

MALAYSIA

Last Updated: 2007-01-02

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							
N	2004	Pregnant women: Total	F	NS	224958			38.3					NS	5795	*			
		Pregnant women by State: Perlis	F	NS	NS			48.8										
		Pregnant women by State: Kedah	F	NS	NS			32.0										
		Pregnant women by State: P. Pinang	F	NS	NS			42.5										
		Pregnant women by State: Perak	F	NS	NS			37.3										
		Pregnant women by State: Selangor	F	NS	NS			46.2										
		Pregnant women by State: W. Persekutuan KL	F	NS	NS			48.4										
		Pregnant women by State: W. Persekutuan Labuan	F	NS	NS			19.5										
		Pregnant women by State: N. Sembilan	F	NS	NS			51.1										
		Pregnant women by State: Melaka	F	NS	NS			50.1										
		Pregnant women by State: Johor	F	NS	NS			25.7										
		Pregnant women by State: Pahang	F	NS	NS			50.4										
		Pregnant women by State: Terengganu	F	NS	NS			32.3										
		Pregnant women by State: Kelantan	F	NS	NS			35.4										
		Pregnant women by State: P. Malaysia	F	NS	NS			39.4										
		Pregnant women by State: Sabah	F	NS	NS			33.1										
Pregnant women by State: Sabah	F	NS	NS			36.5												
N	2003	Pregnant women: Total	F	NS	232386			43.7					NS	5794	*			
		Pregnant women by State: Perlis	F	NS	NS			53.7										
		Pregnant women by State: Kedah	F	NS	NS			43.7										
		Pregnant women by State: P. Pinang	F	NS	NS			46.8										
		Pregnant women by State: Perak	F	NS	NS			45.9										
		Pregnant women by State: Selangor	F	NS	NS			47.8										
		Pregnant women by State: W. Persekutuan	F	NS	NS			71.4										
		Pregnant women by State: N. Sembilan	F	NS	NS			53.3										
		Pregnant women by State: Melaka	F	NS	NS			54.1										
		Pregnant women by State: Johor	F	NS	NS			32.9										
		Pregnant women by State: Pahang	F	NS	NS			49.8										
		Pregnant women by State: Terengganu	F	NS	NS			33.8										
		Pregnant women by State: Kelantan	F	NS	NS			43.0										
		Pregnant women by State: P. Malaysia	F	NS	NS			31.9										
		Pregnant women by State: Sabah	F	NS	NS			41.5										
		Pregnant women by State: Sarawak	F	NS	NS			33.2										
D	2000 -2001	6 Villages: Adolescents: Total	B	12.00- 19.99	165						131	17	D	4781	*	1		

