Correlates of Health Among Maranaos of Lanao del Sur: an Executive Summary

Segundina T. Sarangani
Teresita I. Taberdo

The authors began with the notion that something new and exciting would be found in the study of health among the Maranaos of Lanao del Sur, one among the 13 Muslim groups on Mindanao and neighboring islands. They made the study, but realized that while this landlocked province was culturally unique, its trends on health were very much like those of other places, as far as information access, education and economics were concerned.

They came to the conclusion that access was a vital factor for a healthy community: those who had access to information on health and who, in fact, could avail of the services and facilities it entailed would be able to muster good health. Also important to note was the ability to process such information, which was dependent on certain acquired skills. Meanwhile, in the absence of modern information on health, those who

claimed to know about it (the traditional and local healers, known as *pamomolong* and *panday*) would continue to dispense this vital service, even to the point of outshining medical doctors in popularity.

But education and economics would also have much role to play. The more educated – or informed – and the moneyed or better-placed families would bask in the best of health even in a far-flung village in Lanao del Sur. That this would be the case was understandable. It would take some measure of acquired knowledge to perceive the world much more keenly. It would also pay to have money to be able to buy not only the material things but also comfort and convenience of life. Thus, in the remote villages, malnourished children would continue to be a monopoly of the poor and disadvantaged families, usually those who lived by farming and fishing. Many of their children would be likely to catch diseases of various kinds, and for the unlucky ones, they eventually would die and form part of government statistics.

Speaking of how policy can enter into the picture, a few suggestions are in order. Formal education has demonstrated its power among mothers to acquire the needed information and use it to advantage. From that, we can perhaps learn that by training parents, especially the mothers, on such components as proper nutrition, housekeeping and management, basic child care, and family planning, they may be induced to do a bit more for their own families. If the government lacks manpower and resources to penetrate the hinterlands, why not train the local healers to do some of the job? Or else, spot who among the community wield power and influence, such as the religious leaders (*imam, ustadz*). Make them realize the importance of a health program and through them spread the good tidings to the community, hoping to infect the rest. These suggestions are no doubt easier said than done, but a committed extension program will have to go all out to reach a larger audience.

Introduction

The province of Lanao del Sur, on the highlands of central Mindanao, may be described as largely "rural" in health practices. It has one of the highest infant mortality rates (over 100), and a leading province in the occurrence of some ailments, such as respiratory diseases. Home to close to a million Maranao Muslims, Lanao is largely rural and geographically isolated. Landlocked in the interior, it is bounded by the provinces of Lanao del Norte, Cotabato and Bukidnon.

Although the Maranao are now generally exposed to education and modern amenities of life, many among those from the rural and remote sections of the province are still mired in poverty, disease and ignorance. One might say, therefore, that such are among the afflictions of the contemporary Maranaos, the lake-dwelling inhabitants. Eradicating these ills is now a growing concern that has echoed from the halls of government chambers down to the barangay level. "Health for all" is a recent slogan amid this emergent consciousness, whose source is the Department of Health. As a manifestation of such concern, Lanao del Sur has become a recipient province since 1988 – one of the three on Mindanao – of a nationwide program for children and mothers under the auspices of the UNICEF.

Yet, behind this growing public interest in health is the glaring observation – or plea – that much is yet to be done in the countryside. In Lanao del Sur, as in others, the delivery of basic health services outside the city has remained wanting. People adhere to their traditional practices of health that are now anachronistic with the concepts of medical science. The population grows rapidly and yet the mortality rate due to natural causes remains at high level. Hence, the old cycle is back on its feet once again. What are these anomalies happening?

The present study seeks answer to – and hopes to propose solutions for – these quandaries.

Objectives

This study is an attempt to describe the health situation and its correlates among the Maranao of Lanao del Sur and Marawi City. More specifically, it:

- characterizes the family, community and other social aspects of health, and determine the level of health facilities available to these mothers

- describes the personal attributes of mothers relative to their health beliefs and practices.

- suggests policy options, based on the data, for improving the health situation in the province.

