ENHANCING REPRODUCTIVE HEALTH SERVICES USE BY MARRIED ADOLESCENT GIRLS AND YOUNG WOMEN- ROLE OF COMMUNITY WOMEN VOLUNTEERS

REPORT

LADY HEALTH WORKERS AND LADY HEALTH SUPERVISORS EXPERIENCE WITH AND VIEWS ON THE ROLE OF COMMUNITY WOMEN VOLUNTEERS IN ENHANCING FPRH SERVICES UTILIZATION

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LIST OF ABBREVIATION

CPR	Contraceptive Prevalence Rate
FMST	Field Monitoring and Supervisory Teams
FP	Family Planning
FPRH	Family Planning and Reproductive Health
HHR	Health Human Resources
IRMNCH&N	Integrated Reproductive Maternal Newborn, Child Health and Nutrition Programme
IUDs	Intrauterine Devices
LHS	Lady Health Supervisor
LHW	Lady Health Worker
MNCH	Maternal Newborn and Child Health
PDHS	Pakistan Demographic and Health Survey
PHC	Primary Health Care
QDA	Qualitative Data Analyst
UHC	Universal Health Coverage

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EXECUTIVE SUMMARY

The country's national health programs are under performing as is evident from the country's stagnating health indicators and failure to achieve national and international health goals.[1]A significant reason for the underperformance of the programs is shortage of health human resources (HHR). While over a 100,000 LHWs have been trained and deployed to provide Primary Health Care (PHC) and Family Planning and Reproductive Health (FPRH) services in the underserved and marginalized communities, owing to shortage of HHR they are performing 22 other tasks in addition to their two primary responsibilities. [2, 3]

Fresh initiatives are needed to invigorate the programs and enhance their impact. The health programs have yet to explore the role of volunteers for filling HHR gaps and addressing socio-cultural barriers. The lady Health Workers Program (LHWP) has the potential for mobilizing communities' help and support for overcoming the challenges they face including human resources shortages. Nur Center for Research and Policy (NCRP), Lahore in collaboration with George Washington University Milken Institute of Public Health, undertook a study to test an innovative strategy of enhancing access of LHWs to the marginalized and disempowered group of married adolescent girls and young women (aged 15-24 years) for FPRH counselling through community-based women volunteers. The testing of the intervention couldn't be completed owing to the COVID-19 pandemic but in the pre-pandemic period of intervention-testing, 900 Community Women Volunteers were recruited and worked with the LHWs for a period of more than five months. In the light of the experience the LHWs had gained of working with these volunteers, a survey of the LHWs participating in our study, was done to get their perspective on the role volunteers can play in support of their work and creating awareness about the FPRH services they provide. The purpose of the surveys was to generate evidence for advocating the need and feasibility of mobilizing the services of volunteers to address the human resources shortages and mitigate the effects of socio-cultural beliefs limiting the impact of FPRH and Maternal Newborn and Child Health (MNCH) services being provided by community-based programs like the Integrated Reproductive Maternal, Newborn and Child Health & Nutrition (IRMNCH&N).

Participants and Methods

The study site was Nishtar Town, Lahore District of Punjab. Informed consent was given by 225 LHWs working in the town for participation in the study. After discontinuation of the original intervention testing study due to the COVID-19 pandemic, a modified methodology was developed including survey of the participating LHWs and their 14 Lady Health Supervisors (LHSs). This report presents the findings of the survey.

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[1] Pakistan MDGs Report

[2] Z Mumtaz, S Salway, C Nykiforuk, A Bhatti, A Ataullahjan, B Ayyalasomayajula.The role of social geography on lady health workers' mobility and effectiveness in Pakistan. Soc Sci Med, 91 (2013), pp. 48-57

[3] Rose Zulliger, PAKISTAN'S LADY HEALTH WORKER PROGRAM. https://chwcentral.org/pakistans-lady-health-worker-program

Key Findings

LHWs Socio-Demographic Profiles

The age of the 201 LHWs interviewed ranged from 26 – 63 years with a mean age of 43 years. Eighty four percent were currently married, 11.4 percent were widows. About 10 percent of their husbands were un- employed and 71 percent had low paid jobs. About 48 percent were married off in adolescence.

Empowerment of LHWs by their jobs

With un-employed and low-paid husbands, the LHWs families were highly dependent on her salary. For 13 percent it was the only source of income and for 53 percent it paid for some critical needs of the family. All the LHWs and LHS said that their employment had empowered them, increased their mobility and interaction with the community and increased their status in the community.

LHWs' FPRH Background

We documented the FPRH practices of the LHWs to assess their own experiences of child bearing and exposure to socio-cultural influences on child bearing. Their age at marriage, age at first pregnancy and number of children were the same as all women of child- bearing age reported by PDHS 2017/18. About half were married off in adolescence. Their mean age at first pregnancy was 21.25 years. Seventy one percent had more than four pregnancies and 60 percent had more than 4 live children.

LHWs' FPRH Services utilization

Comparison of utilization of reproductive health services by the LHWs in their first and last pregnancies showed an increase services utilization but no difference in the providers of services was found. Doctors provided services to the majority both in their first and last pregnancies. This finding is the same as in other women groups of childbearing age and has negative implications for the development and utilization of primary health care services and achievement of universal health coverage (UHC).

LHWs Views on Family Planning

For 71.64 percent of the LHWs, the ideal number of children for a couple was 3 - 4 and for 24.4 percent 1 -2. All except 6.47 percent believed in modern contraceptives for Family Planning (FP). Condoms were the preferred modern contraceptives of 85 percent and IUDs of 31.8 percent. Adverse effects of pills were mentioned as a reason for their infrequent use.

Issues and Barriers faced by LHWs in the Delivery of Services

A number of LHWs said that they had faced a hostile response from the community, more especially from mothers-in-law to FP counselling in the early years of their employment. They however felt that with the passage of time, communities are getting more aware about the need for family planning and their attitude towards LHWs and FPRH is improving. Shortages of contraceptives and medicines was another issue they faced and according to them this undermined their credibility and respect in the community.

Views on the effectiveness of the services they provided

According to their assessment of the effectiveness of their FPRH counselling and other services provided by them, only 1.4 percent said they were disappointed, 14 percent were satisfied and the rest considered themselves successful or very successful. Sixty percent thought contraceptive prevalence in their area was more than 40 percent, with 35 percent claiming that it was more than 50 percent. The age group 25-30 years was considered the most frequent users of services according to 58.2 percent while about 32 percent thought age group less than 24 years were frequent users.

Experience and Views on Working with Volunteers

At the start of the project, some LHWs were skeptical about anyone willing to volunteer for unpaid work. They also didn't think they needed any help from volunteers and feared that volunteers would add to their responsibilities rather than help them.

Never-the-less the 225 volunteers were able to recruit 900 volunteers. The reasons for success of recruitment included good response from relatives, friends and community members they had served and who had developed respect for them and their work.

Some persuasive reasons used by LHWs during recruitment included equating volunteer work with charity that will please Allah, or as an opportunity for increase in knowledge or as a means of increasing prospects of jobs in future.

LHWs' Feedback on the work of the volunteers they had recruited

A number of the LHWs who had been skeptical about volunteers being of any help to them, said they had changed their lives. They had found that the volunteers had made their jobs easier, they were able to reach more people, and that working with volunteers had helped build their confidence. One respondent even mentioned them as her "right arm". They felt that volunteers would step in for them (the LHW) when needed by someone in case they were busy or unable to reach some place.

In quantitative terms a mixed picture came out, but the encouraging part was that despite the difficulties some had faced finding volunteers to work without payment and in training the volunteers, 68 percent admitted that the volunteers had made a difference, 92 percent said that they will continue working with their volunteers and 96 percent were of the opinion that this initiative can be used all over the Punjab province.

Lady Health Supervisors Survey

The Lady Health Supervisors (LHSs)' views on Volunteers and their FPRH practices and services utilization mirrored that of the LHWs. Most were happy with the work the volunteers had done. They were also positive about LHWs ability to recruit volunteers. Some said they had helped the LHWs in identifying and convincing volunteers to work with them.

