

Supplementary File 1

Questionnaire on Knowledge, Attitudes, and Practices Related to Tuberculosis Among College Students in Anhui Province, China

Note: This questionnaire includes multiple domains. In the present study, only selected variables (e.g., willingness to participate in TB screening and preventive treatment) were analyzed, while other variables will be reported in separate analyses.

Introduction

Dear participant,

We are staff members from the Anhui Provincial Center for Disease Control and Prevention. This anonymous online survey aims to understand tuberculosis (TB) prevention and control among college students in Anhui Province. Your responses are important for improving future campus TB prevention and control work. The questionnaire takes approximately 3–5 minutes to complete. All data will be used for research purposes only and kept strictly confidential. Please answer according to your actual situation. Thank you for your support.

Unless otherwise stated, each item is single-choice.

Note: The full questionnaire is provided for transparency. The present manuscript analyzed sociodemographic characteristics, TB knowledge, Health Belief Model constructs, and willingness outcomes. Items on health behaviors and information channels were included in the broader survey but were not included in the present analysis.

Part 1. Sociodemographic Information

1. Please provide the following information (Open-ended)

University name: _____

Major: _____

Class: _____

2. Type of institution (Single choice)

(1) Undergraduate institution

(2) Junior college

3. Major category (Single choice)

(1) Humanities

(2) Science

(3) Engineering

(4) Medicine

(5) Other: _____

4. Year of enrollment (Open-ended)

Year: _____

5. Current grade (Single choice)

(1) Freshman

(2) Sophomore

(3) Junior

(4) Senior

(5) Other: _____

6. Sex (Single choice)

(1) Male

(2) Female

7. Date of birth (Open-ended)

Date: _____

8. Household registration (Single choice)

- (1) Rural
- (2) Urban

9. Have you had contact with a TB patient in the past year, including yourself? (Single choice)

- (1) Yes
- (2) No
- (3) Not sure

Part 2. Tuberculosis Knowledge

10. Pulmonary tuberculosis is classified as (Single choice)

- (1) Acute non-infectious disease
- (2) Chronic non-infectious disease
- (3) Acute infectious disease
- (4) Chronic infectious disease
- (5) Not sure

11. The main transmission route of pulmonary tuberculosis is (Single choice)

- (1) Respiratory tract
- (2) Digestive tract
- (3) Blood transmission
- (4) Mother-to-child transmission
- (5) Not sure

12. Which of the following symptoms should raise suspicion of pulmonary tuberculosis? (Single choice)

- (1) Coughing and sneezing
- (2) Cough and sputum for two weeks or more, or bloody sputum
- (3) Abdominal pain and diarrhea
- (4) Not sure

13. Which behaviors can effectively prevent the spread of Mycobacterium tuberculosis? (Single choice)

- (1) Not spitting in public
- (2) Covering the mouth and nose when coughing or sneezing
- (3) Wearing a mask in crowded places
- (4) All of the above

14. Can pulmonary tuberculosis be cured after standardized treatment? (Single choice)

- (1) All cases can be cured
- (2) Most cases can be cured
- (3) Cannot be cured
- (4) Not sure

15. During school, what should a student do if they develop suspected TB symptoms or are diagnosed with pulmonary tuberculosis? (Single choice)

- (1) It is personal privacy and should not be told to anyone
- (2) Tell family members only
- (3) Report to the school, do not conceal the condition, and do not attend classes while ill
- (4) Not sure

16. The main purpose of TB screening is (Single choice)

- (1) To detect pulmonary tuberculosis patients
- (2) To identify people with latent TB infection
- (3) To provide TB prevention and control education
- (4) All of the above
- (5) Not sure

17. The correct management approach for people with latent TB infection is (Single choice)

- (1) No management is needed
- (2) They must take medication for more than six months
- (3) Preventive treatment should be provided based on medical evaluation

- (4) They should be hospitalized immediately
- (5) Not sure

Part 3. Health Belief Model Constructs

For the following statements, please choose the option that best reflects your true feelings. There are no right or wrong answers.

Response scale for all items in Part 3: 1 = Strongly agree; 2 = Agree; 3 = Not sure; 4 = Disagree; 5 = Strongly disagree.

Perceived Susceptibility

- 18. Even if I have no symptoms, I may be infected with Mycobacterium tuberculosis (latent TB infection). (Likert scale)**
- 19. If someone around me coughs, I worry that I may be infected. (Likert scale)**

Perceived Severity

- 20. TB would seriously affect my academic development. (Likert scale)**
- 21. Standardized TB treatment requires six months or more and involves a long duration and high cost. (Likert scale)**

Perceived Benefits

- 22. Healthy behaviors, such as covering the mouth and nose when coughing or sneezing and not spitting in public, can effectively reduce the risk of TB transmission. (Likert scale)**
- 23. Regular screening helps detect TB at an early stage. (Likert scale)**
- 24. Preventive treatment for people with latent TB infection can effectively reduce the risk of developing TB disease. (Likert scale)**
- 25. Timely and standardized treatment can prevent transmission to others. (Likert scale)**

Perceived Barriers

- 26. Mild symptoms do not require immediate medical consultation. (Likert scale)**
- 27. There is too little publicity and too few resources for TB prevention and control. (Likert scale)**
- 28. Obtaining TB prevention and control knowledge takes too much time and energy. (Likert scale)**
- 29. I would be reluctant to disclose my illness because I worry about being discriminated against by classmates. (Likert scale)**
- 30. TB treatment takes a long time, and it is easy to discontinue treatment midway. (Likert scale)**
- 31. TB screening requires considerable time and money. (Likert scale)**
- 32. Side effects of preventive treatment drugs may affect my study and daily life. (Likert scale)**

Self-efficacy

- 33. I am confident that I can take protective measures to prevent TB. (Likert scale)**
- 34. If suspected symptoms appear, I will actively seek medical examination. (Likert scale)**

Cues to Action

- 35. I am willing to participate in TB health education activities organized by the school. (Likert scale)**
- 36. Recommendations from doctors or staff from the Center for Disease Control and Prevention would prompt me to take action. (Likert scale)**
- 37. TB-related health information on social media can improve my awareness of prevention and control. (Likert scale)**

Part 4. Health Behaviors

This section was included in the broader questionnaire but was not analyzed in the present manuscript.

