

ETHICAL REVIEW COMMITTEE, ICDDR, B.

220

Principal Investigator: DR. A.K. MAJUMDER  
Application No. PCC/008/90  
Title of Study HEALTH BEHAVIOUR AND PRACTICE IN A RURAL COMMUNITY IN BANGLADESH

Trainee Investigator (if any) \_\_\_\_\_  
Supporting Agency (if Non-ICDDR, B) \_\_\_\_\_  
Project status:  
( ) New Study  
( ) Continuation with change  
( ) No change (do not fill out rest of form)

Give the appropriate answer to each of the following (If Not Applicable write NA).

- Source of Population:
- (a) Ill subjects Yes  No
  - (b) Non-ill subjects Yes  No
  - (c) Minors or persons under guardianship Yes  No
- Does the study involve:
- (a) Physical risks to the subjects Yes  No
  - (b) Social Risks Yes  No
  - (c) Psychological risks to subjects Yes  No
  - (d) Discomfort to subjects Yes  No
  - (e) Invasion of privacy Yes  No
  - (f) Disclosure of information damaging to subject or others Yes  No
- Does the study involve:
- (a) Use of records; (hospital, medical, death, birth or other) Yes  No
  - (b) Use of fetal tissue or abortus Yes  No
  - (c) Use of organs or body fluids Yes  No
- Are subjects clearly informed about:
- (a) Nature and purposes of study Yes  No
  - (b) Procedures to be followed including alternatives used Yes  No  N.A.
  - (c) Physical risks Yes  No  N.A.
  - (d) Sensitive questions Yes  No  N.A.
  - (e) Benefits to be derived Yes  No
  - (f) Right to refuse to participate or to withdraw from study Yes  No
  - (g) Confidential handling of data Yes  No
  - (h) Compensation &/or treatment where there are risks or privacy is involved in any particular procedure Yes  No

- 5. Will signed consent form be required:
    - (a) From subjects Yes  No
    - (b) From parent or guardian (if subjects are minors) Yes  No  N.A.
  - 6. Will precautions be taken to protect anonymity of subjects Yes  No
  - 7. Check documents being submitted herewith to Committee:
    - Umbrella proposal - Initially submit an overview (all other requirements will be submitted with individual studies).
    - Protocol (Required)
    - Abstract Summary (Required)
    - Statement given or read to subjects on nature of study, risks, types of questions to be asked, and right to refuse to participate or withdraw (Required)
    - Informed consent form for subjects
    - Informed consent form for parent or guardian
    - Procedure for maintaining confidentiality
    - Questionnaire or interview schedule \*
- \* If the final instrument is not completed prior to review, the following information should be included in the abstract summary:
1. A description of the areas to be covered in the questionnaire or interview which could be considered either sensitive or which would constitute an invasion of privacy.
  2. Examples of the type of specific questions to be asked in the sensitive areas.
  3. An indication as to when the questionnaire will be presented to the Cttee. for review.

Free to obtain approval of the Ethical Review Committee for any changes affecting the rights and welfare of subjects before making such change.

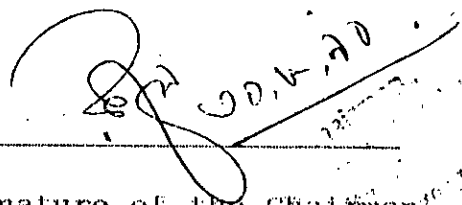
A.K. Majumder  
Principal Investigator

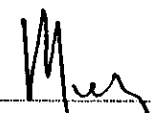
\_\_\_\_\_  
Trainee

REF  
WA 320.JB2  
M939h  
1990

SECTION I: RESEARCH PROTOCOL

1. Title : Health Behaviour and practice in a rural community in Bangladesh
2. Principal Investigators : 1. Dr. Abul Kashem Majumder  
Associate Professor  
Department of Statistics  
University of Chittagong  
Chittagong
2. Dr. S.M. Shafiqul Islam  
Associate Professor  
Department of Statistics  
University of Chittagong  
Chittagong
3. Co-Investigator : Dr. Abbas Bhuiya  
Associate Scientist  
ICDDR,B, Dhaka
4. Starting Date : November 1, 1990
5. Completion Date : ~~June~~ August 31, 1991
6. Total Direct Cost : Taka 4,72,000
7. Scientific Program Head :