The few LHSs who were not in favor of volunteers' support for LHWs didn't see any need for it. According to them the LHWs had been working for many years by themselves and were doing a good job. They were convinced that nobody works without money and recruiting unpaid volunteers will neither benefit the volunteers nor the LHWs.

Despite the mixed views, 71 percent said they would encourage LHWs to continue working with the volunteers they had recruited for the project and all were in favor of testing the initiative in the whole of Punjab.

Discussion and Conclusions

Our interviews with the LHWs and LHSs provided insights on the providers' perspective on the delivery of FPRH services to the community.

Both the LHWs and LHSs were overall positive about their own performance and the effectiveness of services provided by them. Their own FPRH practices show that 'they overall practice what they preach' but their own number of children and use of secondary and tertiary care services have negative implications for the achievement of the program target population growth rate, development of PHC and achievement of the goal of UHC through the PHC approach. They are not being role models for the community they serve.

The views of most of the LHWs and LHSs were positive about the usefulness of volunteers for their work. Over all 225 LHWs had been able to recruit 900 unpaid volunteers. As according to one of them, the volunteers had multiplied their voice and enabled them reach out to groups they could never have approached. This was in reference to one volunteer who was a college student and had taken the FP counselling messages to her colleagues in college.

We recommend that the Community Women Volunteers we introduced in Nishtar town may be scaled up to some other districts of Punjab and research on the effectiveness of this model be carried out in rural and far flung areas to adjust our model to the specific context and needs of these areas, The effectiveness of our model, which is similar to the Care Group Peer Volunteers Model, more especially its modified Integrated Care Group model, has been demonstrated in several developing countries. The integrated model (integrated within the government health care system) has been demonstrated to be low cost and sustainable.

1- INTRODUCTION

Pakistan's health sector suffers from severe financial and crisis level human resources shortages.[4] The country's national health programs are under performing as is evident from its stagnating health indicators and failure to achieve national and international health goals.[5] Fresh initiatives are needed to invigorate the programs and enhance their impact. The health programs have yet to explore the role of volunteers in overcoming barriers they face like health workers shortages and socio-cultural influences limiting the outcomes and impact of their interventions. The primary health care and reproductive health programs have a special need for volunteers mobilized from within the community to support and facilitate the work of their services providers. The country's largest community-based Primary Health Care (PHC) and FP program popularly called the Lady Health Workers (LHWs) Program, is providing services at the household level to predominantly the underserved and marginalized populations of the country. The program is being implemented since the early nineties but has had limited impact particularly on increasing contraceptive prevalence rate (CPR) and improving reproductive health indicators.[6, 7] In our survey of over 5000 married adolescent girls and young women in the age range 15 – 24 years, we found that 80 percent had never received any FPRH counseling and less than 20 percent were using contraceptives. A large number were not familiar with the services the LHWs provide and most hadn't used their services. [8] Under-utilization of LHWs services has been reported by others also. One reason for this is the restricted access of LHWs and other FPRH services providers to married adolescent girls and young women for family planning and reproductive health counseling.[9.10.11] Low social status of these women due to deeply entrenched sociocultural factors is responsible for their disempowerment and marginalization.

Nur Center for Research and Policy (NCRP), Lahore in collaboration with George Washington University Milken Institute of Public Health, undertook a study to test our innovative strategy of enhancing access of LHWs to married adolescent girls and young women (aged 15-24 years) for FPRH counseling through community-based women volunteers. Our study concept was derived from the Care Group experience of using volunteers to motivate mothers to adopt key Maternal and Child Health (MCH) behaviors.[12]

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[4] WHO World Health Report 2006

[5] Pakistan MDGs Report

[6] Z Mumtaz, S Salway, C Nykiforuk, A Bhatti, A Ataullahjan, B Ayyalasomayajula.The role of social geography on lady health workers' mobility and effectiveness in Pakistan. Soc Sci Med, 91 (2013), pp. 48-57

[7] Rose Zulliger, PAKISTAN'S LADY HEALTH WORKER PROGRAM. https://chwcentral.org/pakistans-lady-health-worker-program

[8] Nur Center for Research and Policy. Basline report 2021: Enhancing reproductive health services use by married adolescent girls and young women – role of community women volunteers. July 2021

[9] Snapshot of poor adolescent girls' nutrition and health.

[10] Snapshot of poor adolescent girls' nutrition and health.

[11] PDHS 2017-18

[12] Perry H., Morrow M., Borger S., Weiss J., De Coster M., Davis T., & Ernst P. (2015). Care Groups I: An Innovative Community-Based Strategy for Improving Maternal, Neonatal, and Child Health in Resource-Constrained

2- OBJECTIVES

2.1. To document the socio-demographic profile and FPRH knowledge, beliefs and practices of LHWs and LHS participating in our project;

2.2. To record the LHWs learning from working with the volunteers and their views on the potential of volunteers for overall facilitating the FPRH services they are providing and their access to married adolescent girls and young women for FPRH counselling and services provision.

The purpose of the survey was to generate evidence for advocating the need and feasibility of mobilizing the services of volunteers to address the human resources shortages and mitigate the effects of socio-cultural beliefs limiting the impact of FPRH and MNCH services being provided by community-based programs like the Integrated Reproductive Maternal, Newborn and Child Health & Nutrition (IRMNCH&N).

3- PARTICIPANTS AND METHODS

We selected the quasi experimental 'Before and After' study design to test the effectiveness of community women volunteers (CWVs) in facilitating access of LHWs to the 24 years and less age group of married women and to promote the LHWs provided FPRH services in the community. This included selection of Community Women Volunteers (CWVs) by LHWs from among their family members, friends and social circles and client women, a manageable workload for the volunteers and at least monthly contact between the LHW and her selected group of volunteers for feedback on how their work was going on and any issues they were facing. During these meetings the messages the volunteers were passing on to the target age group women and their families were to be refreshed and new messages were to be added. The LHWs would be providing monthly feedback on the progress of the intervention-testing to our study Field Monitoring and Supervisory Teams (FMST). Our intervention-testing phase was interrupted by the COVID-19 Pandemic. We had completed a Baseline survey and the study 225 participating LHWs had selected and trained 900 CWVs who had started conveying the messages given to them by the LHWs. We revised our study methodology, and after the lifting of lockdown in our study area we undertook a survey of the recruited CWVs and the participating LHWs and their supervisors (LHS) to record their experiences of working together for about 5 months and their views on the role volunteers could play in facilitating the LHWs and creating awareness about their FPRH services.

The project was carried out in Nishtar Town of Lahore District. The project had recruited 225 LHWs and they in turn had mobilized the support of a total of 900 CWVs. Interviews were organized with the following respondents:

Settings. *Global health, science and practice*, *3*(3), 358–369. https://doi.org/10.9745/GHSP-D-15-00051the study participating 225

- Contact was made with 600 out of the 900 CWVs recruited for the project. A total of 511 interviews were completed. Their socio-demographic data, FPRH knowledge and utilization of services and experience of volunteering for the project were recorded.

- Interviews with 221 of 225 LHWs participating in our study. The data collected from them included their background information, their own FPRH practices and experience of working with CWVs they had recruited for the project and views and suggestions for institutionalizing CWVs support for the promotion of their work in the community, in the IRMNCH&N program.

- The 14 Lady Health supervisors (LHS) who were supervising the work of the participating LHWs in the study area were interviewed. Similar data to LHWs was collected from them.

Semi-structured questionnaires were developed and pilot tested. A new team of female interviewers was recruited and trained by the Project Manager and briefed by the PI. They got further hands-on training in the field during the pilot testing of the questionnaires. Interviews started on September 11, 2020 and were completed on November 25, 2020. A total of 749 interviews were done. During data cleaning 20 questionnaires were discarded owing to being incomplete or having inconsistent data. A total of 729 questionnaires were analyzed.

3.1. Monitoring of Data Collection and Data Entry

Three female interviewers collected the data. A Field Supervisor was attached with them who helped them in contacting LHS and LHWs participating in the study. The LHS and LHWs in turn connected them to their respective CWVs.

