

Prevalence and Determinants of Hemoglobinopathies among the Scheduled Tribes in the Selected Districts of Tamil Nadu, India: A Community-Based Cross-sectional Study

QUESTIONNAIRE

Section – A: Socio-demographic characteristics

- 1) Participant ID: _____
- 2) Name of the District: _____ District Code: _____
- 3) Name of the participant: _____
- 4) Name of the tribe to which the participant belongs to:
 - a) Irular b) Malayali c) Kattunayakan d) Kurumbas e) Paniya f) Toda
 - g) Others: _____
- 5) Age (years): _____
- 6) Gender:
 - a) Male b) Female
- 7) Are you currently pregnant?
 - a) Yes b) No
- 8) How long have you been living here (in years)? _____
- 9) Have you migrated from anywhere else?
 - a) Yes b) No
 - 9.1. If Yes, from where? _____
- 10) Number of members in the family: _____
- 11) Religion:
 - a) Hindu b) Christian c) Muslim d) Others: _____
- 12) Educational status:
 - a) Illiterate b) Primary School c) Middle School d) High School
 - e) Intermediate/Diploma f) Graduate g) Professional Degree
- 13) Occupational status:
 - a) Unemployed b) Elementary occupation c) Plant and machine operators and assemblers d) Craft and related trade workers e) Skilled agricultural and fishery workers f) Skilled worker, shop and market sales workers g) Clerk h) Technicians/associate professionals i) Professional j) Legislators, senior officials, managers
- 14) Monthly per capita income (in Rupees): _____
- 15) Socio-economic classes based on Modified Kuppaswamy Scale: (To be filled by the investigator after obtaining scores and doing calculations)
 - a) Upper (I) b) Upper middle (II) c) Lower middle (III) d) Upper lower (IV) e) Lower (V)
- 16) Marital Status:
 - a) Single b) Married c) Separated/Widowed
- 17) Whether you have undergone consanguineous marriage?
 - a) Yes b) No
 - 17.1. If Yes, degree of consanguinity?

- a)1st degree relative b)2nd degree relative c)3rd degree relative
- 18) Whether your parents had undergone consanguineous marriage?
 a) Yes b) No
 18.1.If Yes, degree of consanguinity?
 a)1st degree relative b)2nd degree relative c)3rd degree relative
- 19) Area of Residence:
 a) Hills b) Plains
- 20) Altitude (in metres): _____
- 21) What is your source of drinking water?
 a) Dug wells in common
 b) Pipes in common
 c) Water pumps in common
- 22) Type of house: i) Kutcha ii) Pucca iii) Semi-pucca iv) Concrete
- 23) Type of floor:
 i. Concrete
 ii. Mud
 iii. Straw
 iv. Wood
 v. Plastic sheeting
 vi. Tiles
 vii. Other (specify): _____
- 24) Type of roof:
 i. Concrete
 ii. Tiles
 iii. Straw (grass, papyrus, banana fibres)
 iv. Wood
 v. Plastic shelter
 vi. Galvanized iron
 vii. Other (specify): _____
- 25) Type of walls:
 (i) Concrete/burned bricks
 (ii) Mud blocks
 (iii) Mud and straw
 (iv) Wood
 (v) Plastic shelter
 (vi) Other (specify): _____

Section B: Clinical History

- 1) Were you affected by Anemia in the past? A) Yes B) No
- 2) Were you diagnosed with Jaundice in the past? A) Yes B) No
- 3) Were you diagnosed with Jaundice in the recent times? A) Yes B) No
- 4) Have you undergone blood transfusion? A) Yes B) No
 4.1. If yes, when was your last blood transfusion? _____

Section C: Laboratory Parameters (Reference ranges attached below):

I. Baseline Hematological Studies:

Complete Blood Count (CBC):

- a) Red Blood Cell Count (RBC): _____ cells per microlitre
- b) Hemoglobin: _____ grams per decilitre or grams %
- c) Mean Corpuscular Volume (MCV): _____ cubic micrometre
- d) Mean Corpuscular Hemoglobin (MCH): _____ picograms/cell
- e) Reticulocyte Count: _____ %
- f) Red Cell Distribution Width (RDW): _____ %
- g) High-Performance Liquid Chromatography (HPLC): To detect abnormal variants of Hemoglobin

Reference ranges:

- 1. Red Blood Cell Count: Males: $4.4-5.8 \times 10^6/\mu\text{L}$; Females: $3.9-5.2 \times 10^6/\mu\text{L}$
- 2. Hemoglobin: Males: 13 to 18 g/dl; Females: 12 to 16 g/dl
- 3. Mean Corpuscular Hemoglobin (MCH): 25 to 35 pg/cell
- 4. Mean Corpuscular Volume (MCV): Males: $78-100 \mu\text{m}^3$; Females: $78-102 \mu\text{m}^3$
- 5. Reticulocyte count: 0.5 to 2.5 %
- 6. Red Cell Distribution Width: Female: 12.2 to 16.1 %; Male: 11.8 to 14.5%