  
Signature of the Chairman  
Department of Statistics  
University of Chittagong

 5 Sept 90  
Signature of the Associate  
Director, PSED, ICDDR,B

Date: -----

Date: -----

## 8. Abstract Summary

Studies linking between socio-economic and demographic factors in one hand and child survival in developing countries on the other are numerous. However, our knowledge as to the precise mechanisms through which these factors influence child survival is still very poor. One of the suggested pathways of this influence is through what has been termed as 'personal illness control' in the literature. This refers to various curative as well as preventive health measures taken by individuals or families as for recovery or as an initiation to better health. The present study will be an attempt to investigate several curative and preventive child health measures utilized by the families to which children belong or by the parents' (particularly, mother) responsible for the wellbeing of the children. The specific interest is on identification of the socio-cultural and behavioural factors that could explain the differentials in child health measures. The study will be conducted in a rural community of Hathazari Upazilla under Chittagong district. Both quantitative and qualitative approaches will be adopted for data analysis, which is expected to result in an in-depth understanding of the society and its health behaviour.

## SECTION II: RESEARCH PLAN

### A. Introduction:

#### (a) Objectives of the Study

The major objective of the proposed study is to have a clear understanding of selected cultural, socio-economic and behavioural factors on health (thus on mortality) of children under five years of age in Bangladesh. However, the specific set of objectives are as follows:

- (i) to investigate mother's knowledge on childhood immunization and diarrhoeal disease,
- (ii) to determine the levels and to examine the differentials in childhood immunization by various socio-economic, cultural and demographic characteristics,
- (iii) to identify the reasons for not immunizing children,
- (iv) to investigate the types and incidence of sickness among children under five years (also among the household members), the role and treatment-seeking behaviour of the mother during sickness of her offspring,
- (v) to study household sanitation facilities, and also personal hygiene practice by mothers,
- (vi) to investigate the extent of contraceptive and lactational behaviour and the extent of pre and post natal care.

## (b) Background Information

During the last decade, differential mortality, particularly that of infant and child mortality, have been extensively studied in a wide range of socio-economic and demographic settings in developing countries. But such studies of mortality differentials do not provide any direct information about the mechanism through which social, cultural and economic characteristics of individuals and families exercise their influence on the survival of children and others (Ruzicka and Kane, 1989). For example, a finding that has almost invariably been found to appear in data from developing countries is that there exists a strong relationship between mother's education and infant or child survival; the higher the educational level of the mother, the higher the survival probability of her offspring. Though this differential pattern of child loss experience by mother's education is not attributable to the socio-economic status or the living standard of the families to which children belong has been clearly established a decade ago (Caldwell, 1979), our understanding of the mechanisms of the influence until now remains very poor. Part of the reason lies in the complexity of the subject matter; detailed studies of household behaviour which need to be the key part of any research design are not easy to conduct (Cleland and Ginneken, 1987:21).

As indicated, since traditional demographic analyses fail to

explain how socio-economic status or education affects child health or mortality, as an attempt to fill this gap, Mosley and Chen (1984) have suggested a framework for the study of child survival in the developing countries. The framework claims that all socio-economic factors operate through a set of proximate determinants which directly influence the risk of mortality and morbidity and thus determine the health of a community. The authors identify 14 such proximate determinants categorized under five major headings- Maternal factors, Environmental contamination, Nutrient deficiency, Injury and Personal illness control. The first four groups of the set influence the rate of shift of healthy individuals toward sickness, whereas personal illness control influences both the rate of illness (through prevention) and the rate of recovery (through treatment) (Mosley and Chen, 1984:26-28). Because of the varieties and large volume of data needed, it is highly unlikely that a single study could be designed to examine these suggested pathways of the influence. Thus the present proposed study will consider the last proximate determinant, i.e. personal illness control, which incorporates several preventive as well as curative health measures taken by individuals and families.