This study draws data on knowledge, attributes and behaviors related to health from a sample of 411 Maranao mothers who have been randomly selected through a three-stage probability sampling technique. These mothers reside in widely dispersed 21 barangays representing 10 towns and the city of Marawi. The data collection technique used for this study were of three types:

- ocular survey which measured the characteristics of the community in terms of housing, sanitation and availability of some basic facilities;

- sample social survey which interviewed the mothers using a pre-tested interview schedule; and

- in-depth interview with 36 traditional healers (*pamomolong, panday*) in the area.

Trained interviewers personally visited and talked to these mothers from August to October 1993, dutifully collecting information with the use of an interview schedule. They also made an ocular survey of the research sites and recorded data using a checklist. The data were then

decoded and analyzed at Mindanao State University through a computer program.

Findings

On the sample Barangays

For comparative analysis, the sample barangays were divided into four groups: Marawi City (I), those close to Marawi City (II), those a little far from it (III), and those which are farthest (IV). Also, data pertaining to the respondents were categorized to facilitate analysis and interpretation.

Here are some hard facts that may help illuminate the situation of health in Lanao del Sur.

↘The houses where the Maranaos live are mostly made up of strong materials (GI and wood), but are poorly ventilated. They have only one to two rooms and windows (Table 3.1)

↘Many Maranaos still use the water from Lake Lanao for drinking and cooking, just as they bathe from it or use it for religious ablution.

↘Sewerage and waste disposal are absent. Sanitary toilets are mostly those open pit, which only exist in the poblacions or in the city.

↘Electricity is dead or absent in most towns around the lake area. Yet, Lake Lanao is the main source of Mindanao's cheap hydroelectric power.

↘Public transport, although available, is inadequate. While the surveyed towns are serviced by public transport daily, they only make one round-trip a day.

↘Health services are available only in known centers; outside the city or poblacion, resident nurses or physicians are virtually non-existent.

Only three of the surveyed 21 barangays had drugstores (*boticas*).

On the Sample Mothers

↘Majority of the mothers are generally young (25-44 years) and plain housewives (32%) (Table 3.2)

↘They have low literacy level, adjudged from the absence or low educational attainment (elementary and high school), although about a fourth are college attenders. About a tenth have attended the local madrasah school (islamic). Their husbands have about the same level of educational achievements. Occupationally, about 40 percent of the mothers are gainfully employed.

↘They are sedentary and have lived most of their lives in Lanao, although a fourth had stayed in Marawi while others came from another place within the province.

↘To compensate perhaps for their relative isolation, about half listen to the radio daily for news and entertainment.

↘The family structure is basically extended and large. While the average number of children is four, a typical family accommodates an average of three other members, usually relatives.

Table 3.1 Housing and Community Services in Sample Barangays

	I	II	III	IV	TOTAL
A) **Structure of the House**					
I roofing, concrete walls	1	1	0	0	2
GI roofing, wooden walls	2	4	4	4	15
GI roofing, bamboo walls	0	1	1	1	3
Cogon/nipa, wooden walls	0	0	0	0	0
Cogon/nipa, bamboo walls	0	0	0	1	1
Cogon/nipa, cogon walls	0	0	0	0	0
B) **No. of Rooms**					
One room	0	2	5	2	9
Two rooms	2	3	1	2	8
Three or more rooms	1	1	0	2	4
C) **Type of Windows**					
3 or more windows	1	1	0	0	2
1-2 windows	2	5	5	4	16
none	0	0	2	1	3
D) **Source of Drinking Water**					
piped (direct to the house)	0	0	0	0	0
deep well (public)	1	0	2	1	5
deep well (private)	1	0	0	0	1
lake	1	3	5	3	9
shallow well (open)	0	3	0	1	4
others (river/spring)	0	1	0	1	2
E) **Type of Toilet**					
automatic flush	0	0	0	0	0
manual flush	1	0	0	0	1
close pit	1	0	0	0	1
open pit	0	4	2	4	10
backyard	1	0	2	2	5
lake	0	2	2	0	4
anywhere					

