Workload of public health nurses

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STUDY ON WORKLOAD OF PUBLIC HEALTH NURSES AND OTHER WOMEN HEALTH WORKERS

WOMEN COMPONENT PLAN 2009-10

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REPORT OF

THE WOMEN COMPONENT PLAN FOR THE YEAR 2009-10

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I. INTRODUCTION

A) BACKGROUND

Health sector employs large number of women workforce for its function is a well-known phenomenon. The existence of the ANMs and other nursing professionals contributes much to the health system in India. NRHM introduced larger women workforce as Accredited Social Health Activists (ASHA) highlights the importance of women workforce in health in India. There is a differential job allocation for men and women workers in health sector. Studies show ANMs are more burdened compared to their male counterparts in terms of the work load. The male Health Supervisors and other multipurpose workers (men) have lesser responsibility compared to that of Nurses in general. In general, in addition to the routine activities such as immunization, family planning, and other services, they are also burdened with a large amount of work in terms of report writing and attending meetings. These additional responsibilities burden the Nursing workforce. Further to the above, they are also engaged in various national programs. There are other factors such as transfers and postings, poor working conditions and so on adds more load to their work. The present study is trying to address some of these problems. The study proposes to study the workload among the nurses in India with specific reference to Kerala.

B) REVIEW OF LITERATURE AND RATIONALE FOR THE STUDY

The extent of services delivered by the female health workers in public health sector, their work allocation and work load handled by them is a considerable area of research in public health. But the vast area of literature in the area of nursing focuses either on the official duties or the practices of the nurses at hospitals. Ngin (1994) discusses the process and context in which nursing documents are created and how they are actually used in delivering care. In the study on record keeping practices of nurses in hospitals the author noted that staff nurses are both care givers and authors of documents in medical records. One of the earlier studies (Wade, et al 1963) shows the ways in which public health nurses promote mental health. It noted that the large numbers of persons needing costly care for mental illness indicate that public health nursing should be utilized more effectively in the community mental health program. Wilson-Barnett (1986) gives an account of the ethical dilemmas related to nursing profession. A study on public health nursing professional in India conducted by the Academy of Nursing Studies, Hyderabad (2005) gives a situational analysis of the nursing manpower situation in India by compiling data from six districts including Assam, Bihar, Gujarat, Tamilnadu, Uttaranchal, and West Bengal. Persons like Sharma et al (2010) and Conrad et al (1985) also gives an account of the job satisfaction of the nurses and their official role and duties. Likewise, the occupational hazards of the nurses also become a topic of interest. An increasing number of nurses are suffering back injuries on the job from lifting and moving patients and heavy equipment (Helmlinger 1997). Fragar and Depczynski study on challenges at work for older nurses who were 50 and above in

Australia. The study found work and age related factors increase difficulties lead to perceived workload(Fragar and Depczynski 2011). O'Donnell et.al study in UK on practice nurses' workload and its impact on isolation found nurses working alone are in a team of two more likely to feel isolated compared to 3 or more.(O'Donnell et.al 2010). Montour et.al study on challenging nature of nursing workforce in rural and small community hospitals in Canada found the nurses feel the new generation nurses different values and goals, structural changes in rural health system, routine scheduling issues among nurses due to rise in vacant positions and other technology related problems. (Montour A.et.al 2009).

Gum study in Australia on nursing students preparedness in rural practice found, majority of them prepared with regard to their attitudes for future practice and overall practice. (Gum 2007). Golubic et.al study on work related stress among nurses in University hospital in Croatia found, financial issues, educational level and age were identified as important occupational stressors. (Golubic et.al 2009). Nabirye et.al study on occupational stress among hospital nurses in Uganda found differences in occupational stress, job satisfaction and job performance between public and private hospitals.

Philibin et.al. study in Ireland on public health nurses' role in changing society emphasized the need for defining and redesigning their role for better community service. (Philibin et.al. 2010). Hegny et.al. 2004 study on workforce issues in Queensland found, the workload was heavy, skills and experiences are rewarded poorly, high work stress, poor morale. Findings were consistent with the earlier study conducted in 2001. (Hegny et.al. 2006). Begat et. al. study among the clinical nurses in Norway found, ethical conflicts creates job related stress and anxiety among nurses. Supervision has a positive effect on nurses. (Begat et.al 2005). Feng et.al study on low back pain among the female nurses in Taiwan found, manual transfer of patients, perceived physical exertion, and psychological demands, were associated with low back pain.(Feng et.al. 2007).

Even if there are a lot of studies on different aspects of nurses and public health workers, there is hardly any study focused on the work load of public health nurses particularly in the context of India in general and Kerala in particular. The present study tries to fill up the lacuna in the available literature by focusing on the work load of women public health workers including public health nurses in Kerala.

II. OBJECTIVES

Present study is an attempt to explore the workload of public health nurses and other women health workers in Kerala. It also aims to gather information regarding level of work load among the women public health workers and factors associated with this by analyzing the data from the five selected districts of Kerala (Thiruvananthapuram, Alappuzha, Ernakulam, Malappuram and Wayanad). Available literature on Health workers shows that there is a differential job allocation for men and women health workers and the junior public health workers are more burdened compared to their male counter parts in terms of the work load. This study is also an effort to understand the various duties and responsibilities of the women workers in the field of public health in Kerala. In addition to these, study proposes to explore the perceptions, aspirations and

ambitions of the respondents related to their work and career and also the nature of interpersonal relations in the work sight. The inclusion of five categories of women health workers as respondents (JPHN, JHI, staff nurse, LHI and LHS) is helpful to develop a comparative perspective regarding the work allocation and work load.

Workload in the present study refers to the perceived notion of work by health worker in terms of role overload, self role distance and role stagnation.

III. METHODOLOGY

A) STUDY TYPE

This is a cross sectional study using both quantitative and qualitative methods.

This is a study for analysing the workload of women public health workers including public health nurses. Following were involved in the data collection:

- Primary data collection among the public health nurses (including staff nurses from CHCs).
- Time and work study in selected work places(PHCs and SCs)
- Qualitative methods to study workload. (Key informant interview and Case studies)

A. STUDY SETTING

The subjects selected for the study include the Junior Public Health Nurses (JPHN), Junior Health Inspector (JHI), Staff nurses, Lady Health Inspectors (JHI) and Lady Health Supervisors (LHS) from five districts of Kerala, namely, Thiruvananthapuram, Alappuzha, Ernakulam, Malappuram and Wayanad.

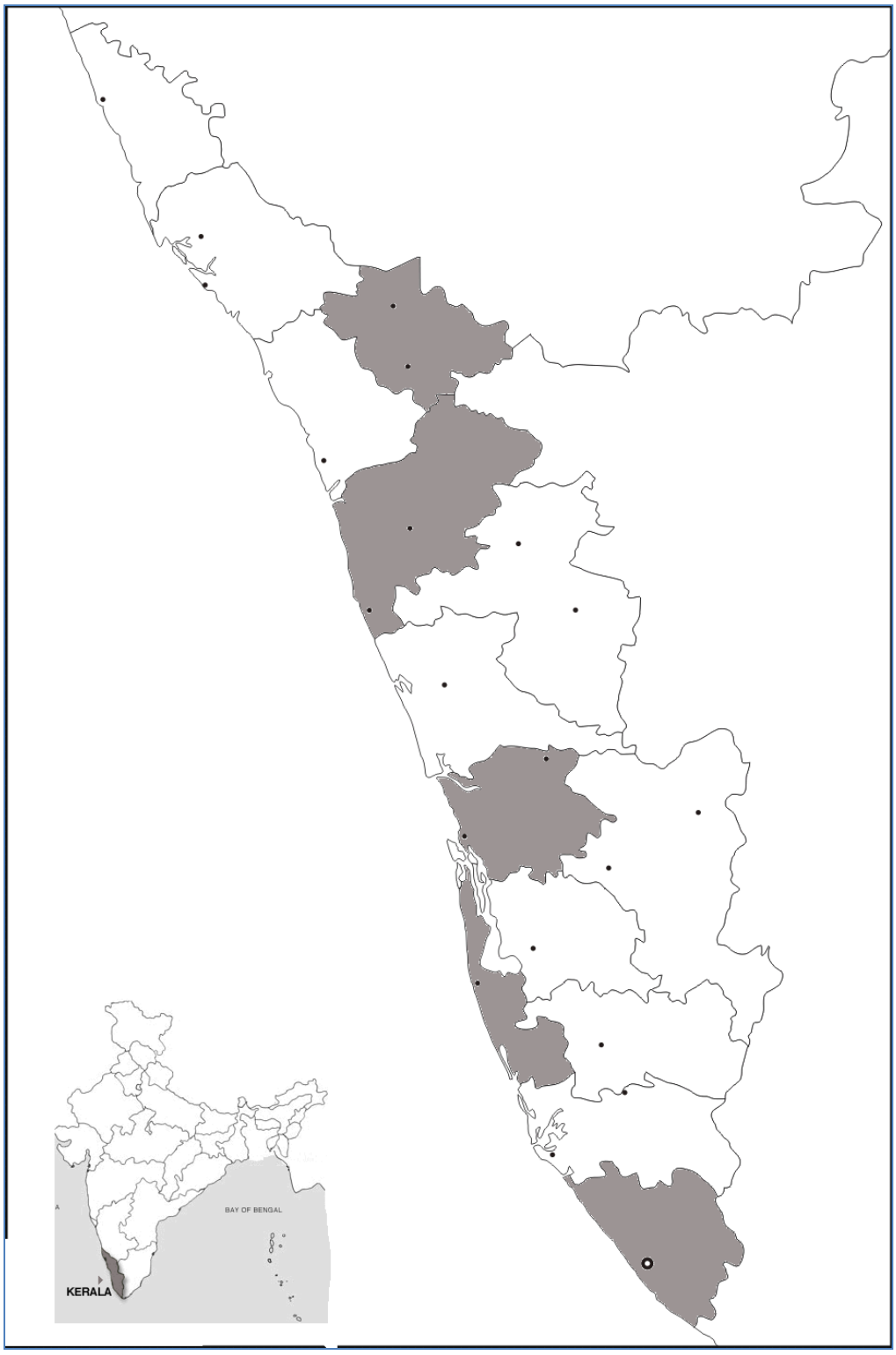


FIGURE STUDY AREA – FIVE DISTRICTS OF KERALA

B. SAMPLE SIZE AND SAMPLE SELECTION PROCEDURES

Samples were drawn from the following five study districts of Kerala, Thiruvananthapuram, Alappuzha, Ernakulam, Malappuam and Wayanad. First a list of health centers in each of the five districts was collected from Directorate of Health Services (DHS), Government of Kerala. Then, an expert who is familiar with the district was consulted while selecting the Community Health Centres (CHCs) to be included in data collection. The inclusion criteria for the CHCs were based on the representation of all types of landscape in each district. As the study is relating to the workload, keeping the difficulties in delivering the services, different geographical locations of each district was included.

From the selected CHCs, the CHC, Primary Health Centre(PHC), and Sub-centre(SC) were identified for data collection. The list based on the selected health centres were shared with the data collection agencies for collecting data from the centres. Table 1. Shows the CHCs, PHCs and SCs under each of the district(refer Table 1). The investigators collected data from the different respondent categories viz. Junior Public Health Nurses (JPHNs), Junior Health Inspectors (JHIs), Staff Nurses, Lady Health Inspectors (LHIs) and Lady Health Supervisors (LHSs) from the listed centres. They were also informed about the number of each of the respondent category before starting the fieldwork.

TABLE **NUMBER OF HEALTH CENTRES SELECTED FROM FIVE DISTRICTS**

Name of district	**No. of CHCs**	**No. of PHCs**	**No. of SCs**	**Total**
Thiruvananthapuram	12(Out of 28)	44 (including 1 Medical College unit)	242	298
Alappuzha	10(Out of 20)	25 (including 1 Medical College unit)	141	176
Ernakulam	12(Out of 35)	29	207	248
Malappuram	14(Out of 15)	40	141	195
Wayanad	7(Out of 5)	21	131	159

Currently there are 10,203 public health nurses and other health workers(JPHN, JHI, LHI and LHS) work in Kerala. For the sample selection about 10% of the above mentioned i.e. about 1000, was included in the study. For sample selection first we randomly selected two to three blocks from a district and included the selected category of health workers from all the health institutions (Taluk Hospitals(TH), PHCs, CHCs and SCs) within the blocks. The selection of blocks varied as per the requirement of the intended respondents. We collected the data from the consented health workers. The number of respondents from each of the five districts who were included for the study is given in Table 2. In total 1238 respondents participated in the study.

TABLE SAMPLE SIZE AND SAMPLING DESIGN N=1238

Sl No	District	JPHN	JHI	Staff Nurse	LHS	LHI	Total
1	Wayanad	137	70	24	2	17	250
2.	Malappuram	126	69	20	7	29	251
3.	Ernakulam	117	52	31	8	28	236
4.	Trivandrum	124	62	25	6	38	255
5.	Alappey	131	50	26	7	32	246
	Total	635	303	126	30	144	1238

C. DATA COLLECTION TECHNIQUES

Data was collected by the qualified field investigators who have experience in similar studies. Data was collected at the workplace of the health workers using a self administered questionnaire. The questionnaire comprises of four sections. They are, (a) Information and consent form, (b) General information, (c)Personal profile, (d) Duties and responsibilities related to Profession, (e) Perceptions, aspirations and ambitions related to work and career, (f) Role Overload, Distance and Stagnation (RODS)scale. All the sections excepting the RODS scale were developed by the investigators. RODS scale is, the RODS scale which was developed by Pareek and Purohit(2010). RODS is used to measure the 3 role stresses; role overload, self-role distance and role stagnation. The scale has 30 items; 10 for each of the 3 role stresses. **Reliability:** Cronbach Alpha for a group of 25 health administrators was reported to be 0.77.

D. TRAINING OF FIELD INVESTIGATORS

For data collection, four agencies were selected from the five study districts of Kerala. For the field investigators and supervisors we organized one day training programme in each of the study district with the support of the data collection agency. The training programme covered various aspects of data collection. The participants were introduced with the basic structure and functions of public health system in Kerala, ethical aspects of research with the special reference to the workload of public health nurses, and they have been given a detailed introduction of the data collection questionnaire with a training manual developed in Malayalam. The manual included the codes of each one of the health centre along with the different responses for each of the question. (See Annexure .,.. for details). The participants were also been taken to a health centre and asked to collect data from different respondent categories. This given them a hands on experience of data collection with the respondents. Then a session to discuss the problems faced while collecting data was held.

E. DATA COLLECTION AND ANALYSIS

For data collection agencies having experience in research studies were identified and were given the charge for data collection. Four different agencies were engaged to collect data from five districts of Kerala. Table 3 shows the names of the agencies and the districts in which the agencies collected data.

