

BANGLADESH

Last Updated: 2007-03-02

Level	Date	Region and sample descriptor	Sex	Age (years)	Sample size	Haemoglobin (g/L)						Mean	SD	Method	Reference	Notes	
						Proportion (%) of population with haemoglobin below:										General	Line
						70	100	110	115	120	130						
L	2004 -2005	113 upazilas: PW: Total	F	NS	254			44.9				112	14	B	5454	*	1
		113 upazilas: Adolescents: Total	F	13.00- 19.99	354							126	14			2	
		PW by project: NNP	F	NS	107			51.4				110	15			3	
		PW by project: BINP	F	NS	122			36.1				113	14			4	
		PW by project: NNP comparison	F	NS	25			60.0				108	12			5	
		Adolescents by project: NNP	F	13.00- 19.99	124							125	14			6	
		Adolescents by project: BINP	F	13.00- 19.99	190							127	14			7	
		Adolescents by project: NNP comparison	F	13.00- 19.99	40							128	14			8	
NR	2004	National: NPW: Total	F	NS	1388					46.0			B	5540	*		
		National: PW	F	NS	102			39.0									
		National: PreSAC: Total	B	0.50- 4.99	1227	3.0		68.0				102			15.7		
		NPW by physiological status: NPNLW	F	NS	385					41.2							
		NPW by physiological status: LW	F	NS	1003					47.8							
		PreSAC by sex	F	0.50- 4.99	586			71.7									
		PreSAC by sex	M	0.50- 4.99	641			64.2									
		PreSAC by age	B	0.50- 0.99	NS	3.9		92.0									
		PreSAC by age	B	1.00- 1.99	NS	5.7		85.0									
		PreSAC by age	B	0.50- 1.99	NS			87.0									
		PreSAC by age	B	2.00- 4.99	NS			58.0									
		PreSAC by sex and age	F	0.50- 0.99	NS			89.2									
		PreSAC by sex and age	M	0.50- 0.99	NS			93.5									
		PreSAC by sex and age	F	1.00- 1.99	NS			84.7									
		PreSAC by sex and age	M	1.00- 1.99	NS			85.3									
		PreSAC by sex and age	F	2.00- 2.99	NS			75.0									
		PreSAC by sex and age	M	2.00- 2.99	NS			54.8									
		PreSAC by sex and age	F	3.00- 3.99	NS			58.1									
		PreSAC by sex and age	M	3.00- 3.99	NS			56.3									
		PreSAC by sex and age	F	4.00- 4.99	NS			54.4									
		PreSAC by sex and age	M	4.00- 4.99	NS			40.4									
		PreSAC by sex and age	F	0.50- 1.99	NS			86.1									
		PreSAC by sex and age	M	0.50- 1.99	NS			87.6									
PreSAC by sex and age	F	2.00- 4.99	NS			64.2											
PreSAC by sex and age	M	2.00- 4.99	NS			51.9											
NR	2001	Women: Total	F	16.00- 45.99	1199								B	3256	*	9	