- 38. In which situations do you wear a mask? (Multiple choice; select all that apply)**

- (1) When I have respiratory symptoms
- (2) In crowded places
- (3) For daily protection
- (4) I never wear a mask

39. How often do you cover your mouth and nose when coughing or sneezing? (Single choice)

- (1) Every time
- (2) Often
- (3) Occasionally
- (4) Never

40. In the past week, how often was the classroom or dormitory ventilated by opening windows? (Single choice)

- (1) Twice or more per day
- (2) Once per day
- (3) Once every 2–3 days
- (4) Almost never

41. If you had a persistent cough for more than two weeks, what would you do? (Single choice)

- (1) Seek medical care immediately
- (2) Wait and observe for a few days
- (3) Buy medicine by myself
- (4) Do nothing

42. If you found that a classmate had a persistent cough for more than two weeks, what would you do? (Single choice)

- (1) Advise them to seek medical care and report to the counselor
- (2) Give only a verbal reminder
- (3) Ignore it

43. Have you participated in TB screening organized by the school? (Single choice)

- (1) Never
- (2) Participated at enrollment
- (3) Not sure whether screening was conducted

44. Which TB screening methods would you prefer the school to use? (Multiple choice; select all that apply)

- (1) Centralized screening at enrollment
- (2) Regular screening for high-risk groups
- (3) Symptom-warning-based screening
- (4) Voluntary screening upon request

45. When the school organizes TB screening, what concerns you most? (Multiple choice; select all that apply)

- (1) Time conflict
- (2) Privacy disclosure
- (3) High examination cost
- (4) Harm to health
- (5) Other: _____

46. If someone around you was diagnosed with pulmonary tuberculosis, would you actively participate in TB screening organized by the school? (Single choice)

- (1) Definitely yes
- (2) Probably yes
- (3) Not sure
- (4) Probably not
- (5) Definitely not

47. If screening showed that you had latent TB infection, would you accept preventive treatment? (Single choice)

- (1) Definitely yes

- (2) Probably yes
- (3) Not sure
- (4) Probably not
- (5) Definitely not

48. Would you be willing to actively learn about TB prevention and control? (Single choice)

- (1) Definitely yes
- (2) Probably yes
- (3) Not sure
- (4) Probably not
- (5) Definitely not

49. Would you share TB prevention and control knowledge with others? (Single choice)

- (1) Definitely yes
- (2) Probably yes
- (3) Not sure
- (4) Probably not
- (5) Definitely not

Part 5. Information Sources

This section was included in the broader questionnaire but was not analyzed in the present manuscript.

50. Have you previously received TB prevention and control education? (Single choice)

- (1) Actively received
- (2) Passively received
- (3) Both actively and passively received
- (4) Never received

51. In the past year, how often did you encounter TB-related health education or publicity? (Single choice)

- (1) Six times or more
- (2) Three to five times
- (3) One to two times

52. Through which channels have you mainly obtained TB-related information? (Multiple choice; select all that apply)

- (1) School/community publicity, such as posters or lectures
- (2) Short-video platforms, such as Douyin or Kuaishou
- (3) Social media, such as WeChat or Weibo
- (4) Knowledge-sharing platforms, such as Zhihu or Bilibili
- (5) Traditional media, such as television, radio, or newspapers
- (6) Medical institutions, such as hospitals or CDCs
- (7) Friends or relatives
- (8) Other: _____

53. Through which channels would you prefer to receive TB-related information? (Multiple choice; select all that apply)

- (1) School/community publicity, such as posters or lectures
- (2) Short-video platforms, such as Douyin or Kuaishou
- (3) Social media, such as WeChat or Weibo
- (4) Knowledge-sharing platforms, such as Zhihu or Bilibili
- (5) Traditional media, such as television, radio, or newspapers
- (6) Medical institutions, such as hospitals or CDCs
- (7) Friends or relatives
- (8) Other: _____

54. Which forms of campus TB education would you prefer? (Multiple choice; select all that apply)

- (1) Theme class meetings or health education classes

- (2) Expert lectures
- (3) Free clinic consultation
- (4) Artistic performances
- (5) Creative design competitions, such as scenario dramas or microfilms
- (6) Knowledge contests or speech competitions
- (7) Peer education
- (8) Traditional media publicity, such as bulletin boards or campus broadcasts
- (9) New media publicity, such as official accounts, Weibo, short-video platforms, or websites
- (10) Other: _____

55. What TB-related information are you most interested in? (Multiple choice; select all that apply)

- (1) Transmission routes and prevention methods
- (2) Treatment methods and prognosis
- (3) School suspension/resumption policies and medical security
- (4) Patient stories and case examples
- (5) TB epidemic situation and latest research progress
- (6) Other: _____

56. What aspects of current TB publicity need improvement? (Multiple choice; select all that apply)

- (1) Interest and attractiveness of the content
- (2) Credibility of information
- (3) Coverage of communication channels
- (4) Plain and understandable language

Thank you sincerely for your support and cooperation. We wish you success in your studies and a happy life!