TABLE DATA COLLECTION AGENCIES IN FIVE SELECTED DISTRICTS

Sl. No	Name of district	Name of agency
1	Alappuzha	Gandhi Smaraka Grama Seve Kendram, Alappuzha
2	Ernakulam	Gandhi Smaraka Grama Seve Kendram, Alappuzha
3	Malappuram	Rajiv Youth Foundation, Manjeri
4	Thiruvananthapuram	Family Planning Association of India (FPAI), Trivandrum Branch
5	Wayanad	The Centre for Advanced Research, Development and Education (CARDE), Thrissur

We started our data collection in the month of December 2010 and completed it by September 2011. Collected data were entered into data entry software – Epidata and analysis was done using SPSS 17.0. Univariate and bivariate analyses were done for the purpose of exploring the workload among the women health workers.

F. OUTCOMES

The workload among the public health nurses were documented and will be published as a conference/journal papers. This will be used as a base for future research and policy formulation. The findings on the time and work-study will help the policy makers to allocate work in a modified way in future.

G. ETHICAL CONSIDERATIONS

Confidentiality and anonymity was maintained throughout the study. The data collected will be used only for the research purposes. There was an informed consent from the respondent before administering the questionnaire. The self administered questionnaire was in simple Malayalam language and was easily understood by the respondents.(Refer Annexure…) The details of contact information such as phone numbers and address were given in the questionnaire. The respondents had freedom to decide on his/her participation in the study.

All eligible men and women health workers (JPHN,JHI,staff nurse, LHI and LHS) who are working permanently in the selected health centers were included in the study.

Pregnant women were excluded from the study.
All temporary health workers were also excluded from the study.

IV. PROJECT MANAGEMENT

A) DURATION

Duration of the study was 20 months. First three months was used for preparation. 4th month was utilized for recruitment and training. Data collection began from 5th month and ended in 14th month. The analysis began in the 14th month and ended in 16th month. Draft report is ready in 19th month. The final report will be ready by 20th month.

TABLE TIME SCHEDULE

Sl No	Activity	Duration
1.	Preparation	3 month
2.	Recruitment and training	1 month
3.	Data collection	6 months
4.	Analysis	4 months
5.	Draft Report	3 months
6.	Final Report	3 months
	Total	20 months

TABLE NUMBER AND DURATION OF PERSONNEL RECRUITED

Sl No	Personnel	No	Duration
1.	Project Associate	1	17 months
2.	Office Assistant	1	17 months

V. FINDINGS

A) PROFILE

TABLE 5.1 RESPONDENT CATEGORIES IN DIFFERENT DISTRICTS

District	Respondent Category					
	JPHN	JHI	SN	LHI	LHS	Total
TVPM	124	62	25	38	6	255
	48.6%	24.3%	9.8%	14.9%	2.4%	100.0%
APZA	131	50	26	32	7	246
	53.3%	20.3%	10.6%	13.0%	2.8%	100.0%
EKLM	117	52	31	28	8	236
	49.6%	22.0%	13.1%	11.9%	3.4%	100.0%
MPRM	126	69	20	29	7	251
	50.2%	27.5%	8.0%	11.6%	2.8%	100.0%
WYND	137	70	24	17	2	250
	54.8%	28.0%	9.6%	6.8%	.8%	100.0%
Total	635	303	126	144	30	1238
	51.3%	24.5%	10.2%	11.6%	2.4%	100.0%

Table 5.1 presents the details of respondent categories in 5 study districts. The total number of respondents who have participated in the study are 1238. The average number of persons participated in each district is 247.6, which ranges from 236 in Ernakulam and to 255 in Thiruvananthapuram. We originally planned to collect data from 1000 respondents from five districts. Keeping the response rate in mind we have given a list of about 250 respondents to the data collection agencies.(Kindly refer Table No. 1).

In all districts we have collected data from five categories of respondents. They include, JPHN, JHI, SN, LHI, and LHS. The number of JPHNs in the five districts ranges from 117 to 137, while the number of JHI ranges from 50 to 70. The number of staff nurses participated in the study ranges from 20 to 31, while LHI ranges from 17 to 38 and LHS ranges from 2 to 8. The number of LHI and LHS were lowest in Wayanad. This is due to non-availability of LHI and LHS in the district. The response rate is 99.04%. We have distributed 1250 questionnaires and got back 1238 which were complete in all respect.

Table 5.2 presents the sex distribution of respondents. Majority of respondents are women. The percentages of female respondents ranges from 75.6 to 84.3. In Malappuram and Wayanad districts the the female respondents participated in the study are lesser than other three districts.

TABLE 5.2 **DISTRICT WISE SEX DISTRIBUTION OF RESPONDENTS**

District	Sex		Total
	Female	Male	
TVPM	212	43	255
	83.1%	16.9%	100.0%
APZA	205	41	246
	83.3%	16.7%	100.0%
EKLM	199	37	236
	84.3%	15.7%	100.0%
MPRM	191	60	251
	76.1%	23.9%	100.0%
WYND	189	61	250
	75.6%	24.4%	100.0%
Total	996	242	1238
	80.5%	19.5%	100.0%

TABLE 5.3 AGE OF THE RESPONDENTS

District	Age category (in years)				
	<=29	30-39	40-49	>=50	Total
TVPM	13	71	133	38	255
	5.1%	27.8%	52.2%	14.9%	100.0%
APZA	8	88	99	51	246
	3.3%	35.8%	40.2%	20.7%	100.0%
EKLM	12	72	104	48	236
	5.1%	30.5%	44.1%	20.3%	100.0%
MPRM	10	85	110	46	251
	4.0%	33.9%	43.8%	18.3%	100.0%
WYND	11	80	117	42	250
	4.4%	32.0%	46.8%	16.8%	100.0%
Total	54	396	563	225	1238
	4.4%	32.0%	45.5%	18.2%	100.0%

Table 5.3 is presented on the age distribution of respondents. The age of the respondents ranged from 22 to 55. 45.5 % of the respondents belong to 40 to 49 years categories which is followed by 32 % belong to 30-39 years category. The age ranged from 22 to 55 years. Median Age of the

respondent is 42. There were 18.2 % of respondents above 50 years of age. Only 4.4 % were below 29 years. The trend remained more or less similar in all the five study districts.

Table 5.4 shows the marital status of the respondents. In all districts, about 90 % of the respondents are married. The percentage of married respondents ranges from 87.4 to 92.6.

TABLE 5.4 MARITAL STATUS OF THE RESPONDENTS

District	Marital status			Total
	Married	Unmarried	Others	
TVPM	221	28	4	253
	87.4%	11.1%	1.6%	100.0%
APZA	216	28	2	246
	87.8%	11.4%	.8%	100.0%
EKLM	214	17	2	233
	91.8%	7.3%	.9%	100.0%
MPRM	220	25	6	251
	87.6%	10.0%	2.4%	100.0%
WYND	225	18	0	243
	92.6%	7.4%	.0%	100.0%
Total	1096	116	14	1226
	89.4%	9.5%	1.1%	100.0%

Table 5.5 presents the family type of the respondents. In total 70% of the respondents live in nuclear family. This percentage ranges from 57.7 to 71.8. The trend is more or less similar in all the five districts except in Malappuram district. The percentage of people live in nuclear family in Malappuram district is only 57.7%.

TABLE 5.5 FAMILY TYPE OF RESPONDENTS

District	Type of family		Total
	Nuclear	Extended	
TVPM	175	72	247
	70.9%	29.1%	100.0%
APZA	157	87	244
	64.3%	35.7%	100.0%
EKLM	163	64	227
	71.8%	28.2%	100.0%
MPRM	139	102	241
	57.7%	42.3%	100.0%
WYND	166	71	237
	70.0%	30.0%	100.0%
Total	800	396	1196
	66.9%	33.1%	100.0%

Table 5.6 presents the rural urban distribution of respondents. In total 92.8% of respondents live in rural area. The percentage ranges from 81.7 to 98.6. This distribution is similar in all the districts except in Thiruvananthapuram. In Thiruvanthapuram only 81.7% live in rural areas.

TABLE 5.6 **RURAL URBAN DISTRIBUTION OF RESPONDENTS**

District	Location		
	Urban	Rural	Total
TVPM	40 18.3%	81.7%	219 100.0%
APZA	3 1.4%	213 98.6%	216 100.0%
EKLM	16 7.8%	188 92.2%	204 100.0%
MPRM	10 4.6%	207 95.4%	217 100.0%
WYND	7 3.5%	194 96.5%	201 100.0%
Total	76 7.2%	981 92.8%	1057 100.0%

Table 5.7 presents distribution of years of experience of respondents. The experience of the respondents ranged from 1 year to 33 years. The median years of experience is 14. Majority of the respondents are experienced more than 5 years of experience. Only 11.7% of respondents were experienced below 5 years and only 1.9 % has experience more than 30 years. The pattern is more or less similar in all the five study districts.

Table 5.8 presents the income distribution of respondents. About 60 % of the respondents earn more than 12001 rupees per month. Only 5 % of respondents earn less than 8000 rupees per month. When we look in to the distribution, 25.3% respondents earn more than 16000 rupees followed by 22.9% of respondents earn in a range of 10001-1200 and 21.7% in the range of 12001 to 14000.

TABLE **5.7 DISTRIBUTION OF YEARS OF EXPERIENCE OF RESPONDENTS**

District	Experience_category(Years)							
	<5	5-9	10-14	15-19	20-24	25-29	>=30	Total
TVPM	18	48	64	48	45	28	4	255
	7.1%	18.8%	25.1%	18.8%	17.6%	11.0%	1.6%	100.0%
APZA	46	49	43	37	25	39	7	246
	18.7%	19.9%	17.5%	15.0%	10.2%	15.9%	2.8%	100.0%
EKLM	35	49	32	42	39	34	5	236
	14.8%	20.8%	13.6%	17.8%	16.5%	14.4%	2.1%	100.0%
MPRM	21	52	61	33	49	29	6	251
	8.4%	20.7%	24.3%	13.1%	19.5%	11.6%	2.4%	100.0%
WYND	25	55	41	32	48	47	2	250
	10.0%	22.0%	16.4%	12.8%	19.2%	18.8%	.8%	100.0%
Total	145	253	241	192	206	177	24	1238
	11.7%	20.4%	19.5%	15.5%	16.6%	14.3%	1.9%	100.0%

TABLE **5.8 INCOME DISTRIBUTION OF RESPONDENTS**

District	Monthly Income category (In Rupees)						
	< 8000	8000-10000	10001-12000	12001-14000	14001-16000	>16000	Total
TVPM	19	17	51	35	32	100	254
	7.5%	6.7%	20.1%	13.8%	12.6%	39.4%	100.0%
APZA	14	39	69	50	23	51	246
	5.7%	15.9%	28.0%	20.3%	9.3%	20.7%	100.0%
EKLM	13	25	43	74	29	50	234
	5.6%	10.7%	18.4%	31.6%	12.4%	21.4%	100.0%
MPRM	12	37	67	43	38	53	250
	4.8%	14.8%	26.8%	17.2%	15.2%	21.2%	100.0%
WYND	4	34	53	66	35	58	250
	1.6%	13.6%	21.2%	26.4%	14.0%	23.2%	100.0%
Total	62	152	283	268	157	312	1234
	5.0%	12.3%	22.9%	21.7%	12.7%	25.3%	100.0%

B) ABOUT WORK AND WORKLOAD

TABLE **5.9 NO OF HOURS SPENT ON DIFFERENT ACTIVITIES DURING THE PREVIOUS MONTH**

	FV	Imsn	PInter	Prevn	MCH	FP	Info	Reptg	Meet	Conf/ca
N	1011	1126	1171	999	1024	995	1034	1049	1069	874
Mean	73.08	25.61	51.94	41.48	40.84	33.55	36.46	14.48	14.73	10.67
Medn	72.00	20.00	40.00	26.00	24.00	20.00	27.00	10.00	12.00	8.00
StDev	42.77	26.12	53.26	46.14	43.49	36.02	40.42	16.43	12.02	11.14
Min	0	0	0	0	0	1	0	0	0	0
Max	450	240	600	360	454	232	332	160	200	160

FV- Field Visit, Imsn-Immunization, Pinter-People Interaction,Prevn- Prevention of illness, MCH-Mother and child care, FP-Family Planning, Info-Information, Reptg-Reporting, Meet-participating in meetings, Conf/ca- conference and camps

Please refer Table 5.9. All respondents were asked to state number of hours a public health nurse spends in a mentioned activity during the previous month. There were 10 activities listed against which they were expected to give figure for number of hours. Table No.5.9 shows the response for each of the activities varied from 874 to 1238. The mean hours spent on each activity is given above. For field visit, the mean time spent during the previous month was 73 hours, while for immunization it was 26 hours, for community interactions it was 53 hoiurs, for prevention activities it was 41 hours, for mother and child care it was 41 hours, for family planning they spend 34 hours in an average. For IEC it was 36 hours, for reporting the mean time spent was 14 hours, while official meetings took about 15 hours of their time. While they spent about 11 hours on conferences and camps.

Duties and responsibilities

TABLE **5.10 NUMBER OF PERSONS VISITED (N=838)**

Number of persons	Frequency	Percent
<500	60	4.8
501-1000	169	13.7
1001-1500	343	27.7
1501-2000	146	11.8
2001-2500	62	5.0
2501-3000	23	1.9
3001-3500	20	1.6
>3501	15	1.2
Total	838	67.7

Table 5.10 shows the number of persons visited by the health workers during the previous month. Only the JPHNs and JHIs are expected to visit houses in their area of operation. More than half(58 %) visited 2000 or less people in a month. In an average about 1400 persons were visited as reported by the respondents.

Various duties perfomed by JPHNs and JHIs are shown in Table5.11. Above 90 percent of JPHNs and JHIs engaged in Mother and child care, Immunisation, Family/village survey, Family planning service, Registration, Medicine issue, Control and prevention of disease, Health and family planning programme, ICDS Programme, School health programme, National health programmes, Old age clinics, Referring to other hospitals, and Ensuring environmental hygiene. While around 80% of them engaged in Mental illness and Palliative Care. More than 50% time of all of them spent time in meetings and panchyat surveys. These are not directly contributing to service. JPHNs and JHIs in Wayanad district were engaged in Sickle cell/Tribal health activities.

TABLE **5.11 JOBS PERFORMED BY JPHN/JHI(N=938)**

Name of activity	Frequency	Percent
Mother and child care	894	95.3
Immunisation	931	99.3
Family/village survey	910	97.0
Family planning service	895	95.4
Registration	871	92.9
Medicine issue	850	90.6
Control and prevention of disease	930	99.1
Health and family planning programme	928	98.9
ICDS Programme	916	97.7
School health programme	900	95.9
National health programmes	892	95.1
Old age clinics	895	95.4
Mental illness	826	88.1
Palliative Care	783	83.5
Referring to other hospitals	880	93.8
Ensuring environmental hygiene	914	97.4
Programmes/Classes/Meetings	505	53.8
Interventions/Committees	311	33.2
Sickle cell/Tribal health	109	11.6
Palliative/Counselling/Support	57	6.1
Panchayat/Administrative/Survey	475	50.6

TABLE **5.12 NATURE OF SUPERVISION OF LHI/LHS (N= 174)**

Name of activity	Yes	
	Frequency	Percent
I go to field for supervision	171	98.3
They will come to me at Health Centre	66	37.9
I check all clinical activities/programmes	35	20.1
I check and supervise their administrative work	92	52.9
I supervise them during community programmes	42	24.1

Table 5.12 presents the nature of supervisions done by the LHIs and LHSs. One of the major responsibilities of LHIs and LHSs are supervision of JPHNs and JHIs respectively. Almost all except a few visit the sub-ordinates at field for both concurrent and consecutive supervision. Majority(98.3%) of them supervise their subordinates on the field and 92% supervise the administrative work. Some of them attend the immunisation clinics, NCD clinics, anti-natal clinics and so on. During such instances they track their sub-ordinates. More than a half of the respondents reported that they check all the registers, reports and the other administrative work done by their subordinates.