The interviewers translated the filled questionnaires in Urdu and then back into English. This exercise enhanced their understanding of the questions. The per day target for each interviewer was 5 translated interviews which they uploaded on to G-Drive in their respective folders. The Project Associate scrutinized the data received from the field, reviewed the uploaded English transcripts by the interviewers for completeness and corroborated them with the Urdu versions. She communicated the mistakes detected to respective interviewers who corrected them where possible.

3.2. Qualitative and Quantitative Data Entry

- Owing to a large qualitative data component in the questionnaire a qualitative Data Analyst familiar with the use of qualitative data software (MaxQDA) was recruited. He gave training to the project field manager, supervisors and interviewers. The training included interviews techniques, coding and use of MaxQDA. The data collected was uploaded by the Project Associate and then coded in MaxQDA software for qualitative analysis by the Qualitative Data Analyst (QDA) and two Research Analysts at NCRP.

- The quantitative data was entered in coded form in excel according to the template created and guided by the Data Analyst.

The hard form data was segregated area-wise, indexed in the respective files and has been stored securely under the custody of Manager Operations, NCRP.

4- RESULTS

Section- R1: Lady Health Workers Profiles and Perspective

4.1. LHWs Socio-Demographic Profiles

The age of the 201 LHWs interviewed for the survey ranged from 26 – 63 years with a mean age of 43 years. Eighty four percent were currently married, 11.4 percent were widows and 2.5 percent separated or divorced. All had secondary level education with 13.93 percent with higher secondary and 8.49 percent with college level education. About 10 percent of their husbands were un-employed and 71 percent had low paid jobs (Table-1).

Variable	N	Range	Frequency (%)	Confid. Interval
Age (years)	201	25 – 35	29(17.16%)	11.48%-22.84%
		36 – 45	82(48.52%)	40.99%-56.06%
		46 – 55	51(30.18%)	23.26%-37.10%
		56 – 65	7(4.14%)	1.14%-7.15%
		Range	Mean (SD)	Confid. Interval
		26-63	43.12 (7.44)	42.09-44.16
Marital Status	201	Categories	Frequency (%)	Confid. Interval
		Divorced/Separated	5(2.49%)	0.33%-4.64%
		Widowed	23(11.44%)	7.04%-15.84%
		Single	4(1.99%)	0.06%-3.92%
		Married	169(84.08%)	79.02%-89.14%
Education Level	201	Secondary	156(77.61%)	71.85%-83.37%
		High Secondary	28(13.93%)	9.14%-18.72%
		College	17(8.46%)	4.61%-12.30%
Husbands' Age (years)	169	25 – 35	22(13.02%)	7.94%-18.09%
		36 – 45	54(31.95%)	24.92%-38.98%
		46 – 55	76(44.97%)	37.47%-52.47%
		56 – 65	17(10.06%)	5.52%-14.59%
		Range	Mean	Confid. Interval
		27-65	45.8402(8.3405)	44.5736-47.1068
Husband's Occupation	169	Unemployed	16(9.47%)	5.05%-13.88%
		Low Paid*	120(71.01%)	64.16%-77.85%
		Mid Paid**	24(14.20%)	8.94%-19.46%
		High Paid***	9(5.33%)	1.94%-8.71%
Type of Household	201	Joint	45(22.39%)	16.63%-28.15%
		Nuclear	156(77.61%)	71.85%-83.37%

Number of Family members	201	1-5	69(34.33%)	27.76%-40.89%
		6-10	108(53.73%)	46.84%-60.62%
		>10	24(11.94%)	7.46%-16.42%

***Upto PKR 30,000 ** PKR 31,000 – 50,000 *** Above PKR 50,000**

Table-1: LHWs Socio-demographic profiles

About 48 percent had been married off in adolescence (Table-3). For the 24 percent who were in school at the time of their marriage and wanted to continue their education after marriage, it was not possible to do so owing to the usual reasons of looking after home and children and the refusal of in-laws to give permission.

> *"My husband allowed me to study but then I had children. The children were small, and I also had household responsibilities, so I didn't have time to study so I dropped out."*
> *"My husband allowed me to study further but my in-laws did not want me to study more. They said "pay attention to your husband and your home. What will you do by educating yourself?"*

4.1.1. Empowerment of LHWs by their jobs

With 10 percent husbands un-employed and over 70 percent in low- paid jobs, the LHWs families were highly dependent on her salary. For 13 percent it was the only source of income and for 53 percent it paid for some critical needs of the family. The interesting finding is that the very same families who were averse to the continuing of their education after marriage had no problem allowing them to take the training and jobs of LHWs. In fact, for 50 percent their husbands made the decision of their becoming LHWs. It is therefore not surprising that 90 percent of the LHWs reported their husbands to be supportive and highly supportive. Only about 6 percent reported their in-laws to be discouraging, the rest said they were neutral (15 percent) or supportive and highly supportive. (Table-2)

Variable	N.	Responses	Frequency (%)	Confidence Intervals
Who made the decision for her to work as LHW	201	Myself	72(35.82%)	29.19%-42.45%
		Father	17(8.46%)	4.61%-12.30%
		Brother	6(2.99%)	0.63%-5.34%
		Mother	25(12.44%)	7.88%-17.00%
		Husband	101(50.25%)	43.34%-57.16%
		Father-In-law	9(4.48%)	1.62%-7.34%
		Mother-In-law	4(1.99%)	0.06%-3.92%
Husband's attitude towards her work	169	Highly Discouraging	2(1.18%)	-0.45%-2.81%
		Discouraging	4(2.37%)	0.07%-4.66%
		Neutral	11(6.51%)	2.79%-10.23%
		Supportive	71(42.01%)	34.57%-49.45%
		Highly Supportive	81(47.93%)	40.40%-55.46%
In-laws attitude towards her work	169	Highly Discouraging	5(2.96%)	0.40%-5.51%
		Discouraging	10(5.92%)	2.36%-9.47%
		Neutral	26(15.38%)	9.94%-20.82%
		Supportive	84(49.70%)	42.17%-57.24%

		Highly Supportive	44(26.04%)	19.42%-32.65%
Need of family for her salary	169	Family doesn't need it	2(1.18%)	0.00%-2.81%
		Pays for extra comforts	69(40.83%)	33.42%-48.24%
		Pays for critical needs	90(53.25%)	45.73%-60.78%
		Only source of family income	22(13.02%)	7.94%-18.09%
Respect for her work	169	No	2(1.18%)	0.00%-2.81%
		Yes	167(98.82%)	97.19%-100.45%

Table-2: LHWs husband's and Family support for her job

4.1.2. Enhanced respect within family

The LHWs reported that their jobs had enabled them to contribute to their families' income, give better education to their children and meet their children's other needs. This has increased respect for them within the family.

> *"I found this work when we were going through some very critical times so my contribution was a support for the family, and they were thankful to me as I brought in money."*
>
> *"Now the children give me more respect because I earn to meet their every need. Now, relatives also do not argue much and respect me."*

4.1.3. Increased independence and decision-making status

According to the LHWs their employment had also increased their mobility, given them independence and decision-making status within family.

> *"In my home, my independent status has been increased due to my job. My decision-making power has enhanced and, I am the only source of earning in my home now."*
> *"In my home, my family members support my work and respect my financial status due to which I feel more confident and empowered. With time I also have developed public speaking ability as well and now I am the polio worker in charge of my area as well."*

4.1.4. Change in community perception

Some LHWs reported facing criticism and negative remarks from the community but they felt that over time and with better understanding of the work they do, the negative perceptions have changed and there is more respect for and acceptance of their services.

"In the beginning people used to call me very bad and say wrong things about me and my work but now they respect me very much. They welcome me in their homes and even offer me refreshments and ask us for advice for their health." (LHW)

"Most people do listen to my advice, some people used to say bad words at first but as the time passed, they understood the importance of family planning and of lady health workers. Now, they not only follow up our advice but also respect us a lot."

4.1.5. Increased mobility and interaction with the community – enhanced trust of the community

They were especially pleased about their increased mobility and interaction with the community and their enhanced status in the community. They believed they had gained the trust of the community and people shared intimate matters with them.

"Everyone in my community respects me a lot. They take advice from me whenever they meet me. People share things with me that they don't even do with their families because they believe in me, so I like it very much."