Diarrhoea, diphtheria, pertussis, tetanus, polio, measles and tuberculosis are among the leading causes of death among children under five years of age in developing countries. Available estimates for the year 1987 reveal that diarrhoeal disease accounts for about 5 million, measles for 1.9 million, acute

respiratory infection for 2.9 million, tetanus for 0.8 million, and other diseases for another 2.4 million deaths in the developing world (UNICEF, 1988:3). It is assumed that about 70 per cent of these children could have been saved through preventive vaccines and proper health campaign at a low cost that any developing country can afford. Because of this grave situation in the developing countries, WHO and UNICEF, as part of their 'global strategy for health for all by the year 2000', have jointly undertaken an Extended program of Immunization (EPI) designed to achieve universal immunization against six important vaccine preventable diseases, such as, diphtheria, pertussis, tetanus, polio, measles and tuberculosis in late 1970s. During 1980s, immunization coverage of these diseases has extended its reach from less than 10 per cent to approximately 50 per cent of the developing world (UNICEF, 1988:5).

However, in Bangladesh where more than one-fifth of the children die before reaching age five years, immunization services are still at a very low level. Government estimates show that by mid-1986, only 2-3 per cent children were immunized against diphtheria, whooping cough, tetanus and polio; the percentage coverage of BCG vaccine among children under 15 years of age was 63 and finally, the distribution of Oral Rehydration Salt (ORS) for the control of diarrhoeal diseases covered only 56 per cent of the country (Govt. of Bangladesh, 1989). Such figures are undoubtedly among the lowest compared to other developing countries.

The low level of the coverage or acceptance of immunization may be associated with a variety of factors, for example, accessibility to and concentration of health care centers, parents' knowledge about and availability of immunization, household income and education. A few recent studies based on Matlab data in Bangladesh as well as in other countries throw some insights into the issue. One micro study in Matlab shows that the level of immunization among children under five years are strongly related to the education of mother, who is primarily responsible for child health care. Children born to mothers having primary education or more were more likely to be immunized against measles, polio, DPT and BCG (Chakraborty, 1987). Similar observations appear for Thailand (Wilairat, 1987) and for Indonesia (Streatfield et al., 1986). Another in-depth study in Matlab shows a better personal hygiene practices among educated mothers than among mothers having no education. Irrespective of their social status, educated mothers were more likely to wash their hands after defecation, more aware of the hazards of drinking unboiled surface water and more likely to warm food left overnight before eating or serving again (Bhuiya, 1989). Data from Teknaf, another rural community in Bangladesh suggest that distance of the treatment center from home plays an important role in not treating children attacked with diarrhoeal disease even with free treatment facilities (Rahman and D'Souza, 1981).

Though the above cited studies in Bangladesh, to some extent



contributes to our current knowledge regarding various behavioural and preventive child-health measures, they are by no means adequate in this new field of demographic research. For example, examination of the level of immunization by various socio-economic variables in Chakraborty's (1987) study show little about the relative importance of the factors involved. Apart from this, the uniqueness of Matlab from the rest of the country regarding selected health provisions makes it even more difficult to generalize any findings. Being a field station of ICDDR,B, established in 1966 primarily for diarrhoeal disease treatment, Matlab has undergone through several health intervention programs during the last two decades. In 1978, ICDDR,B has set up an integrated village based maternal-child health and family planning program in about 70 villages of Matlab. Later, the program started offering other selected health services, e.g., immunization for children, oral therapy for diarrhoeal treatment, tetanus vaccine for pregnant women, nutrition education for mothers. The strong grass-root level health worker base of ICDDR,B has made house to house free services of immunization, ORS and contraception distribution possible. These unique characteristics of Matlab thus suggest to carry out similar or even more in-depth studies in other parts of the country.

