	2012										
Gambia	2013										Significant,
Ghana	2014										RRR<1
Guinea	2012										
Lesotho	2014										Not significant
Liberia	2013									_	
Madagascar	2008-09										
Malawi	2015-16										
Mali	2012-13										
Niger	2012										
Nigeria	2013										
Sao Tome & Principe	2008-09										
Senegal	2010-11										
Sierra Leone	2013										
Swaziland	2006-07										
Тодо	2013-14										

Country	Year	Rural Re	sidence	Higher Wealth		Age (Cont.)	Second	ary +Ed	1	
		<18.5	≥25.0	<18.5	≥25.0	<18.5	≥25.0	<18.5	≥25.0		
Benin	2011-12										
Burkina Faso	2010										
Cameroon	2011										
Chad	2014-15										
CongoBZ	2011-12										
CongoDR	2013-14										Significant,
Côte d'Ivoire	2011-12										RRR>1
Gabon	2012										
Gambia	2013										Significant,
Ghana	2014										RRR<1
Guinea	2012										
Lesotho	2014										Not significant
Liberia	2013									_	
Madagascar	2008-09										
Malawi	2015-16										
Mali	2012-13										
Niger	2012										
Nigeria	2013										
Sao Tome & Principe	2008-09										
Senegal	2010-11										
Sierra Leone	2013										
Swaziland	2006-07										
Тодо	2013-14										





Relationship of thinness and

overweight/obesity with covariates, East and

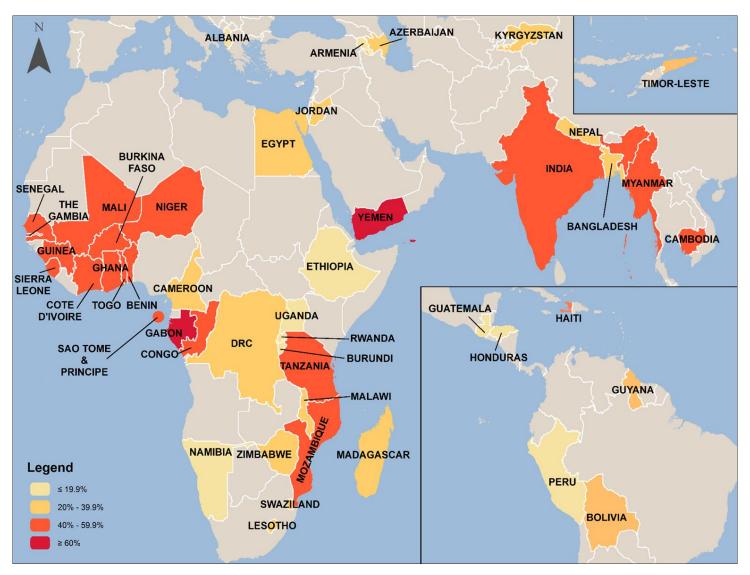


Country	Year	Rural Residence		Higher	ligher Wealth Age (Cont.)		Cont.)		ndary Ed	Significant,
		<18.5	≥25.0	<18.5	≥25.0	<18.5	≥25.0	<18.5	≥25.0	RRR>1
Bangladesh	2014									Significant,
India	2005-06									RRR<1
Maldives	2009									Not significant
Nepal	2010-11									Not significant
Pakistan	2012-13									

Relationship of thinness and overweight/obesity with covariates, Latin America & Caribbean

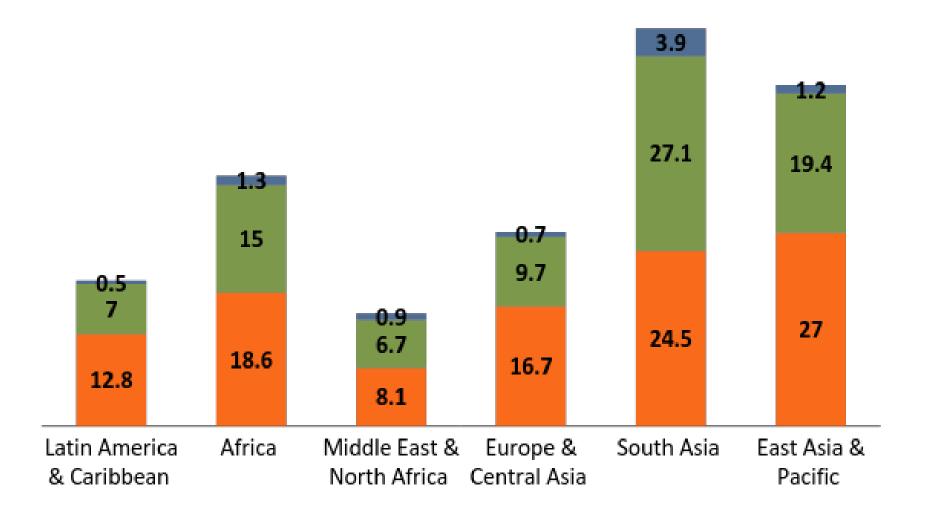
Country	Year	Rural Residence		Rural Residence Higher Wealth		Wealth	Age (Cont.)		Secondary +Ed		
		<18.5	≥25.0	<18.5	≥25.0	<18.5	≥25.0	<18.5	≥25.0		
Bolivia	2008									Significant,	
Colombia	2009-10									RRR>1	
Guatemala	2014-15									Significant,	
Guyana	2009									RRR<1	
Haiti	2012									Not significant	
Honduras	2011-12										
Peru	2012										