F) **If toilet, location**					
inside the house	1	0	0	0	1
outside the house	2	6	6	6	20
others (specify)	0	0	0	0	0
G) **Garbage**					
collected by garbage truck	1	0	0	0	1
thrown into the lake	0	0	0	0	0
thrown into open pit	1	0	1	1	3
thrown in the vicinity	1	4	5	5	15
others (burned)	0	2	0	0	2
H) **Drainage**					
flowing	0	2	2	2	6
open	1	2	2	3	8
piped	0	0	0	0	0
stagnant	2	2	2	1	7
I) **Frequency of transportation**					
every hour	1	0	0	0	1
everyday (once)	0	2	4	4	10
twice a day	0	4	2	1	7
always/now and then	2	0	0	1	3
J) **Health Services**					
hospital	2	0	0	1	3
clinic	2	0	0	0	3
drugstore	2	0	0	1	3
mobile	0	0	0	0	0
doctor	2	0	0	0	2
dentist	2	0	0	0	2
nurse	2	0	0	0	2
midwife	3	2	2	3	10
health inspector	1	0	0	0	1
health center	3	3	0	2	8
none	0	1	4	2	7

↘Large family size is due to traditional beliefs that are culturally sanctioned, such as the notion that "number is power." The Maranaos equate large families with family welfare. On the part of the mothers interviewed, they associate children with economic security (31%) and parental treasure (30%).

➘A hefty majority are not organizationally connected. A fourth said they are, joining PTAs, religious groups in their barangays.

➘The family is essentially patriarchal or patricentric. It is the husband who usually does the marketing as well as the decision-making.

➘Economically, the families surveyed are in general poverty-stricken; a full majority or more than three-fourths have annual incomes below P6,000. This status classifies them as belonging to the lower side of the poverty line for Region XII (P6,913 per capita). Their level of living or actual consumption of goods and services is also below par. They only own an average of four items in a scale of 14 household items (radio, gas stove, bed, etc.).

➘The common occupations of husbands are farming and trade. As farmers, they mostly own lands measuring from one to four hectares where they plant corn and rice, with some growing vegetables and other crops.

Table 3.2 Percentage Distribution, Personal Demographic Characteristics of Respondents, by Barangay

Characteristics	I	II	III	IV	Combined
N =	(158)	(82)	(79)	(92)	(411)
1. Type of Respondents					
Wife	82.7	75.6	81.0	80.4	79.9
Married daughter	10.8	12.2	8.9	15.2	11.8
Married relative	3.2	3.7	8.9	2.2	4.5
Widowed/Separated	1.3	7.3	1.3	1.1	2.8
Others	1.9	1.2	-	1.1	1.1
Total %	99.9	100.0	100.1	100.0	100.0
2. Age					
below 25	14.5	6.0	11.5	17.6	12.4
25-34	41.1	28.1	36.5	31.6	34.3
35-44	25.3	34.1	30.3	28.1	29.5

45 and above	18.9	31.5	21.6	21.3	23.8
Total %	99.8	99.7	99.9	100.4	100.0
Average Age of Respondent = 35.9					
3. Birthplace					
Same as present Residence	27.8	53.7	63.3	54.3	49.9
Not present residence but within Lanao Sur	55.1	36.6	34.2	35.9	40.6
Outside Lanao Sur	17.1	8.5	2.5	9.8	9.5
Total %	100.0	99.9	100.0	100.0	99.9
4. Places lived before present residence					
Rural	48.7	30.5	38.0	44.6	40.5
Urban	30.4	29.3	22.8	16.3	24.7
None (same place)	12.0	20.7	17.7	18.5	17.2
Others	8.9	19.5	21. 5	20.7	17.6
Total %	100.0	100.0	100.0	100.1	100.0
5. Duration of Stay					
1-5 years	37.3	24.4	29.1	25.0	28.9
6-10 years	8.2	11.0	11.4	4.3	8.7
11 yrs. or more	32.3	18.3	20.3	25.0	23.9
Others	- -	45.1	39.2	45.7	38.3
Total %	99.9	100.0	100.0	100.0	99.9
6. Education					
None	14.6	26.8	25.3	28.0	23.7
Arabic Education/voc'l	10.8	13.4	11.4	10.0	11.4
Some Elementary	22.2	14.7	12.6	28.0	19.4
Elem Grad to HS Grad	19.7	18.3	17.8	25.0	20.2
Some Col. & Col. Grad	32.4	26.9	33.0	8.9	25.3
Total %	99.7	100.1	100.1	99.9	99.9
7. Job of Respondent					
Fulltime Housewife	36.8	9.2	41.8	40.6	32.1
Gov't/Private Employee	14.5	23.6	19.0	5.5	15.7

