Health literacy scale for screening in obesity prevention of children aged 9 to 14 years By Ungsinun Intarakamhang

The objectives of this study are to evaluate the HL level of Thai childhood overweight, and develop a path model of health behavior for preventing obesity focused eating behavior, exercise behavior, and emotional coping, which consist of 8 parts and total 71 items

       Part 1 General data of student (15 items)

       Part 2 Health knowledge and understanding (10 items)

       Part 3 Accessing the information and services (5 items)

       Part 4 Communicating for added skills (6 items)

       Part 5 Managing their health conditions (5 items)

       Part 6 Media literacy (5 items)

       Part 7 Making appropriate health-related decision (5 items)

       Part 8 Health behavior for preventing obesity (20 items)

Part 1 General data of student

Explanation: Please fill your background in the blanks or mark ✓ that matches the student

1. Currently, students are studying level.……..........… …..........……..........……..........……..............

   School name …………………………………………….…………………………………………

2. What is the student's grade? ❑ 1. Excellent ❑ 2. good ❑ 3. fair ❑ 4. No good

3. Sex ❑ 1. Male   ❑ 2. Female

4. Age…………………………......……years ……………..……………… months

5. Religious students ❑ 1. Buddhist ❑ 2. Christian ❑ 3.Islamic ❑ 4. Other ....…….................

6. Current weight ....(kgs.)   height .... (cms.), and waist....................(inches.)

7. In your mind, what is your body shape or weight?

   ❑ 1. Skinny   ❑ 2. Normal weight   ❑ 3. Getting fat   ❑ 4. Fat   ❑ 5. Too fat

8. Are students currently living with their parents?

   ❑ 1. Yes   ❑ 2. No (I live with …………………………………….…………..)

9. Marital status Parents of students

   ❑ 1. Single   ❑ 2. Married and living together   ❑ 3. Married, but not living

   ❑ 4. Widow   ❑ 5. Divorce / Separation   ❑ 6. Other ....

10 Maximum parental education

   ❑ 1. Did not study ❑ 2. Primary school ❑ 3. Secondary School   ❑ 4. Diploma

   ❑ 5. Bachelor   ❑ 6. Postgraduate   ❑ 7. Other ....

11. Parental occupation

    ❏ 1. Farmer   ❏ 2. Labor   ❏ 3. Business   ❏ 4. Government/State enterprise

    ❏ 5. Factory work ❏ 6. An employee of the private sector   ❏ 7. No employee

    ❏ 8. Other …………...

12. In your mind, what is the economic status of your family?

    ❏ **1.** Very good   ❏ 2. Good   ❏ 3. Fair   ❏ 4. No good

13. In your mind, how are your parents, important or meaningful in their lives?

    ❏ 1. Very much   ❏ 2. Much   ❏ 3. Moderate   ❏ 4. Less

14. In the last one month, what is your overall physical and mental health?

    ❏ 1. Excellent   ❏ 2. good   ❏ 3. fair   ❏ 4. No good

15. Who are the family members of obese? (Choose more than one answer)

    ❏ 1. Father   ❏ 2. Mother   ❏ 3. grandparents ❏ 4. Sister/brother ❏ 5. Nobody

Part 2 Health knowledge and understanding
Please marking ✓ or ◯ Surrounding the most corrected choice only one.

1. Which disease may be high associated with childhood obesity?

    a. Demencien, backpain, high cholesterol (score 0) b. Diabetes, hypertension, high cholesterol (1)✓

    c. Cardiomegaly, stoke, osteoporosis (0)   d. Backpain, cardiovascular, osteoporosis (0)

2. How to eat safely and healthily for Weight loss ?

    a. No eating all kinds of meat (0)   b. No eating all kinds of fat (0)

    c. No eating all kinds of sugar and flour (0)   d. No eating high energy food (1)✓

3. Which diet menu is safe and effective for weight control?

    a. **morning** one glass of milk with two bread slides, **lunch** rice with fried chicken broth,

        evening fried noodles with shrimp, squid (0)

    b. **morning** fried egg rice with milk, **lunch** fried noodles with sausage, sweet fruits

        evening cheese chicken, eggs rice with chocolate sweets (0)

    c. **morning** a bread slide with one glass of milk, **lunch** shrimp boil noodles with an orange

        evening steamed fish with vegetable (1)✓

    d. **morning** fried chicken spaghetti with milk, **lunch** pizza with fried chicken

        evening meat hamburger with cheese frenfried (0)

4. Which are the foods causing obesity?

    a. Hot tea, coffee (0)   b. Fresh milk (0)   c. Juice   (0)   d. Soft drink (1)✓

5. Which is the safe exercise in obese children?

    a. Fence Jumping, rope jumping (0)   b. Basketball, football (0)

    c. Swimming, cycling   (1)✓   d. High jump, broad jump (0)