4.2. LHWs' Family Planning and Reproductive Health Background

The primary function of the LHWs is provision of Primary Health Care and FPRH services to the community. We documented the FPRH practices of the LHWs to assess their own childbearing experiences and exposure to the socio-cultural influences on child bearing. Their own history and FPRH practices can be taken as an indicator of their belief in and commitment to the services they are providing and promoting in the community.

4.2.1 LHWs Reproductive History

The results show that their age at marriage, age at first pregnancy and number of children are the same as all women of child- bearing age reported by PDHS 2017/18 (Table-3). A possible reason for this could be that most of them became LHWs after marriage and they hadn't yet achieved the empowerment due to their job.

Variable	N	Range	Freq. (%)	Confid. Interval
Age at marriage	197	< 15	7(3.48%)	0.95%-6.02%
		15-19	90(44.78%)	37.90%-51.65%
		20-25	86(42.79%)	35.95%-49.63%
		> 25	14(6.97%)	3.45%-10.48%
		Range	Mean (SD)	Confid. Interval
Age at first pregnancy (years)	193	13-33	21.25(3.65)	20.73-21.77
Age at last pregnancy (years)	187	17-41	31.06(4.85)	30.36-31.77
Number of Pregnancies	193	Range	Frequency(%)	Confid. Interval

		1-3	56(29.02%)	22.61%-35.42%
		4-6	109(56.48%)	49.48%-63.47%
		7-10	28(14.51%)	9.54%-19.48%
Number of Live Children	192	1-3	75(39.06%)	32.16%-45.96%
		4-5	94(48.96%)	41.89%-56.03%
		6-8	23(11.98%)	7.39%-16.57%
Age of youngest child (years)	192	Range	Mean (SD)	Confid. Interval
		01-35	12.49 (6.89)	11.51-13.47

Table-3: LHWs' Reproductive history

4.2.2 LHWs RH services utilization

Table 4 compares the utilization of FPRH services by the LHWs in their first and last pregnancies. Antenatal care, Folic Acid tablets intake, TT immunization and nutrition counseling had all increased by more than 10 percentage points in the last pregnancy. This indicates an increase in their knowledge of reproductive health needs of pregnant women due to their training as LHWs.

N.	Variable	Response	Freq. (%)	CI	N.	Freq. (%)	CI
			First pregnancy			Last Pregnancy	
197	Antenatal Care	No	27(13.71)	8.90-18.51	197	6(3.05)	0.65-5.45
		Yes	170(86.29)	81.49-91.10		191(96.95)	94.5-99.35
	Folic Acid	No	34(17.26)	11.98-22.54		9(4.57)	1.65-7.48
		Yes	163(82.74)	77.46-88.02		188(95.43)	92.5-98.35
	TT Immunization	No	29(14.72)	9.77-19.67		9(4.57)	1.65-7.48
		Yes	168(85.28)	80.33-90.23		188(95.43)	92.5-98.35
	Nutrition Counseling	No	56(28.43)	22.13-34.73		33(16.75)	11.5-21.97
		Yes	141(71.57)	65.27-77.87		164(83.25)	78.0-88.46
170	Frequency of Antenatal Care	1-3	45(26.47)	19.84-33.10	191	51(26.70)	20.4-32.98
		4-6	79(46.47)	38.97-53.97		80(41.88)	34.8-48.88
		> 6	46(27.06)	20.38-33.74		60(31.41)	24.83-38.0

Table- 4: LHWs Reproductive Health Services Utilization during their first and last pregnancies

4.2.3 Providers of reproductive health services to LHWs

While utilization of reproductive health services by the LHWs had increased, there is not much difference in the providers of services. Doctors provided services to the majority both in their first and last pregnancies (Table-5). This finding is the same as in other women groups of childbearing age and has negative implications for the development and utilization of primary health care services and achievement of universal health coverage (UHC).

N.	Variable	Response	First Pregnancy			Last Pregnancy	
			Freq. (%)	CI	N.	Freq. (%)	CI
170	Provider of Antenatal Care	Myself	-	-	191	4(2.09)	0.06-4.12
		Family	11(6.47)	2.77-0.17		13(6.81)	3.23-10.38
		Nurse	1(0.59)	0.00-1.74		2(1.05)	0.00-2.49
		LHV	10(5.88)	2.35-9.42		8(4.19)	1.35-7.03
		LHW	2(1.18)	0.00-2.80		3(1.57)	0.00-3.33
		CMW	2(1.18)	0.00-2.80		2(1.05)	0.00-2.49
		Dai	4(2.35)	0.07-4.63		4(2.09)	0.06-4.12
		Doctor	141(82.9)	77.3- 88.6		163(85.34)	80.32-90.36
163	Provider of Folic Acid Supplements	Myself	4(2.45)	0.08-4.83	188	9(4.79)	1.74-7.84
		Family	4(2.45)	0.08-4.83		3(1.60)	0.00-3.39
		Nurse	2(1.23)	0.00-2.92		5(2.66)	0.36-4.96
		LHV	8(4.91)	1.59-8.22		1(0.53)	0.00-1.57
		LHW	3(1.84)	0.00-3.90		1(0.53)	0.00-1.57
		CMW	1(0.61)	0.00-1.81%		12(6.38)	2.89-9.88
		Dai	4(2.45)	0.08-4.83		1(0.53)	0.00-1.57
		Doctor	140(85.8)	80.5-91.23		160(85.11)	80.02-90.20
168	Provider of TT Immunization	Myself	-	-	188	6(3.19)	0.68-5.70
		Family	2(1.19)	0.00-2.83		1(0.53)	0.00-1.57
		Dai	1(0.60)	0.00-1.76		4(2.13)	0.06-4.19
		CMW	1(0.60)	0.00-1.76		1(0.53)	0.00-1.57
		LHW	1(0.60)	0.00-1.76		-	-
		LHV	4(2.38)	0.08-4.69		4(2.13)	0.06-4.19
		Vaccinator	22(13.10)	7.99-18.20		23(12.23)	7.55-16.92
		Nurse	2(1.19)	0.00-2.83		1(0.53)	0.00-1.57
		Doctor	133(79.17)	73.03-85.31		148(78.72)	72.87-84.57
141	Provider of Nutrition Counseling	Myself	4(2.84)	0.10-5.58		11(6.71)	2.88-10.54
		Family	3(2.13)	0.00-4.51		3(1.83)	0.00-3.88
		Dai	3(2.13)	0.00-4.51%		3(1.83)	0.00-3.88

		CMW	1(0.71)	0.00-2.09	164	9(5.49)	2.00-8.97
		LHV	5(3.55)	0.49-6.60		1(0.61)	0.00-1.80
		Nurse	1(0.71)	0.00-2.09		1(0.61)	0.00-1.80
		Doctor	128(90.78)	86.00-95.56		143(87.20)	82.08-92.31

Table-5: Providers of RH services to the respondent LHWs during their first and last Pregnancies

A high proportion of the LHWs had home deliveries, 35 percent for their first delivery and over 20 percent for the last delivery a 15 percentage points drop in home deliveries. With half of the first deliveries and a third of the last deliveries attended by relatives and dais, this finding is a matter of concern since the LHWs have links with trained Community Midwives (CMWs) and Basic Health Units (BHUs) and these services were available to them for delivery. Only 5 percent increase in BHU deliveries had occurred (Table-6)

N.	**Variable**	**Response**	**First Pregnancy**		**N.**	**Last Pregnancy**	
			Freq. (%)	**CI**		**Freq. (%)**	**CI**
197	Place of Delivery	NA	5(2.54)	0.34-4.73	197	5(2.54)	0.34-4.73
		Home	69(35.03)	28.3-41.6		41(20.81)	15.14-26.4
		BHU	3(1.52)	0.00-3.23		13(6.60)	3.13-10.0
		RHC	2(1.02)	0.00-2.42		5(2.54)	0.3-4.73
		Private Clinic	27(13.71)	8.90-18.5		24(12.18)	7.6-16.75
		Private Hospital	25(12.69)	8.04-17.3		31(15.74)	10.6-20.82
		Govt. Hospital	66(33.50)	26.9-40.0		78(39.59)	32.7-46.42
192	Delivery attendant	Relative	38(19.79)	14.16-5.4	192	34(17.71)	12.3-23.11
		Dai	55(28.65)	22.2-5.04		32(16.67)	11.4-21.94
		LHW	5(2.60)	0.35-4.86		-	-
		CMW	11(5.73)	2.44-9.02		7(3.65)	0.9-6.30
		LHV	21(10.94)	6.5-15.35		27(14.06)	9.15-18.9
		Nurse	51(26.56)	20.3-2.81		47(24.48)	18.4-30.56
		Doctor	107(55.73)	48.7-2.76		126(65.6)	58.9-72.34
	Postnatal Care Provider	Relatives	-	-	197	56(28.43)	22.13-34.7
		Dai	-	-		32(16.24)	11.09-21.3