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						70	100	110	115	120	130						
D	2000 -2001	6 Villages: Adolescents by sex	F	12.00- 19.99	91					28.6	124	16	D	4781		2	
		6 Villages: Adolescents by sex	M	12.00- 19.99	74						139	13				3	
DR	1995	Mersing District: Elderly: Total	B	60.00- 118.99	304								D	3736	*	4	
		Mersing District: Elderly by sex	F	60.00- 118.99	149						125	15				5	
		Mersing District: Elderly by sex	M	60.00- 118.99	155						134	17				6	
L	1994	Sarawak: SAC	F	12.00- 17.99	1408					19.1		A	1976	*			
D	1994	Sarawak: All: Total	B	5.00- 85.99	365						133		D	4438	*	7	
		Sarawak: All by sex	F	13.00- 69.99	176					17.2	129					8	
		Sarawak: All by sex	M	5.00- 84.99	189						137					9	
L	1992 -1995	Rural villages: Adults: Total	B	18.00- 59.99	3241						138	23	A	2807	*	10	
		Rural villages: Women	F	18.00- 59.99	2011						131	20				11	
		Rural villages: Men	M	18.00- 59.99	1230						150	22				12	
		Rural villages: Elderly: Total	B	61.00-NS	886						136	21					
		Rural villages: Elderly by sex	F	61.00-NS	448					22.1	132	18					
		Rural villages: Elderly by sex	M	61.00-NS	438					23.3	141	22					
		Rural villages: Children by age	B	1.00- 6.99	1418			24.0			121	18					
		Rural villages: Children by sex and age	F	1.00- 6.99	717			23.7			122	17					
		Rural villages: Children by sex and age	M	1.00- 6.99	701			24.4			121	18					
		Rural villages: Children by age	B	7.00- 12.99	1778					21.9	130	18					
		Rural villages: Children by sex and age	F	7.00- 12.99	880					21.4	130	18					
		Rural villages: Children by sex and age	M	7.00- 12.99	898					22.4	129	18					
		Rural villages: Children by age	B	13.00- 17.99	701						137	19				13	
		Rural villages: Children by sex and age	F	13.00- 17.99	374					17.4	133	18					
		Rural villages: Children by sex and age	M	13.00- 17.99	327						141	19					14
		SR	1992 -1993	Kelantan: PW by visit: First antenatal visit: Total	F	NS	9860			47.5					111		D
Kelantan: PW by visit: Last antenatal visit	F			NS	9860			39.5									
Kelantan: PW by age	F			NS- 19.99	418			47.4						16			
Kelantan: PW by age	F			20.00- 40.99	8724			46.8						17			
Kelantan: PW by age	F			41.00-NS	718			56.6						18			
Kelantan: PW by gestational age: 0-15 wks	F			NS	1419			39.7						19			
Kelantan: PW by gestational age: 16-30 wks	F			NS	8171			48.5						20			

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						70	100	110	115	120	130								
SR	1992 -1993	Kelantan: PW by gestational age: >30 wks Kelantan: PW by pregnancy number: 0 Kelantan: PW by pregnancy number: 1-4 Kelantan: PW by pregnancy number: 5-9 Kelantan: PW by pregnancy number: >9	F	NS	270			58.9									21		
			F	NS	1696			37.5										22	
			F	NS	5166			47.1											23
			F	NS	2712			52.9											24
			F	NS	286			64.0											25
L	1982	3 villages: Women 3 villages: Pre-SAC	F	18.00- 45.99	61					57.0	115	14	A	2887	*				
			B	0.08- 5.99	90			44.0								*			
L	1971 -1972	Gombak: PW Aborigines	F	NS	278		25.5						A	832	*		26		

NOTES

MALAYSIA

Reference No: 5795

General Notes: *Sampling: all pregnant women at 36 weeks gestation who attended government health facilities in 2004: 82.5% of all pregnant women.*

Reference No: 5794

General Notes: *Sampling: all pregnant women at 36 weeks gestation who attended government health facilities in 2003: 90.7% of all pregnant women.*

Reference No: 4781

General Notes: *Study was carried out in six fishing village communities (Serusop, Penimbawan, Tajau, Kindu, Betutai, Sambah), in the Tuaran District of Sabah; dates of survey provided by investigator; method: Abbott Cell-Dyne® 1700; sampling: all adolescents aged 12-19 yrs were invited to participate, 165 out of 225 eligible subjects were enrolled; inclusion only of subjects who had no history of any medical conditions or medications known to affect iron metabolism.*

Line note 1 Prevalence of anaemia 20.0% (Hb <120 g/L both sexes 12-14 yrs, females 15-19 yrs, Hb <130 g/L males 15-19 yrs); prevalence of iron deficiency anaemia 17.0% (Hb <120 g/L+>=2 of the indicators: serum ferritin <12 µg/L, transferrin saturation <16% or mean corpuscular volume <78 fL 12-14 yrs or <80 fL 15-19 yrs); mean (SD) age 15.2 (2.1) yrs; disaggregated data by age.

Line note 2 Prevalence of iron deficiency anaemia 26.4% (Hb <120 g/L+>=2 of the indicators: serum ferritin <12 µg/L, transferrin saturation <16% or mean corpuscular volume <78 fL 12-14 yrs or <80 fL 15-19 yrs); mean (SD) age 15.9 (2.2) yrs; disaggregated data by age.