Almost all of the LHIs and LHSs (97.7%) reported that their sub-ordinates are performing their work properly and report them.

Various job responsibilities of staff nurses are shown in the above Table 5.13. Many of the services rendered are clinical in nature. The staff nurses are posted only in the hospitals. They are serving in CHCs and Taluk Hospitals. There are a few non-medical services such as record maintenance and managerial jobs. Half of them also engaged in palliative care services. Some even go for camps. In Wayanad district, staff nurses do sickle cell anemia treatment activities.

Table 5.14 shows the number of patients managed in OP clinics by the staff nurses(Table 5.14). This is based on the number of persons served by a staff nurse in a normal OP day at health centre. 38% managed more than 201 persons, while 34.5% staff nurses managed between 101 to 200 patients. 27.4% of them managed less than 100 patients.

Table **5.13 Jobs performed by Staff Nurses (N=126)**

Name of activity	Yes	
	Frequency	Percent
Administering injections	121	96.0
Wound dressing	103	81.7
Operation theatre service	64	50.8
Medicine distribution	122	96.8
Maintaining registers	116	92.1
Palliative care	50	39.7
Follow-ups	87	69.0
Referring patients	99	78.6
Clinical	33	26.2
Managerial	16	12.7
Sickle Cell	4	3.2
Programmes/Camps	17	13.5

TABLE **5.14 OP SERVICES RENDERED BY STAFF NURSES (N=126)**

Number of people	Frequency	Valid Percent
<100	31	27.4
101-200	39	34.5
>201	43	38.1
Total	113	100.0

TABLE **5.15 IP SERVICES RENDERED BY STAFF NURSES (N=126)**

Number of people	Frequency	Valid Percent
<20	61	70.1
21-40	22	25.3
>41	4	4.6
Total	87	100.0

Table 5.15 shows the number of IP patients served by the staff nurses(Table 5.15). This is based on the number of patients served by a staff nurse at IP in a normal working day. 70% of them served below 20 persons, 25 % served between 21 to 40 patients. Only 4.6% of them served more than 41 in patients.

C) SELF RATED PERFORMANCE

TABLE **5.16 SELF RATED PERFORMANCE OF RESPONDENTS**

Respondent Category	Self assessment of performance			Total
	Better than expected	Satisfactory	Couldn't satisfy expectations	
JPHN	44	505	76	625
	7.0%	80.8%	12.2%	100.0%
JHI	18	265	18	301
	6.0%	88.0%	6.0%	100.0%
SN	6	110	9	125
	4.8%	88.0%	7.2%	100.0%
LHI	14	116	14	144
	9.7%	80.6%	9.7%	100.0%
LHS	2	22	6	30
	6.7%	73.3%	20.0%	100.0%
Total	84	1018	123	1225
	6.9%	83.1%	10.0%	100.0%

Note: The total number of respondents was 1238. For this question only 1225 responded.

Above Table 5.16 presents the performance of the health workers as perceived by them. This is based on the self reported self rated performance of the respondents during last one year. Irrespective of the respondent category a majority of the respondents rated their work performance over last one year of filling the questionnaire as satisfactory. Above 80% all categories of respondents excluding LHSs satisfied by their performance. Overall 10% of the respondents have stated they could not satisfy their expectations.

When a question on consequence of poor performance in their responsibilities, more than 80% perceived that they may have to work more. (Kindly refer the above Table 5.17). 18% perceive this will delay their promotion. In general they do not expect any adverse consequence for poor performance.

TABLE **5.17 PERCEIVED CONSEQUENCES OF POOR WORK PERFORMANCE**

Name of activity	Yes		No	
	Frequency	Percent	Frequency	Percent
Delay in promotion	225	18.2	1013	81.8
More work	531	42.9	707	57.1
Transfer	257	20.8	981	79.2
Suspension	66	5.3	1172	94.7
Termination	7	.6	1231	99.4
Asking explanation	32	2.6	1206	97.4
Verbal/mental abuse	18	1.5	1220	98.5
Dissatisfaction	11	.9	1227	99.1

TABLE **5.18 INTER PERSONAL RELATIONS AT WORK PLACE**

Category	Co-operative		Competitive		Conflicting	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
Superiors	1204	98.1	5	.4	18	1.5
Colleagues	1203	98.0	21	1.7	3	.2
Patients/visitors	1210	99.0	3	.2	9	.7
People at the field	1156	98.5	6	.5	12	1.0

D) PERCEPTIONS

Above table(5.18) is the type of inter personal relations the health workers have. Almost all of them stated that the relationship with their superiors, colleagues, patients and subordinates as cooperative.

TABLE 5.19 **OFFICIAL WORK AFFECTING FAMILY RESPONSIBILITIES**

Respondent Category	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	Total
JPHN	46	166	88	260	69	629
	7.3%	26.4%	14.0%	41.3%	11.0%	100.0%
JHI	23	62	46	140	31	302
	7.6%	20.5%	15.2%	46.4%	10.3%	100.0%
SN	15	50	12	42	7	126
	11.9%	39.7%	9.5%	33.3%	5.6%	100.0%
LHI	11	44	21	54	13	143
	7.7%	30.8%	14.7%	37.8%	9.1%	100.0%
LHS	4	7	3	14	2	30
	13.3%	23.3%	10.0%	46.7%	6.7%	100.0%
Total	99	329	170	510	122	1230
	8.0%	26.7%	13.8%	41.5%	9.9%	100.0%

Above table(5.19) is the response to a five point scale on the official work affecting family responsibilities among different categories of health workers. Among the JPHNs, JHIs, LHIs, and LHSs around 30% have mentioned their family life is affected by their work. Only among the Staff Nurses it was high with 51%.

Table 5.20 presents how much of the health workers' social life is affected by their job. Above 25 % JPHN, JHI, and LHI reported that their social life is affected by their official responsibilities. However, this was only about 17% among the LHSs. This was about 43% among Staff Nurses.

TABLE **5.20 OFFICIAL WORK AFFECTING SOCIAL LIFE**

Respondent category	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	Total
JPHN	19	141	94	304	68	626
	3.0%	22.5%	15.0%	48.6%	10.9%	100.0%
JHI	19	72	27	154	30	302
	6.3%	23.8%	8.9%	51.0%	9.9%	100.0%
SN	13	41	14	52	6	126
	10.3%	32.5%	11.1%	41.2%	4.8%	100%
LHI	7	34	13	73	16	143
	4.9%	23.8%	9.1%	51.0%	11.2%	100.0%
LHS	2	3	3	21	1	30
	6.7%	10.0%	10.0%	70.0%	3.3%	100.0%
Total	60	291	151	604	121	1227
	4.9%	23.7%	12.3%	49.2%	9.9%	100.0%

Table 5.21 shows the additional responsibility performed by the health workers in different categories. More than two third of all health workers irrespective of categories reported to have been doing additional work. This is due to the additional responsibilities assigned to many due to non-availability of man power in many of the health centres in different levels. Non-public health nurse i.e. Staff Nurses reported the maximum with 94.4%.

TABLE **5.21 ADDITIONAL RESPONSIBILITY**

Respondent Category	Do additional responsibility		Total
	Yes	No	
JPHN	548	84	632
	86.7%	13.3%	100.0%
JHI	268	34	302
	88.7%	11.3%	100.0%
SN	118	7	125
	94.4%	5.6%	100.0%
LHI	114	30	144
	79.2%	20.8%	100.0%
LHS	21	9	30
	70.0%	30.0%	100.0%
Total	1069	164	1233
	86.7%	13.3%	100.0%

A question on whose responsibility was shared by the health workers, about 66 per cent of them stated they are sharing with the persons in their level. More than 27 per cent of all the workers stated either they are sharing the works of superiors and the pharmacists(Kindly refer table 5.22).

TABLE **5.22 SHARING OF RESPONSIBILITIES WITH OTHER STAFF MEMBERS IN THEIR CENTRE**

Category	**Yes**		**No**	
	Frequency	Percent	Frequency	Percent
Lab technicians	59	5.5	1016	94.5
Pharmacists	300	27.9	774	72.1
Persons in your rank	711	66.2	363	33.8
Doctor's	35	3.3	1039	96.7
superiors/administrative	293	27.3	781	72.7
Sub-ordinate's	47	4.4	1027	95.6

E) PERCEPTION ON TRAINING

TABLE **5.23 AGREEMENT ON TRAINING RECEIVED FOR UPDATING SKILLS AND KNOWLEDGE**

Respondent category	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	Total
JPHN	56	400	85	70	22	633
	8.8%	63.2%	13.4%	11.1%	3.5%	100.0%
JHI	33	175	29	58	8	303
	10.9%	57.8%	9.6%	19.1%	2.6%	100.0%
SN	3	85	13	18	7	126
	2.4%	67.5%	10.3%	14.3%	5.6%	100.0%
LHI	18	105	12	6	2	143
	12.6%	73.4%	8.4%	4.2%	1.4%	100.0%
LHS	8	18	2	2	0	30
	26.7%	60.0%	6.7%	6.7%	.0%	100.0%
Total	118	783	141	154	39	1235
	9.6%	63.4%	11.4%	12.5%	3.2%	100.0%

The above table(5.23) presents 5 point response(Strongly Agree to Strongly Disagree) to a statement, "I get enough training from the concerned authorities to update my skills and knowledge". More than two third of all categories of health workers have stated that they agree receiving training to update skills and knowledge appropriate for their present position.

F) MIGRATION PLAN

In the midst of role stress and other difficulties related to work a huge majority of the respondents(95.9%) do not have any plan to migrate other states/countries.

Among those who wanted to migrate the reasons mentioned for intended migration are,

- Better prospects in the destination
- Heavy workload
- Poor working conditions
- Interpersonal problems among co-workers

- Low social acceptance for the job
- To stay with the life partner

G) WORKLOAD

The workload in the present study comprises of three elements. 1. Role overload, 2. Role distance, and 3. Role stagnation. As referred earlier for the purpose of measuring the workload RODS scale was administered among different categories of public health nurses. Following tables show the prevalence of three aspects of workload. As per the scale, the cut off point for the categories were kept at 25 out of 50(maximum value). People who score more than or equal to 25 are classified as high in the respective aspect of workload viz. Role overload, role distance and role stagnation.

TABLE **5.24 ROLE OVERLOAD**

		Frequency	Percent	Valid Percent
Valid	<25	306	24.7	24.7
	>=25	931	75.2	75.3
	Total	1237	99.9	100.0
Missing	System	1	.1	
Total		1238	100.0	

Table 5.24 shows the prevalence of role overload among the public health nurses. 931 out of 1237 of them have reported role overload. That means 75.26%(95% CI*: 72.78, 77.59) of them have role overload as per the values they scored on the RODS scale.

*Confidence Interval

TABLE **5.25 ROLE STAGNATION**

		Frequency	Percent	Valid Percent
Valid	<25	549	44.3	44.4
	>=25	688	55.6	55.6
	Total	1237	99.9	100.0
Missing	System	1	.1	
Total		1238	100.0	

Table 5.25 shows the prevalence of role stagnation among the public health nurses. 688 out of 1237 of them have reported role stagnation. That means 55.62%(95% CI*: 52.84,58.37) of them have role stagnation as per the values they scored on the RODS scale.

*Confidence Interval

TABLE **5.26 SELF ROLE DISTANCE**

		Frequency	Percent	Valid Percent
Valid	<25	1089	88.0	88.0
	>=25	149	12.0	12.0
	Total	1238	100.0	100.0

Table 5.26 shows the prevalence of role distance among the public health nurses. Only 149out of 1238 of them have reported role distance. That means Only 12.04% (95% CI*: 10.34,13.97) of them have reported role distance as per the values they scored on the RODS scale.

*Confidence Interval

TABLE **5.27 RESPONDENT CATEGORY AND RODS**

			Role overload			**Role stagnation**			**Self role distance**		
			Low	High	Total	Low	High	Total	Low	High	Total
Respondent Category	JPHN	Count	112	522	634	270	364	634	550	85	635
		%	17.7	82.3	100.0	42.6	57.4	100.0	86.6	13.4	100.0
	JHI	Count	91	212	303	118	185	303	261	42	303
		%	30.0	70.0	100.0	38.9	61.1	100.0	86.1	13.9	100.0
	SN	Count	49	77	126	49	77	126	114	12	126
		%	38.9	61.1	100.0	38.9	61.1	100.0	90.5	9.5	100.0
	LHI	Count	42	102	144	89	55	144	135	9	144
		%	29.2	70.8	100.0	61.8	38.2	100.0	93.8	6.3	100.0
	LHS	Count	12	18	30	23	7	30	29	1	30
		%	40.0	60.0	100.0	76.7	23.3	100.0	96.7	3.3	100.0
Total		Count	306	931	1237	549	688	1237	1089	149	1238
		%	24.7	75.3	100.0	44.4	55.6	100.0	88.0	12.0	100.0
P* Value			< 0.001			<0.001			0.050		

* Pearson Chi-Square test, df 4

H) ASSOCIATION OF INDEPENDENT VARIABLES WITH RODS

Three aspects of workload namely role overload, stagnation and role distance are different across the health workers ($p<0.05$). Role Overload and Role stagnation are found high in all categories of public health nurses. While the self role distance was found to be less in all categories.

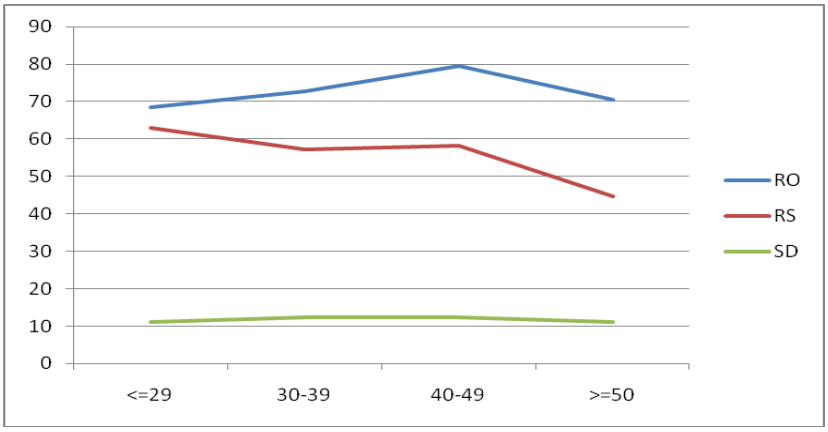
Table **5.28 Age category and RODS**

			Role overload			**Role stagnation**			**Self role distance**		
			Low	High	Total	Low	High	Total	Low	High	Total
Age category	<=29	Count	17	37	54	20	34	54	48	6	54
		%	31.5	68.5	100.0	37.0	63.0	100.0	88.9	11.1	100.0
	30-39	Count	108	288	396	169	227	396	347	49	396
		%	27.3	72.7	100.0	42.7	57.3	100.0	87.6	12.4	100.0
	40-49	Count	115	448	563	236	327	563	494	69	563
		%	20.4	79.6	100.0	41.9	58.1	100.0	87.7	12.3	100.0
	>=50	Count	66	158	224	124	100	224	200	25	225
		%	29.5	70.5	100.0	55.4	44.6	100.0	88.9	11.1	100.0
Total		Count	306	931	1237	549	688	1237	1089	149	1238
		%	24.7	75.3	100.0	44.4	55.6	100.0	88.0	12.0	100.0
P* Value					0.012			0.003			0.961

* Pearson Chi-Square, df 3

Statistically significant difference is found only in Role overload and stagnation. In case of role overload, the overload is increasing with age. On the other hand the role stagnation decreases with the age. However, role stagnation decreases with age is only statistically significant(Chisquare test for trend p=0.004).

