A COMPARATIVE STUDY ON THE ATTITUDE AND PRACTICE OF THE NURSING STAFFS IN URBAN AND RURAL AREAS ON HOME VISITING

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ABSTRACT

To assess the attitude and practice of the public health nursing staffs on the home visiting activities based on categories of nursing personnel and level of urbanity. Cross sectional survey using postal structured questionnaire sent to 400 randomly selected public health nursing staffs in June 1998 who were involved in doing home visiting in Malaysia. 4 categories of nursing personnel were involved in the survey: Public Health Nurse (PHN), Staff Nurse (SN), Community Nurse (CN) and Assistant Nurse (AN). Response rate was 84.25 % (337) of which 93.3% (125) are from rural area and 79.7% (212) from urban. There is a significant difference noted between the categories of nursing personnel with p-value <0.05. Eleven types of cases visited were chosen to assess the practice and attitude of the nursing personnel on home visiting. Based on type of cases visited it was noted that there is significant difference between the two samples urban and rural (p<0.05). Means distribution noted higher in rural area compared to urban with p-value <0.05 on type of cases visited: normal pregnancy, high-risk pregnancy, postnatal nursing, malnourished program and elderly. However, there is no significant difference between the two samples on type of cases visited: family planning, child less than 5 years old, children with special needs, elderly and cases discharge from hospital. Based on categories of staffs it was noted that the PHN and SN visited more in high-risk pregnancy, postnatal, children with special needs, malnourished program and elderly cases. While, CN are more concentrating on normal pregnancy cases, family planning and postnatal cases. It also showed that AN visited most of that defaulters and children less than 5 years old. Practice of respondent on home visiting by level of urbanity showed that most of the cases in rural areas had 4-6 visits per case as compared to urban only less than 4 cases with p-value <0.004. There is significant difference on the average time spent to do home visiting: higher in rural areas (>10 hours per weeks) as compared to urban area. Attitude score of the nursing personnel on home visiting showed that it is better in rural with mode score=10 (43.0%) as compare to urban mode score =5 (75.1 %). All 4 categories of nursing personnel have their role in home visiting. Rural areas has done more home visiting as compared to urban areas. It was supported by the attitude scoring and practice were better in rural as compared with urban.

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INTRODUCTION

Ministry of health is in the process of evaluating health program activities using health technology Assessment. This assesment will give us an idea whether the program give cost effectiveness to client satisfaction The scope of health technology assessment can be group as:

- drugs, diagnostics, reagent indicators
- equipment, supply and procedure
- support system such as information system, computer etc.
- organization and management system

Family Health Development Division with Health Technology Assessment Unit has chosen home visiting activities as one of the major health activities done by health staffs to be assess. The focus mainly on maternal and child health care.

Home visiting has been started as Ministry of Health Program since 1950s. This program initially meant for home visiting and home nursing for postnatal mothers . But now has been expanded to many activities such as:

- Defaulter cases
- Follow up cases for KZM
- High risk antenatal cases
- family planning
- children with special needs
- elderly
- case discharge from hospital
- children less than 5 years
- etc

Home visiting is not only done by nursing staff but also by other support staff based on certain activities such as:

Medical Assistant - follow up medical problem such as emergency cases and changing catheter,etc

Public Health Inspector - Follow up infectious cases such cholerae, typhoid and sanitation hygiene

Public Health Assistant - tracing for defaulter cases (infectious), sanitation hygiene.

How ever because of increasing workload on staffs, most of the activities ware not done as schedule. This is the best time to assess whether the activity of home visiting should continue or reduce.

OBJECTIVES

- To compare between urban and rural workload of health staffs on home visiting done based on listed activities recommended by Ministry of Health
- To asses practice of health staffs on home visiting.
- To evaluate attitude and opinion of health staffs towards home visiting activities.

HYPOTHESIS

Hypothesis 1

There is no difference between workload for home visiting done by health staff in urban and rural

Hypothesis 2

There is no difference in client satisfaction about home visiting done by health staff in urban and rural

METHODOLOGY

Study Design
Cross sectional survey

Study Population
Health care providers at selected primary health facilities in Malaysia who conducted home visiting and home nursing.

Selection of study sites
In this survey all states were chosen to be involve. Every states had chosen one urban district and one rural district by random sampling method. For each district selected, the District Health Office, two health clinics and two Community Clinics were chosen through stratified random sampling from the clinics who fulfill the criteria.
Criteria identified:
Healthclinic: - a clinic with child / antenatal attendance > 100 per session and also priority if running new programme such as elderly, adolescent, children with special needs and others.
and
- clinic with child/antenatal attendance <100 per session and also priority if running new programme such as elderly, adolescent, children with special needs and others.