Prevalence women age 15-19 who are anemic (<12.0 g/dl)

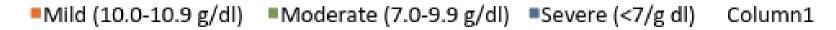


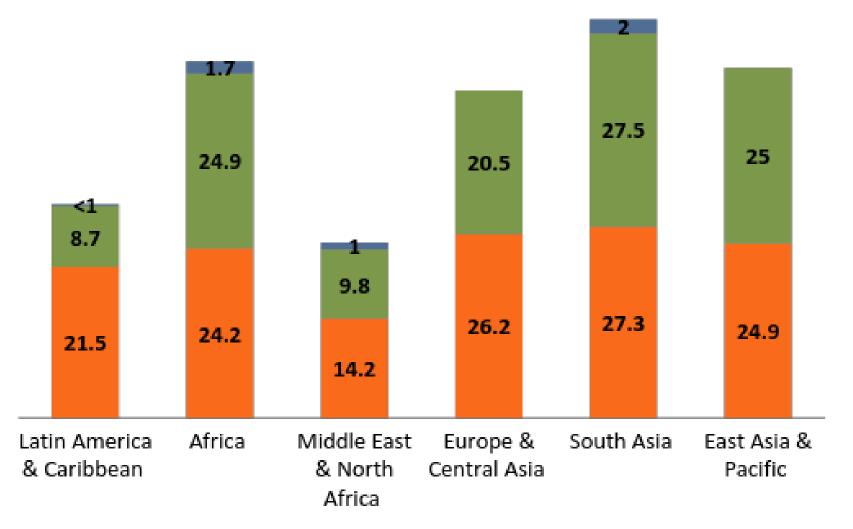
Prevalence women age 15-19 who are anemic World regions

Mild (11.0-11.9 g/dl) = Moderate (8.0-10.9 g/dl) = Severe (<8/g dl) Column1</p>



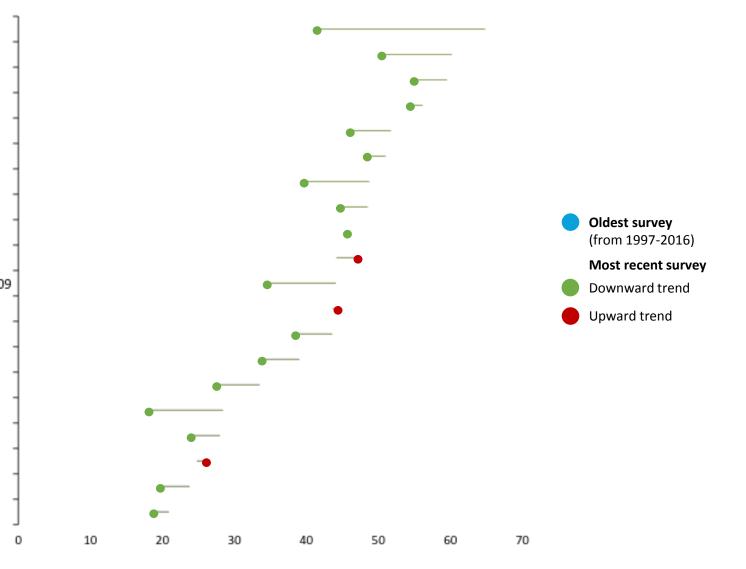
Prevalence pregnant women age 15-19 who are anemic, World regions