FIGURE 5.1 TREND FOR AGE CATEGORY AND WORKLOAD RODS



The above figure shows trend for workload for different age categories. The trend shows decreasing Role Stagnation aspect of workload with lesser age. The trend shows an increasing

Role Stagnation aspect of workload with increase in age category. This shows when a public health nurse getting old feel her workload in terms of role stagnation is increasing.

TABLE **5.29 SEX AND RODS**

			Role overload			Role stagnation			Self role distance		
			Low	High	Total	Low	High	Total	Low	High	Total
Sex	Female	Count	233	762	995	459	536	995	886	110	996
		%	23.4	76.6	100.0	46.1	53.9	100.0	89.0	11.0	100.0
	Male	Count	73	169	242	90	152	242	203	39	242
		%	30.2	69.8	100.0	37.2	62.8	100.0	83.9	16.1	100.0
Total		Count	306	931	1237	549	688	1237	1089	149	1238
		%	24.7	75.3	100.0	44.4	55.6	100.0	88.0	12.0	100.0
P* Value					0.029			0.012			0.030

* Pearson Chi-Square, df 1

Three aspects of workload namely role overload, stagnation and role distance are different for both sexes($p<.05$). The Role over load is higher among women and the role stagnation and self role distance are higher among men.

TABLE **5.30 MARITAL STATUS AND RODS**

			Role overload			Role stagnation			Self role distance		
			Low	High	Total	Low	High	Total	Low	High	Total
Marital status	Married	Count	259	836	1095	486	609	1095	971	125	1096
		%	23.7	76.3	100	44.4	55.6	100	88.6	11.4	100
	Un-married	Count	40	76	116	56	60	116	94	22	116
		%	34.5	65.5	100	48.3	51.7	100	81.0	19.0	100
	Others	Count	4	10	14	4	10	14	13	1	14
		%	28.6	71.4	100	28.6	71.4	100	92.9	7.1	100
Total		Count	303	922	1225	546	679	1225	1078	148	1226
		%	24.7	75.3	100	44.6	55.4	100	87.9	12.1	100
P* Value					0.035			0.348			0.050

* Pearson Chi-Square, df 2

Statistically significant difference is found only in Role overload and self role distance($p<0.05$). The role overload is highest among the unmarried and the self role distance is highest among the unmarried.

TABLE **5.31 NO.OF CHILDREN AND RODS**

			Role overload			Role stagnation			Self role distance		
			Low	High	Total	Low	High	Total	Low	High	Total
No. of Children	0	Count	4	4	8	3	5	8	7	1	8
		%	50.0	50.0	100	37.5	62.5	100	87.5	12.5	100
	1	Count	58	166	224	100	124	224	192	32	224
		%	25.9	74.1	100	44.6	55.4	100	85.7	14.3	100
	2	Count	125	435	560	258	302	560	507	54	561
		%	22.3	77.7	100	46.1	53.9	100.0	90.4	9.6	100
	3	Count	15	41	56	21	35	56	49	7	56
		%	26.8	73.2	100	37.5	62.5	100	87.5	12.5	100
	4	Count	1	8	9	5	4	9	9	0	9
		%	11.1	88.9	100	55.6	44.4	100	100.0	.0	100
Total		Count	203	654	857	387	470	857	764	94	858
		%	23.7	76.3	100	45.2	54.8	100	89.0	11.0	100
P* Value					0.255			0.714			0.305

* Pearson Chi-Square, df 4

No evidence that the number of children contributes to workload in terms of overload, stagnation and role distance.

TABLE **5.32 TYPE OF FAMILY AND RODS**

			Role overload			Role stagnation			Self role distance		
			Low	High	Total	Low	High	Total	Low	High	Total
Type of family	Nuclear	Count	189	610	799	368	431	799	704	96	800
		%	23.7	76.3	100	46.1	53.9	100	88.0	12.0	100
	Extended	Count	106	290	396	167	229	396	350	46	396
		%	26.8	73.2	100	42.2	57.8	100	88.4	11.6	100
Total		Count	295	900	1195	535	660	1195	1054	142	1196
		%	24.7	75.3	100	44.8	55.2	100	88.1	11.9	100
P* Value					0.240			0.204			0.847

* Pearson Chi-Square, df 1

Type of family have no association with workload in terms of RODS.

TABLE **5.33 MONTHLY INCOME CATEGORY AND RODS**

			Role overload			Role stagnation			Self role distance		
			Low	High	Total	Low	High	Total	Low	High	Total
Monthly Income category in Rupees	Below 8000	Count	21	41	62	38	24	62	57	5	62
		%	33.9	66.1	100	61.3	38.7	100	91.9	8.1	100
	8000-10000	Count	29	123	152	55	97	152	129	23	152
		%	19.1	80.9	100	36.2	63.8	100	84.9	15.1	100
	10001-12000	Count	73	210	283	122	161	283	243	40	283
		%	25.8	74.2	100	43.1	56.9	100	85.9	14.1	100
	12001-14000	Count	58	210	268	125	143	268	234	34	268
		%	21.6	78.4	100	46.6	53.4	100	87.3	12.7	100
	14001-16000	Count	42	115	157	54	103	157	141	16	157
		%	26.8	73.2	100	34.4	65.6	100	89.8	10.2	100
	Above 16000	Count	82	229	311	153	158	311	281	31	312
		%	26.4	73.6	100	49.2	50.8	100	90.1	9.9	100
Total		Count	305	928	1233	547	686	1233	1085	149	1234
		%	24.7	75.3	100	44.4	55.6	100	87.9	12.1	100
P* Value					0.172			0.001			0.372

* Pearson Chi-Square, df 5

Based on the response, the role stagnation has an association with the monthly income. The respondents with lower income category are having minimal role stagnation compared to higher income(categories). (Table 5.33)

Table 5.34 shows there is an association between the years of experience and two of the workload components, namely, the role overload and role stagnation. There is no trend emerging from the responses.

Table 5.35 shows only the self role distance is associated with the number of persons visited. However, there is no trend emerging from the responses.

Table 5.36 shows the perception of family life is affected by the official work. The perception is associated with all the three components of workload, namely, role overload, role stagnation and self role distance($p<0.05$). This is also further confirmed by the trend emerging from the responses for all three components of workload (Chi square test for trend $p<0.05$ for all the three namely, role overload, role stagnation, and self role distance).

TABLE **5.34 EXPERIENCE CATEGORY AND RODS**

			Role overload			Role stagnation			Self role distance		
			Low	High	Total	Low	High	Total	Low	High	Total
Experience category	<5	Count	43	102	145	66	79	145	127	18	145
		%	29.7	70.3	100	45.5	54.5	100	87.6	12.4	100
	5-9	Count	64	189	253	107	146	253	218	35	253
		%	25.3	74.7	100	42.3	57.7	100	86.2	13.8	100
	10-14	Count	60	181	241	92	149	241	217	24	241
		%	24.9	75.1	100	38.2	61.8	100	90.0	10.0	100
	15-19	Count	52	140	192	91	101	192	166	26	192
		%	27.1	72.9	100	47.4	52.6	100	86.5	13.5	100
	20-24	Count	31	174	205	86	119	205	181	25	206
		%	15.1	84.9	100	42.0	58.0	100	87.9	12.1	100
	25-29	Count	49	128	177	92	85	177	160	17	177
		%	27.7	72.3	100	52.0	48.0	100	90.4	9.6	100
	>=30	Count	7	17	24	15	9	24	20	4	24
		%	29.2	70.8	100	62.5	37.5	100	83.3	16.7	100
Total		Count	306	931	1237	549	688	1237	1089	149	1238
		%	24.7	75.3	100	44.4	55.6	100	88.0	12.0	100
P* Value		0.032			0.046			0.722	* Pearson Chi-Square, df 6		

TABLE **5.35 PERSONS VISITED CATEGORY AND RODS**

			Role overload			Role stagnation			Self role distance		
			Low	High	Total	Low	High	Total	Low	High	Total
Persons visited category	<500	Cou	11	49	60	21	39	60	46	14	60
		%	18.3	81.7	100	35.0	65.0	100	76.7	23.3	100
	501- 1000	Cou	48	121	169	63	106	169	140	29	169
		%	28.4	71.6	100	37.3	62.7	100	82.8	17.2	100
	1001-1500	Cou	65	278	343	147	196	343	309	34	343
		%	19.0	81.0	100	42.9	57.1	100	90.1	9.9	100
	1501-2000	Cou	27	119	146	67	79	146	131	15	146
		%	18.5	81.5	100	45.9	54.1	100	89.7	10.3	100
	2001-2500	Cou	17	44	61	30	31	61	60	2	62
		%	27.9	72.1	100	49.2	50.8	100	96.8	3.2	100
	2501-3000	Cou	3	20	23	6	17	23	17	6	23
		%	13.0	87.0	100	26.1	73.9	100	73.9	26.1	100
	3001-3500	Cou	6	14	20	10	10	20	15	5	20
		%	30.0	70.0	100	50.0	50.0	100	75.0	25.0	100
	>3501	Cou	5	10	15	8	7	15	13	2	15
		%	33.3	66.7	100	53.3	46.7	100	86.7	13.3	100
Total		Cou	182	655	837	352	485	837	731	107	838
		%	21.7	78.3	100	42.1	57.9	100	87.2	12.8	100

P* Value	0.113	0.270	0.001

* Pearson Chi-Square, df 7

TABLE **5.36 FAMILY LIFE VS OFFICIAL WORK AND RODS**

			Role overload			Role stagnation			Self role distance		
			Low	High	Total	Low	High	Total	Low	High	Total
Family life Vs official work	Strongly agree	Count	13	86	99	34	65	99	77	22	99
		%	13.1	86.9	100	34.3	65.7	100	77.8	22.2	100
	Agree	Count	55	273	328	131	197	328	280	49	329
		%	16.8	83.2	100	39.9	60.1	100	85.1	14.9	100
	Neither Agree/dis	Count	36	134	170	77	93	170	148	22	170
		%	21.2	78.8	100	45.3	54.7	100	87.1	12.9	100
	Disagree	Count	144	366	510	238	272	510	464	46	510
		%	28.2	71.8	100	46.7	53.3	100	91.0	9.0	100
	Strongly disagree	Count	55	67	122	66	56	122	112	10	122
		%	45.1	54.9	100	54.1	45.9	100	91.8	8.2	100
Total		Count	303	926	1229	546	683	1229	1081	149	1230
		%	24.7	75.3	100	44.4	55.6	100	87.9	12.1	100
P* Value					<0.001			0.014			0.001

* Pearson Chi-Square, df 4

FIGURE 5.2 TREND OF WORKLOAD(RODS) OFFICIAL WORK AFFECTS FAMILY LIFE

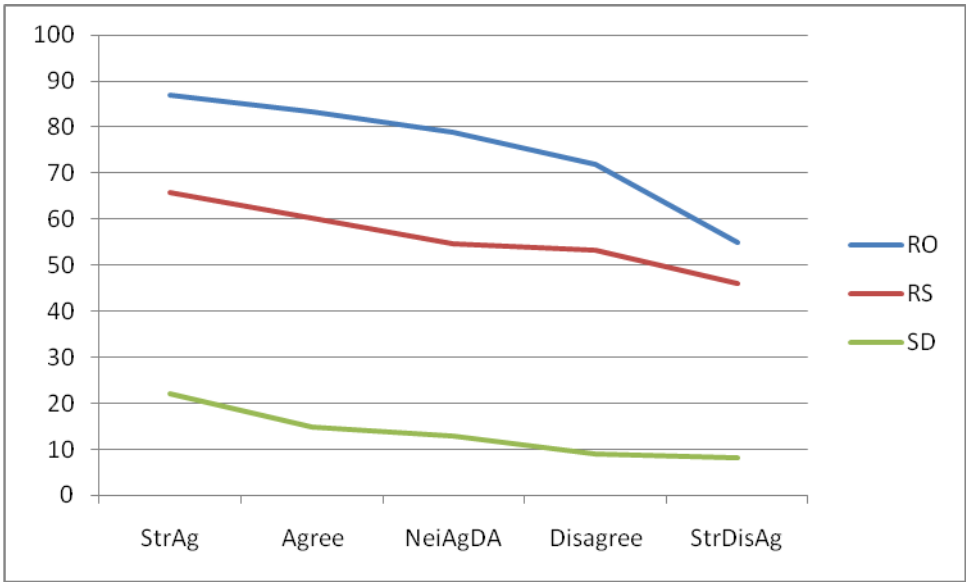


Figure 5.2 shows the trend of workload against their official work affect their family life. The trend shows decreasing workload for those who disagrees the official work affects their family life. This suggests those who feel their official work affects their family life have more workload.
Discussion: The trend suggesting the workload is experienced for those who feel their official work is affecting their family life.