Community Health Clinic:

- a clinic with child / antenatal attendance > 20 per session.

Selection of study sample

Respondents were selected randomly and according to the justified norm as in Table 1. Estimated 400 respondents will be participating in the surveys but only 337 questionaires received back.

Data collection

Study period:

A set of questionaires were posted to all the State Family Health Officers on the 5th February l998 to be distributed the selected District Health Officers and given the selected respondents. The questionaires were collected back before 28th February 1998.

Study instrument:

Data ware collected using standardised self administered questionaires HTA/FH/l/1998.(Appendix 1)

Data analysis:

Collected data were coded and saved in dbf.(DBASEIV). Descriptive analysis were frequency and percentage distributions. Major outcomes, level of attitude and practice were analysed by scoring. The statistical package used throughout the analyses was EPI INFO Version 6.

Statistical analysis using t-test and chi-square tests were used to compare 2 groups (urban and rural) and difference in categories of staffs.

From this tables it shows that out of 400 questionaires sent, only 337 questionaires were returned. The districts selected mostly reached up to more than 90% response rates. However, Kangar, Kuantan, Kuala Terengganu and Kuala Rompin achieved the response rates of less than 90%.

RESULTS

Table 1: Response rates of health staffs by districts with different levels of urbanicity

States	Rural	RC	RD	RR	Urban	RC	RD	RR
Perlis					Kangar	16	0	0
Kedah	Baling	15	14	93.3	Kota Setar	19	19	100
P. Pinag					Timur Laut	28	26	92.9
Perak	Hulu Perak	16	18	112.5	Kinta	17	16	94.1
Wilayah Persekutuan					DBKL	19	0	0
Selangor	Sabak Bernam	10	10	100	Petaling	14	14	100
N. Sembilan	Jelebu	9	9	100	Seremban	14	13	92.9
Melaka	Jasin	11	11	100	Melaka Tengah	19	19	100
Johor	Kota Tinggi	14	14	100	Johore Bahru	25	24	96.0
Pahang	Kuala Rompin	16	7	43.8	Kuantan	16	12	75.0
Terengganu	Hulu Terengganu	11	11	100	Kuala Terengganu	18	16	88.9
Kelantan	Gua Musang	10	10	100	Kota Bharu	18	18	100
Sabah	Kota Kinabatangan	16	16	100	Kota Kinabalu	26	26	100
Sarawak	Bau	6	5	83.3	Kuching	17	20	111.1
Total		134	125			266	212	

Note: RC - recruited, RD - responded, RR - response rates (%)

Table 2: Response rate shown by respondents answered on urbanicity levels

Urbanicity level	Frequency	%
Urban	169	50.0
Rural	163	48.2
Mixed	5	1.8
Total	337	100

From the questionaires analysis it shows that 5 respondents (1.8%) did not answered urban or rural but written mixed. Since the objective of the study was to see the different between rural and urban health service, therefore the samples have been drop.

Table 3: Characteristics of respondent by category, place of work and also public service available by level of urbanicity

Characteristics	Level of urbanicity				p-value
	urban		rural		
	f	%	f	%	
Category					
Health inspector	33	19.6	13	8.0	
Public Health Nurse	33	19.6	21	13.0	
Staff nurse	18	10.7	22	13.6	
Public Health Assistant	10	6.0	26	16.0	0.34
Assistant Nurse	5	3.0	3	1.9	
Com. Nurse/Midwive	55	32.7	62	38.3	
Medical Assistant	14	8.3	15	9.3	
Place of Work					
Health Office	47	27.8	29	17.8	
Health Clinic	46	27.2	82	50.3	
Community Clinic	19	11.2	43	26.4	0.66
DBKL	12	7.1	8	4.9	
MCHC	45	26.6	1	0.6	
Clinic Telephone facilities					
Yes	155	91.7	149	91.4	0.00
No	14	8.3	14	8.6	
Public Phone facilities					
Yes	122	72.2	118	72.4	0.00
No	47	27.8	45	27.6	
Home phone facilities					
>=50%	161	89.3	116	71.2	0.03
<50%	18	10.7	47	28.8	
Post facilities					
Yes	153	90.5	126	77.3	0.07
No	16	9.5	37	22.7	
Public transport available					
Bus	70	41.4	66	40.5	
Taxi	3	1.8	2	1.2	
Car	76	45.0	46	28.2	0.01
Train	3	1.8	2	1.2	
Boat	14	8.3	1	0.6	
Others	3	1.8	46	28.2	
Transport use for home nursing					
Office/Clinic transport					
Motorcycle	10	15.9	54	33.1	0.02
Bicycle	76	45.0	74	45.4	
Bus	34	20.1	5	3.1	
Taxi	2	1.2	1	0.6	
Car	6	3.6	1	0.6	
Boat	33	19.5	18	11.0	
Others	1	0.6	1	0.6	
	7	4.0	9	5.5	