Business/Skilled/ Semi-skilled/Crafts	34.8	27.6	22.7	16.5	25.4
No job but helps in the farm/ Others	13.8	39.5	16.4	37.4	26.8
Total %	99.9	99.9	99.9	100.0	99.93
8. Listen to Radio					
Everyday	58.3	58.0	58.2	28.2	50.7
Once a week	.6	-	-	18.5	4.8
Rarely	30.7	29.6	33.0	19.6	28.2
Not at all	10.2	12.3	8.8	33.6	16.2
Total %	99.8	99.9	100.0	99.9	99.9
9. Membership in Organizations					
Yes	22.4	32.9	27.6	20.7	25.9
No	77.6	67.1	72.4	79.3	74.1
Total %	100.0	100.0	100.0	100.0	100.0

Nutrition

↘Many of the mothers are still ignorant of good and proper nutrition. Majority believe that some foods (meat, vitamins, seafoods) and fruits (banana, durian, jackfruit, mango, papaya, pineapple, etc.) are "no-no" for pregnant mothers as these are "bad" for them (Table 3.6). They thought that these prohibited foods enlarge the fetus, thereby making delivery dangerous to the mothers.

↘While they believe that germs and other organisms are causes of diseases, some (11 percent) still think that spirits make people sick. Majority, however, are sold to the idea that "good hygiene and sanitation and clean environment" are good practices to avoid getting sick.

↘In theory, mothers believe in good food for health. In practice, however, mothers prepare foods which are nutritionally deficient in terms of the standard body requirements. Meat, fruits and vegetables are not

regularly served on the table. In addition, meals are observed for only two times a day by a full 80 percent of the families (Table 3.11).

Malnutrition among children is chronic. In Marawi, forty-six percent of the children below three years old are mildly to moderately underweight. Five percent of the children of this age group are severely underweight (Table 3.11). In other barangays far from the city, severe malnutrition is higher, reaching 29 percent.

Table 3.6 Frequency and Percentage Distribution, Nutritional Knowledge and Misconceptions

1.	**Good Foods**	Frequency	Percent
	Vegetables	290	29.5
	Rice, Corn, Cassava, *Gabi*	170	17.3
	Meat, chicken, egg	143	14.5
	Dairy products, Milk	48	4.9
	Fruits	256	26.0
	Fish	63	6.4
	Water, Juice	13	1.3
		Total N = 983*	Total %99.9
2.	**Nutritional Value of Good Foods**		
	Vitamins	226	28.3
	Protein	41	5.1
	Minerals	26	3.2
	Fats	30	3.8
	Makes body strong/for energy	323	40.4
	To avoid sickness	29	3.6
	For good appetite	20	2.5
	For good/beautiful body, skin	104	13.0
		Total N =799*	Total %99.9

3. **Do the respondents believe that some foods are prohibited especially to pregnant women, children and the sick?**

Yes	337	83.0
No	30	7.3
DK	43	10.5
	Total N =410	Total % 99.8

4. **Foods identified as prohibited to pregnant women.**

Fruits		
'Borongan' banana, durian, jackfruit, mango, marang, papaya, pineapple	132	22.0
Vegetables and other foods		
(Cassava leaves, 'marodo' leaves, eggplant, fern, squash)	53	8.8
Coconut, coconut milk	59	9.8
Softdrinks	59	9.8
Alcoholic drinks	44	7.3
Coffee, Coffee leaves	34	5.7
Dried fish ('tamban')	43	7.2
Meat	25	4.2
Medicine/Vitamins	27	4.5
Sweets, Ice cream	25	4.2
Chicken, eggs	13	2.2
Seafoods	14	2.3
Cooked/uncooked rice	20	3.3
Junk foods	11	1.8
Bitter/cold/salty/foods	31	5.2
Spices, vinegar	7	1.2
	Total N =600*	Total % 100.0