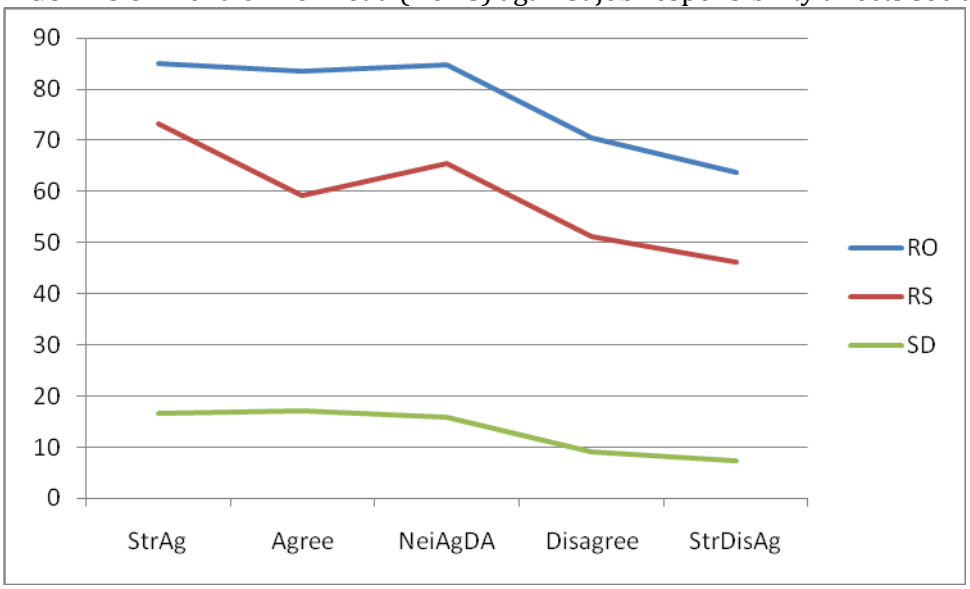
TABLE **5.37 SOCIAL LIFE VS JOB RESPONSIBILITY AND RODS**

			Role overload			Role stagnation			Self role distance		
			Low	High	Total	Low	High	Total	Low	High	Total
Social life Vs job responsibility	Strongly agree	Count	9	51	60	16	44	60	50	10	60
		%	15.0	85.0	100	26.7	73.3	100	83.3	16.7	100
	Agree	Count	48	242	290	118	172	290	241	50	291
		%	16.6	83.4	100	40.7	59.3	100	82.8	17.2	100
	Neither Agree/dis	Count	23	128	151	52	99	151	127	24	151
		%	15.2	84.8	100	34.4	65.6	100	84.1	15.9	100
	Disagree	Count	179	425	604	294	310	604	549	55	604
		%	29.6	70.4	100.0	48.7	51.3	100	90.9	9.1	100
	Strongly disagree	Count	44	77	121	65	56	121	112	9	121
		%	36.4	63.6	100.0	53.7	46.3	100	92.6	7.4	100
Total		Count	303	923	1226	545	681	1226	1079	148	1227
		%	24.7	75.3	100.0	44.5	55.5	100	87.9	12.1	100
P* Value					<0.001			<0.001			0.001

* Pearson Chi-Square, df 4

The perception of social life is affected by the official work are associated with all the three components of workload, namely, role overload, role stagnation and self role distance($p<0.05$). This is also further confirmed by the trend emerging from the responses for all three components of workload (Chis quare test for trend $p<0.05$ for all the three namely, role overload, role stagnation, and self role distance).

FIGURE 5.3 Trend of workload (RODS) against job responsibility affects social life



The above figure presetns the trends of workload against the job affects their social life. The trend shows that decreasing workload for those who do not agree the present job afects their social life. This suggests those who agreed the social life affected by present job reported higher workload.
Discussion: The trend is suggesting the workload is felt more to those who feel the job affects their social life.

TABLE **5.38 TRAINING HELPED IN UPDATING SKILLS AND KNOWLEDGE AND RODS**

			Role overload			Role stagnation			Self role distance		
			Low	High	Total	Low	High	Total	Low	High	Total
Training received	Strongly agree	Count	34	84	118	74	44	118	110	8	118
		%	28.8	71.2	100	62.7	37.3	100	93.2	6.8	100.0
	Agree	Count	212	570	782	397	385	782	713	70	783
		%	27.1	72.9	100	50.8	49.2	100	91.1	8.9	100
	Neither Agree/dis	Count	22	119	141	44	97	141	116	25	141
		%	15.6	84.4	100	31.2	68.8	100	82.3	17.7	100
	Disagree	Count	31	123	154	28	126	154	123	31	154
		%	20.1	79.9	100	18.2	81.8	100	79.9	20.1	100
	Strongly disagree	Count	7	32	39	5	34	39	25	14	39
		%	17.9	82.1	100	12.8	87.2	100	64.1	35.9	100
Total		Count	306	928	1234	548	686	1234	1087	148	1235
		%	24.8	75.2	100	44.4	55.6	100	88.0	12.0	100
P* Value					0.014			<0.001			<0.001

* Pearson Chi-Square, df 4

The perception that training helped in updating skills and knowledge is associated with all the three components of workload, namely, role overload, role stagnation and self role distance ($p<0.05$). This is also further confirmed by the trend emerging from the responses for all three components of workload (Chi square test for trend $p<0.05$ for all the three namely, role overload, role stagnation, and self role distance). Kindly refer the figure below.

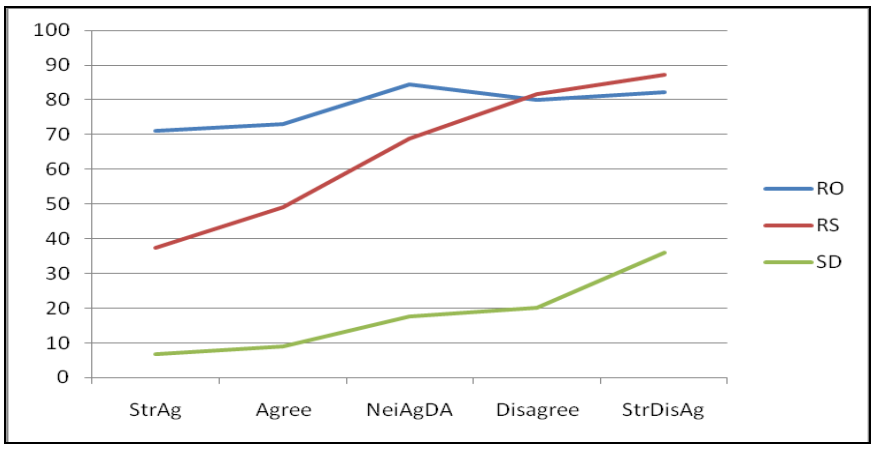


FIGURE 5.4 TREND OF WORKOLOAD AGAINST TRAINING HELPED UPDATING SKILLS &KNOWLEDGE

The figure above shows the trend of workload against training help in upgrading skills and knowledge. The trend shows an increasing workload for those who disagree that the training helped in upgrading skills and knowledge. This suggests those who feel training helps them in their current job have less workload.

Discussion: The trend is suggesting the workload is felt more to those who feel the training they had did not help them in present job.

TABLE **5.39 ADDITIONAL RESPONSIBILITY AND RODS**

			Role overload			**Role stagnation**			**Self role distance**		
			Low	High	Total	Low	High	Total	Low	High	Total
Do additional responsibility	Yes	Count	240	828	1068	461	607	1068	932	137	1069
		%	22.5	77.5	100.0	43.2	56.8	100.0	87.2	12.8	100.0
	No	Count	66	98	164	86	78	164	152	12	164
		%	40.2	59.8	100.0	52.4	47.6	100.0	92.7	7.3	100.0
Total		Count	306	926	1232	547	685	1232	1084	149	1233
		%	24.8	75.2	100.0	44.4	55.6	100.0	87.9	12.1	100.0
P* Value					<0.001			0.026			0.044

* Pearson Chi-Square, df 1

Those who are doing additional work have higher workload in terms of role overload, role stagnation and self role distance($p<0.05$).

VI. QUALITATIVE FINDINGS

For the present study, two qualitative methods were used to understand the workload of the public health nurses and their problems. We have done 10 in-depth interviews using an interview guide and 5 case studies. Qualitative data was collected with informed consent from the respondents for participation and recording the interviews and case studies at their workplaces. All interviews were conducted in Malayalam. After the interviews, the interviews were transcribed in to text and later translated to English for analysis. Analysis started with coding the interviews into number of categories. Following are the categories emerged out of analysis.

Profile of the respondent, reporting and meeting, fieldwork, health programmes, working conditions, community interactions, interpersonal relations, personal and family issues, gender issues, career development, job satisfaction, perceptions on workload, and challenges.

Following sections will be discussing the findings based on above categories.

6. 1 PROFILE OF RESPONDENTS

In total 15 people were contacted for qualitative data collection. Out of 15, 10 were in-depth interviews, and 5 were case studies. The categories of respondents included for the qualitative study included, JPHN, JHI, and LHI. Among them, one LHI who was interviewed, was recently promoted to this position, was working with the system for many years. The age of the respondents was between 31 and 55 years. All of them were women. The experience of the respondents ranged between 3 and 25 years. All respondents were married and all had at least one child. All have completed 10 years of schooling and completed either ANM-training or LHI-training. Some of the participants have bachelors' degree in non-nursing disciplines. All of them were employed permanently with Government of Kerala.

6.2 RESPONSIBILITIES

Following sections describes the responsibilities of each of the respondent categories viz. JPHN, JHI and LHI.

6.2.1 JPHN

The Junior Public Health Nurse(JPHN), has the following responsibilities to be performed as a part of their job. The activities reported by JPHN are given below.

- Routine activities such as Immunization at sub-centre and infant clinic. (Interview 1, Interview 4, Interview 9)

- Field work for the community program, and for facilitating nursing students. (Interview 1, Interview 7, Interview 9)
- Follow-up some of the programmes and diseases such as RNTCP, Communicable Disease(CD), Non Communicable Disease (NCD). (Interview 7, Interview 9)
- Conducting clinics such as special clinics, blood pressure clinic, life style clinic, and NCD clinic. (Interview 1, Interview 2, Interview 3, Interview 4)
- Conducting camps such as NCD camp, (Interview 1, Interview 8)
- Conducting classes for adolescents, on Oral Rehydration Therapy (ORT), CD, Health Education, preventive medicine, employment, and nutrition. (Interview 1, Interview 2, Interview 3, Interview 4, Interview 8, Interview 9,)
- *Anganwadi* activities related to education programmes, mothers meeting and immunization. (Interview 2, Interview 7, Interview 9)
- Family planning activities such as condom distribution, Intra Uterine Devices(IUD) including Copper T, and Laparoscopy. (Interview 1, Interview 7)
- Vector control by creating awareness, and source reduction. (Interview 3, Interview 7, Interview 9)
- They are also getting involved in cleaning activities at the ward level. (Interview 3)
- Chlorination in general and especially during the epidemic. (Interview 3, Interview 5)
- Maternal Health such as helping women in pregnancy care by escorting women to hospitals, Ante Natal Care(ANC) and facilitating Janani Suraksha Yojana(JSY). (Interview 1, Interview 9)
- They also coordinate with JHI and also report to LHI and do IDSP(?) activities in the absence of JHI.(Interview 1,Interview 7, Interview 8)
- Managing ASHA, specifically managing funds for ASHA and monitoring ASHAs. (Interview 1, Interview 3, Interview 4)
- Fund management. Managing funds for Diabetic clinic, preparing expenditure statement, maintaining vouchers, maintain cash books, manage ward health sanitation fund. (Interview 5, Interview 4, Interview 2)
- Attending meetings such as monthly meetings, post DMO conference, Zonal conference, panchayat meeting, and ward health sanitation meeting. (Interview 1, Interview 3, Interview 9)
- Assisting in Palliative care and home care programme of Panchayat. (Interview 3)
- Preparing action plan by conducting surveys including vector survey. (Interview 1, Interview 5, Interview 8)
- Record maintenance. Maintaining routine reports with all activities of SC, maintain ANC and Immunization registers, and MCH registers. (Interview 1, Interview 3, Interview 5, Interview 9, Interview 4)
- Serve in special programme on Sickle Cell Anaemia (Interview 1)
- Conducting Training programmes for ASHAs, for ICDS-Anganwadi teachers (Interview 1) Attending training programmes (Interview 1)

6.2.2 JHI

JHI from our field has mentioned the following as her duties. While she is in charge of two Sub Centers, the records are kept in one centre which is 5 kilometers apart. The duties described by her are as follows.

Field visit, immunization duty, assisting JPHN in national programmes, Information Education and Communication, collecting blood smears to test for Malaria from people with fever, managing Communicable Diseases and Non Communicable Diseases, and maintaining records. In earlier times this position was known as Malaria worker. The legacy is still followed by focusing more on communicable disease with specific reference to Malaria and related activities. Generally JHIs collect blood smears from 100 houses in a 15 days block following a cycle. They spend much time on blood smear collection, blood testing, mapping the houses with Malaria infections and so on. In recent times they also engage themselves in IEC, chlorination, attend meetings in *Anganwadi*, mobilizing children for polio immunization, pain and palliative care by providing home care, antenatal care, conduct clinics, giving directions on JSY, ward health sanitation, conduct classes for adolescents and school children. All male and female JHI's follow up RNTCP patients, conduct nutrition classes at *Gramasabha*, conduct Dangerous and Offensive(D&O) Trade raids in all shops and houses, inspect waste disposal practices at shops, inspect food samples at hotels, restaurants, stationary shops, collect blood smear from migrant labourers for Malaria screening. In addition they are also expected to work with the SHGs, voters list revision duty, *Garamasabha* duty (Interview 6).

6.2.3 LHI

In general LHIs do supervision. This includes concurrent and consecutive supervisions. They also do immunization duty, and verify registers (Interview 10)

6.3 FIELD WORK

As per the Indian Public Health Standard(IPHS) 2006, the population norms for establishing a sub-centre(SC) is 5000 population in plain area and is 3000 population in hilly/tribal/desert areas. Sub-centre is a health institution is an interface for the community at the grass-root level. Normally, the personnel posted in a SC include a Junior Public Health Nurse (JPHN) and a Junior Health Inspector (JHI). The field staffs are expected to provide various services to the population during routine field work. Here, field work means the periodical activities such as visit to households within the community. They generally classiffy their field in to manageable smaller blocks, which enables them to cover the entire area in 40 days period. This way they visit every house at least once in 40 days. (Manju report refer).

In practice the JPHN and JHI equally divide the area in to two blocks and complete them within 40 days period. It is also observed that the population served by the sub-centres were more than the number suggested by the norm ie. 5000/3000. In many instances they were

serving a population more than 10,000 which is double of the numbers. This was further made difficult with the poor field conditions which were of hilly terrain, coastal plain which is below sea level, and other difficult settings.

All public health nurses have to go for field. Four hours of field work generally begins at 9 am. They stay longer time during emergencies and epidemic outbreaks. On her experience on the field she serves a JPHN from a southern district of Kerala mentioned the following.

> *"In my field, people have reported fever during last rainy season. When many report fever in the field, it is difficult for us to leave early unless we complete our work. Many at times we reached our home late nights. This is the difficult aspect of our work. We are expected to visit all parts of our field area for various activities. We conduct classes on communicable diseases and preventive measures. During last monsoon season, in my field area, a woman in her early 30s had died of Leptospirosis. Some of the houses, roads and foot paths were submerged under flood water. During those times, even members of the community ask me, 'Sister, why are you coming when it rains? Visit us after the rain stops and water drain out of this area'. But, we visit the houses as our job demands it. We cannot keep away from the field during such times"*(Interview 3).

Many public health nurses expressed difficulty to visit the field, for which one has to walk longer, makes it difficult for them to perform duty at sub-centre the following day. In rural areas the houses are distributed in a scattered manner. There were instances where JPHNs and JHIs had to walk more than 5 kilometers a day to perform the fieldwork which are poorly connected with a few bus services connecting the field with sub-centre. A JPHN worked in southern Kerala said, her SC is located in the border of her field area. When she visited field in the other end of the corner, she travelled several kilometers to reach back the sub-centre in the afternoon. In addition to the distance, the bag they carry includes kit of vitamin and mineral tablets, Iron Folic Acid tablets, contraceptives, slides of blood smears, pregnancy test kit, field diary, and many other. This makes them dissatisfied as the compensation is not matching their efforts. One JHI mentioned, "We are not getting allowance for *chapel* (footwear), uniform, bag, umbrella, etc. Compared to our counterparts in the hospitals we work more and we are paid less" (Interview 6).

