

CHAPTER IV

DATA EXERCISE

Observation of case management of acute diarrhea in a child and attitudinal survey of part-time private physicians

4.1. Introduction

This chapter presents the results of a data exercise to test data collection instruments designed for the study. There are two types of data collection instruments. (1) Observation checklist and (2) self-administered questionnaires are used. The observation checklist was developed on the basis of WHO standard treatment guideline. Self-administered for studying attitude towards elements included in WHO standard treatment guideline was also developed using Likert scale format.

4.2. Objectives of data exercise

- 4.1.1. To implement the pretest of the data collecting instruments.
- 4.1.2. To achieve the skill and familiarity with data analysis.

4.3. Data collection methods and instruments

Two types of data collection methods were employed to measure the variables. Observation using an observation checklist developed is to assess the performance of private physicians at their clinic when they are managing a case of childhood acute diarrhea. The checklist includes case history, clinical examination notes, diagnosis and treatment as well as counseling. Result from observation will be compared and score will be given to each case. The other instrument is self-

administered questionnaire to find out the physician perceived need of continuing learning experiences, and attitudes towards management of childhood diarrhea. Attitude is one of the important determinants that can influence behavior. Although it is not an absolute measure to predict the clinical decision for management behavior in practice, knowledge of attitude of physicians is helpful to assess their behavior.

4.4. Field activities

4.4.1. Observation on the management of acute diarrhea in a child

Observation on the management of acute diarrhea in primary health care setting was done in an outpatient clinic at Somdejprasunkaraj hospital, a public hospital, in Nakornluank District, Ayudtaya Province. Although the target population is private physicians, it was difficult to get access to private clinics in Thailand. Therefore a public setting was chosen because of easy accessibility to make trial of observation. Observation was done on the 24th of March, 1999. The clinic hour was from 8:00 a.m. to 12:00 a.m. before the lunch break and from 13:00 to 16:00 p.m. in the afternoon. It took 3 hours to wait for a case of childhood acute diarrhea to be observed.

4.4.2. Survey on attitudes of part-time private physicians towards management of childhood acute diarrhea

The survey was done in Bangkok. The sample was physicians who had private clinic experience. They were 11 physicians, 9 from Myanmar and 2 from Cambodia who were students attending the post-graduate course in Mahidol University and College of Public Health, Chulalongkorn University. Although they were public physicians, they also run private clinics in the out-of-office hours. They had very similar experience as exclusive private physicians did in the management of childhood acute diarrhea. The physicians were requested to give response for every statement and suggestions where necessary.

4.5. Findings

4.5.1. Findings of observation on the primary health care management of childhood acute diarrhea

The filled form of observation checklist used in data exercise was as follows.

Form. (1) No.

Observation checklist for diarrhea disease management in children under 5.

Name of observer. Win. Date. 24.3.99. Place. OPD clinic at Somdejprasunkaraj Hospital

Patient's age. 10 month old 2. Gender. Male 3. Chief complaint. Loose motion for three times 4. Duration of illness. One day 5. Clinical findings. Temperature 39.6 degree F, body weight 8.5 kg, BP normal, pulse rate 120/ minute, general condition normal and no obvious signs of dehydration

5. Diagnosis. Acute diarrhea **7. Treatment given.** ORS (Orida) 5 packets ad. Lib.

paracetamol syrup ¼ teaspoon p.r.n and 6 hourly, Norflex 75 mg b.d., tab diazepam 1 mg p.r.n.

Mark (✓) in the respective box when the physician perform the stated action and (X) when he doesn't. (*) to be filled out by researcher only.

No.	Items.	(✓) or (X)	Score*
1.	Rehydration therapy		1
	A. prescription of ORS	✓	
	B. prescription of fluid other than ORS	X	
	C. prescription of fluid not recommended by Diarrhea Project	X	
2.	Prescription of drugs		0
	A. prescription of antibiotics.	✓	
	B. prescription of symptomatic drugs.	✓	
3.	Dietary advice		1
	A. suspend all food	X	
	B. suspend solid food	X	
	C. stop milk feeding	X	
4.	Counseling to the mother/ caregiver		1
	A. giving information on the alarm signs for referral	✓	
	B. verification on understanding of mother/ caregiver	✓	
5.	Total score		3

To get the information of clinical management, the responsible physician was asked for the permission and help for observation. The physicians first took history of illness

from the mother of the patient and then examined the child and given treatment. The physicians wrote down the brief description of history, clinical findings, diagnosis and treatment in a patient record booklet. It was also observed and noted what she gave as dietary advice. And then the counseling behavior was also observed whether it agreed with the WHO guidelines.

A. Findings in the assessment of management with use of WHO guidelines

1. Rehydration therapy

The rehydration therapy employed in that case was found to be in line with WHO guideline. The ORS was provided with explanation how to make a solution and how much fluid to give everytime after passing a loose stool. There was no prescription of commercial fluid.