		LHW	-	-		13(6.60)	3.13-10.07
		CMW	-	-		14(7.11)	3.5-10.69
		LHV	-	-		27(13.71)	8.90-18.51
		Nurse	-	-		9(4.57)	1.65-7.48
		Doctor	-	-		77(39.09)	32.27-45.9

Table-6: LHWs utilization of delivery services

4.2.4 LHWs Views on and Practice of Family Planning

For 71.64 percent of the LHWs, the ideal number of children for a couple is 3-4 and for 24.38 percent 1-2. All except 6.47 percent believed in modern contraceptives for FP and condoms were the preferred modern contraceptives of 85 percent and IUDs for 31.8 percent (Table-7).
Adverse effects of pills were mentioned as a reason for their infrequent use.

> *"I used pills once to take a break but because of them I got very sick, so I didn't use them again. Now I just use a condom to take a break because it is the easy way and there is no harm (side effects) in that."*

N.	Variable	Response	Freq. (%)	Confid. Interval
197	Practicing FP	No	32(16.24)	11.09-21.39
		Yes	165(83.76)	78.61-88.91
201	Ideal Number of Children	As Allah Wills	1(0.50)	0.00-1.47
		5-6	7(3.48)	0.95-6.02
		3-4	144(71.64)	65.41-77.87
		1-2	49(24.38)	18.44-30.31
201	Best Contraceptives	Traditional	13(6.47)	3.07-9.87
		Pills	18(8.96)	5.01-12.90
		IUD	64(31.84)	25.40-38.28
		Injections	13(6.47)	3.07-9.87
		Surgery	16(7.96)	4.22-11.70
		Condoms	171(85.07)	80.15-90.00

Table-7: LHWs Views on and Practice of Family Planning

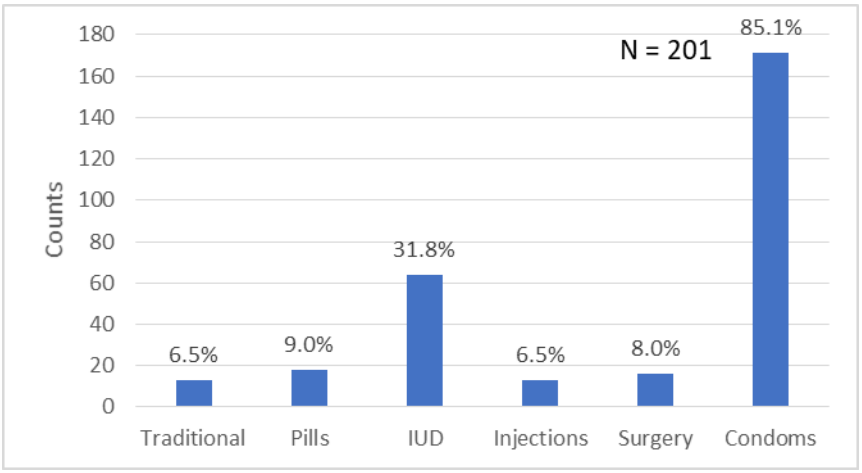

Fig-1: LHW's contraceptives preference

4.3 LHWs Experience and Views as FPRH Services Provider

4.3.1. LHWs' assessment of the effectiveness of the services provided by them:

When asked to provide their own assessment of the effectiveness of their FPRH counseling and other services provided by them, only 1.4 percent said they were disappointed, 14 percent were satisfied and the rest considered themselves successful or very successful (Table-8).

Variable	N.	Response	Frequency (%)	Confid. Interval
Years of service as LHW	201	9-15	127(63.18)	56.52-69.85
		16-20	39(19.40)	13.94-24.87
		> 20	35(17.41)	12.17-22.66
Number of Households served	201	150-200	15(7.46)	3.83-11.10
		201-250	125(62.19)	55.49-68.89
		>250	61(30.35)	23.99-36.70
Success as FP Counselor/Provider	201	Disappointed	3(1.49)	0.18-3.17
		Satisfied	29(14.43)	9.57-19.29
		Successful	70(34.83)	28.24-41.41
		Very Successful	99(49.25)	42.34-56.17

Table-8: LHWs' duration of service and satisfaction with the effectiveness of their services

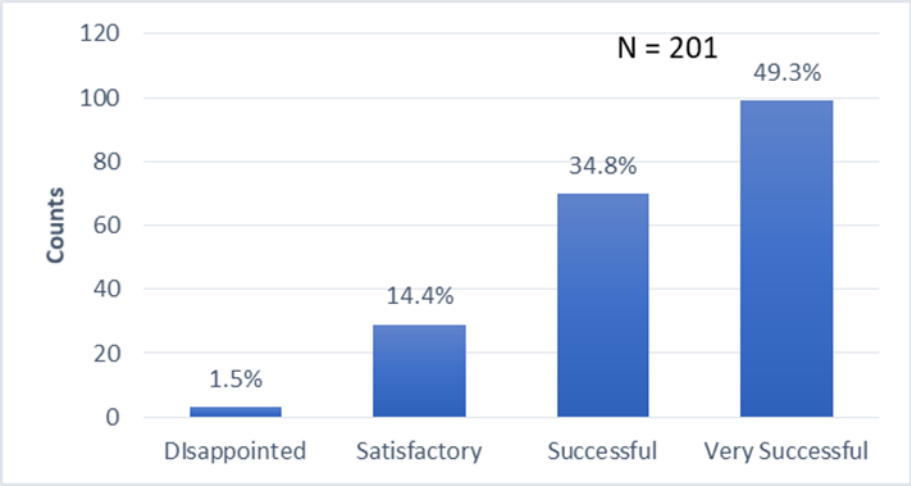

Fig-2: LHWs own assessment of their success as family planning counselors

When asked to estimate the outcomes of the utilization of their FP services in their coverage households, 60 percent thought CPR was more than 40 percent in their coverage area with 35 percent claiming that it was more than 50 percent. The age group 25-30 years was the most frequent users of services according to 58.2 percent while about 32 percent thought age group less than 24 years were frequent users (Table-9).

Variable	N.	Responses	Frequency(%)
Age group of most frequent FP Services users	201	24 or less	64(31.84)
		25-30	117(58.21)
		Over 30	20(9.95)
Proportion of Contraceptives using Women	201	16-20%	11(5.47)
		21-30%	31(15.43)
		31-40%	38 (18.91)
		41-50%	50(24.88)
		> 50%	71(35.32)
Mean number of children per couple	201	1-3	56(27.86)
		4-5	129(64.18%)
		6-7	16(7.96%)

Table-9: LHWs assessment of FP services utilization in their coverage communities

4.3.2 Issues and Barriers faced by LHWs in the Delivery of Services

- **Negative attitude to FP in the community:** A number of LHWs said that they had faced a hostile response from the community, more especially from mothers-in-law to FP counseling in the early years of their employment. They however felt that with the passage of time, communities are getting more aware about the need for family planning and their attitude towards LHW and FPRH is improving.

"When I became a lady health worker and I started telling people about family planning in my society, the women's mothers-in-law used to call me bad, they used to say, "Allah is the provider, why do you want to make our family small". It was very difficult to persuade them to do family planning, so I had a hard time doing this."

"The mothers-in-law would not let me meet her, she wouldn't allow us to tell such things (FP) to the daughter-in-law, but we motivate and convince her that family planning methods are very important so there are no more issues."

"When we go to anyone's house, if her sister-in-law or mother-in-law is there, they will not let her talk to us and take anything from us, so we need to revisit that house again after 2 -3 days, so this thing takes a lot of time."