While discussing about the difficulties faced by the public health during field work, a JPHN from northern Kearla said, "I have joint pain and bone depreciation. Doctor advised me not to strain legs. But our job requires us to walk every day. We have to walk, this leads to pain and I use to get relieved of pain by taking some medication. We are irregular in eating food during fieldwork. We bring food from home when we leave in the mornings which will help us to work for longer duration." (Interview 1).

Another JPHN said in similar lines as, "Due to long distance walking, I have pain for few days. This makes us to think the amount paid to us as salary does not match the efforts. However, we accept our job and keep working." (3).

6.4 WORKING CONDITIONS

Health care delivery is closely linked to working conditions of the public health workers. Working conditions many at times linked to workload. Many of the sub-centres we have visited were operating in rented buildings. At times public health nurses paid rent from their pocket. A JPHN from central Kerala mentioned, "Our centre is functioning in a rented building. I am paying Rs. 250 per month as rent from my pocket to land lord. We come to know that we can reimburse the rent from the NRHM. But it did not happen. Earlier, when I worked in another sub-centre, the rent was only Rs. 50 per month."(Interview 3).

Many sub-centres lack basic facilities such as drinking water, water for other purposes, and electricity. Even the toilets of the public health nurses were in bad shape. They did not have cleaning staff at their centres. Cleaning the health centre is an additional work they do along with their fieldwork. Many reported that they were not given accommodation. If they were given one, they were in poor condition. The basic inputs required for a centre such as stationary and registers were also not available. A JPHN in a northern Kerala mentioned,

"There is no water connectivity or a well in my centre. I do not have a cleaning staff. I clean the centre and toilet every day and bring water from a distance. When we clean the centre, even the members of the community use to ask 'Sister, why are you sweeping the floor?" (Interview 1).

6.5 COMMUNITY INTERACTIONS

For better healthcare delivery, the public health nurses were expected to have good relationship with the members of the community. In general it was observed that, many of them have reported that they were accepted by the community. (Interview 1, Interview 2, Interview 3, Interview 4, Interview 9). A JPHN said, "If a member of the community comes to know about a person requiring antenatal care, they will inform us. They also inform us about the conditions such as chicken pox, infant death etc either in person or over phone."(Interview 9). Because of good relationship with the community, even persons from higher socio-economic status immunize their children at our centre, otherwise they seek care only from private health facilities. (Interview 3). However, periodical transfers affect their relationship with the community. A JPHN in northern Kerala stated, "As per norms we are transferred every 3 years. In other words, once we establish rapport and generate interactions with community, we are asked to leave the sub-centre. Then we need to begin again in a new setting. This requires minimum of one year to build relationship for the community to follow our instructions and accept services" (Interview 1). A JPHN mentioned,

> "I visit houses in the community to mobilize people to bring their children for polio vaccination. Even after visiting the community, many forget the date of immunization. Because of this I use to collect phone numbers of them and remind them during the morning of immunization day. This has changed the opinion of

> many about polio vaccination. Introduction of ASHA was to mobilize people for all the services. But in my area if an ASHA visit the community for vaccination, people do not consider them. Because of this, I personally visit the houses and mobilize. There are also people who do not change even with my efforts in vaccinating their children." (Interview 5)

The services of JPHNs may not be delivered in a scheduled manner, but they have to be delivered when and then they are demanded by the community. For instance, a JPHN from a sub centre in Southern Kerala said, "When I am available in the sub-centre some people come for blood pressure measurements. The day may not be a day of BP Clinic. But, I cannot deny the services and direct them to come on a BP clinic day. If I deny, they may not show up in the SC for any of the services later." (Interview 8).

Like JPHNs, JHIs were also well received by the community. A JHI mentioned the difficulty in administering food quality control among the small shops and restaurants. "Many at times the shop owners were not listening to my directions because they could not recognize me as a health staff. If we are provided with a uniform, they might have recognized us"(Interview 6).

6.6 INTERPERSONAL RELATIONS IN ORGANIZATIONAL SETTING

6.6.1 JPHN AND JHI

From our interviews we found there exists a good relation between JPHNs and JHI(except in one instance). JPHNs also have good relations with their superiors - LHI. They also mentioned, in many instances there were no clear directions given by the superiors which prevents them from performing their full potential.(Interview 1).

On JPHN-JHI relationship, a JPHN said,

"We have a good co-ordination and relationship with JHI. If I find a person with communicable disease, I immediately inform JHI about it. In response, he will visit the area immediately. Then I continue my field work. The JHI, comes in a two-wheeler vehicle to reach the place. It would be difficult if JHI is not there in my centre."(Interview 3)

While discussing about a JPHN's relationship with colleagues and superiors, she said, "The JHI in charge of my sub-centre does not visit the sub-centre at all. He works from PHC and he does not share job at the sub-centre. Meanwhile, there exists a good relation with LHI. She is very cooperative and she does not demand work." (Interview 5)

Some JPHNs did not have a cordial relationship with their LHIs(immediate supervisors). On the issue a JPHN said, "In my present position I have a healthy relations with my superiors. Initially when I joined as JPHN, LHIs were so harsh. Our working hour starts at 9 am.

According to them we should be in the field at sharp 9 am. If we are late due to any reason, then it would be treated as a big offence. Now things are changing. Present day JPHNs do not have such LHIs."(Interview 7)

In case of ASHAs, the JPHNs mentioned some ASHA workers accompany them to field for mobilization campaigns for pulse polio immunization.

There were two instances in which the JPHNs mentioned ASHA workers do not contribute much. (Interview 3, Interview 4). JPHNs also complained that ASHAs take credit for their achievements in the field. (Interview 4). A JPHN on ASHA said, "There are four ASHAs under my sub-centre. Their services are not satisfactory. We do not supervise them. If we give direction, they will go to field. This may not lead to perfection in their work. At times we may have to redo the work they claim to have completed."(Interview 5)

There are also some positive comments about ASHAs. A JPHN mentioned, "ASHAs in general are helpful. Some are not supportive. " (Interview 6)

ASHAs are volunteers as per the National Programme(NRHM), they do not receive any salary. This makes them less motivated and they do not work. We have the responsibility of managing their honorarium. At present I do not have money to pay them" stated a JPHN. (Interview 8)

A LHI stated, "ASHAs do not contribute much". (Interview 10).

6.6.2 LHI

In general the LHIs have a good relationship with their subordinates. On interpersonal relationship a LHI mentioned, "There exists a good relation with subordinates and superiors. Coordination among JHIs and JPHNs in my PHC is very well appreciated. Interpersonal relationship in our centre is cordial" (Interview 10).

6.7 PERSONAL AND FAMILY ISSUES

6.7.1 JPHN AND JHI

When we asked, how work affects their family life a JPHN stated,

> "We work between 9am – 5 pm. This gives less time to spend time with my family members. In my field, I advise mothers to be closer to their children and be affectionate. In my case it is not possible. Once my child was sick of diarrhea, I did not spend time with her. I left her with someone due to my job. Even today, I feel guilty of not providing care to my children. This is how our job affects our family. In fact, I could not breast feed my children fully. When I was pregnant there was only three months as maternity leave. I availed a part of

it before delivery. I had only 60 days left after delivery. Because of this I was not able to breast feed my child during day time. The children might have felt about this. We were not able to rear our children properly. Even today I feel bad about that" (Interview 1).

Generally the family members were very supportive and they understand the nature of work. A JPHN said, "I am doing all works at home in the morning before leaving for office. After reaching home I am doing all the remaining works."(3).

During outbreaks the JPHNs may have to stay late in the community. This affects their family life(Interview 4)

A JPHN hailing from neighboring district stays at accommodation attached to sub-centre, shared her difficulties in child rearing of two four year old children in the absence of her husband and relatives. She said, " When I joined as JPHN they were too small. I had to face many hardships. Nobody was taking care of my children. Our family members were not willing to come here for it. Later, I hired a home nurse. She could not give a good care to my children. Seeing my children, my family members at home were disturbed when I visited last."

She remembered her experiences initially when she had joined. "Two years before, there was Hepatitis - B epidemic in my field area. During that period, I visited my field with my two year old children for chlorination in 50 houses along with other staffs." (Interview 5).

A JHI said, "it is difficult to balance family and official responsibilities. We have field visit, National Programmes, Pulse Polio immunization and so on. In such instances we work from 6.30 AM to 7.00 PM, while our duty is only from 8 AM to 4 PM. During those days it was difficult for me to concentrate work at home. As a part of job I am managing and adjusting the responsibilities. Sometimes, I forego my personal and family matters" (Interview 6).

A field staff (JPHN) is undergoing treatment for her cardiac problem. She mentioned her difficulty in walking in the field. Recently there was an episode of chest pain and she was admitted for 2 days at Medical College Hospital in the city. Generally she gets relief from pain after two days and start field work. (7).

We didn't have any consideration in the field work when we were pregnant. Now LHIs are considering the pregnant field staffs by reducing their workload. (Interview 7)

A JPHN talking about the conflict between the office and home responsibilities said, "I don't want to mix official things with family. If I carry home the stress caused by workplace, tell me what will happen to my family and children?" (Interview 9) She meant this will adversely affect her family, especially her children.

6.7.2 LHI

In general the work does not affect much of family life for the LHI. However, the long duration activities such as training programmes disturb their family life. On that issue an

LHI said, “For LHI promotion we had to go for six months residential training. This keeps us away from home for longer period. This kind of in-service training is only found in health sector.” (Interview 10).

6.8 GENDER ISSUES

There are specific gender related problems were experienced by the women health staffs. There were discomfort while working when a staff was pregnant, and during menstrual periods. There was also an instance of harassment by a client and an attack by a robber on her way to health centre from the field while stealing a gold chain worn by the nurse. In general nurses stated that they did not experience any kind of problem at their work place. (Interview 1, Interview 5). But a JPHN said, “As a woman it is difficult to carry condoms. Eave teasing was experienced by two of our colleagues. It is difficult to go to field during menstrual periods. (Interview 5).

A JHI said, “Most of the JHIs are males. Being a woman, I didn’t face any difficulty in performing work done by male counterparts and working with male colleagues”. However, she experienced other women staffs in health sector made comments on her job.

A JHI shared an experience of her women colleague. On her words, “Once, one of my colleagues went for fieldwork alone, while she was returning to sub-centre, she saw a man on a two wheeler following her. Near a bamboo plantation, the person stopped the vehicle and sat for a while. When the staff passed by, the person hit her on her back and snatched the gold chain which she was wearing. She was screaming for help and later escaped unhurt. She failed to note down the vehicle number. She felt, the person was attempting to kill her. The trauma she experienced still continues till today. Whenever she happened to see a vehicle approaching her, or when a person visit in two wheelers to sub-centre seeking condoms, she fears to face them and get tensed seeing persons in vehicles. (Interview 6)

Another instance of harassment faced by a female health staff was mentioned by a JHI. “In the centre I worked earlier, a sister was getting ready to leave for home. At that time, a local man came to centre seeking condom. He tried to act in an unacceptable way. She immediately reported it to police as misbehavior. But the person denied the charge. She explained the incident emotionally. Later, local people intervened and no action was taken against the person. Later, she got herself transferred to another location.” (Interview 6).

A JPHN shared the support given by her spouse on field work. She said, “I did extensive fieldwork during my pregnancy. I have never gone to field alone. My husband supported me even when I have done the fieldwork”. (Interview 9).

6.9 CAREER ORIENTATION- PROMOTION PROSPECTS, DEVELOPMENT

All respondents expressed concern over poor promotion prospects. Respondents in all study districts complained about the difficulty in getting promotion by pointing out either their own experiences or the experiences of seniors working with them. One JPHN serving for 25 years mentioned, "the number of LHI posts are very less. In our district, we have only 33 LHIs and 208 JPHNs. LHIs get promoted as LHS. There are 3 LHS posts in the district" (Interview 1).

Two JPHNs joined 3 years ago said, that they knew JPHNs with upto22 years of experience and remain in the same position. (Interview 3, Interview 5). Another JPHN accepted it as the peculiarity with the position and nothing could be done about it. (Interview 4).

While talking about the promotion prospects of JHI, one person said, "Like JPHN we too enter into the job service as Grade II. As per rules we get promoted as Grade-I once we complete four years. It is time for me to be a Grade I. I will get it. There are number of persons joined before me are still working as Grade II. (Interview 6).

An LHI who promoted recently from JPHN position was sharing her experience. She served as JPHN for about 25 years. LHIs are expected to supervise the field work and work at sub-centres. The LHI was having difficulty in travelling to field as it requires one to walk many kilometers. She was mentioning, "Earlier I worked in an area where houses were located in distant settlements. Now it is difficult to walk and reach places for the purpose of supervising the field staff". She also recalled an LHI recently promoted at the age of 53 years (Interview 9).

An LHI expressed her dissatisfaction about the promotional prospects in health services. When describing it she said, "I took syringe with needle with my hand since I joined as JPHN. I was immunizing children for last long 23 years. Are you aware any other sector has such poor promotional prospects? For the current position (LHI), I received training at 24th year of my service. Now I have only 6 ½ years service remaining prior to my retirement. This is the only profession which is predominantly served by women, hence there is delay in promotions" (Interview 10).

Similar concern on delay in getting promotion was expressed by other JPHNs as well. (Interview 9).

6.10 HEALTH CARE DELIVERY ACCEPTANCE AND SATISFACTION OF THE HEALTH WORKERS

This session discusses how the health care delivered by the public health workers in grass root level and accepted widely by the society and their satisfaction/ While discussing with the image of job, one JPHN mentioned, "I am getting affection and due respect from members of the community. I like my present job and I am satisfied. Due to my efforts, number of people who use to deliver at home began to go to hospitals. Everybody, including

my family members, treat me well. When my brother's children were pregnant, they use to call and asked for my suggestion on anti-natal care. I am aware of ANC and other care related to it. This makes me very proud of my profession." (Interview 1)

Generally speaking, the services of these public health workers are well received by the community. There are instances, where JPHNs directly approach husbands of the eligible women for IUD and laparoscopy. Otherwise husbands of eligible women will not allow them to adopt family planning. (Interview 3)

A JPHN said, there is resistance from the community in accepting health services such as immunisation, anti-natal care and family planning. After a long time with our efforts, now people are accepting the services. (Interview 2)

On job satisfaction, a JPHN mentioned that they are not happy with the introduction of ASHA. This only increased their burden by getting engaged in financial management and meetings associated with them.(Interview 4).

Another JPHN shared her experience on immunization acceptance in the community. "When I joined this sub-centre, there were a lot of people who were unwilling to immunise their children. I tried my best to make them aware of immunization. In spite of the non-cooperation, I kept going to their houses every month. One day, I mentioned, 'I will not visit you again.' In response to that the community said, 'Sister, we will come to you'. Now they are getting all immunizations. After persistent efforts, I could change the opinion of the community on Immunization. Now, they are also accepting family planning services, especially the condoms. "(Interview 5).