### (c) Rationale of the Study

The necessity of the models linking between socio-economic and cultural behaviour in one hand and child health on the other has recently been increasingly felt by the social scientists. The proposed study is an attempt to identify some of the possible routes of this link, the relevance is obviously undeniable for formulating a better child health care planning in our society.

### B. METHODS

The study will be carried out in Fatehpur Union, a rural community of about 9 sq. miles under Hathazari Upazilla of Chittagong district. Fatehpur Union, divided into 3 wards of varying sizes, has currently an estimated population of 22 thousands. According to information from the Union Family Welfare Center, there are about 2,600 registered eligible couples aged 15-49 years residing in the Union.

Using the frame available at the Union Family Welfare Center, at the first stage, the study plans to draw a random sample of about 1000 couples with probability proportional to ward size. A household questionnaire will then be administered to households of the selected couples, where the respondents will be the household heads. The household questionnaire will collect information mainly on: age and sex of each household member,

household, income, land ownership, types of dwellings, drinking water and sanitation facilities, incidence and types of sickness among household members in a period of one or two weeks before the survey and also types of treatment used during sickness.

The household survey will identify all sampled couples having at least one living child under three years of age. It is expected that there will be about 800 couples satisfying this criterion. At the second stage, an individual questionnaire will be administered to the identified mothers with at least one living child under five years of age. An in-depth interview will then be carried out to collect information on: knowledge, attitude and practice of childhood immunization as well as of diarrhoeal disease, knowledge about the causes of selected childhood diseases, respondent's status in the family and her role in decision making in the household particularly during sickness of the children, practice of personal hygiene, breastfeeding and contraception.

Both univariate and multivariate techniques will be employed for data analysis. In order to explain the quantitative results, the study also plans to have informal interviews with village leaders, local health workers, doctors, nurses, family welfare visitors, members and chairman of the Union Parishad on various health and other related issues. Apart from this, time to time visits to the study area will be made by both the principal investigators to have an insight into the societal, cultural and

health behaviour of the community.

**C. Collaborative Arrangements**

The study will be a collaborative study between the Department of Statistics, University of Chittagong, Chittagong, and ICDDR,B, Dhaka.

**SECTION III: BUDGET**

**Personnel Services:**

Name	% Effort	No. of Months	Monthly Rate (Taka)	Budget Reqd. (Taka)
a) Dr. Abul Kashem Majumder	25	10	5,000	50,000
b) Dr. S.M. Shafiqul Islam	25	10	5,000	50,000
c) Dr. Abbas Uddin Bhuiya	5	10	-----	-----
d) 1 Research Assistant (To be recruited)	100	10	4,000	40,000
e) 6 Field Investigators (To be recruited)	100	5	3,500	105,000
f) 4 Coding Assistants (To be recruited)	100	4	3,500	56,000
g) 2 Data Entry Technicians	100	2	3,500	14,000
Sub-total:				315,000

**Computer Services** ----- 60,000

**Transport and Conveyance:**

10 trips Ctg-Dhaka-Ctg including per diem Tk. 200	---	30,000
2 trips Dhaka-Ctg-Dhaka including per diem Tk. 200	---	10,000
20 trips to the field by principal investigators	---	2,000
Conveyance allowance for field investigators and research assistant (field supervisor)	---	25,000
Sub-total:		67,000

**Others:**

Pretesting and printing questionnaires		15,000
Computer disketts, stationary etc.		15,000
Sub-total:		30,000

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**Grand Total:** 4,72,000

**SUMMARY BUDGET**

Salary/Honorarium	Tk. 315,000
Computer Services	Tk. 60,000
Transport & Conveyance	Tk. 67,000
Others	Tk. 30,000

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Total Direct Cost: Tk. 4,72,000