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						Proportion (%) of population with haemoglobin below:										General	Line	
						70	100	110	115	120	130							
NR	2001	Pre-SAC: Total	B	0.50- 4.99	1148			47.0						B	3256			
		SAC: Total	B	5.00- 14.99	2146												10	
		Adolescents: Total	B	15.00- 19.99	189												11	
		Women by physiological status: NPNLW	F	16.00- 45.99	275					29.0								
		Women by physiological status: PW	F	16.00- 45.99	108			47.0										
		Women by physiological status: LW	F	16.00- 45.99	816					35.0								
		Pre-SAC by sex	F	0.50- 4.99	501			48.0										
		Pre-SAC by sex	M	0.50- 4.99	647			46.0										
		Pre-SAC by age	B	0.50- 0.99	116			74.0										
		Pre-SAC by age	B	1.00- 1.99	253			55.0										
		Pre-SAC by age	B	2.00- 2.99	265			44.0										
		Pre-SAC by age	B	3.00- 3.99	258			40.0										
		Pre-SAC by age	B	4.00- 4.99	256			37.0										
		Pre-SAC by sex and age	F	0.50- 0.99	57			66.0										
		Pre-SAC by sex and age	M	0.50- 0.99	59			81.0										
		Pre-SAC by sex and age	F	1.00- 1.99	125			53.0										
		Pre-SAC by sex and age	M	1.00- 1.99	128			58.0										
		Pre-SAC by sex and age	F	2.00- 2.99	103			44.0										
		Pre-SAC by sex and age	M	2.00- 2.99	162			44.0										
		Pre-SAC by sex and age	F	3.00- 3.99	101			46.0										
		Pre-SAC by sex and age	M	3.00- 3.99	157			35.0										
		Pre-SAC by sex and age	F	4.00- 4.99	115			38.0										
		Pre-SAC by sex and age	M	4.00- 4.99	141			36.0										
		SAC by sex	F	5.00- 14.99	1140													12
		SAC by sex	M	5.00- 14.99	1006													13
		SAC by age	B	5.00- 11.99	1734				34.0									
		SAC by age	B	12.00- 14.99	412					35.0								
		SAC by sex and age	F	5.00- 11.99	911					33.0								
		SAC by sex and age	M	5.00- 11.99	823					35.0								
		SAC by sex and age	F	12.00- 14.99	229						36.0							
SAC by sex and age	M	12.00- 14.99	183						34.0									
Adolescents by sex	F	15.00- 19.99	104						30.0									
Adolescents by sex	M	15.00- 19.99	85							29.0								
LU	1999	3 Urban cities: Children: Total	B	0.50- 4.99	1354			75.8					B	3257	*			
		3 Urban cities: Children by age	B	0.50- 0.99	183			92.3										

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						Proportion (%) of population with haemoglobin below:										General	Line		
						70	100	110	115	120	130								
LU	1999	3 Urban cities: Children by age	B	1.00- 1.99	314			87.6					B	3257					
		3 Urban cities: Children by age	B	2.00- 2.99	319			74.3											
		3 Urban cities: Children by age	B	3.00- 3.99	253			69.4											
		3 Urban cities: Children by age	B	4.00- 4.99	285			63.2											
		3 Urban cities: Children by city: Dhaka (ward 60)	B	0.50- 4.99	314			73.6											
		3 Urban cities: Children by city: Dhaka (ward 62)	B	0.50- 4.99	351			67.8											
		3 Urban cities: Children by city: Khulna	B	0.50- 4.99	353			90.4											
		3 Urban cities: Children by city: Chittagong	B	0.50- 4.99	336			71.3											
L	1998	Northwestern Bangladesh: SAC	B	NS	164				31.7		118		B	2010	*				
L	1998	Dhaka: PW	F	20.00- 30.99	383			39.7			113	11	A	4602	*	14			
NR	1997	NPW: Total	F	NS	1082	0.9				45.0		120	15	B	2778	*	15		
		PW	F	NS	120	0.0		49.2				109	15					16	
		Pre-SAC: Total	B	0.50- 4.99	1199			47.0				109						17	
		SAC	B	6.00- 11.99	328				38.4										
		Adolescent girls	F	11.00- 16.99	196				28.5	43.0									
		NPW by physiological status: LW	F	NS	694					48.7		119	15						18
		NPW by physiological status: NPNLW	F	NS	388					38.9		122	14						19
		Pre-SAC by age	B	0.50- 0.99	54				75.9										
		Pre-SAC by age	B	1.00- 1.99	180				63.9										
		Pre-SAC by age	B	2.00- 2.99	247				47.0										
		Pre-SAC by age	B	3.00- 3.99	328				46.3										
		Pre-SAC by age	B	4.00- 4.99	390				35.6										
		Pre-SAC by subdistrict: Bhaluka	B	0.50- 4.99	117				34.2										
		Pre-SAC by subdistrict: Kaliorkor	B	0.50- 4.99	120				39.2										
		Pre-SAC by subdistrict: Goshairat	B	0.50- 4.99	110				58.2										
		Pre-SAC by subdistrict: Chandiasih	B	0.50- 4.99	129				32.6										
		Pre-SAC by subdistrict: Lakismpur Sadar	B	0.50- 4.99	129				65.6										
Pre-SAC by subdistrict: Chunarghat	B	0.50- 4.99	125				42.2												
Pre-SAC by subdistrict: Saghatta	B	0.50- 4.99	115				54.8												
Pre-SAC by subdistrict: Bera	B	0.50- 4.99	116				61.2												
Pre-SAC by subdistrict: Narail Sadar	B	0.50- 4.99	120				48.3												
Pre-SAC by subdistrict: Chitilmari	B	0.50- 4.99	119				34.5												