Now people prefer to go to private hospitals for immunisation. This is because, in private hospitals, in one shot all vaccines including Hepatitis B are administered. (Interview 8, Interview 9).

JPHNs generally are dissatisfied by the number of people to be served by them. As mentioned earlier, many at times they are expected to cover more than 5000 population. JPHN who serves a population of 8790 people said, if she had only 5000, it would have been very easy to deliver good services. The other service they are not equipped with is rehabilitation. According to the JPHN, each of the family in her area has at least one person with mental illness. Along with that there were many elderly persons who require attention. All of these necessitate a good rehabilitation service at primary level. All these affect their job satisfaction. (Interview 8).

A LHI having worked as JPHN for 23 years expressed her satisfaction on the community's cooperation and affection. She said, "In my childhood, I use to see people with polio and whooping cough. Now, can anyone see any child with polio or whooping cough? We could achieve it only because of immunisation initiatiated by the Government institutions." (Interview 10).

6.11 PERCEPTIONS ON WORKLOAD

In general the JPHNs feel they are burdened with more work. This is a phenomenon after their position is converted to Multi-purpose worker(Interview 1, Interview 4). A JPHN serving for 25 years in the same position described, the roles and responsibilities of their position. She said, "When I joined for this position our main job was to visit houses. This was easy for us to complete our duties without much of problem. Now, it is renamed as 'multipurpose worker', with many of new tasks added to it. Now we are expected work on different programmes such as, NRHM, sickle cell project, RNTCP and other programmes. This makes our job very difficult. The workload of our job is increasing with age".(Interview 1). Another problem faced by the JPHNs is, the absence of LHIs in the field. This makes the senior JPHNs made in-charge in the vacant position. In such instances, they are expected to do the LHIs job in addition to their own. This does not get them any additional benefits either as money or kind. (Interview 1).

Some even feel the workload but they accept it as their responsibility and do not complain.(Interview 3, Interview 4). Some have mentioned the workload has increased after the introduction of ASHAs. They are finding it difficult to manage ASHAs and their activities such as, financial management, attending meetings of committees and so on . (Interview 4).

A young JPHN joined four years before said, "Initially, I use to see my work as burden. Now my perception is changing. In some instances, it is difficult to manage personnel and official responsibilities. At times, this distances me from my job. We, JPHNs are expected to do all activities at the sub-centre level. In other words, 'sub-centre means JPHN'. A JHI will never be asked to prepare an action plan for different activities such as, pulse polio immunisation. Only we are expected prepare the action plan. There is no one who listens to our problems and understands our sufferings. Recently, when the salary was revised, ours has gone below those who were in similar cadre. We work for 24 hours. I stay in sub-centre. People approach me all the time even during nights. It is difficult to deny service to the community members even during night times, when I live in the community.". (Interview 5)

JPHNs serving in health centres attached to Medical College have more responsibility than other JPHNs. In addition to routine JPHN jobs, they are expected to do additional jobs which are done only in Medical College Health Centres. They also have to assist the BSc Nursing and House Surgeons. This makes many to try for transfers from such centres. (Interview 7).

While talking about various jobs, a JPHN said, she was conducting anti-natal clinic, B.P Clinic and handling classes for community and so on. In addition she was also expected to distribute Iron tablets, maintain records and registers. She was suggesting one person exclusively devoted for recording will reduce their burden. (Interview 8).

There was also a feeling that JPHNs have more responsibilities than JHIs. (interview 9)

Even an LHI feel the women public health workers have more workload. (Interview 10)

CASE STUDIES

CASE -1 FIELD WORK

Sujata is a JPHN in a tribal area. The community has a unique problem 'Sickle Cell Anaemia'. This is common among the tribal population northern Kerala. She takes care of five Sickle Cell Anaemia patients. This includes a six year old boy, a 19 year old girl and 3 married women have children. One among them just delivered a daughter and two have grown up children. According to her all who have sickle cell aneamia have normal life and it difficult to differentiate from others. Only by testing the blood we can diagnose this. Their blood cells in a microscope will look like sickle. The haemoglobin count is too low which causes poor immunity. Persons with this disease are vulnerable to even common fever and pain in all parts of body. Despite this, they look normal, but they get tired easily. Fe years back Calicut Medical College started a study about Sickle Cell Anaemia in the district. During that period all live in the tribal settlements were screened. She was not aware of current state of the project. The five people live in her area were diagnosed at that time and were provided with medicines. She mentioned that sickle cell patients live in neighbouring PHC were provided with free nutritious food. But this was not started in her PHC area. Some instances she managed to get food from neighbouring PHC for her patients. She remembers the moment when she saw people with sickle cell anemia, shocked when they first come to know about it. She advised them to eat proper food, medicines, and keep the cards used and produce them whenever they visit doctor. She is also maintaining a register for the affected and maintains complete details of them. She always makes it a point to visit them during her field work and keep advising them to take care of themselves and visit doctor in case of need. However, this was not the only responsibility.

CASE -2 PERCEPTIONS ON WORKLOAD

Vijayamma works as JPHN from 1989. Few months before a JPHN worked in the subcentre adjacent to hers within her PHC promoted and transferred to another district. Since then, she is incharge of that sub-centre along with her own. She has 4650 people live in her own area and 4600 people live in other. After that she visits the centre with new schedule. On

Tuesdays she conducts antenatal clinic. In addition she attends ward health sanitation committees and conduct nutrition classes, manage ASHAs and maintain registers. Due to heave work in her centre, it is difficult for her to visit the field of the second centre regularly. In emergency situations she goes to second centre, then keep reports.

She was well accepted by the community. She was responsible for all activities of sub centre. She was mentioning that activities of the neighbouring sub-centre affects her. If she was in only in one SC, people would have benefited from services. She indicated there is workload among JPHNs. Following are her duties and responsibilities. Manage ward health sanitation committee, manage JSY fund, supervise ASHAs, go to field, participate in panchayat and block level committees, involved in palliative care, and so on." She further reiterated her commitment by performing all of these during Sundays and holidays. Generally Sundays are either immunization day, or 'dry day'. During 'dry day' health workers, along with Self Help Group(SHG) members, ward members and ASHA workers visit houses and engage in source reduction(dry out the accumulated water in different vessels and other containers) and chlorination.

CASE-3 CHALLENGES

Jisha, a JHI who works in a Sub-centre, where people resist immunization was sharing her experience of using IEC and other innovative approaches for improving situation. A year ago a person along with two Homeopath were propagating against vaccination. They spread several of the examples which have adversely affected the vaccination. Later, they were arrested. In her area people belong to different religious beliefs along with the JPH in the centre attempted several times aiming at an attitude change towards vaccination. But they did not succeed. Then she introduced some new approaches to create awareness. She later brought Compact Disks(CD) from CHC on immunization and communicable diseases projected in different corners of different streets. The shows were scheduled when people use to come out for meeting others in street corners. She first mapped the spots for the shows then projected them. She repeated the same several times in several places. There was a good response from the community. She had also organized street plays on immunization and puppet shows on communicable diseases. This had improved the immunization in her

area. In 2010 about 70 were infected with malaria. They were first started as imported cases then locally spread from August to October. This was controlled by December 2010.

In her area there are a lot of migrant labourers from Northern India from the states including West Bengal, Bihar, Assam and adjacent state of Tamil Nadu. Every month she visits the migrant labourers for collecting blood smear for Malaria screening. She found the migrants were very cooperative and accept the services provided by them. There is also a migrant register maintained exclusively for this purpose. In addition thee is also Tuberculosis in her area. There are 6 persons were under treatment. Anganwadi and ASHA workers work as DOTS providers. They are regularly following up by the staff.

CASE – 4 PERCEPTIONS ON WORKLOAD

Sini, a 14 years experienced JPHN shared her experience. According to her, JHIs help JPHNs. However, JPHNs have more workload than JHIs. JPHNs generally involved in blood smear collection, surveys, maintaining registers for antenatal care and birth, administer T.T, distribute iron and folic tablets, and measure weight. Earlier responsibility did not include Glucose and HB testing. Management of ward health sanitation fund was a burden for her. Twice every year they receive Rs.10,000. This is deposited in a bank as a joint account operated by the health staff(convener) and a ward member(chairman). This was to be spent on activities in the ward. There are two wards under her sub-centre. The problem is poor response from the ward members. She was sharing her experience a month before when she visited bank for three times for withdrawing money from the account. On those days the ward member was busy with his meetings. When the member was free, she was not free. Even for issuing a new cheque book the bank needs both to sign the request. This makes her to visit the bank for 3 tiems in a day for completing the task. She concluded by saying in spite of an improvement in financial power, this did not come free but with more hassles and additional work.

CASE – 5 ACCEPTANCE/SATISFACTION

Aani (38) and Mersi (40) were JPHN and JHI respectively in a sub-centre of a coastal Sub-centre. The literacy level of the community was low. This led to poor acceptance of immunization services. Most of the men in the area were fishermen and the women sell the produce. Men leave for fishing in the sea during nights and return during mornings. Health workers mentioned that men spend their day time by sleeping at home after night long work. During the day the children administered DPT experience fever and body and they cry out of discomfort. This was a disturbance to the fathers and other male members at home. This makes them to discourage vaccination inspite of the fact that mothers were willing to vaccinate. This necessitated the health workers approaching the fathers for polio programmes. This had a good response. However, still there are a few who do not accept.

In their centre they serve a population more than 10,000, which is double of the numbers as per norm. The sub-centre is located in an area which is high risk for communicable diseases during monsoon season. In coastal area, people were affected by diarrhea during rainy season. They wee finding it difficulty in reaching all of them and it led to poor job satisfaction. The duo had also mentioned some disturbances by people engaged in gambling and alcoholism in their sub-centre. Men visit sub-centre after office hour and play cards and consume alcohol. The following day the office use to be tidy with empty bottles of alcohol and empty cigarette cartons. In general the JPHN and JHI get good support from the community. There were problems when they newly joined the centre. Over the period people accept them.

VII. TIME AND MOTION STUDY

TABLE **7.1 TIME AND MOTION IN FIELD VISIT AT CENTRAL KERALA MAIN CENTRE AT 11 AM**

Sl. No	Activity	N	Total Time in Seconds(Min, Sec)	Mean time in Seconds(Min, Time)	Range
1.	Motion- Reaching the field	1	57	57	57
2.	Motion- moving in the field area(home to home visit)	14	4715	337(5 Min 37 Sec)	14 to 360 (14 Sec to 6 Min)
3	Service delivery(Consultation and so on)	15	1638	109(1 Min 49 Sec)	20 to 200 (20 Sec to 3 Min 20 Sec)
4.	Wastage- Door locked	1	73	73 (1 Min 13 Sec)	73

TABLE **7.2 TIME AND MOTION IN FIELD VISITS AT CENTRAL KERALA MAIN CENTRE AT 11 AM**

Sl. No	Activity	N	Total Time in Seconds(Min, Sec)	Mean time in Seconds(Min, Time)	Range
1.	Motion- Reaching the field	1	780 (13 Min)	780	780
2.	Motion- moving in the field area(home to home visit)	9	1323 (22 Min to 3 Sec)	147(2Min 27 Sec)	11 to 120 (11 Sec to 2 Min)
3	Service delivery(Consultation and so on)	19	1454(24 Min 14 Sec)	77 (1 Min 17 Sec)	17 to 289 (17 Sec to 4 Min 49 Sec)

Table 7.3 presents the time taken for the health staffs to visit houses in the field. The time is recorded when the health staff was either on motion or delivering the service. The principal investigator along with the research associate went to field with the health workers and recoded the timing. Following are the findings of the field visit time and motion study.
Average time to reach the field ranged from 57 seconds to 17 minutes to 38 seconds. Average time spent on walking within the field ranged from 44 seconds to 5 minutes 37 seconds.

Average time spent for service delivery was ranging from 1 minute 16 seconds to 3 minutes 58 seconds. In two instances, the wastages recorded were 1 Minute 13 seconds and 1 minute 23 seconds. In both the instances, the houses found to be locked.

The overall mean of the time spent on motion from the sub-centre to the field area was 802 seconds(4010/5). Likewise, the overall mean time spent on motion in moving within a field area

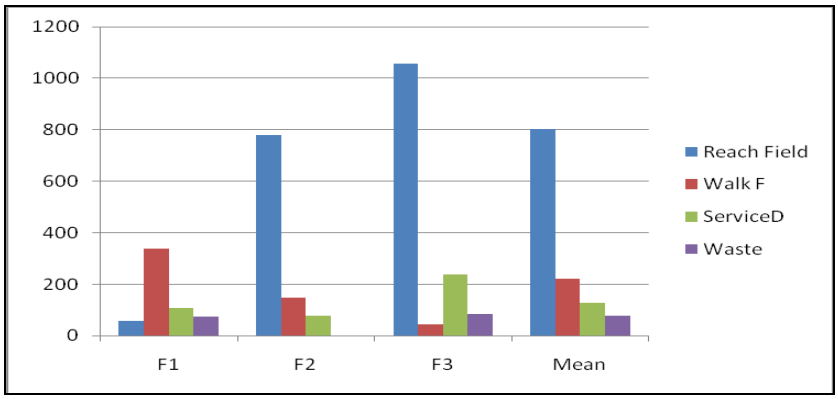
was, 223.46 seconds(6257/28). The overall mean time spent on service delivery was 129.39 seconds(5952/46). There were very less time wasted in the field (85 Seconds).

TABLE **7.3 TIME AND MOTION IN FIELD VISITS AT NORTHERN KERALA – HILLY TERRAIN AT 10 AM**

Sl. No	Activity	N	Total Time in Seconds(M,S)	Mean time in Seconds(M,S)	Range
1.	Motion- Reaching the field(From the Health centre to field, and one settlement to other settlement)	3	3173 (52M, 53S)	1058 (17M, 38S)	623 to 1800 (10 M, 23 S to 30 M)
2.	Motion- moving in the field area(home to home visit)	5	219 (3M, 39S)	44	20 to 91 (20 S to 1 M 31 S)
3	Service delivery(Consultation and so on)	12	2860(47 M, 40 S)	238(3 M, 58 S)	26 to 623 (26 S to 10 M, 23S)
4.	Wastage- Door locked	1	83 (1 M 23 S)	83	83

M- Minutes, S-Seconds

FIGURE 7.1 TIME AND MOTION FOR FIELD VISIT



From the figure above either reaching field or walking in the filed takes more time than service delivery. There is much of wastage found in three fields the investigators visited.