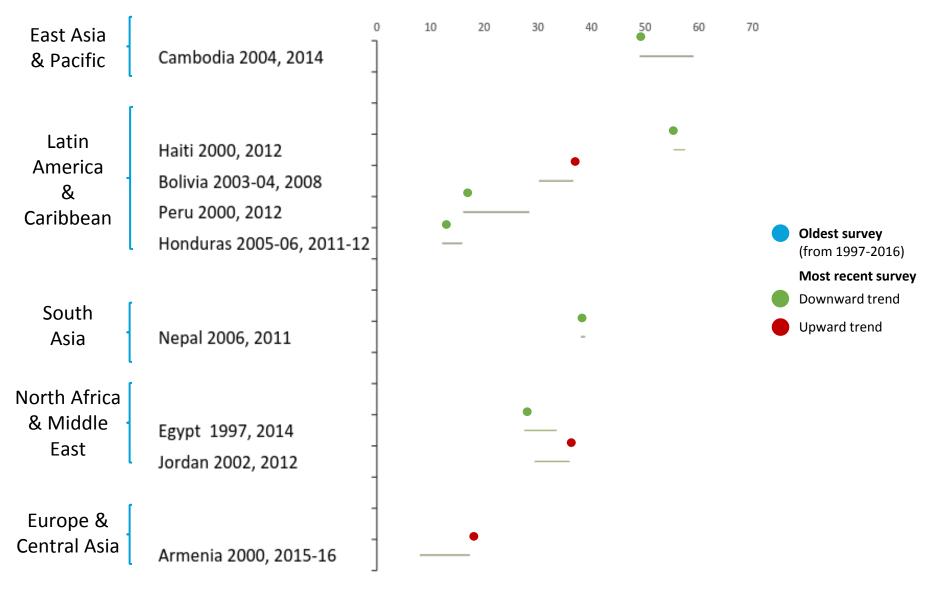


Trends in prevalence women age 15-19 who are anemic (<12.0 g/dL), Africa

Benin 2001, 2012 Mali 2001, 2012-13 Senegal 2005, 2010-11 CongoBZ 2005, 2011-12 Burkina Faso 2003, 2010 Sierra Leone 2008, 2013 CongoDR 2007, 2013-14 Guinea 2005, 2012 Tanzania 2004-05, 2015-16 Ghana 2003, 2014 Madagascar 2003-04, 2008-09 Niger 2006, 2012 Cameroon 2004, 2011 Malawi 2004-05 2015-2016 Egypt 2000, 2014 Uganda 2000-01, 2011 Lesotho 2004-05, 2014 Zimbabwe 2010-11, 2015 Ethiopia 2003, 2008 Rwanda 2005, 2014-15



Trends in prevalence women age 15-19 who are anemic (<12.0 g/dL), Other regions



Relationship of anemia with covariates, West and Central Africa

		Rural	Higher		Secondary+	
Country	Year	Residence	Wealth	Age (Cont.)	Ed	
Benin	2011-12					
Burkina Faso	2010					
Cameroon	2011					
CongoBZ	2011-12					🥅 Significant,
CongoDR	2013-14					OR>1
Côte d'Ivoire	2011-12					
Gabon	2012					Significant,
Gambia	2013					OR<1
Ghana	2014					Not significant
Guinea	2012					
Mali	2012-13					
Namibia	2013					
Niger	2012					
Sao Tome and						
Principe	2008-09					
Senegal	2010-11					
Sierra Leone	2013					
Тодо	2013-14					

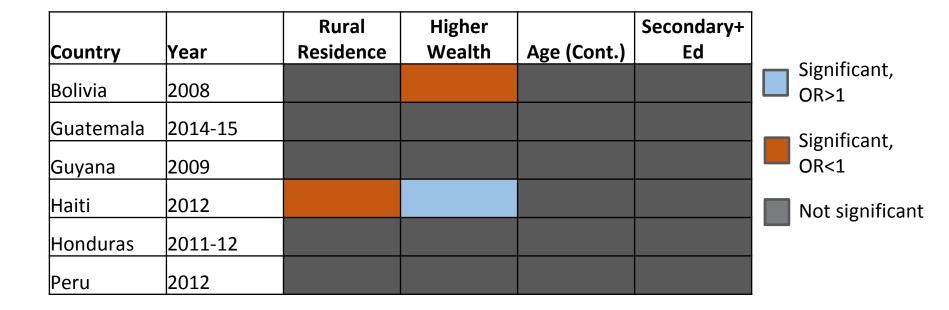
Relationship of anemia with covariates, East and Southern Africa

Country	Year	Rural Residence	Higher Wealth	Ago (Cont.)	Secondary+ Ed	
Country		Residence	Weartin	Age (Cont.)	Eu	
Burundi	2010-11					
Ethiopia	2008					
Lesotho	2014					Significant,
Madagascar	2008-09					
Malawi	2015-16					Significant,
Mozambique	2011					OR<1
Namibia	2013					
Rwanda	2014-15					Not significant
Swaziland	2006-07					
Tanzania	2015-16					
Uganda	2011					
Zimbabwe	2015					

Relationship of anemia with covariates, South Asia

Country	Year	Rural Residence	Higher Wealth	Age (Cont.)	Secondary+ Ed	Significant, OR>1
Bangladesh	2011					Significant,
India	2005-06					OR<1
Nepal	2010-11					Not significant