* Multiple responses

Table 3.11 Percentage Distribution, Weight of Respondent's Children 0-12 years old

	I	II	III	IV	Combined
1. **Weight (0-3 years old)**					
Normal	48.4	70.0	47.3	58.9	56.2
Mildly underweight	25.0	25.0	18.4	10.7	19.7
Moderately underweight	21.2	5.0	5.2	8.9	10.5
Severely underweight	5.3	-	28.9	21.4	13.9
Total %	100.0	100.0	100.0	99.9	99.9
Total N	132	20	38	56	246
2. **Weight (4-12 years old)**					
Normal	35.4	35.0	47.3	33.3	37.7
Underweight	58.7	52.5	32.7	30.4	43.5
Overweight	5.8	12.5	20.0	36.2	74.5
Total %	99.9	100.0	100.0	99.9	99.7
Total N	189	40	55	69	353

If poverty accounts for child malnutrition, ignorance and tradition would seem to be more responsible. Among the sample, about four out of ten the mothers had their first baby before reaching the age of 20. Cumulatively, more than three fourths (79%) had their first baby before they turned 25. Modern pre-natal and post-natal care is hardly observed. For pre-natal care alone, the mothers entrust principally the local midwives or *panday* (56%) and secondarily the medical doctors (32%).

Child death is a likely consequence of malnutrition. Nearly every family experienced this event in the family. An alarmingly high 80 percent of the cases reported that they have lost one to three children, and another 13 percent said four to six of their children died (Table 3.23).

Of the perceived causes of death, fever was a leading factor, followed by measles/chicken pox, diarrhea/cholera, respiratory diseases

and tetanus infection.

↘Child immunization still has to make headway among the Maranao. Only about half (52%) of the mothers claimed to have immunized their children. The rest who did not do so said it "was not available," "caused fever," and "expensive" – accounting for nearly all the reasons given.

↘When sick, the average Maranao resorts to home remedy or seeks help from the *pamomolong*. When all efforts fail, he goes to town (or Marawi City/Iligan City) to consult a doctor.

Table 3. 23 Percentage Distribution, Number of Deaths and Causes

	I	II	III	V	Combined
1. **No. of dead children**					
1-3	83.6	71.7	79.0	93.4	81.9
4-6	16.3	28.2	20.9	6.5	17.9
Total %	99.9	99.9	99.9	99.9	99.8
Total N	49	78	43	46	216
2. **No. of dead children (1-4 yrs. Old)**					
1-3	84.2	88.3	81.5	93.0	86.8
4-6	16.0	12.0	18.4	7.3	13.4
Total %	100.0	100.0	99.9	100.3	100.2
Total N	70	43	38	41	122
3. **Cause of deaths**					
Sickness	78.0	82.0	77.8	84.4	80.5
Miscarriage	12.2	8.0	11.1	11.1	10.6
Accident	2.4	4.0	6.8	-	3.3
Spirits	1.2	-	-	-	1.3
Others	6.1	6.0	4.4	4.4	5.2
Total %	100.0	100.0	100.0	100.0	100.3
Total N	82	50	45	45	222

4. **Deaths due to sickness**					
Fever	34.3	37.2	40.5	23.9	33.9
Measles/Chicken Pox	37.1	20.9	30.9	19.7	27.2
Diarrhea	4.3	11.6	9.5	10.8	9.1
Cough/Colds	1.4	7.0	2.4	4.3	3.8
Malaria	-	-	-	-	-
Tetanus	7.1	9.3	2.4	6.5	6.3
Others	15.7	14.0	14.3	34.8	19.7
Total %	99.9	100.0	100.0	100.0	100.0
Total N	70	43	42	46	201

Family Planning

➘A full majority (86%) has heard of family planning and are more likely to know that it means child spacing at the couple's choice. Of those who do, however, a large proportion regard it as "bad" because they perceive it to be against the teachings of Islam or have negative side effects (see Table 3.24).