8. How to do the best exercise in obese children?

    a. Exercise to tired, sweat at least 5 times a week for 30 minutes. (1)✓

    b. Exercise regularly until very sweaty everyday for 60 minutes. (0)

    c. Exercise with slow walking everyday for 20 minutes. (0)

    d. Exercise hard for 10 minutes every other day. (0)

7. For activity, when to do either before or after exercise?

    a. Drink plenty of water before and after exercising. (0)

    b. Warm up the body and stretch the muscles after exercise. (1)✓

    c. Eat big meal before and after exercising. (0)

    d. Singing during the exercise. (0)

8. Who is the best for emotional management?

    a. Smith, Have a blessed holy thing clear problem.(0) b. Lee, Be careful not to let anyone gossip.(0)

    c. Boa, Attended class regularly for improvement. (1)✓ d. Pier, Finding a solution to all the problem.(0)

9. Which is the best practice to relieve stress?

    a. To eat favorite food and read the books.(0)   b. To exercise until sweat and meditation. (1)✓

    c. To watch movies and eat favorite snack.(0)   d. To study breaks and travel. (0)

10. Which type of foods should be avoided in obese children?

    a. Fatty meat (1)✓   b. Fish oil.(0)   c. Tuna vegetable salad.(0)   d. Grilled Chicken. (0)

Part 3 Accessing the information and services
    Please marking ✓ in ❑ which corresponds to reality in your life.

Items	Frequency of practice				
	Always (5)	Almost (4)	Often (3)	Sometime (2)	Almost Never (1)
1. Whenever you need to access the health information, how often could you access the many health resources?	5	4	3	2	1
2. Whenever you need to know about the health information, how often could you ask an expert?	5	4	3	2	1
3. Whenever you have the problem about searching health information, how often could you ask the teacher or others?	5	4	3	2	1
4. How often do you reassure the health information from several sources?	5	4	3	2	1
5. How often do you review the health information or products before you make decision to believe and/or buy?	5	4	3	2	1

Part 4 Communicating for added skills
Please marking ✓ in ❑ which corresponds to reality in your life.

Items	Frequency of practice				
	Always (5)	Almost (4)	Often (3)	Sometime (2)	Almost Never (1)
1. Whenever you get an advice about obesity, how often could not you understand? **(Negative item)**	1	2	3	4	5
2. How often do you ask the teacher or others for help about food label reading, calories calculating or health care?	5	4	3	2	1
3. How often do you translate knowledge of obesity and weight control for your family or friend to understand?	5	4	3	2	1
4. Whenever you read the health brochures about obesity protection, how often could not you understand? **(Negative item)**	1	2	3	4	5
5. How often do you communicate about practice in obesity to your friends or others to understand?	5	4	3	2	1
6. How often do you inspire your friend with obesity to accept practices for healthy weight control?	5	4	3	2	1

Part 5 Managing their health conditions
Please marking ✓ in ❑ which corresponds to reality in your life.

Items	Frequency of practice				
	Always (5)	Almost (4)	Often (3)	Sometime (2)	Almost Never (1)
1. How often do you consider the appropriateness of the nutritional value on foods?	5	4	3	2	1
2. How often do you set exercise goals and achieve?	5	4	3	2	1
3. How often do you manage your stress appropriately?	5	4	3	2	1
4. How often do you review your practices for obesity protection and better health?	5	4	3	2	1
5. How often do you improve your environment for healthy?	5	4	3	2	1

Part 6 Media literacy
Please marking ✓ in ❑ which corresponds to reality in your life.

Items	Frequency of practice				
	Always (5)	Almost (4)	Often (3)	Sometime (2)	Almost Never (1)
1. How often have you seen an advertisement on the TV and search for information from the multiple sources to verify before believing?	5	4	3	2	1

2. How often have you seen an advertisement to seek additional information for credibility before you buy?	5	4	3	2	1
3. How often have you logically analyzed the media information before deciding practice?	5	4	3	2	1
4. How often have you participated in health, you approve the activities before believing and practice?	5	4	3	2	1
5. How often have you discussed or criticized an advertisement for health before making decision believe or practice?	5	4	3	2	1

Part 7 Making an appropriate health-related decision

Please marking ✓ or ○ Surrounding your choice only one which you will do in your life.