Relationship of anemia with covariates, Latin America & Caribbean

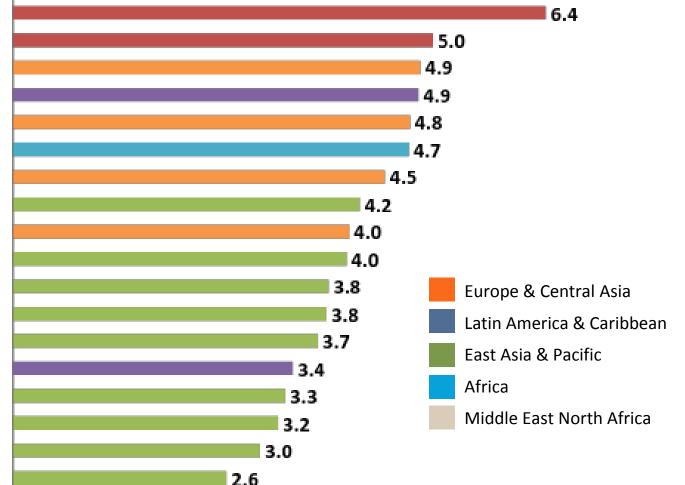


Average difference in nutrition status among women age 15-19 vs. women 20-49

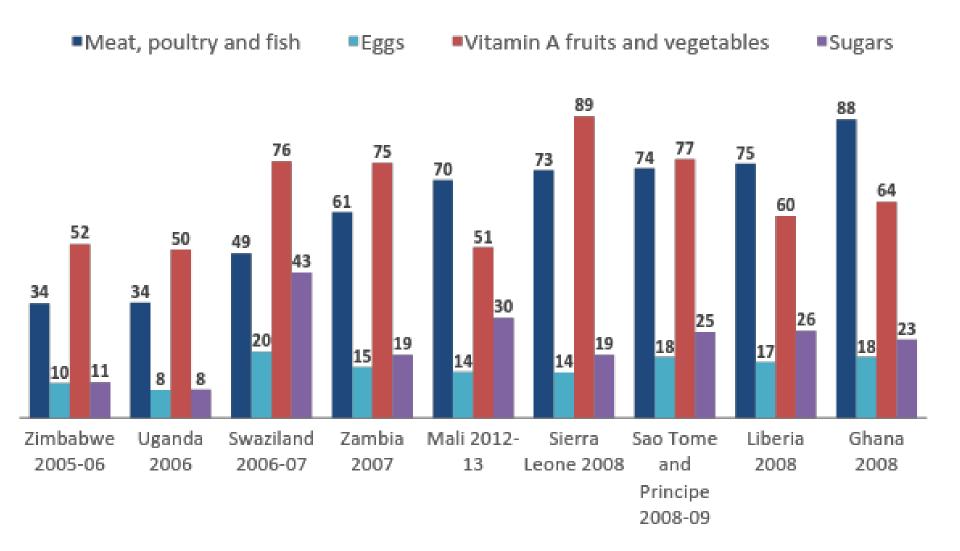
	Thin (<18.0 kg/m2)	Overweight or obese (≥25.0 kg/m2)	Anemia (<12 g/dL)
Latin America & Caribbean	4.5	-22.4	-0.4
Africa	1.8	-12.1	0.4
Middle East & North Africa	3.7	-21.3	-1.9
Europe & Central Asia	4.8	-28.6	-1.7
South Asia	7.1	-12.7	0.6
East Asia & Pacific	8.3	-11.3	2.4

Mean Women Dietary Diversity Score among women age 15-19

Albania 2008-09 Azerbaijan 2006 Bolivia 2008 Philippines 2008 Guyana 2009 Egypt 2008 Dominican Republic 2007 Sierra Leone 2008 Honduras 2005-06 Ghana 2008 Swaziland 2006-07 Mali 2012-13 Sao Tome and Principe 2008-09Timor-Leste 2009-10 Liberia 2006-07 Zambia 2007 Uganda 2006 Zimbabwe 2005-06



Prevalence of women age 15-19 who consumed select food groups, Africa



Prevalence of women age 15-19 who consumed select food groups, Latin America & Caribbean

Vitamin A fruits and vegetables

Sugars

Eggs

Meat, poultry and fish

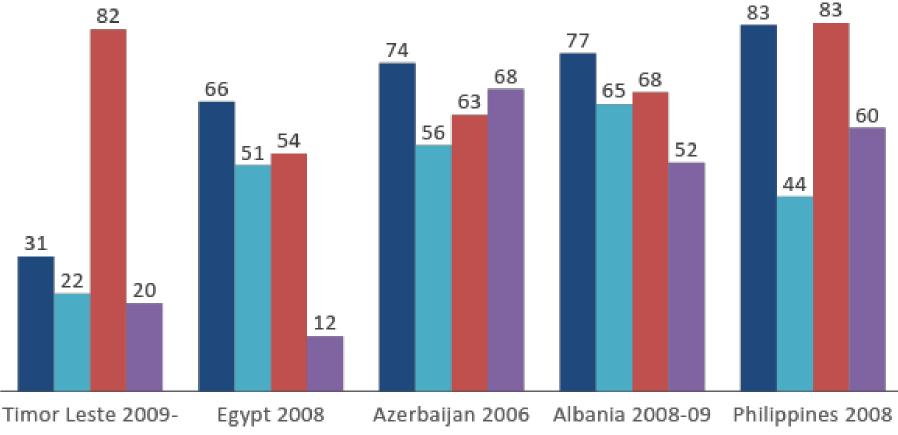
Honduras 2008 Dominican Republic Guyana 2008 Bolivia 2008

Prevalence of women age 15-19 who consumed select food groups, Other regions

Meat, poultry and fish

Eggs Vitamin A fruits and vegetables

Sugars





THANK YOU! For more information, please contact: Rukundo.Benedict@icf.com









ADDITIONAL SLIDES







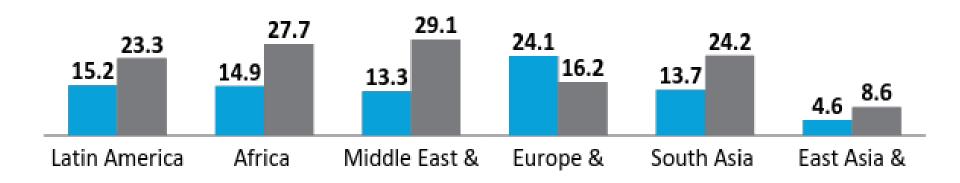


Percent difference in consumption among women age 15-19 vs. women 20-49

Кеу				
- < -5% - - -5 to < -10%	 > -10%		+ < +5 % ++ +5 to < +10)% +++
>+10%	Meat, poultry, and fish	Vitamin A fruits and Eggs vegetables Sugars		
Albania 2008-09		_	+	
Azerbaijan 2006	-	++	+++	
Bolivia 2008	+	+	+	+
Dominican Republic 2007	+	-	++	-
Egypt 2008	-	+	+	+
Ghana 2008	+	_	+	++
Guyana 2008	+		++	_
Honduras 2008	+	-	++	-
Liberia 2008	-	-	+	+
Mali 2012-13	-	+	+	++
Philippines 2008	-	+	+	-
Sao Tome and Principe 2008-09			+	
Sierra Leone 2008	-	+	+	-
Swaziland 2006-07	+		+	+
Timor Leste 2009-10		_	++	
Uganda 2006	++	++	+	+
Zambia 2007	-	+	++	+
Zimbabwe 2005-06	-	-	+	_