2. prescription of drugs

Antibiotic i.e. Norflex was prescribed. It was against WHO guidelines. Symptomatic drugs such as paracetamol syrup and diazepam were also given. Although the prescription of antipyretic drug, paracetamol was right according to WHO guideline, there was no obvious reason to give diazepam that can cause drowsiness in the child leading to difficulties for clinical assessment.

3. Dietary advice

There was no restriction of food. Therefore it agreed with WHO guideline.

4. counseling behavior

The physicians gave counseling to mother on the important conditions such as development of high fever, repeated vomiting, intense thirst, taking food poorly, increased frequency of loose motion containing large amount of watery stool and blood in the stool and illness more than three days that required consultations to medical center. The physician also rechecked understanding of the mother about the points counseled. Therefore counseling behavior was found to be in line with WHO guideline.

B. Scoring for observation checklist

Observation checklist was scored according to predetermined scoring format. Four essential items of primary health care management in childhood acute diarrhea were observed, and planned to give one mark for each item if the item performed had agreement with WHO standard guideline.

From the observation, it was found that out of four items, the rehydration therapy, dietary advice and counseling agreed with WHO guideline, but the drug prescribing did not agree. Thus resultant score is 3 out of 4.

4.5.2. Findings of attitudinal survey

Findings of attitudinal survey can be summarized into (1) general characteristics of the respondents (2) mean score for group of items. For calculation of attitudinal score, the following score system was applied.

For positive statement, strongly agree = 5, agree = 4, not sure = 3, disagree = 2, and strongly disagree = 1. For the negative statement scoring is reversed (Mueller, 1986).

(a). General characteristics of the respondents

Respondents were from varying age groups. Their age ranged from 30 to 52 with mean 39.8 (7.74). Female was minority making 28% of respondents. The year of graduation was also reflecting the wide range of age group. The youngest graduated 2 years ago. The oldest has graduated for 27 years. Average year of general practice is 12.6 year.

Table 4.1. General characteristics of physician participants in data exercise

(n= 11)

SD = standard deviation

Sr.	characteristics	(%)Number	Mean (SD)
1.	age	Range 30- 52	39.8 (7.74)
2.	gender		
	male	72% (8)	
	female	28% (3)	
3.	Year of graduation		
	1970s	27.5% (3)	
	1980s	45% (5)	
	1990s	27.5% (3)	
4.	Duration of practice	Range 2-26 years	12.6 (7.3.)

(b) Results of attitudinal questions

Attitudinal scores

To describe the attitudinal status, each item score was calculated according to scoring system. Then mean scores were made to interpret. Mean score for each item can be calculated as follows:

$$\text{Mean score for each item} = \frac{\text{Total score for the item}}{\text{Total number of respondents}}$$

Mean score range from 1 to 5. The score for not sure attitude was given as 3. If all the respondents answer not sure, the maximum mean score will be 3. Therefore it will be used as an arbitrary cut-off point to categorize as positive attitude when item mean is > 3 . According to scoring system, agree for negative statement and disagree for positive statement were given 2. If everybody response is 2, maximum mean will be 2. So mean score ≤ 2 can be interpreted as negative attitude. Then categories will be as follows.

- (1) Positive attitude = mean attitude score > 3
- (2) Not sure attitude = mean attitude score > 2 to ≤ 3
- (3) Negative attitude = mean attitude score ≤ 2

Grouping of items

The statements of attitude are grouped into 5: (1) general attitudes towards disease problem, (2) attitudes towards use of ORS, (3) attitudes towards use of drug (4) attitudes towards dietary management and (5) attitudes towards counseling.

1. General attitudes towards disease problem of childhood acute diarrhea

There were 4 statements that queried about general attitudes towards disease problem of childhood acute diarrhea. Those were statements 13, 14, 17, and 18. Statement 13 asks about perception on the severity of the illness. Mean score for this statement is 4.45 indicating that most respondents are aware of the severity of illness.

Statement 18 is for attitude on cause of failure of treatment. It states that mothers are responsible for the failure. The resultant score is 4.27. It denotes most respondents are aware of mother's failure to follow advice in treating childhood diarrhea. Except statement 17, the rest showed positive attitude.

The item 17 investigates the attitude about the statement "the failure in the treatment of childhood diarrhea is due to failure of mother to follow the advice of physician."

2. Attitudes towards use of ORS

Four statements were also used to find out the attitudes of the respondents in concern with use of ORS in the management of acute diarrhea. Those were statements 1, 2, 3, and 4. The statement 2 and 4 showed the positive attitudes but the statement 1 and 3 gave negative attitudes score.

Statement 1 asks about attitude on children's acceptability of taste of ORS produced by the government usually in formula recommended by WHO. Mean score for the statement is 2.36 indicating that it is in the range of unsure attitude.

Statement 2 asks about the perception on the acceptability of government ORS by mother. Mean score is 4.18. It reflects that most respondents believe mother will accept ORS very well.