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						Proportion (%) of population with haemoglobin below:										General	Line	
						70	100	110	115	120	130							
DR	1997	Mymensingh than: PW	F	NS	140			45.7				111	13	B	3529	*	20	
L	1996 -1997	Rupganj Thana: Adolescents: Total	B	10.00- 17.99	861									A	1740	*	21	
		Rupganj Thana: Adolescents by sex	F	10.00- 17.99	NS													22
		Rupganj Thana: Adolescents by sex	M	10.00- 17.99	NS													23
LU	1996 -1997	Dhaka: PW	F	NS	475			39.8						D	3983	*	24	
D	1996 -1997	Jessore, Sataria and Mymensingh: Women	F	15.00- 49.99	514							117	14	B	4361	*	25	
		Jessore, Sataria and Mymensingh: Women	F	15.00- 49.99	514								119	15				26
		Jessore, Sataria and Mymensingh: Women	F	15.00- 49.99	514								115	14				27
DR	1996	Mymensingh District: Fulbaria thana Sub-District: N	F	15.00- 45.99	179	1.0				73.0		112	18	A	366	*	28	
D	1996	Dhaka District: 5 peri-urban sub-districts: SAC	F	11.00- 16.99	526	0.0				27.0		126	12	A	3794	*	29	
L	1995	Dinajpur slums: NPW	F	15.00- 45.99	328	11.3				98.2		88	16	A	2256			
DU	1995	Dinajpur District: NPW	F	15.00- 45.99	328					98.2				A	3873	*	30	
L	1994 -1995	Matlab: Women	F	NS	218					23.0		129		B	1691	*		
L	1993 -1994	Dhaka: PW at delivery	F	20.00- 30.99	151			20.0				123		A	2333	*		
LU	1992	Dhaka: Adolescent school girls	F	12.00- 15.99	225					22.0		128	16	A	3874	*	31	
L	1977 P	Dhaka: PW	F	20.00- 30.99	130			46.1				109	1	D	2258	*	32	
NR	1975 -1976	NPNLW	F	15.00-NS	437					70.0		111		A	5178	*		
		Men	M	15.00-NS	590							124						
		Children	B	0.00- 4.99	144			82.0				97						
		SAC by sex	F	5.00- 14.99	384							111						33
		SAC by sex	M	5.00- 14.99	463							110						34
L	1973	Dhaka: PW	F	NS	157			66.0				102		A	2259	*	35	

NOTES

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Reference No: 5454

General Notes: *Sampling: the survey covered 113 upazilas in 6 administratively divisions; 45 primary sampling units from the National Nutrition Programme (NNP) intervention upazilas and 15 primary sampling units from the National Nutrition Programme (NNP) comparison non-intervention upazilas selected with proportional allocation to size (number of households) of the division; 45 primary sampling units randomly selected in the Bangladesh Integrated Nutrition Project (BINP) upazilas (nutrition intervention areas 1995-2002); Hb cut-off levels for adolescents not according to WHO recommendations (please see 'Key to the data tables').*

Line note 1 PW: PW in third trimester.

Line note 2 Prevalence of anaemia: 24.8% (Hb <120 g/L 13-19 yrs).

Line note 3 NNP: National Nutrition Programme.

Line note 4 BINP: Bangladesh Integrated Nutrition Project.

Line note 5 NNP comparison: National Nutrition Programme comparison group.

Line note 6 NNP: National Nutrition Programme, prevalence of anaemia: 28.2% (Hb <120 g/L 13-19 yrs).

Line note 7 BINP: Bangladesh Integrated Nutrition Project, prevalence of anaemia: 22.2% (Hb <120 g/L 13-19 yrs).

Line note 8 NNP comparison: National Nutrition Programme comparison group, prevalence of anaemia: 27.5% (Hb <120 g/L 13-19 yrs).