## REFERENCES

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2. Caldwell, J.C. 1979. 'Education as a factor of mortality decline: An explanation of Nigerian data', Population Studies, 33, pp. 395-413
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8. Ruzicka, Lado and P. Kane. 1989. 'Health transition: The course of morbidity and mortality', Paper presented at the Health Transition Workshop on Cultural, Social and Behavioural Determinants of Health: What is the Evidence?, May 15-19, Australian National University, Canberra
9. Streatfield, K., M. Singarimbun and I. Singarimbun. 1986. 'The impact of maternal education on the use of child immunization and other health services', Research Note on Child Survival, No. 8CS, IPDP, ANU: Canberra
10. United Nations Children's Fund (UNICEF). 1988. The State of the World's Children 1988. Oxford University Press, New York
11. Wilairat, Sirimon. 1987. Maternal Education and Child Health in Thailand. MA Thesis. ANU: Canberra

ANNEX A: HOUSEHOLD QUESTIONNAIRE (DRAFT)

Identification

Sample No. ----- Ward No. ----- Village name -----

Household No. (HH No.) -----

Name of household head -----

Main occupation of household head -----

Religion of the HH -----

Household Information (HH head is the respondent)

1. Ask the following for each HH member beginning with the head of the HH:

Line No.	Name	Relationship to HH head	Sex (M/F)	Age/Date of birth	Marital status
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					





9. Do you have toilet facilities in the household? (please tick)

Yes                      No (skip to Q. 10)

|  
|  
What type toilet facilities do you have?

- (a) Sanitary
- (b) Other (specify) .....

10. Has any member in the household been sick during the last fortnight?  
(please tick)

Yes                      No

|  
|  
(a) What type of sickness he/she/they had? Specify .....

(b) What type of treatment have you sought for the sickness?  
(please tick)

- Alopathy
- Homoeopathy
- Kabiraji/Hakemi
- No Treatment
- Other (specify) .....



7. Now, I would like to ask about all of your children including those who have died or living elsewhere, beginning with the first.

Order	Name	Sex (M/ F)	Date of birth/ Current age Yr ___ Mon ___	Alive (A)/	If dead, age
				Dead (D)	at death Yr ___ Mon ___
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					

**Section B: Knowledge and Practice of Immunization**

8. Have you or your children ever been given cholera vaccine?  X  
(please tick)

Yes  No

9. Have you ever heard of any vaccine (pratisedak tika) which prevents disease among children? (please tick)

Yes  No (skip to Q. 10)

From which of the following sources have you heard about immunization for the first time? (please tick)

- (a) Qualified doctor/Nurse
- (b) Quack
- (c) Local health/family planning/EPI worker
- (d) Traditional midwife or Dai
- (e) Union parishad chairman or member
- (f) Husband/relatives
- (g) Radio/TV/Newspaper/Poster
- (h) Neighbour
- (j) Other (specify) .....

10. Now, I would like to ask you about the following kinds of immunizations (pratisedak tika)

Types of Immunization

	Measles	BCG	DPT	Polio	TT
Ever heard of					
Prevent what disease					
How many dose of a vaccine is needed					
At what ages (months)					

11. Which of the following diseases you consider dangerous for children? (please tick)

Disease	Dangerous	Not dangerous	Don't know
Tetanus			
Tuberculosis			
Whooping cough			
Diphtheria			
Measles			
Polio			

12. Did your last child or penultimate child suffer from any of the following diseases? (please tick)

Disease	Last child	Penultimate child
Tetanus		
Tuberculosis		
Whooping cough		
Diphtheria		
Measles		
Polio		

13. Have your last child and penultimate child (if any) been immunized?  
(please tick)

Child	Yes	No
Last		
Penultimate		

(If any one is immunized, ask Q. 14; if, no one is immunized, ask Q. 15)

14. Where did you get your child/children immunized?

Child	Hospital/ Clinic	Local Immuniza- tion camp	Home	Other (specify)
Last				
Penultimate				