- **Shortages of contraceptives and other supplies:** According to the LHWs, along with counselling, supply of recommended commodities enables them to develop and maintain good rapport with their clients and their families and to perform their duties effectively. Shortages of these supplies have a negative impact on their work.

"We are not receiving medicine and without medicine giving advice is just a waste of time because when we do not give anything to people, they do not follow our advice. So, this creates a lot of difficulties in our way." (LHW)

"People ask for medicines, but we don't have any, so it feels really bad to go to their homes without medicines and especially people ask for condoms, but we don't have them. Those are the barriers we face."

4.4. Experience and Views on Working with Volunteers

In our first meeting with the LHWs who had consented to participate in our study we found some to be skeptical about anyone volunteering as they thought it will be difficult to convince women to join without any salary. They also thought that volunteers might not be able to give sufficient time due to household responsibilities and non-cooperative families.

After recruiting volunteers and working with them for a period of 6 months, we wanted to see if any change in their thinking had occurred.

4.4.1. Initial reluctance to recruit volunteers and skepticism about availability of unpaid volunteers

The LHWs confirmed that they had expressed doubts and skepticism about anyone wanting to work without monetary compensation especially if they are poor and need money.

"I was thinking that whether these women will go with me in this project or not as we are not giving them any money." (LHW)

"We thought it would be very difficult because they are housewives, so they don't have much time, they are not allowed to go outside."

"I thought it would be very difficult to persuade them because nowadays no one works without money, but I won them as a friend and then asked them to do it, so they agreed."

Table-10 lists the reasons for the reluctance of LHWs to recruit unpaid volunteers for the project. Beside the common perception that nobody works without money, some LHWs didn't feel any need for help from volunteers while others thought the volunteers will not be able to understand the issues faced by them in the delivery of services and will not be able to convey and explain messages correctly. Some were concerned that instead of helping them the volunteers will become an added responsibility and waste their time.

Emergent reason	LHWs statement
1. People need money. Nobody works without money	*"It seemed to me that these people will not be willing to work with us because nowadays no one works without money, everyone needs money."*
2. People know us, we don't need volunteers to promote our work	*"We did not need any volunteers because in our community everyone knows us. We just need volunteers on Polio days only otherwise we can do this work by ourselves."*
3. Doubt about volunteers understanding of their work	*"I was not sure about them. I always thought that they would never understand our work and will never guide others about this as they are not getting any money for their work."*
4. Instead of help, volunteers will become an added responsibility	*"No, I did not want to work with them because I don't like to have anyone with me at work. I get disturbed and it also increases our responsibility."*

Table-10: Reasons given by the LHWs for their reluctance to recruit volunteers

4.4.2. Experience of and approaches used by the LHWs in recruiting Volunteers

The different experiences the LHWs had while recruiting volunteers are listed in Table-11. There were some who had found it difficult to convince women they approached to volunteer mainly because they demanded payment for services they would provide.

The ones who didn't face any difficulty in finding volunteers gave different reasons for this. A number of them recruited their relatives and friends. Others believed that because they had good standing in the community and were respected and trusted, the women they approached, readily agreed. An interesting reason given by some LHWs was that volunteering to facilitate their work was considered as a return of favor by the volunteers and their families for the service they (the LHWs) were providing them.

Emergent themes	LHWs Statement
1. Those who faced difficulties recruiting volunteers	

Refusals mainly because of no salary for the service	• *"Volunteers first asked how much money I would pay to them otherwise she is not willing to work without money. Many of them say, they don't have time and their in-laws don't allow them to go to someone's house, so we had a hard time convincing them."* • *"No one works without money. They said, give us money first and then we will work. Even though they said that give us money from your salary if your organization is not giving you."*
2. Those who faced no difficulty	
• **Relatives are easily recruited as unpaid volunteers** • **Friends are a source of unpaid volunteers** • **LHWs good standing in the community facilitates recruitment of unpaid volunteers**	• *"Finding volunteers was not that difficult because they are my relatives. I told them about family planning and explained that they have to motivate people, and if anyone needs help related to family planning, they will take it from me."* • *"I did not face any type of problem. Her family knew me so they trusted me. It was not that difficult to explain to her as she has done matric and she knows community members well so can meet and greet them easily."* • *"I did not face any difficulty because one is my sister-in-law and the others are my friends, so they supported me and worked with me very easily without creating any issues."* • *"It is my community so there was no problem. Everyone easily agreed to help me out. Because they all know me and trust me."* • *"Because they belonged to my community, so they easily got persuaded to work with me. Their family members also trust me. I helped them by providing contraceptives and medicine, so they want to help me in return."*

Table-11: Experiences of LHWs during recruitment of volunteers

Some LHWs were able to persuade women to volunteer for the unpaid work by appealing to their desire for pleasing Allah, increasing their knowledge or social service. These are listed in Table – 12.

Emergent themes	LHWs Statement
• **Unpaid volunteer work as charity is an effective inducement for recruiting unpaid volunteers** • **There are people who seek Increase of knowledge of FPRH and they are ready to**	• *"I persuaded them by saying that if you do this you will be able to please Allah and this work will also increase your knowledge."* • *"I asked them that it will increase your knowledge and they will receive free medicines; they won't have to buy it from medical stores. I had to insist a lot on them."*

do unpaid volunteer work • **Increased prospect of a job in future**	• *"I ask them that it is very beneficial for both them and people. It will increase their knowledge and maybe they will be recruited for the job in future."*

Table-12: Effective inducements used by some LHWs for recruiting volunteers

4.4.3. LHWs' feedback after working with the volunteers they had recruited

When tasked if after working with the volunteers for 5 months, there was any change in their views about the volunteers, a number of the LHWs said yes, there was a positive change in their earlier views. Most of them said that their job had become easier, they were able to reach more people, and that working with volunteers had helped LHW's build their confidence. One respondent even mentioned them as her "right arm". They felt that volunteers would step in for them (the LHW) if they were busy when needed by someone or unable to reach some place. The views expressed by LHWs are listed in Table-13.

Emergent view	LHWs Statements
1. Change in views from negative to positive - volunteers can share the burden of LHWs	"*Yes, as now when they are working with me in the field and in their own homes, my thinking towards them has changed as they are supportive and help to spread information regarding the usage of FP methods."* *"Yes because of their work I changed my views. They visit people's homes and guide them on family planning methods and give them family planning contraceptives."* *"I used to believe that their presence will increase our work, but they actually shared my burden."*
1. Volunteers are Helpful and Supportive	*"They have become my right arm now. Even if I am not available, they can help people properly. They provide family planning medicines. If a woman needs to go to a doctor, they can take them."* *"I used to believe that their presence will increase our work, but they actually shared our burden."*
2. Volunteers increase LHWs outreach to a wider group of end-users	*"Because of their arrival, our work has become much easier. Because of them, we can reach more people now. They also do our part as well. Anyway, I always thought that whatever is done together is blessed. I am glad they came."* *"Yes, it affects me on some level. Like counseling young girls, my volunteer is also young, so she counsels her university fellows about family planning. I do not have access to that area, so it is good for me."*
3. Volunteers can bring a positive change in the	*"There is a positive change in community due to them. They guide very keenly others about family planning if I am not*

community about FPRH and LHWs services	*available. They visit women in their houses and listen to their problems and give them medicines."* *"I feel good that they are helping others and spreading awareness among people of the community."*

Table-13: LHWs views about volunteers after working with them

Table 14 quantifies the overall feedback from the LHWs about their experience working with the volunteers they had recruited and their views on the volunteers' work. A mixed picture is presented but the encouraging part is that despite the difficulties some faced finding volunteers to work without payment and in training the volunteers, 68 percent admitted that the volunteers had made a difference, 92 percent said that they will continue working with their volunteers and 96 percent were of the opinion that this initiative can be used all over the Punjab province.