Adolescent Childbearing by Residence

Percent of women age 15-19 who have had a child or are currently pregnant











Adolescent Childbearing by Education

Percent of women age 15-19 who have had a child or are currently pregnant

No education/Primary Secondary+











Adolescent Childbearing by wealth

Percent of women age 15-19 who have had a child or are currently pregnant





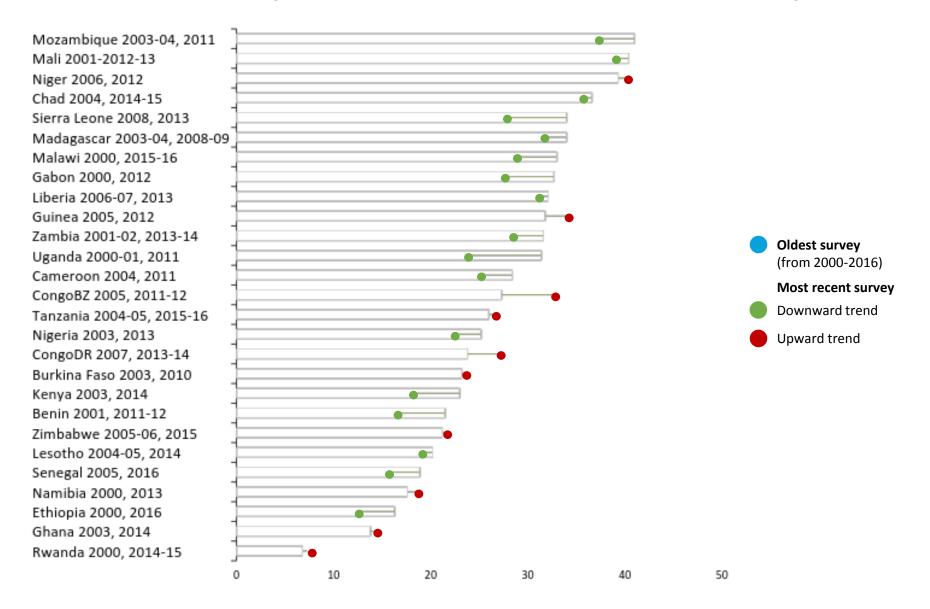






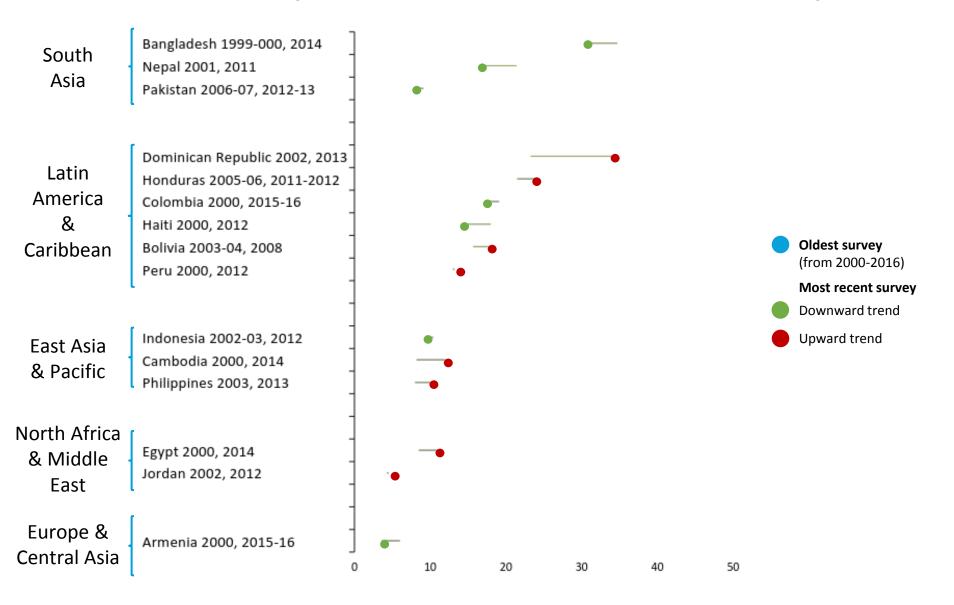
Trends in Adolescent Childbearing, Africa

Percent of women age 15-19 who have had a child or are currently pregnant



Trends in Adolescent Childbearing, Other

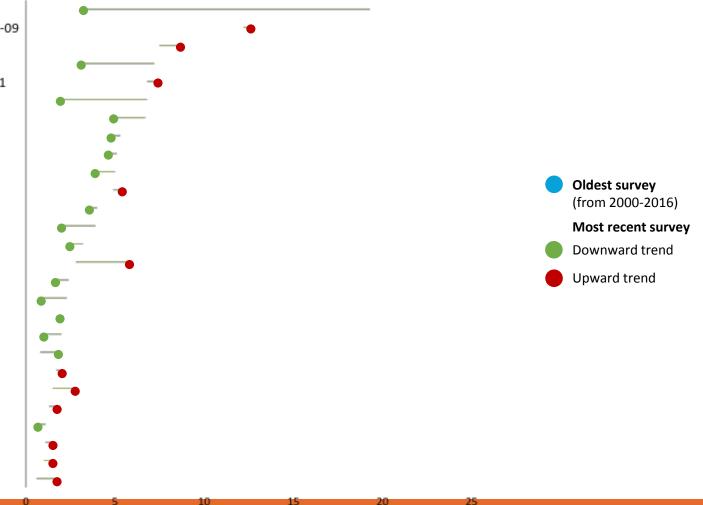
Percent of women age 15-19 who have had a child or are currently pregnant