➘Most (93%) of the mothers do *not* practice family planning, perhaps because family planning services are not available in their area (82%), or that it is against their religion. However, their answers betray that they prefer more children (55%). The practice is more acceptable among those who live in Marawi City, but that number is small (10%)

➘For 44% of the mothers, family planning is what the husbands say, rather than what they both decide upon (38%).

Table 3.24 Percentage Distribution, Knowledge, Attitudes and Practices on Family Planning

	I	II	III	IV	Combined
1. **Heard of Family Planning?**					
Yes	93.0	82.0	82.5	85.0	85.6
No	7.0	18.0	17.4	15.0	14.3
Total %	100.0	100.0	99.9	100.0	99.9
Total N	134	62	63	74	333
2. **Idea of Family Planning**					
No Children Control	3.7	10.5	0	3.0	4.4
Spacing/Fewer Children	37.0	21.0	31.5	25.0	28.6
Couple Has Choice	9.2	21.0	26.3	8.3	16.2
Protect Health of Mother	7.4	10.5	10.5	0	1.4
Against Islam	42.5	37.0	31.5	63.8	43.7
Total %	100.1	100.0	99.8	100.1	100.0
Total N	54	19	19	36	128
3. **Practice of Family Planning?**					
Yes	10.6	1.3	9.0	9.0	7.2
No	89.4	98.6	91.0	92.0	92.8
Total %	100.0	100.0	100.0	100.0	100.0
Total N	157	76	78	91	402
4. **Reason Why?**					
Prevent Problem/Protection	-	4.3	2.0	1.5	2.0
Don't Know How	3.0	-	4.0	3.1	2.6
Don't Like It's Side Effects	3.0	-	4.0	1.5	2.2
Against Islam	5.0	2.1	2.0	9.5	4.7
Husband Against It	18.2	22.0	16.3	19.0	18.9
Want More Children	49.5	58.0	65.3	47.6	55.5
Others	21.2	13.0	6.1	17.4	14.4
Total %	99.9	100.4	99.9	100.0	100.3
Total N	99	46	63	63	271

5. **FP available in your place?**					
Yes	34.8	12.5	8.9	15.3	17.8
No	65.1	87.5	91.0	84.6	82.1
Total %	99.9	100.0	99.9	99.9	99.9
Total N	155	80	78	91	404
6. **FP conforms to Islam?**					
Yes	12.0	5.0	5.2	24.0	11.6
No	88.0	95.0	95.7	76.0	88.7
Total %	100.0	100.2	100.2	100.0	100.3
Total N	150	76	76	83	385
7. **Factors preventing couples to avail FP**					
Irregular services	18.2	-	-	2.0	5.1
Attitudes of health workers	9.0	2.0	2.0	2.0	3.6
Husband against it	9.0	6.0	4.0	8.0	6.6
Religion	27.2	4.0	5.4	5.0	10.3
Side effects	9.0	76.0	82.0	78.0	61.3
Others	27.3	12.0	7.0	5.0	12.8
Total %	99.8	100.0	100.0	100.0	99.7
Total N	11	51	55	60	385

What Local Healers Say

➘The local healers (*panday* and *pamomolong*) are popular in the village; they receive more trust and confidence than doctors among the rural Maranaos. They minister not only to the sick (the *pamomolong*) but also serve as midwives (the *panday*) during child delivery.

➘They claim to have derived their "healing powers" from a departed mother or father, grandparents, through observation of others and from Allah as a gift.

➘Asked about their own observations, the local healers (*panday* and *pamomolong*) confirmed the special bond that exists between them

and their clients. They "know us" and "trust us," so they said. They also testified on the relatively frequent occurrences of child and maternal deaths in their community. Of the 32 healers interviewed, 23 estimated 1-3 maternal deaths during the past year.

↘Their healing techniques vary, depending upon the sickness was diagnosed to be caused by "bad spirits" or by natural elements. If the former was in effect, the healers recite verses from the Qur'an or use "healing water" to exorcise the bad spirits.