Reference No: 5540

General Notes: *Sampling: households with a child aged less than 5 years and his/her mother were selected in 24 fixed rural sub-districts by multi-stage cluster sampling.*

Reference No: 3256

General Notes: *Sample sizes, ages of mothers, anaemia prevalence figures provided by Helen Keller International Bangladesh; sampling: households with a child aged less than 5 yrs and his/her mother were randomly selected in 24 fixed rural sub-districts; sample for SAC, adolescents and mothers not national representative.*

Line note 9 Prevalence of anaemia 35.0% (Hb <110 g/L PW, Hb <120 g/L NPW).

Line note 10 Prevalence value calculated; prevalence of anaemia 34.2% (Hb <115 g/L 5-11 yrs, Hb <120 g/L 12-14 yrs).

Line note 11 Prevalence of anaemia 30.0% (Hb <120 g/L females, Hb <130 g/L males).

Line note 12 Prevalence value calculated; prevalence of anaemia 33.6% (Hb <115 g/L 5-11 yrs, Hb <120 g/L 12-14 yrs).

Line note 13 Prevalence value calculated; prevalence of anaemia 34.8% (Hb <115 g/L 5-11 yrs, Hb <120 g/L 12-14 yrs).

Reference No: 3257

General Notes: *Study in 4 urban slums in Dhaka (2), Chittagong (1) and Khulna (1) cities; sample sizes for the various age groups provided by Helen Keller International Bangladesh; sampling: random selection of households with under-five children.*

Reference No: 2010

General Notes: *Facility based study (2 schools in Panchagar and Thakurgaon District); SAC grade 3-5.*

Reference No: 4602

General Notes: *Facility based study (Maternal and Child Health centre); sampling: simple random sampling; Hb determination at first antenatal visit.*

Line note 14 20-30 wks gestation; median Hb: 114 g/L; disaggregated data by education, husbands education, income.

- Reference No:** 2778
- General Notes:** *Months of survey adapted from reference No. 3900; samples sizes for disaggregated data by age and by subdistrict of pre-SAC children provided by Hellen Keller International Bangladesh; sampling: random sub-sample of households in 10 clusters each in 10 rural thanas (multi-stage sampling frame); women were mothers from the pre-SAC children; Hb determination for subsample of vitamin A survey of rural Bangladesh; values for other Hb cut-off levels (pre-SAC, SAC).*
- Line note 15** 95% CI: 40.9%, 49.5%.
- Line note 16** 95% CI: 36.2%, 62.3%.
- Line note 17** Prevalence of anaemia 52.7% (when adjusted for age, since the age of children in the sub-sample differed significantly from the sample).
- Line note 18** 95% CI: 43.3%, 54.0%.
- Line note 19** 95% CI: 32.1%, 46.2%.
- Reference No:** 3529
- General Notes:** *Facility based study (50 of 54 community-based antenatal care centers) in 2 rural areas (Samvugonj and Dapunia) of Mymensingh Than (subdistrict); baseline values of intervention study (daily iron, weekly iron); dates of survey and cut-off level provided by investigator; sampling: each antenatal center was randomly assigned to an intervention, all PW in catchment area were identified through household visits, on the day of the scheduled antenatal service the first 4 women who booked the service and met the inclusion criteria were invited to participate; inclusion only of PW who had a fundal height between 14 and 22 cm (18-24 wks gestational age), not used iron supplements during pregnancy before start of study and were apparently healthy; exclusion of subjects with Hb <80 g/L.*
- Line note 20** Prevalence value calculated; women with complete information; mean (SD) age 24.0 (5.9) yrs; disaggregated data by intervention.
- Reference No:** 1740
- General Notes:** *Survey in four villages in Rupganj Than, Narayanganj district; sampling: 803 households each containing at least one adolescent; low socioeconomic status; Hb cut-off level not according to WHO recommendations for 10-15 yrs (please see 'Key to the data tables').*
- Line note 21** Prevalence of anaemia 94.0% (Hb <115 g/L females 10-15 yrs, Hb <120 g/L females >15 yrs, males 10-15 yrs, Hb <130 g/L males >15 yrs).
- Line note 22** Prevalence of anaemia 96.0% (Hb <115 g/L 10-15 yrs, Hb <120 g/L >15 yrs).
- Line note 23** Prevalence of anaemia 98.0% (Hb <120 g/L 10-15 yrs, Hb <130 g/L >15 yrs).
- Reference No:** 3983
- General Notes:** *Study as part of zinc supplementation trial in Dhaka urban slums; inclusion only of pregnant women between 12-16 weeks gestation (n=559); method: commercial kit of Sigma Diagnostics, St. Louis; dates of survey and method for Hb determination provided by researcher.*
- Line note 24** 4 months gestation; mean age (SD) at enrollment anemic women 23.2 (5.9) yrs; mean age (SD) at enrollment non-anemic women 23.3 (5.4) yrs.
- Reference No:** 4361
- General Notes:** *Longitudinal study (four survey rounds; 4-month interval) in 16 villages in Jessore, 10 in Sauria, 18 in Mymensingh; sampling: selection of 990 households was done in a complex manner to ensure representativeness of the three sites; Hb determination only for 664 women aged 15-49 yrs during rounds 2, 3, 4 (one from each household); 71 women were pregnant during one or more of the three survey rounds; only mean Hb values.*
- Line note 25** Mean (SD) age 33.3 (7.8) yrs; round October 1996-January 1997.
- Line note 26** Round February 1997-March 1997.
- Line note 27** Round June 1997-September 1997.
- Reference No:** 366
- General Notes:** *Cross-sectional survey in 12 villages of Fulbaria Thana (sub-district) in Mymensingh District; sampling: study villages were selected randomly and were representative of typical rural Bangladesh, sample of women was selected based on availability at home and consent.*
- Line note 28** 95% CI: 67%, 79%; disaggregated data by education, land holding, perceived economic situation, socioeconomic status score.