Table 3 shows that the characteristics of the health facilities where the respondents attached to were comparable between urban and rural. Both of the areas have the facilities of telephone and clinic but for house telephone majority of the urban districts(89.3%) have telephone facilities as compared to rural districts only 71.2% has home telephone more than 50%. Post facilities higher in urban districts(90.5%) compared to rural districts(77.3%). Health staffs in rural area mostly used Office/ clinics transport and motorcycle whereas in urban there frequently used motorcycle, bicycle and car to do home visiting.

Table 4: Mean % distribution by types of cases visited according to categories of staffs by level of urbanicity

Type of case visited	Urban				Rural			
	PHN (n=33)	**SN (n=18)**	**AN (n=5)**	**CN (n=55)**	**PHN (n=21)**	**SN (n=22)**	**AN (n=3)**	**CN (n=62)**
Normal Pregnancy	5.9 (10-33)	1.7 (0-18)	11.2 (0-40)	5 (0-80)	8.4 (0-33)	13.8 (0-60)	8.7 (0-18)	17 (0-100)
High risk pregnancy	26.6 (0-78)	10.9 (0-40)	0 (0)	7 (0-90)	27.6 (0-68)	27.7 (0-90)	3.3 (0-10)	12 (0-100)
Postnatal	12.4 (0-63)	20.2 (0-59)	12.2 (0-26)	8 (0-100)	15.1 (1-65)	7.4 (0-30)	29 (0-70)	21.9 (0-100)
Postnatal nursing	17.8 (0-99)	12.8 (0-93)	0 (0)	8 (0-100)	18.5 (0-65)	27.7 (0-75)	0 (0-1)	3.6 (0-100)
Family planning	0.3 (0-10)	2.2 (0-22)	5.6 (0-16)	5.6 (0-60)	1.9 (0-10)	3.8 (0-14)	0	7.8 (0-70)
Child less than 5 years old	3.2 (0-25)	6.4 (0-24)	16 (0-53)	3 (0-70)	4.7 (0-16)	8.0 (0-30)	13 (0-35)	10.9 (0-60)
Children with special needs	10.2 (0-80)	2.1 (0-10)	3.4 (0-10)	0 (0-100)	8.2 (0-33)	5.5 (0-20)	1 (0-2)	4.3 (0-100)
Malnourished program	7.9 (0-50)	6.2 (0-49)	3.8 (0-9)	2 (0-100)	9.7 (0-33)	5.5 (10-20)	0 (0-2)	7.2 (0-100)
Defaulter	4.5 (0-72)	5.7 (0-50)	61.4 (0-88)	5 (0-80)	3.2 (0-24)	9.8 (0-54)	27 (0-73)	14.5 (0-100)
Elderly	0 (0-8)	1 (0-10)	0	0	0.9 (0-7)	2.2 (0-21)	0 (0-1)	1 (0-20)
Case disharge from hospital	4.1 (0-40)	0 (0-3)	0	0	5.2 (0-23)	1.6 (0-9)	0 (0-1)	5.2 (0-90)
Others	2.4 (0-28)	3.7 (0-30)	0	0	2 (0-20)	3 (0-31)	0	1.9 (0-26)

Note:

PHN - Public Health Nurse
SN - Staff Nurse
AN - Assistant Nurse
CN - Community Nurse

Table 4 shows that Public Health Nurses mostly do home visiting for high risk pregnancy - urban 26.6%, rural 27.6%, postnatal – urban l2.4%, rural 15.1%, postnatal nursing – urban 17.8%, rural l8.5%, children with special needs – urban 10.2%, rural 8.2% and malnourished program – urban 7.9%, rural 9.7%

Staffnurse in urban area did postnatal visit (20.2%), postnatal nursing (l2.8%), child less than 5 years old (6.4%) and food nutrient depletion (6.2%). Whereas for staff nurses at rural areas did high risk pregnancy (27.7%), postnatal nursing (27.7%), child less than 5 years old (8.0%) and trace defaulter cases (9.8%).