TABLE **7.4 TIME AND MOTION IN IMMUNIZATION CLINIC IN SOUTHERN KERALA 11.20 AM**

Sl. No	Activity	N	Total Time in Seconds(Min, Sec)	Mean time in Seconds(Min, Time)	Range
1.	Registration	2	15	7.5	5-10
2.	Immunization	16	569	35.56	7-117
3	Rest	5	81	16.2	1-29
4.	Walking	1	240		
5.	Payment	1	21		

TABLE **7.5 TIME AND MOTION IN IMMUNIZATION CLINIC IN NORTHERN KERALA –2.00 PM**

Sl. No	Activity	N	Total Time in Seconds(Min, Sec)	Mean time in Seconds(Min, Time)	Range
1.	Registration	8	447	55.87	30-96
2.	Immunization	6	446	74.33	43-125
3	Rest	1	65		

TABLE **TABLE 7.6 TIME AND MOTION IN IMMUNIZATION CLINIC IN SOUTHERN KERALA –2.00 PM**

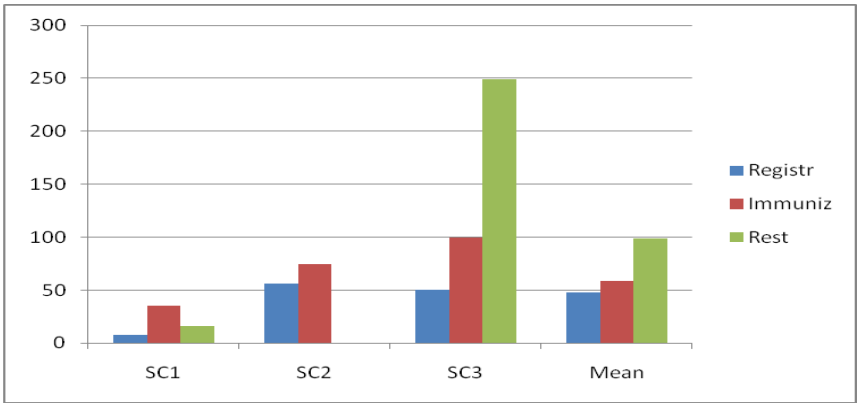
Sl. No	Activity	N	Total Time in Seconds(Min, Sec)	Mean time in Seconds(Min, Time)	Range
1.	Registration	4	203	50.75	13-120
2.	Immunization	7	695	99.28	5-162
3	Rest	3	747	249	221-285

The above tables present the time taken for the health staffs for immunization and related consultation at the Sub-centre. The time is recorded when the health staff was either registering or immunizing the children. The principal investigator along with the research associate went to field with the health workers and recoded the timing. Following are the findings of the field visit time and motion study.

Average time for registration ranged from 7.5 seconds to 55.87 seconds. Average time spent on immunization ranged from 35.5 seconds to 99.28 seconds. In all instances, there was rest time as there was a gap in patient flow which ranged from wastages recorded were 16.22 Seconds to 249 seconds. In there was also a motion in terms of the nursing went to bring the vaccine from the storage and in one instance collected the money for the service as per the official requirement. The time spent for walking was 240 seconds and for payment the time spent was 21 seconds.

The overall mean of the time spent on registration at sub-centre for immunization was 47.5 seconds(665/14). Likewise, the overall mean time spent on immunization was, 58.96 seconds(1710/29). The overall mean time spent on rest was 99.22 seconds(893/9).

FIGURE 7.2 TIME AND MOTION FOR IMMUNIZATION



Above figures shows, Immunization takes larger part of the time. The rest shown in the picture denotes, the time spend on waiting for the parents to come. The patient flow was regular, hence there is larger time spent on waiting for them. Only SC3 the waiting time was very high.

VIII. DISCUSSION

Present study found the workload of public health nurses is high. This is in confirmation with other studies conducted in the past (Srinivasan and Sharan 2006, Nair and Sarma..). The problems reported in the earlier studies are yet to be resolved. Instead, the nurses are given additional responsibilities. This includes, number of new vertical programs. One among them is National Rural Health Mission(NRHM), a battery of programs in one. In the state of Kerala, NRHM started its activities during the end of 2006. This has a bundle of activities in one single program. This has not just added the workload of the public health nurses, but also introduced new set of volunteers called ASHAs and along with new committees. This was in confirmation with the study conducted in Canada. Montour et.al(2009) study found the nurses feel difficulty due to structural changes in rural health system, routine scheduling issues among nurses due to rise in vacant positions and other problems. (Montour A.et.al 2009).

Another important contribution by NRHM was financial autonomy at the lower level public health centers. This provides them financial autonomy in operating village sanitation fund. But, the benefit of this was not easily available, as it has come with a hidden problem of funds been transferred in the banks in the form of a joint account along with a *panchyat* member, which requires other formalities to operate the joint account. (Case study 4)

When we were analyzing the prevalence of three aspects workload as per RODS scale, we found, a high prevalence of role overload (75%) and role stagnation (56%). This confirms that there is overload and stagnation experienced by the Public health nurses. This is in confirmation with a study conducted in Queensland (Hegny et.al. 2004).

The role stagnation is another aspect of RODS. Many expressed role stagnation as a problem. This was due to poor promotional prospects (Interviews 1,3,4,5,9,10). However, the self role distance aspect of the workload among public health nurses was less prevalent. This means the nurses were not distanced themselves from their profession. This may be because they are working in a profession, which they opted, when they applied for the job, or the training. This is the best available job in the category.

The age plays an important role in workload of the public health nurses. The role stagnation aspect of workload increases with age. This may also be due to the poor promotional prospects in their positions. This is in confirmation with the findings of an Australian study showing work and age related factors increase difficulties lead to perceived workload.(Fragar and Depczynski 2011). This was also reported in a United States study. (Molinari and Monserud 2008).

The workload per se is generally assessed in terms of quantum of work. On our study we used RODS scale, which is a scale assessing three aspects of workload, viz. role overload, role

distance, and role stagnation. When we analyzed it to find its association with some specific questions, we found the following. People who perceive the work affects their personal and social life were scoring high on role overload, role stagnation and role distance. The scale measures role overload, role stagnation and role distance based on the perceptions of their work. This was not based on the quantum of work done by them. The association of the three components with the agreement on job affects their family and social life suggests, those who are passionate to work have better score on the scale. Hence, workload is a perceived phenomena and it is not based on quantum of work as in other studies .

Other important thing emerging in our study is the need to address the safety and security of nurses. In a couple of qualitative interviews found the health centres and the field area were not safe to work. A couple of incidents reported on their safety such as, eve teasing, robbery and physical attack on the public health nurses.(Interview 6).

The present study found that the public health workers were rewarded poorly compared to similar cadres in other sectors, high work load and they were not fully motivated. This finding was consistent with the study conducted on nurses in Queensland that found workload was heavy, skills and experiences are rewarded poorly, high work stress, poor morale among the nurses. (Hegny et.al. 2006).

A longitudinal study of employed Norwegian women during their pregnancy for the first time found, emergence of readjusting one's life in terms of the following: attempting to manage the load of work and take responsibility keeping the best interests of the child, live with the feelings of not being a good mother, and have a balance between sensitivity and self-confidence. After the maternity leave when they return to work, the participants had to manage the work and motherhood responsibilities. This was interpreted as "living in a state of tension between work and motherhood". (Alstveit et.al. 2011). The present study also had similar finding on one of indepth interviews, where a JPHN stated, she was not a responsible mother as she did not give enough time to her children after the delivery as she had return to her work two months after delivery. She further reiterated that she could not breast feed her children during day times on those months. (Interview 1).

The public health nurses belonging to different categories were expected to do many jobs. This included, mother and child care, immunization, home care, vector control, national programs such as NRHM, attend meetings, write reports, family survey, IEC and so on. This was in confirmation with the descriptive qualitative study conducted in Ireland. The study calls the Public Health Nurses as 'Jack of all trades'. Different types of responsibilities led to work overload. Due to this, despite the PHNs prioritize care, it makes it impossible for them to carry out their health promotion activities.(Philibin et.al. 2010).

IX. CONCLUSION

The workload of public health nurses is reported to be high in all the five districts of Kerala. The problems mainly caused by introduction of new programs time to time. Additional responsibilities were assigned to public health nurses without providing sufficient resources including human resources. In fact the public health nurses are the one, who are the face of the health sector by acting as an interface with the community by the way of delivering the basic services. Whenever there is a new component of service delivery, they are the one, who are entrusted. This increases the work pressure on them. However, this is not true in case of rewards and compensations. In such instances they are the ones who are not considered. One such instance is the recent pay revision, in which, persons who working in similar cadre in administrative positions were compensated with higher pay, while the nurses were not provided with the similar pay. This has created dissatisfaction among the public health workers, which led to non-cooperation(protest) for more than two months during the study period. In fact, the public health nurses are the army of workforce which is the backbone of public health system in India. They are larger in number, and always system depends on them for the service delivery or introduction any new initiative. Another thing which has been reported consistently by the nurses from all study districts is, the recent introduction of ASHAs. A group of volunteers who were identified as Accredited Social Health Activists(ASHA) for the purpose of assisting the nurses and community, has done no good to them. They have only become a burden to them. The public health nurses are the ones who had to manage them along with the funds to be disbursed to them. One more activity that affects the routine service delivery of public health nurses is the number of meetings to be attended every month. This makes them to modify their schedule of some of their routine services. For an example, a JPHN in a month attends at least 4 meetings in the district or block level. This keeps her away from the field or sub-centre for at least four days. In addition, they may also have to keep additional days for travel, if the meeting venue is farther from their centre/field. One more problem mentioned by many of the public health nurses is, the time consumed on the record maintenance. Many at times they were involved in creating records, which are nothing but duplication of similar exercises. Some are computer based, some or traditional methods. All these add to their workload. Some nurses have suggested, a position may be created only for the purpose of maintaining records. In spite these limitations they still feel their job is very satisfactory. They enjoy community work such as field visit, family survey, and different clinics at the centre and so on. On the other hand, the activities such as record maintenance and attending meetings make them unhappy. Another problem reported by many was, the non availability of own buildings for their sub-centers. Many are paying the rent for the centers from their own pocket. One more issue observed from the field which is of significance is, the vacancy of number public health nursing positions in the lower level. In such situation, the system assigns an existing public health nurse from the nearby center to be an in-charge in addition to the existing center. Many have reported they are continuing to

be in-charge of two centers for more than a year. In this process their contact with the community is a rare event.

One more issue needs to be addressed is the poor promotional prospects for the JPHN and JHI. Many have expressed a need for better career path for them. This is the only thing which can keep their morale high. Presently there are number of position in the next level which are remaining vacant for long. If the government takes a decision on filling them will improve the situation.

X. REFERENCES:

1. Alstveit M, Severinsson E, Karlsen B. Readjusting one's life in the tension inherent in work and motherhood. *Journal of Advanced Nursing.* 2011; 67(10): 2151–60.

2. Be'gat, I ., Ellefsen B. & Severinsson E. 2005. Nurses' satisfaction with their work environment and the outcomes of clinical nursing supervision on nurses' experiences of well-being – a Norwegian study. *Journal of Nursing Management*. 13, 221–230.

3. Conrad, Karen M., Kendon J. Conrad and Jane E. Parker. 1985. 'Job Satisfaction among Occupational Health Nurses', *Journal of Community Health Nursing*, 2(3): 161-173.

4. Feng, CK, Chen ML, and Mao IF. 2007. Prevalence of and risk factors for different measures of low back pain among female nursing aides in Taiwanese nursing homes. *BMC Musculoskeletal Disorder.* 8:52. http://www.biomedcentral.com/1471-2474/8/52(Accessed on 17 December 2011).

5. Fragar, Lyn J. Depczynski, Julie C. 2011. 'Beyond 50. challenges at work for older nurses and allied health workers in rural Australia:a thematic analysis of focus group discussions'. *BMC Health Services Research*, 11:42 http://www.biomedcentral.com/1472-6963/11/42 (Accesed on 28 October 2011)

6. Golubic, R., Milosevic, M., Knezevic, B., Mustajbegovic J. Work-related stress, education and work ability among hospital nurses. 2009. *Journal of Advanced Nursing*. 65(10), 2056–2066.

7. Hegney D, Eley R, Plank A, Buikstra E, Parker V. 2006. Workforce issues in nursing in Queensland: 2001 and 2004. Journal of Clinical Nursing 15, 1521–1530.

8. Helmlinger, Connie. 1997. ' A Growing Physical Workload Threatens Nurses' Health', *The American Journal of Nursing*, 97(4): 64-66.

9. LF Gum. Studying nursing in a rural setting: are students adequately supported and prepared for rural practice? A pilot study.2007. *Rural and Remote Health* 7: 628. 2007. http://www.rrh.org.au (accessed on 29 October 2010).

10. Molinari DL, Monserud MA. Rural nurse job satisfaction. *Rural and Remote Health.* 2008;8:1055(Online).

11. Montour, A. Baumann, A. Blythe,J. Hunsberger, M. 2009. The changing nature of nursing work in rural and small community hospitals, *Rural and Remote Health* 9: 1089. http://www.rrh.org.au (accessed on 29 October 2010).

12. Nabirye, RC, Brown KC, Pryor ER, and Maples, EH. Occupational stress, job satisfaction and job performance among hospital nurses in Kampala, Uganda. 2011. *Journal of Nursing Management*, 19, 760–768

13. Ngin, Phyllisis M. 1994. 'Record keeping Practices of Nurses in Hospitals', *The American Archivist,* 57(4): 616-630.

14. O'Donnell, Catherine A. Jabareen, Hussein. Watt, Graham CM. 2010. Practice nurses' workload, career intentions and the impact of professional isolation: A cross-sectional survey. . *BMC Nursing*. 9:2. http://www.biomedcentral.com/1472-6955/9/2 (Accesed on 28 October 2011).

15. Pareek, Udai. 1993. Making organisational Roles Effective. New Delhi: Tata McGraw-Hill.

16. Pareek, Udai and Purohit, Surabhi, 2010. Training Instruments in HRD and OD. New Delhi: Tata McGraw-Hill Publishing Company Limited.

17. Philibin C.A.N, Griffiths C. , Byrne G., Horan P., BradyA.M. and Begley C. 2010. The role of the public health nurse in a changing society. *Journal of Advanced Nursing*. 66(4), 743–752.

18. Sharma, Bharati, Sweta Roy, Dileep Mavalankar, Pallavi Ranjan and Poonam Trivedi. 2010. 'The Role of the District Public Health Nurses: A Study from Gujarat'. www.iimahd.ernet.in/publications/data/2010-02-04Sharma.pdf. Accessed on 04-08-2010.

19. Srinivasan K, Sharan R. Organization of Indian Health Bureaucracy and its Delivery System. *Productivity, A Quarterly Journal of the National Productivity Council, India.* 2006; 46(4): 477-86.

20. Wade,Mattie L., Nancy S. Gillespie and Murlene D.1963. 'How Public Health Nurses Promote Mental Health', *The American Journal of Nursing*, 63(1):81-83.

21. WHO. 'Situational Analysis of Public Health Nursing Personnel in India: Based on national review and consultations in six states'. 2005. Academy for Nursing Studies, Hyderabad.www.whoindia.org/.../hsd_resources_situation_analysis_of_public_health_nursing_personnel.pdf Accessed on 04-08-2010.

22. Wilson-Barnett, Jenifer. 1986. 'Ethical Dilemmas in Nursing', *Journal of Medical Ethics*, 12(3): 123-126.