Trends in Short Stature in Adolescents, Africa

Height <145 cm

Sierra Leone 2008, 2013 Madagascar 2003-04, 2008-09 CongoDR 2007, 2013-14 Ethiopia 2000, 2016 Mozambique 2003-04, 2011 CongoBZ 2005, 2011-12 Rwanda 2000, 2014-15 Tanzania 2004-05, 2015-16 Malawi 2000, 2015-16 Liberia 2006-07, 2013 Nigeria 2003, 2013 Zambia 2001-02, 2013-14 Uganda 2000-01-2011 Lesotho 2004-05, 2014 Benin 2001, 2011-12 Gabon 2000, 2012 Mali 2001-2012-13 Kenya 2003, 2014 Ghana 2003, 2014 Namibia 2006-07, 2013 Guinea 2005, 2012 Niger 2006, 2012 Zimbabwe 2010-11, 2015 Senegal 2005, 2010-11 Cameroon 2004, 2011 Burkina Faso 2003, 2010 Chad 2004, 2014-15





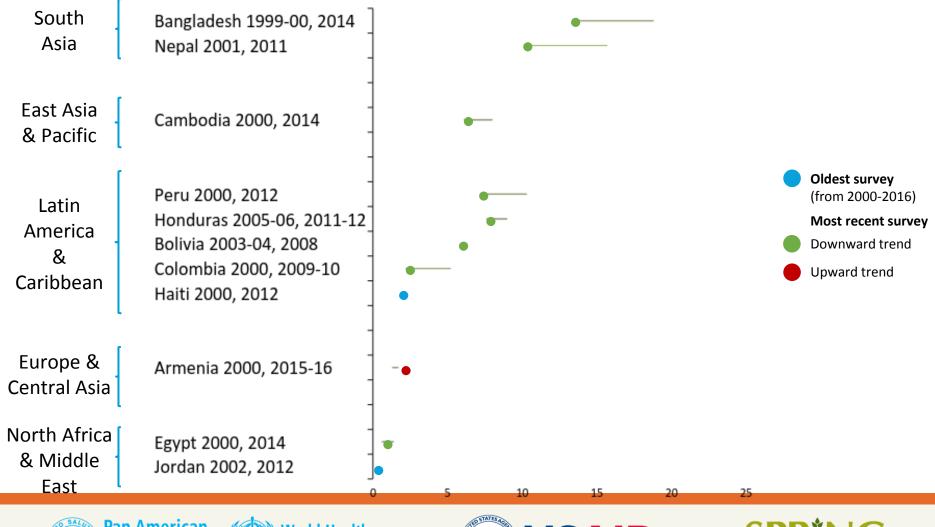






Trends in Short Stature in Adolescents, Other Regions

Height <145 cm





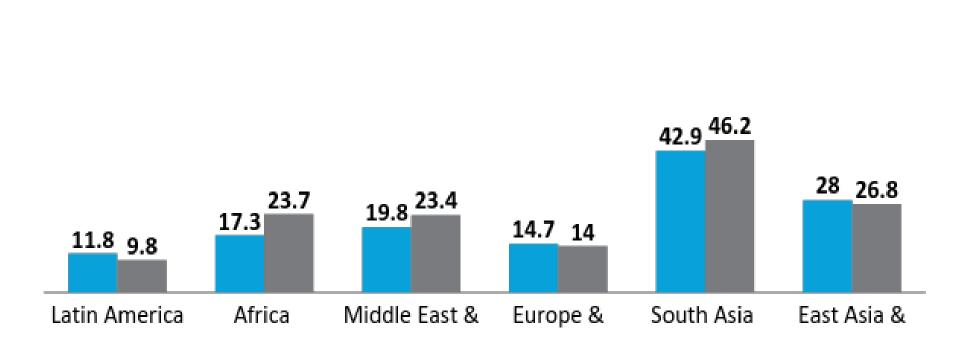






Thinness among Adolescents by Residence

Percent of women age 15-19 who are thin (BMI <18.5 kg/m2)





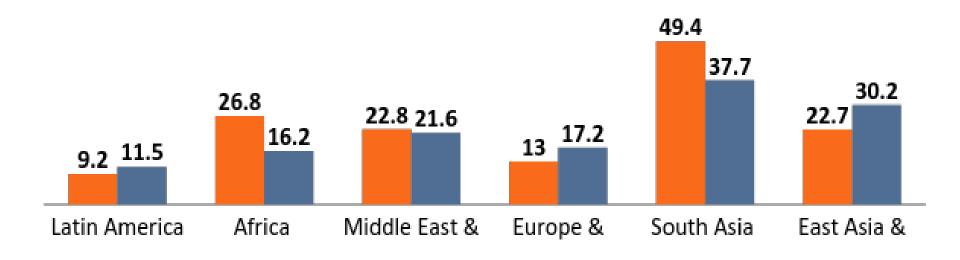






Thinness among Adolescents by Wealth

Percent of women age 15-19 who are thin (BMI <18.5 kg/m2)