Asistant nurse (AN) in urban area mostly did tracing defaulter cases (61.4%) and rural AN only did 27% but they also did postnatal visit (29%). Community Nurse in urban area only did visiting to normal pregnancy (5%), higk risk pregnancy (7%), postnatal visit and postnatal nursing (8%). Whereas CN in rural area did almost all activities but priorities to postnatal nursing (36%) postnatal visit (21.9%) and normal pregnancy cases (l7%).

Table 6: Opinon of respondents in precentage on the types of cases that could be visited by the non-nursing personel.

Type of case visited	MA	PHI	PHA	TBA	NGO	PRIV
Normal pregnancy	16.8	5.6	5.9	24.2	5.0	16.5
High risk pregnancy	25.4	7.4	3.8	10.6	5.6	18.0
Postnatal	11.8	3.5	2.7	21.2	4.4	16.2
Postnatal Nursing	11.8	2.1	2.7	18.9	2.9	17.7
Family planning	16.8	6.5	8.0	11.2	15.0	14.2
Child less than 5 years old	20.6	17.7	18.6	4.4	8.8	10.3
Children with special needs	33.0	12.4	19.2	1.8	20.6	12.1
Malnourished program	26.0	22.7	17.1	4.1	0	0
Defaulter	3.4	1.2	2.8	0	11.2	8.6
Elderly	32.7	23.3	25.4	4.7	28.0	12.4
Case discharge from hospital	36.6	22.7	24.5	4.4	7.7	13.0

Note:

MA - Medical assistant
PHA - Public Health Assistant
TBA - Traditional Birth Attendant
NGO - Voluntary group
PRIV - Private health personnel
PHI - Public Health Inspector

Table 6 shows opinion of respondent on health staff beside nursing personnel on home visiting. MA should emphasis on case discharge from hospital (36.7%), elderly (32.7%) and children with special needs (33.0%). Public Health Inspector has their role in malnourish program case3 (22.7%), elderly (23.3%) and case discharge from hospital (22.7%). TBA should help in normal pregnancy cases (24.2%) and postnatal (21.25). NGOs should participate in home visiting for cases children with special needs (20.6%) and elderly (28%)

Table 7: Opinion of respondents on future of home visiting by level of urbanicity

Type of case visited	Urban			Rural		
	continue	reduce	stop	continue	reduce	stop
Normal Pregnancy	34	43	30	1	57	41
High Risk pregnancy	88	19	2	1	101	6
Postnatal	46	36	19	1	72	29
Postnatal nursing	67	17	15	1	87	16
Family planning	28	23	45	1	55	22
Child less than 5 years old	40	27	31	1	59	25
Children with special needs	83	19	7	1	83	14
Malnourished program	76	24	9	1	76	12
Defaulter	66	20	23	1	72	17
Elderly	35	28	18	1	49	32
Case discharge from hospital	40	12	13	1	51	23
Others	1	14	10	1	23	8

Table 7 shows some discrepancies between rural and urban health staff opinion on home visiting. Higher response shows from urban to continue home visiting whereas from rural mostly prefer to reduce the activity of home visiting. Out of 11 activities listed above, urban health staff gave response to stop activity of visiting child less than 5 years old (18.3%) and family planning (26.6%).

Table 8: Practice of respondent on home visiting by level of urbanicity

Characteristics	Levels of urbanicity				P-values
	urban		rural		
	f	%	f	%	
Average of case visited per session					
<4 cases	54	32.0	36	22.1	0.004
4-6 cases	44	26.0	53	32.5	
>6 cases	47	27.8	52	31.9	
no case	24	14.2	17	10.4	
Average time needed to do home visiting per week					
<5 hours	33	19.8	34	20.8	0.02
5-10 hours	51	30.5	47	28.8	
>10 hours	59	35.3	65	39.9	
none	24	14.4	17	10.4	

Table 8 shows that urban health staffs did home visiting less than 4 cases per session whereas rural health staffs mostly did between 4 to 6 cases. Time allocated for home visiting for rural and urban health staffs is more than 35% per week.