N.	Variable	Response	Freq. (%)
201	Number of Volunteers Recruited	1-3	128(63.68)
		4-6	61(30.35)
		>6	12(5.97)
201	Any difficulty training them	No	106(52.74)
		Yes	95(47.26)
201	Any change of views on their understanding of their work	No	116(57.71%)
		Yes	85(42.29%)
201	Did volunteers have positive impact/were helpful?	No	64(31.84%)
		Yes	137(68.16%)
201	Would you continue your work with the volunteers?	No	15(7.46%)
		Yes	186(92.54%)
201	This Initiative can be used in the whole of Punjab?	No	6(2.99%)
		Yes	195(97.01%)

Table-14: LHWs overall feedback on the volunteers they had recruited

Section-R2: Lady Health Supervisors (LHSs) Socio-Demographic Profiles, FPRH Services Utilization and Views on Volunteers

4.5. Introduction of LHSs

LHSs are hired to monitor and supervise the work of the LHWs. They are required to have passed 12th grade and are given 3 months of full-time basic training at the District Health Office, followed by 1 week per month of classes for the next 9 months.

The main functions of the LHSs are to check the work of the lady health workers, have meetings with community members and write and submit monthly progress report. One LHS has the responsibility to check the duties of 25-30 LHWs in her catchment area. The monthly meetings of LHSs are held at the end of every month in the DPIU (District Programme Implementation Unit) where they submit their last monthly visit reports to the DIPU which comprises of: DOH (District

officer health, District Coordinator, Assistant District Coordinator (Female), Accounts supervisor, Store keeper of National Programme for family planning and PHC5 .[13]
All the 14 LHS who were supervising the 225 LHWs participating in our study, were interviewed. They had no direct interaction with the Community Women Volunteers (CWVs) recruited by the LHWs but were well aware of the initiative. We had invited them to our first briefing meeting with the LHWs and our field monitoring and supervisory team had kept them informed about the progress of the study and taken their help when needed in resolving issues at the field level.

4.6. LHS Socio-Demographic Profile

All the LHSs interviewed were above age 30 years with 50 percent in the age range 35-40 years and 75 percent up to 45 years. All were married but two had become widows. Seventy eight percent had college education with one secondary level education which is below the required level of grade 12 for qualifying for recruitment. One third of the husbands of the LHSs had high paid jobs but a third had either no jobs, low paid jobs or irregular employment. Therefore, a significant proportion of families were dependent on their jobs (Table-15).

Variable	N.	Categories	Freq.(%)
Age	12	35-40	6(50.00)
		41-45	3(25.00)
		>45	3(25.00)
Marital Status	14	Married	12(85.71)
		Widowed	2(14.29)
Education	14	Secondary	1(7.14)
		Higher Secondary	2(14.29)
		College	11(78.57)
Husband's Occupation	12	Unemployed	1(8.33)
		Irregular Employment	2(16.67)
		Low Paid*	1(8.33)
		Mid Paid**	4(33.33)
		High Paid***	4(33.33)
Type of household	14	Joint	2(14.29)
		Nuclear	12(85.71)
Number of live children	13	1-2	3(23.08)
		3-4	7(53.85)
		5-6	3(23.08)
Number of family members	14	2-4	5(35.71)
		5-7	6(42.86)
		>7	3(21.43)

***PKR ≤30,000 **PKR 31,000 – 50,000 ***PKR >50,000**

[13] Zulliger R. PAKISTAN'S LADY HEALTH WORKER PROGRAM'.CHWCentral https://chwcentral.org/pakistans-lady-health-worker-program/

Table-15: LHS' Socio-Demographic Profiles

4.7. LHS Empowerment owing to their Jobs

According to the LHSs themselves their jobs have given them respect within their families and in the community and have empowered them socio-economically. They are treated the same as doctors and people consult them even on personal matters beside their health. Some of them have become decision-makers for their families.

> *"My family and friends give me so much worth and importance. I have an educated community who consider me a well-educated doctor and expert in this field. They ask me for health suggestions."*
>
> *"When I go to check up on my workers people usually and my colleagues consider me as a doctor while we are not. People respect us a lot as they ask for suggestions from us even in their very personal matters."*
>
> *"I am an independent and confident woman after my job. I educate my children through this job. I belong to a village, but I had to move to town for my children's education. Now, I make the decisions for my family."*

Support from Husband and Family for her Job: All the LHSs were full of praise for the support and facilitation provided by their husbands and families to them to undertake their jobs.

> *"My mother-in-law is very supportive. She looks after my children and home. Therefore, I have not much tension at home."*
>
> *"No, there has never been a problem. Husband helps me a lot. I manage my housework and office. When the children get older, there is no problem in handling them. Even housework doesn't affect my job."*
>
> *"I manage things properly, so I have never had a problem. I am free at home and whenever there is work in the community, my husband also goes with me. He drops me at the office. I have never had a problem while working."*

One of the reasons for this is the contribution they make to family income. As given in Table-16, for 8 percent families of the LHSs it is the only source of income while for 41-67 percent their salaries provide for critical needs like health care and education of children.

N.	Variable	Response	Freq. (%)
12	Attitude of husband towards work	Supportive	4(33.33%)
		Highly Supportive	8(66.67%)
12	Attitude of In-laws	Neutral	4(33.33%)
		Supportive	4(33.33%)
		Highly Supportive	4(33.33%)
12	How Income helps family	Provides Extra Comforts	5(41.67%)
		Meets Critical Needs	5(41.67%)

		Only Source of income	1(8.33%)
		Others	1(8.33%)
12	Respect for her Work	No	0(0.00%)
		Yes	12(100.00%)

Table- 16: Husbands and in-laws support of LHS employment and their contribution to family needs

Interestingly some LHSs while acknowledging that they had been empowered by their jobs also complained that their jobs had created feelings of jealously among their relatives.

"Everyone in the family respects me a lot. There are some people who are jealous. My husband supports me on my job. I guide the women in the family regarding family planning. If anyone needs contraceptives, I provide them. I give good health advice to everyone who trusts me."

"My status got spoiled, relatives and family members depict a jealous behaviour, they praise on face but backbite behind me, and they usually say that I am only visiting people just for enjoyment."

4.8. LHSs Reproductive Health Profiles

4.8.1. LHSs Reproductive History

The age at first pregnancy of the respondents ranged from 18-37 years with a mean of 25.92 years. This is much higher than that of other women groups of childbearing age generally and those participating in our study. This delay in first pregnancy age maybe the due to the higher education level of the respondents. What is of concern however is that this has not translated into fewer pregnancies and number of children borne by the respondents. Seventy eight percent had more than 3 pregnancies and the age of 78 percent was over 30 years in last pregnancy. (Table-17). Delay in childbearing to beyond the age of 35 years has its own adverse consequences and concerns (Table-17&4; Fig.-3).

Variable	N	Range	Mean (±SD)	Confidence Interval
Respondent's Current Age (years)	14	35-54	42.35 (5.86)	38.97 - 45.74
Husband's Age (years)	12	36-84	45.84 (8.34)	40.16 - 55.83
Age at first pregnancy (years)	13	18-37	25.92 (5.54)	22.57 - 29.27
Age at last pregnancy (Years)	13	24-38	32.18 (4.33)	29.27 - 35.09
Total number of Pregnancies	13	1-7	3.76 (1.87)	2.63 - 4.90
Age of youngest child (years)	13	0.08 - 23	9.48 (7.45)	4.98 - 13.99
Number of family members	14	2-12	5.71 (2.78)	4.11 - 7.32