1. When do you go to a party at neighbor's home and get an invitation to eat unhealthy foods such as, too sweet or high fat, how do you make decision?
   a. Go out be friends, do not eat, and say that I brushed my teeth. 2
   b. Go out to be friends and eat only fruits or soft drinks. 1
   c. Don't go out and give a real reason to stay home. 3
   d. Don't go out and explain reason of eating them to make fat and difficult to lose. 4

2. When do your friends invite you to eat birthday cake, how you make decision?
   a. Tell your friends that you are full. Another time to eat. 2
   b. Tell your friends that next year, do not make the birthday cake. 1
   c. Tell your friend that I am losing weight. If weight gain, difficult to lose. 4
   d. Tell your friends that I don't like cake, I will eat other foods. 3

3. When your friends suggest you that weight controlling can be achieved by avoiding breakfast. How do you tell your friends? You will tell your friends that
   a. It does not help to lose weight. you will eat more in next meal. 3
   b. I will stop very dinner. Because breakfast makes me fresh. 1
   c. I eat all three meals, but reduce calories. If I am hungry, I will eat a guava. 4
   d. Maybe gastritis, you should eat more all of kind vegetables and fruits. 2

4. When do your friends like to drink the soft drinks, how do you advise?
   a. Talk story about process of making soft drinks. 1
   b. Comparison calories between soft drinks with other drinks. 2
   c. Tell your friends that soft drinks can cause gastritis and obesity. 3
   d. Tell the friends that a can of soft drink has ten teaspoons of sugar mixture. 4

5. If you have the stress with weight gain, how should you choose to act by not boring?
   a. Take your friends to go for a walk slowly around the park. 1
   b. Take your friends to dance according to Korean music rhythm. 2
   c. Take your friend to play sport at the stadium or the park. 4
   d. How to trick your friends to run chasing and running garbage collection. 3

Part 8 Health behavior for preventing obesity

Please marking ✓ in ❑ which corresponds to the reality of your life in the present.

Items	The average frequency of practice/week				
	6-7 days (5)	4-5 days (4)	3 days (3)	1-2 days (2)	Almost Never (1)
1. <u>Eating fatty, fried foods and coconut milk.</u> (Negative item)	1	2	3	4	5
2. Adding sauce, sugar to food before eating. (-)	1	2	3	4	5
3. Eating fresh fruits and vegetables every day, at least 500 grams per day	5	4	3	2	1
4. Controlling calories food is for proper body functioning.	5	4	3	2	1
5. Drinking soft drinks, honeydew, chocolate, or sweet milk (-)	1	2	3	4	5
6. <u>Eating fast foods, Pisa, hamburger, or hotdog etc.</u> (-)	1	2	3	4	5
7. Eating sweet, candy, ice-cream <u>etc</u>. (-)	1	2	3	4	5
8. <u>Eating sweet bread, donut, cookies, etc.</u> (-)	1	2	3	4	5
9. Eating a snack, fried potatoes. (-)	1	2	3	4	5
10. Monitoring to overeat and overweight by yourself.	5	4	3	2	1
11. Eating fast in all meals. (-)	1	2	3	4	5
12. Eating by concerning the useful food.	5	4	3	2	1
13. Eating the cooked, steam, baked, grill, boil food.	5	4	3	2	1
14. Eating a snack or foods before bed. (-)	1	2	3	4	5
15. Physical activity continually to feel tried and sweaty for 20-30 minutes.	5	4	3	2	1
16. Exercise continually to feel tried at least 30 minutes per day	5	4	3	2	1
17. Playing a sport, exercise after school.	5	4	3	2	1
18. Walking up the stair instead of lifting up, walking instead of taking car or bus.	5	4	3	2	1
19. Releasing emotion through eating. (-)	1	2	3	4	5
20. Self- problem solving by optimization	5	4	3	2	1

Table : The three score levels for Thai childhood overweight for evaluating the health literacy level

Total score	Meaning
Functional or Basic Level 1st to2nd compound (Total score of 35 pts.)	
<21pts or <60% of the total score	Low level of cognitive skill
21 to 27.99 pts or ≥60 to <80% of the total score	A fair level of cognitive skill
28 to 35 pts or ≥ 80% of the total score	High level of cognitive skill
Interactive Level 3rd to 4th compound (Total score of 55 pts.)	
<33 pts or <60% of the total score	Low level of socially interactive and communicative skill
33 to 43.99 pts or ≥60% to <80% of the total score	A fair level of socially interactive and communicative skill
44 – 54.9ptsor≥ 80% of the total score	High level of socially interactive and communicative skill
Critical level 5th to 6th compound (Total score of 45 pts.)	
<27pts or <60% of the total score	Low level of critical thinking skill
27 to 35.99pts or ≥60% to <80% of the total score	A fair level of critical thinking skill
36 to 45 pts or ≥80% of the total score	High level of critical thinking skill
Total scores of all compounds of health literacy for preventing obesity (Total 135 pts)	
<81pts or <60% of the total score	Low health literacy
81 to 107.99 pts or ≥60% to <80% of the total score	A fair health literacy
108 to 135 pts or ≥80% of the total score	High health literacy
Total scores of health behavior for preventing obesity in Thai childhood (Total 100 pts)	
<60 pts or <60% of the total score	Low obese preventing behavior
61 to 79.99 pts or ≥60% to <80% of the total score	A fair obese preventing behavior
80 to 100 pts or ≥80% of the total score	High obese preventing behavior