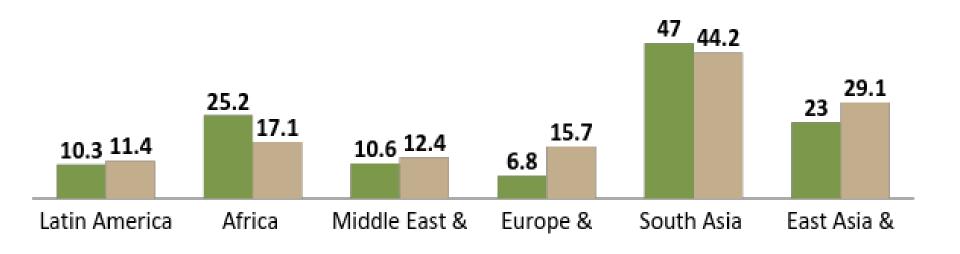




Thinness among Adolescents by Education

Percent of women age 15-19 who are thin (BMI <18.5 kg/m2)

No education/primary Secondary+











Short Stature among Adolescents by Residence

Percent of women age 15-19 with height <145 cm







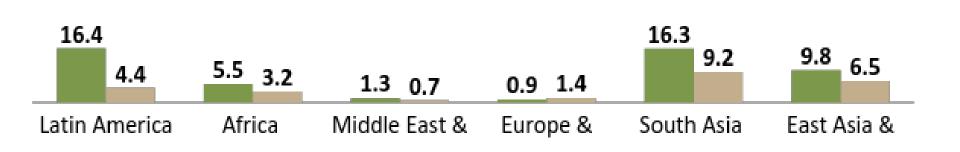




Short Stature among Adolescents by Education

Percent of women age 15-19 with height <145 cm

No education/primary =Secondary+











Short Stature among Adolescents by Wealth

Percent of women age 15-19 with height <145 cm





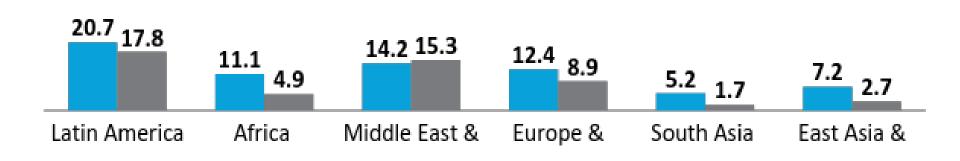






Overweight/Obesity among Adolescents by Residence

Percent of women age 15-19 who are overweight/obese (BMI ≥25.0 kg/m2)







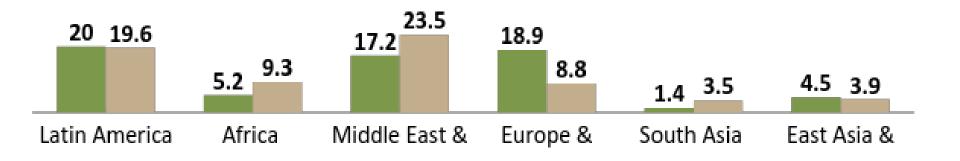




Overweight/Obesity among Adolescents by Education

Percent of women age 15-19 who are overweight/obese (BMI ≥25.0kg/m2)

No education/primary Secondary+











Overweight/Obesity among Adolescents by Wealth

Percent of women age 15-19 who are overweight/obese (BMI ≥25.0kg/m2)





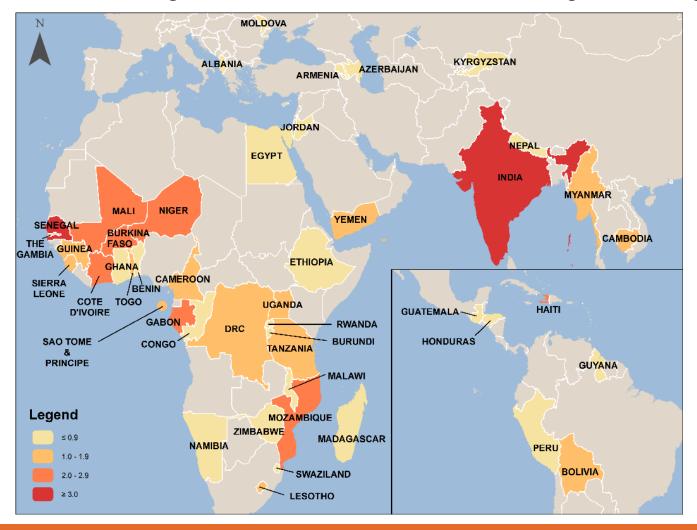






Prevalence of Severe Anemia in Adolescents

Percent of women age 15-19 with severe anemia (NP <8.0 g/dl; P <7.0 g/dl)