(Now, skip to Q. 16)

15. Why didn't you get your child/children immunized? (please tick)

Reason	Last child	Penultimate child
Non-availability of Immunizations		
Health center/clinic too far		
Immunization camp too far		
Health worker did not tell		
Do not think them necessary		
Did not know at all		
Knew but could not afford		
Objection from any member of the family		
Child died before reaching the right ages of immunization		
None of the above		









29. Whose decision in your family gets priority in the treatment of children? (please tick)

- (a) Self
- (b) Husband
- (c) Mother-in-law/Father-in-law
- (d) Other (specify) .....

30. What type of treatment do you usually seek for the treatment of your child/children? (please tick)

- (a) Allopathic
- (b) Homoeopathic
- (c) Kabiraji/Hakemi
- (d) Other (specify) .....

31. Which of the following types of treatment you personally prefer for your child/children? (please tick)

- (a) Allopathic
- (b) Homoeopathic
- (c) Kabiraji/Hakemi
- (d) None of these

32. Why do you prefer ..... (mention the answer in Q. 31) type of treatment? (please tick)

- (a) Less expensive
- (b) better than any others
- (c) No side effects
- (d) easily available
- (e) Other (specify) .....

**Section B: Personal Hygiene Practice**

33. What is the source of drinking water for your last and penultimate (if any) children? (please tick)

Source	Last	Penultimate
Tap/Pipe water		
Tubewell		
Boiled/Purified water		
Other (specify) .....		

4. Do you usually warm food left overnight before you serve it to your last and penultimate children (if any)?  
(please tick)

	Last child	Penultimate child
Yes		
No		

5. What do you usually use for washing cooking utensils and dishes?  
(please tick)

- (a) Soap/Detergent
- (b) Ash
- (c) Sand
- (d) Other (specify) \_\_\_\_\_

6. Do you wash your hands with soap before you serve food to your children? (please tick)

- (a) Always
- (b) Not always but often
- (c) Sometimes
- (d) Not at all

7. Do you wash your hands with soap/detergent after defecation?  
(please tick)

- (a) Always
- (b) Not always but often
- (c) Sometimes
- (d) Not at all

8. Do you wash your hands with soap/detergent when you clean your child/children after defecation? (please tick)

- (a) Always
- (b) Not always but often
- (c) Sometimes
- (d) Not at all



43. Did you get anti-natal care during your last/recent pregnancy?

Yes

No (skip to Q. 44)

By whom did you get anti-natal care? From where?  
(please tick)

Whome:

From where:

(a) Doctor/Nurse

(a)

(b) Health/F.P. worker

(b)

(c) Trained birth attendant

(c)

(d) Other (specify) .....

44. During your last/recent pregnancy, did you take TT vaccine?  
(please tick)

Yes

No

Can't remember

How many times did you take the vaccine? ..... times

Who did administer the vaccine? (please tick)

(a) Doctor/Nurse

(b) Health/F.P. worker

(c) Trained birth attendant

(d) Other (specify) .....

45. Where did you have your last birth/delivery? (please tick)

Home

Hospital/Clinic

Who did attend the birth? (please tick)

(a) Doctor/ Nurse

(b) Trained birth attendant

(c) Local midwife

(d) Relative

(e) Other (specify) .....

[Interviewer, please thank the respondent for her co-operation and finish the interview]

Interviewed by ..... Date .....

Supervised by ..... Date .....

Coded by ..... Date .....