Line note 3 Prevalence of anaemia 9.5% (Hb <120 g/L 12-14 yrs, Hb <130 g/L 15-19 yrs); prevalence of iron deficiency anaemia 5.4% (Hb <120 g/L+>=2 of the indicators: serum ferritin <12 µg/L, transferrin saturation <16% or mean corpuscular volume <78 fL 12-14 yrs or <80 fL 15-19 yrs); mean (SD) age 14.5 (1.7) yrs; disaggregated data by age.

Reference No: 3736

General Notes: *Study in rural areas of Mersing District; method: Reflotron haemoglobin counter analyses; sampling: 11 traditional villages were randomly selected from the list of 62 held by the district office; inclusion only of all elderly aged 60 yrs and above who were permanent residents (at least 12 months) in the selected villages with no known terminal or mental illness (350 out of 498 eligible subjects participated).*

Line note 4 Prevalence of anaemia 35.2 % (Hb <120 g/L females, Hb <130 g/L males).

Line note 5 Only mean Hb value.

Line note 6 Only mean Hb value.

Reference No: 1976

General Notes: *Facility based study (3 schools) in Samarahan District of Sarawak.*

Reference No: 4438

General Notes: *Cross-sectional study in five remote interior communities in upper Rejang River, Sarawak; dates of survey provided by investigator; method: Ames Mini lab haemoglobinometer; sampling: seven villages were selected and all villagers briefed; inclusion only of subjects who volunteered.*

Line note 7 Prevalence of anaemia 24.4% (Hb <110 g/L both sexes 5 yrs, Hb <120 g/L both sexes 6-14 yrs, females >=15 yrs, Hb <130 g/L males >=15 yrs); disaggregated data by ethnic group, age.

Line note 8 Disaggregated data by ethnic group, age.

Line note 9 Prevalence of anaemia 29.2% (Hb <120 g/L 13-14 yrs, Hb <130 g/L >=15 yrs); disaggregated data by ethnic group, age.

Reference No: 2807

General Notes: *Study in 69 villages and 7 estates in 9 states in Peninsular Malaysia; disaggregated data for 5 types of communities (fishing, padi-growing, rubber small holding, coconut small holding, estates) for all age groups.*

Line note 10 Prevalence of anaemia 21.0% (Hb <110 g/L PW, Hb <120 g/L NPW, Hb <130 g/L men).

Line note 11 Prevalence of anaemia 25.1% (Hb <110 g/L PW, Hb <120 g/L NPW).

Line note 12 Prevalence of anaemia 22.7% (Hb <120 g/L NPW, Hb <130 g/L men).

Line note 13 Prevalence of anaemia 17.8% (Hb <120 g/L males <15 yrs, females, Hb <130 g/L males >15 yrs).

Line note 14 Prevalence of anaemia 18.3% (Hb <120 g/L <15 yrs, Hb <130 g/L >15 yrs).

Reference No: 5037

General Notes: *Facility based study (102 rural health clinics); method: photocalorimetric method in the health centers or Sahli's method in the midwife's clinics; sampling: two stage sampling (1. stratified random selection of districts-clinics, 2. proportionate random sampling of 9860 mothers out of a total of 42 504); inclusion only of mothers with singleton pregnancy and who had delivered a live baby; Hb levels were obtained from the antenatal records; Hb levels estimated both at the first and last antenatal visits were recorded; values for other Hb cut-off levels.*

Line note 15 Disaggregated data by contraceptive use.

Line note 16 First antenatal visit.

Line note 17 First antenatal visit.

Line note 18 First antenatal visit.

Line note 19 First antenatal visit.

Line note 20 First antenatal visit.

Line note 21 First antenatal visit.

Line note 22 First antenatal visit.

Line note 23 First antenatal visit.

Line note 24 First antenatal visit.

Line note 25 First antenatal visit.

Reference No: 2887

General Notes: *Study in 3 villages Bengkoka Peninsula, Sabah.*

Reference No: 832

General Notes: *Facility based study (hospital) in Selangor State; Hb cut-off level not according to WHO recommendations (please see 'Key to the data tables').*

Line note 26 Prevalence of anaemia 5.6% (Hb <60 g/L).

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