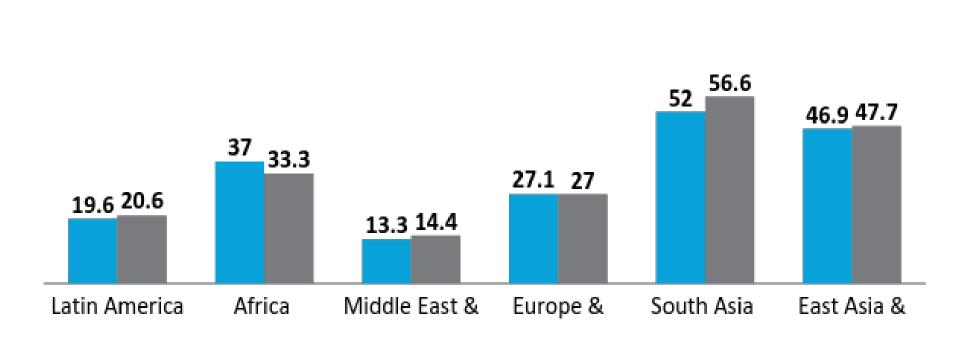






Anemia among Adolescents by Residence

Percent of non-pregnant women age 15-19 with any anemia (<12.0 g/dl)







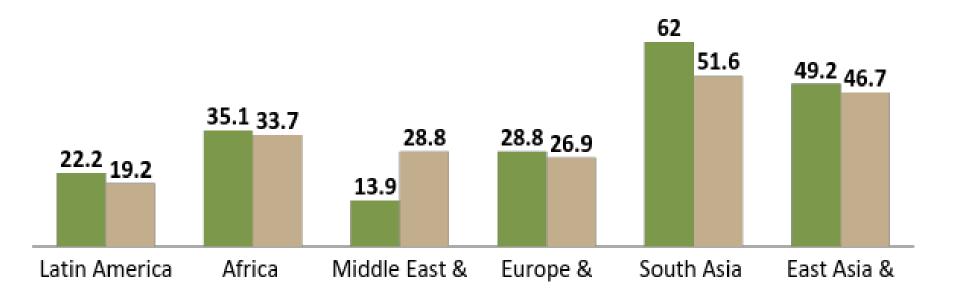




Anemia among Adolescents by Education

Percent of non-pregnant women age 15-19 with any anemia (<12.0 g/dl)

No education/Primary =Secondary+





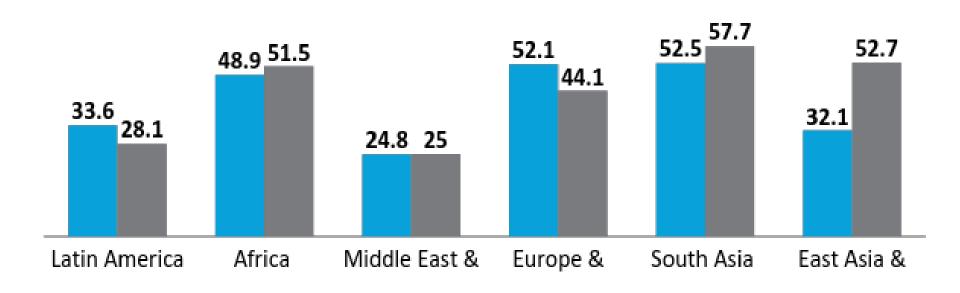






Anemia among Pregnant Adolescents by Residence

Percent of pregnant women age 15-19 with any anemia (<11.0 g/dl)







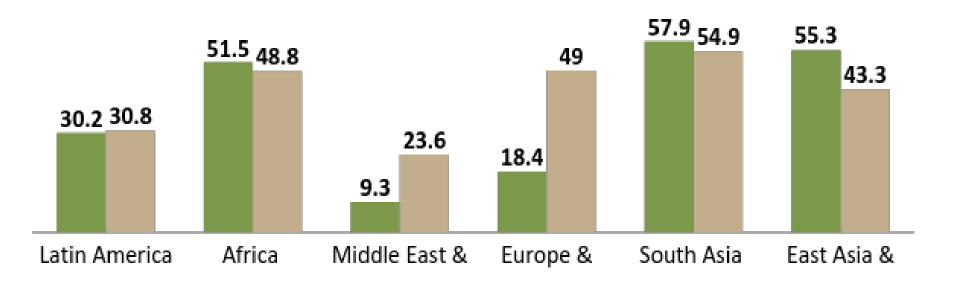




Anemia among Pregnant Adolescents by Education

Percent of pregnant women age 15-19 with any anemia (<11.0 g/dl)

No education/Primary Secondary+





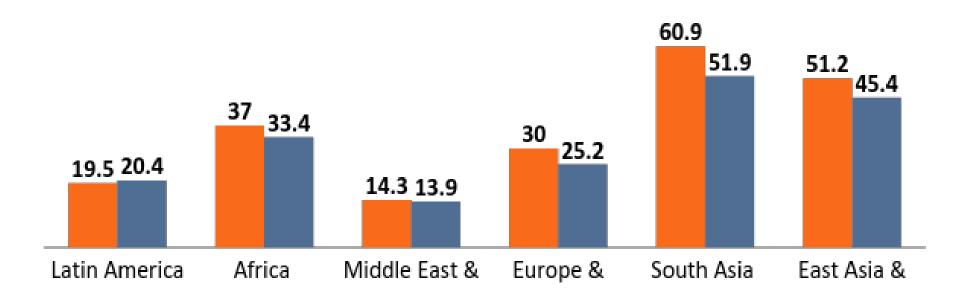






Anemia among Adolescents by Wealth

Percent of non-pregnant women age 15-19 with any anemia (<12.0 g/dl)











Anemia among Pregnant Adolescents by Wealth

Percent of pregnant women age 15-19 with any anemia (<11.0 g/dl)