Reference No: 3794

General Notes: *Facility based study (9 high schools for girls); sampling: 2 schools were selected from all but one of the 5 sub-districts, 12 girls were selected from each class by random sampling (60 girls each school, 120 from each sub-district), in one sub-district with only 1 "girls" high school, 120 girls were selected by random sampling, 24 in each class); inclusion only of students of grades VI-X and with parental consent; same Hb cut-off level applied to different age groups.*

Line note 29 Prevalence of iron deficiency anaemia in anaemic subjects 32.0% (Hb <120 g/L+serum ferritin <12 µg/L); prevalence of iron deficiency anaemia in anaemic subjects 44.2% (Hb <120 g/L+serum ferritin <20 µg/L); mean (SD) age 14.2 (1.3) yrs; disaggregated data by serum vitamin A concentration.

Reference No: 3873

General Notes: *Study in four randomly selected municipal slum areas; baseline values of intervention study (iron, iron+vitamin A, iron+vitamin A+zinc); sampling: all women in the targeted age group were invited to participate; values for other Hb cut-off levels.*

Line note 30 Disaggregated data by intervention.

Reference No: 1691

General Notes: *Subdistrict Matlab; women taking iron supplements; mean of two Hb determinations 0.5-9 months post-partum per women.*

Reference No: 2333

General Notes: *Facility based study (hospital); inclusion only of subjects with low socioeconomic status.*

Reference No: 3874

General Notes: *Facility based study (four high schools for girls); sampling: schools were selected as being representative of the geographical distribution of schools in the city, all girls in the relevant age groups (grades VII to IX) were asked to participate; inclusion only of subjects with written parental consent (50% response rate).*

Line note 31 Median Hb: 129 g/L.

Reference No: 2258

General Notes: *Facility based study (2 Maternity centers); method: oxyhaemoglobin.*

Line note 32 PW 2nd and 3rd trimester.

Reference No: 5178

General Notes: *Sampling: multi-stage cluster sampling with probability proportionate to size; sample comprised of 60 households from 1-2 villages in each of 3 census circles randomly selected in each of the 4 divisions (Chittagong, Dacca, Khulna and Rajshahi).*

Line note 33 Prevalence of anaemai 75% (Hb < 120 g/L)

Line note 34 Prevalence of anaemai 74% (Hb < 120 g/L)

Reference No: 2259

General Notes: *Facility based study (Maternity Center).*

Line note 35 PW 3rd trimester; disaggregated data by pregnancy number.

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