Statement 3 asks about the perception on the mother acceptability of commercial ORS. The mean score is 2. It indicates that mother also likely to accept commercial ORS when it is given.

Statement 4 asks about the attitude on use of homemade, food-based fluid. It attains mean score 4.54 indicating that most respondents agree the statement.

3. Attitudes towards use of drugs

There were 6 statements on which the attitudes towards use of drugs including antibiotics and adsorbent drugs were queried. Those were statement 5, 6, 15, 16 for antibiotics and statement 7 and 8 for use of adsorbent drugs. Attitudes towards antibiotics use demonstrated positive attitudes with mean score 3.65. For use of adsorbent drugs it showed 3.4. Therefore both attitudes towards use of antibiotics and adsorbents were found to be positive indicating that most respondents had idea to use antibiotics and adsorbents rationally.

4. attitudes towards dietary advice

Two statements constituted to make an attitude towards dietary advice. Those were statements 9 and 10. The mean score was 4.48 indicating that most respondents strongly agreed to continue feeding in children complaining of diarrhea.

5. attitudes towards counseling

It was also made up of 2 statements; statement 11 and 12. The findings indicated the positive attitudes with mean 3.8. It reflected that most respondents agreed the importance of counseling to mother about further management of the child. Following table summarized the findings of attitudes score of the group of items.

Table 4.2. Attitude score of respondents towards group of items

Sr.	Group of items	Mean
1.	General attitudes towards disease problem	3.65
2.	Attitudes towards use of ORS	3.26
3.	Attitudes towards use of drugs	3.65
4.	Attitudes towards dietary advice	4.48
5.	Attitudes towards counseling	3.81

Total score for each respondent

Total score for each respondent can be obtained by summation of scores for all the items for each. It may range from 18 to 90 for 18 items because lowest score may be 1×18 and highest score is 5×18 .

Mean score for each respondent

To achieve mean score for each respondent total score must be divided by 18. Mean scores for respondents are more than 3 indicating that generally every respondent favors all the statements in the questionnaire.

Overall mean score for all the respondents

Overall mean score for whole group was 3.8 (0.29) reflecting positive attitude and few variation in the distribution of the score among respondents.

4.6. Discussion

Data exercise was done primarily to fulfill the objectives of making trial of data collection instruments how they work in field conditions. It was also meant to make revision and modification of the contents, structure and format of the questionnaire where indicated. The other objective is to get some extent of acquaintance with data analysis.

Observation on the primary health care management of acute diarrhea in a child under-5 was described by using filled form (1). Among four essential elements of management, the performance of the physician agreed with WHO guidelines in rehydration therapy, dietary advice and counseling. But the physicians prescribed antibiotics. It disagreed with WHO guideline. Therefore, the resultant score for the performance of the physicians became 3 out of 4. The reason for giving antibiotics may be due to early precaution for prevention of systemic infection.

From attitudinal survey, the finding were summarized using mean score for each item and group of items, and mean score for each respondents. Overall mean score for whole group was also calculated. Means score for items were grouped into positive attitude, not sure and negative attitude. Although all the mean score for group of items demonstrated positive attitude, several items showed negative attitude and not sure attitude.

Negative attitude item is statement 3 regarding use of commercial ORS. Most respondent agrees with the statement saying, “mothers of children suffering from diarrhea accept use of other good tasted commercial ORS” with resultant mean score 2. It reflects the perceived expectation of mother for commercial ORS and increased tendency of physicians to use those commercial ORS.

There are four items under not sure attitude group. These are statement 1, statement 7, statement 11 and statement 16. Statement 1 is about taste of ORS produced by government saying, “ORS produced by the government doesn’t make good taste for the children” with resultant mean score 2.36.

The statement 7 investigates physician opinion on satisfaction of families with use of adsorbent drugs in their children suffering from diarrhea. It stated “use of adsorbent drugs can promote satisfaction of families of children suffering from diarrhea” with resultant mean score 2.63.

The statement 16 is about patient satisfaction with use of antibiotics. The score of 2.54 indicates that physician might prescribe antibiotics in anticipation of satisfying his patient demand.

4.7. Lessons learnt from data exercise

From data exercise, it was found that observation alone was not adequate to achieve all the information on the performance of the physician. To achieve complete information on clinical management, questioning to the physician and review of

patient record has to be combined with observation especially for the information on clinical findings and drug prescribing.

From attitudinal survey, every respondent can understand statements except adsorbent drug in statement 7. Some respondents have to be explained. They do not know that kaolin compound is classified as adsorbent. Therefore the example of adsorbent such as kaolin compounds should be described.

Lessons learnt from data exercise using attitudinal questionnaire is also useful for designing educational package. Statements showing negative or not sure attitude score should be addressed with particular attention to change towards positive attitude.

Reference

Mueller, D. (1986). *Measuring social attitudes: A handbook for researchers and practitioners*. New York: Teachers College Press.