Conceptual framework for the research proposal: "Health behaviour and practice in a rural community in Bangladesh"

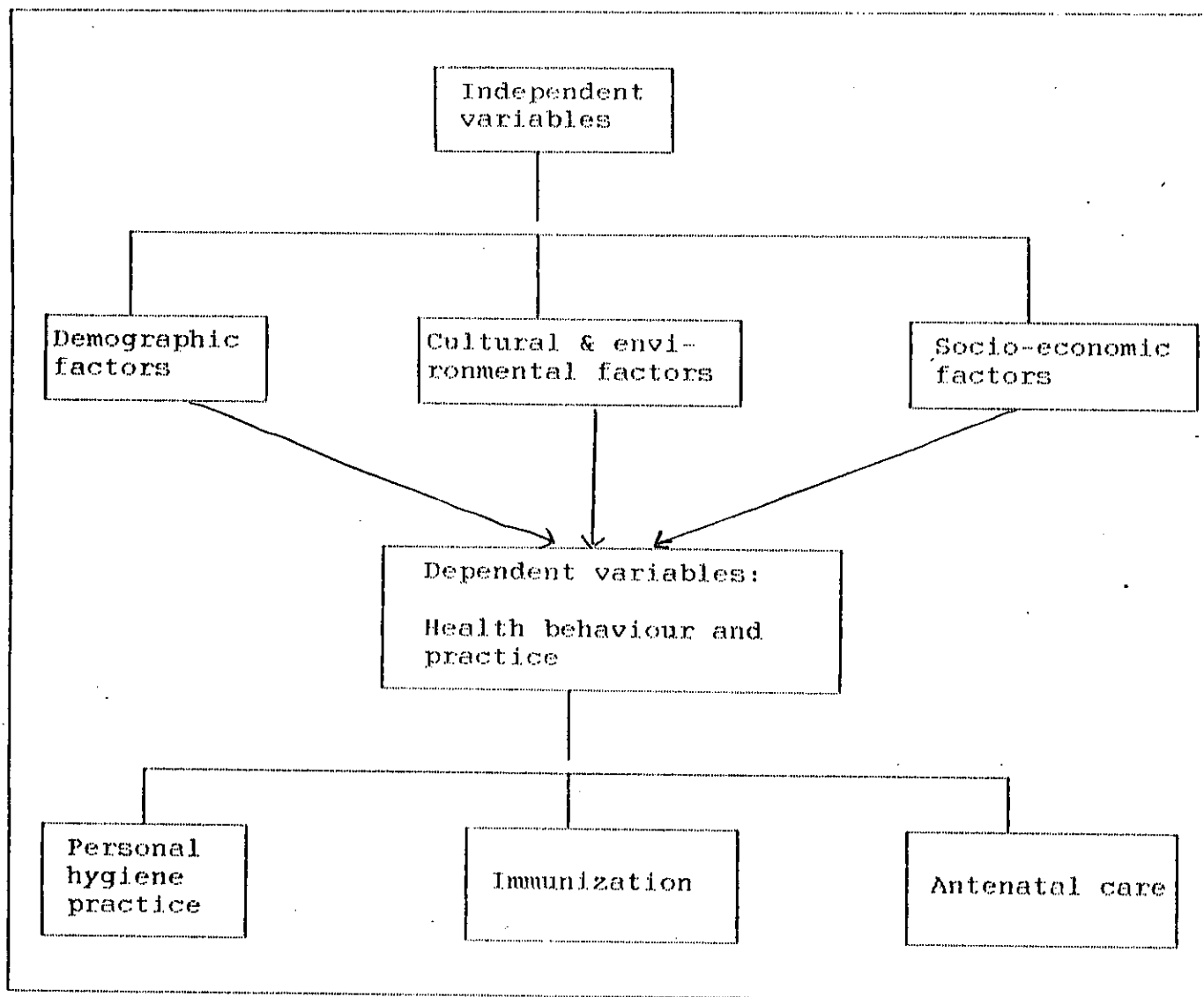


Figure: A conceptual framework for analyzing health behaviour and practice

**Work Schedule of the study**

- (a) Recruitment of Research Assistant and Field Investigators and their training : 15 days
- (b) Pretesting and actual field work : 4 months and 15 days
- (c) Coding and data entry : 4 months [2 months overlapping with item (b)]
- (d) Analysis and report writing : 3 months

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Total duration : 10 months

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