Table 9: Average score of attitude of respondent towards home visiting by levels of urbanicity

Levels of district	Rural(n=163)		Urban(n=163)	
	Mode score	Frequency of mode	Mode score	Frequency of mode
Benefit of home visiting	10	70	5	127
Type of problems				
Manpower	1	58	10	54
Transport	1	95	1	71
Instrument available	1	124	1	101
Skills	1	63	1	148
Family cooperation	1	89	5	93
Communication	1	78	1	55
Procedure	1	67	1	113
Time	1	88	2	120
Others				

The staff at rural area gave a score of 10 for bebefits of home visiting to clients as compared to staffs from urban areas whereby majority gave a score of 5.

From the study it shows that most of the problem face by health staff at urban area is manpower (score 10 under likert scale) follow with family cooperation (score 5). There is no problem noted by the staff at rural area.

DISCUSSION

The survey was done among health staffs from categories of nursing personnel(PHN, SN, AN and CM) and other support staff (MA, PHI and PHA) by comparing rural and urban area. Through close ended questionaire 88 variables has been selected. However, only 57 variables can be analyse and the rest cannot be analysed because of inadequate information (respondent did not give proper answer or did not follow instruction properly).

Practice

Comparing urban and rural areas, health facilities in urban areas have better communication facilities through telephone and post. Transport facilities for both urban and rural area showed ($p = 0.01$) significant different. Health staff in urban area prefer to do home visiting by using Motorcycle (45.05), bicycle (20.1%) and car

(l9.55). Whereas rural health staffs majority using clinic /office transport (33.1%) and motorcycle (45.4%). This is because of the distance between health facilities and condition of the road in rural area normally not as good as in urban area.

From listed type of home visiting done, it shows that different categories of staff have their own role of doing home visiting. PHN from urban and rural areas have most role in handling high risk pregnancy, postnatal case and postnatal nursing. However urban health SN mainly do were visiting for high risk pregnancy (10.9%), postnatal (20.2%) and postnatal nursing (12.8%). Whereas SN at rural area mainly do were visiting for high risk pregnancy (27.7%), postnatal nursing (27.75) and normal pregnancy (13.8%). This shows that SN at rural area did home visiting more on high risk cases and postnatal nursing.

AN at urban area spend their time more to visit defaulter (61.4%) and child less than 5 years (l6%) as compare to AN at rural area who do more visiting postnatal cases follow with tracing defaulter cases (27%). CN in urban areas visit mainly maternal cases but CN at rural beside visiting maternal cases, they also did defaulter tracing and child less than 5 years old. This shows that AN and CN in rural area has broader scope of activities for home visiting as compare with urban staff.

In practice urban health staffs did home visiting per session about less than 4 cases whereas rural health staff did between 4 to 6 cases per session per week. Time spend for home visiting almost same for rural and urban health staff about more than 10 hours per week.

Attitude and opinion

Respondent give an opinion that home visiting is not only for nursing personnel to do but other support staffs also can be trained to do home visiting. MA can be responsible to do home visiting for high risk pregnancy (25.4%), child less than 5 years old (20.6%), children with special needs (33.0%), elderly (32.7%) and cases discharge from hospital (36.6%). PHI better of to visit house of malnourish children (KZM). and elderly case. TBA can give hand in assisting to do home visiting for normal pregnancy and postnatal cases. NGO should start play role in helping out children with special needs and elderly cases.

Home visiting Program which has been started since 1950's, need evaluation for continuity of the program. Respondent has summited their opinion on this. The urban health staff mainly feel that this program should be continued accept for family planning and children less than 5 years old. According to rural health staff, this program should continue but with lesser activity.

Both urban and rural health staff think that home visiting is beneficial for the client however the problem of home visiting is not enough of manpower and in urban area, less family cooperation. There is less problem noted among rural health staffs.

Limitation of the survey

- Even though the response rate by postal questionnaire is good in this survey, but the answers given were not properly and the instructions were not properly followed. This will affect the result of the survey.
- The questionnaires were not pretested before survey which made it difficult for the respondent to understand and give their answers.
- It is difficult to ask about home visiting aspect on attitude and practice through postal close ended questionnaire.
- The methodology of the survey whereby, rural and district was selected based on State MCH Officer cooperation may result in bias sampling.

RECOMMENDATION

- From the survey it shows that home visiting should be continued but the activity should be prioritized
- Certain activities of home visiting can be help by NGO, TBA's and Private sector.
- With adequate of manpower this activity can be done better towards client satisfaction.
- Other support staff like MA also can help in home visiting for certain activities if enough of manpower available to run activities in clinic.