Significant Correlates of Health

Further probing by the use of statistical technique (by Chi-Square formula) revealed that certain health problems, hazards and practices are "significantly" due to a host of social factors. "Significant" means that the error in making a conclusion about the existence of a statistical relationship between these factors is about 10 in 100 possibilities. Here they are:

↘**Infant Mortality** is significantly related, among others, to these factors:

(a) age upon marriage (more infant deaths is experienced by mothers who married early)

(b) number of years married (those who have been married longer have lesser infant deaths)

(c) education of either mother or husband (the odds of infant survival are higher for those who have at least college education)

(d) economically, occupation and level of living are related to child mortality (more children of farmers and fishermen have died than among those of businessmen; families with high level of living reporter fewer infant deaths)

(e) mother's age (older mothers experienced fewer child deaths)

(f) authority pattern (patriarchal families have more child deaths than egalitarian families)

Child and maternal morbidity, or the likelihood of diseases occuring among children and mothers, is associated with different sets of variables. Child morbidity is due to these:

(a) number of living children in the family (more children, higher morbidity)

(b) age when first baby was had (younger mothers, more child morbidity)

(c) self-rating (mother's self-assessment to keep family healthy is low)

(d) number of health programs (more programs availed of by mothers, less morbidity)

Maternal morbidity, on the other hand, is related to these factors:

(a) age upon first marriage (mothers married earlier are more morbid)

(b) authority patterns (patriarchal family is associated with more mothers reporting sickness than other family types)

(c) self-assessment (those with good self-assessment are healthy and are less likely to suffer from certain ailments)

Malnutrition among children 0-3 years old is significantly associated with these variables:

(a) number of years married (those married longer have healthier children as measured by their weight)

(b) age of mothers (relatively older mothers have healthier children)

For children aged 4-12 years old, the significant factors are:

(a) economic (weight deficiency common among children of farmers and fishermen as well as among families with low level of living)

(b) education of husbands (college-educated fathers have healthy children)

Family Planning is generally not observed. For those who do, the practitioners are found to have the following traits:

(a) high level of education, usually a college education

(b) those aged 30-44 practice it more (almost 50 percent said so among this age group)

(c) those who said FP services are locally available

Child immunization is significantly influenced by these:

(a) economics (higher income and higher level of living means a greater likelihood of child immunization)

(b) education of wife and husband (the more educated, children are immunized)

(c) access (if health program exists or heard of, child immunization)

(d) age of mothers (younger mothers tend to avail of child immunization)

Recommendations

1) **Educate parents through extension education and information dissemination**. Necessary and appropriate knowledge and skills on health practices, particularly on proper and practical nutrition, disease prevention and curative measures, pregnancy care, immunization, cleanliness, sanitation, etc. must be made known, especially to mothers.

2) **Motivate couples to change their traditional notion of large-family size and opt for fewer children.** Couples should be made to understand that delayed marriage, having fewer children and spaced births of at least three years increase the chances of child survival and protect the well-being of mother and child. For this information to reach the intended, an effective strategy must be devised.

3) **Educate religious leaders about family planning for the welfare of the community**. The data revealed that the respondents perceived Islam as wrongly opposed to low fertility and practice of family planning. However, religious leaders in other Muslim countries like Bangladesh, Indonesia and India support population control and contend that religious-based inhibitions and misconceptions of the islamic position of family planning arise out of ignorance about Islam. There is a need, therefore, to discuss the population program in public fora, in mosques, and madrasahs to make people aware of its significance for the family, the nation and its economic future.

4) **Provide women with the means to limit their family size.** These means must be effective and acceptable. They should be motivated to practice more effective methods of family planning rather than rely on herbs and other traditional methods.

5) **Furnish basic services like roads, transportation facilities, potable drinking water and improve the health services.** Provide equipment and hire trained and dedicated personnel.

6) **Encourage community participation in its own affairs.** Some among these include: cleaning up the dirty surroundings, construction

of artesian wells, and establishment of other projects to improve the living conditions of the people in the area. They should share in the responsibility for public health is a concern of everyone.

7) **Improve access to education and employment, especially for women**. Studies have shown that women who work in professional jobs and have education have lower fertility, are more aware of family planning methods, take care of themselves and are knowledgeable on nutrition and health.

8) **Local government should take an active role in improving the condition in these neglected areas**. Health programs should be given top priority.

9) **Train *pandays* and *pamomolongs* to make them competent to treat ailments and detect complications.**