Table-17: Mean (SD) of some Reproductive Variables of Respondent LHSs

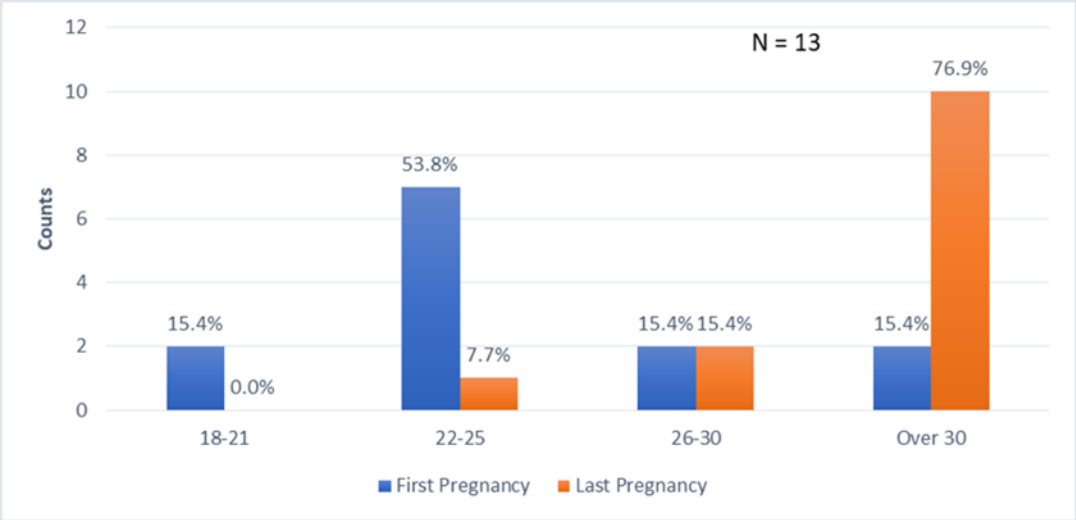

Fig-3: Distribution of ages of respondent at first and last pregnancies

N.	Variable	Categories	Freq. (%)
14	Age at marriage	<15	0(0.00)
		15-19	1(7.14)
		20-25	8(57.14)
		>25	5(35.71)
13	Age at first pregnancy	22-25	1(7.69)
		26-30	2(15.38)
		>30	10(76.92)
14	Number of pregnancies	1-2	3(23.08)
		3-4	6(46.15)
		> 4	4(30.77)
13	Age of youngest child	≤ 3	3(23.08)
		4-6	3(23.08)
		> 6	7(53.85)

Table-18: Distribution of Reproductive Variables of Respondent LHSs

4.8.2. LHS's FPRH Practices and Utilization of Services

RH Services Utilization

To put the LHSs beliefs and commitment to FPRH in perspective, we asked them about their own FPRH practices and utilization of services. All had had full antenatal care during their first and last pregnancies, and over 90 percent intake of supplements and TT immunization in first pregnancy increased to 100 percent in the last pregnancy. All had had nutrition counselling and over 90 percent had 4 - >6 antenatal care visits (Tables-19 & 20).

The safe delivery practices data of the LHSs show a high utilization of private clinics and hospitals for delivery with about a third using government hospitals. This indicates a lack of trust in them even by the health care workers themselves. This doesn't augur well for achieving Universal Health Care (UHC) through development of PHC services (Table-21)

	First Pregnancy			**Last Pregnancy**		
Variable	**N.**	**Response**	**Freq. (%)**	**N.**	**Response**	**Freq. (%)**
Antenatal Care	13	No	0(0.00)	13	No	0(0.00)
		Yes	13(100)		Yes	13(100)
Folic Acid	13	No	1(7.69)	13	No	0(0.00)
		Yes	12(92.31)		Yes	13(100)
TT Immunization	13	No	1(7.69)	13	No	0(0.00)
		Yes	12(92.31)		Yes	13(100)
Nutrition Counseling	13	No	0(0.00)	13	No	0(0.00)
		Yes	13(100)		Yes	13(100)
Frequency of Antenatal Care	13	1-3	1(7.69)	13	1-3	1(7.69)
		4-6	3(23.08)		4-6	1(7.69)
		>6	9(69.23)		>6	11(84.62)

Table-19: LHS's utilization of Reproductive Health Services during their first and last pregnancies

	First Pregnancy			Last Pregnancy		
Variable	N.	Response	Freq. (%)	N.	Response	Freq. (%)
Provider of Antenatal Care	13	LHV	1(7.69)	13	LHV	1(7.69)
		Doctor	12(92.31)		Doctor	12(92.31)
Provider of Folic Acid Supplements	13	LHV	1(8.33)	13	Myself	2(15.38)
		Doctor	12(92.31)		LHV	1(7.69)
Provider of TT Immunization	13	LHV	1(8.33)	13	LHV	3(23.08)
		Vaccinator	3(25.00)		Vaccinator	2(15.38
		Doctor	8(66.67)		Doctor	11(84.62)
Provider of Nutrition Counseling	13	Myself	2(15.38)	13	Myself	5(38.46)
		Family	2(15.38)		-	-
		LHV	2(15.38)		LHV	1(7.69%)
		Doctor	8(61.54)		Doctor	8(61.54%)

Table-20: Providers of Reproductive Health services to LHS during their first and last pregnancies

	First Delivery			Last Delivery		
Variable	N.	Response	Freq. (%)	N.	Response	Freq. (%)
Place of Delivery	13	Home	1(7.69)	13	Home	1(7.69)
		-	-		MCH	1(7.69)
		Private Clinic	3(23.08)		Private Clinic	4(30.77)
		Private Hospital	4(30.77)		Private Hospital	3(23.08)
		Govt Hospital –	5(38.46)		Govt Hospital –	4(30.77)
Delivery attendant	13	Family – 0	4(30.77)	13	Relative	3(23.08)
		Dai – 0	1(7.69%)		Dai	1(7.69)
		-	-		LHV	1(7.69)
		Nurse	6(46.15%)		Nurse	5(38.46)
		Doctor	12(92.31%)		Doctor	11(84.62)
Provider of Postnatal care	13	-	-	13	Relatives	8(61.54)
		-	-		LHV	1(7.69)
		-	-		Nurse	2(15.38
		-	-		Doctor	10(76.92)

Table-21: Place of Delivery and Birth Attendant at the LHS's First and Last Deliveries

4.8.3. FP services utilization by LHSs

The high number of users of contraceptives among the LHSs is consistent with their high utilization of RH services. However similar to the delayed age at first pregnancy, this doesn't translate into fewer number of children. This may be due to the prevalent ideal of 3-4 children family in the community.

The preference for Condoms and IUDs among the LHSs is similar to that of LHWs (Table-22). They used contraceptives for birth spacing mostly and found these two methods safe and without the side effects of the other modern contraceptives.

> *"I used Copper T after the birth of my 4th baby. Before that I used condoms."*
>
> *"I use condoms for family planning. My husband is so cooperative, and he dislikes other medicines and contraceptives, due to their side effects."*

N.	Variable	Response	Freq. (%)
14	Practice FP	No	3(21.43%)
		Yes	11(78.57%)
14	Ideal Number of Children	5-6	1(7.14%)
		3-4	10(71.43%)
		1-2	3(21.43%)
14	Contraceptives Preference	Traditional	1(7.14%)
		Pills	2(14.29%)

		IUD	6(42.86%)
		Injections	0(0.00%)
		Surgery	0(0.00%)
		Condoms	9(64.29%)

Table-22: LHS's Family Planning Practices and Contraceptives Preference

4.9. LHSs' Experience and Views as FPRH Services Provider

4.9.1. LHSs' assessment of their own performance

> *"Since I am doing this job, I have made aware so many women regarding the importance of FP. They now acknowledge its worth. Women who were previously against these services are now in favour of it.*
>
> *"I advised a lady if she does family planning 'it would be good for her and for her child. She used condoms in the beginning and then used copper-T for 3 years just on my advice."*

Since the LHSs monitor and supervise the FPRH services of LHWs and some of them also provide counselling and contraceptives, we documented their experiences and views as providers of services.

According to the LHSs' assessment, which differs from that of LHWs, the less than 24 years age group of married women are low utilizers of FP services. This is similar to the finding of our survey of married adolescent girls and young women aged 15 -24 years.

Like the LHWs, 50 percent of the LHSs thought contraceptive prevalence in their areas of coverage is more than 50 percent and 71 percent guesstimate about number of children per couple was 4-5 (Table-23).

N	Variable	Responses	Freq. (%)
14	Years of service as LHS	9-15	12(85.71)
		16-20	1(7.14%)
		>20	1(7.14%)
14	Number of LHW Supervised	10-15	2(14.29%)
		16-20	5(35.71%)
		>20	7(50.00%)
14	Most frequent FP Services users' age group (years)	≤24	1(7.14%)
		25-30	6(42.86%)
		>30	7(50.00%)
14	%of Contraceptive using Women in area of coverage	21-25%	1(7.14%)
		25-30%	0(0.00%)
		30-35%	2(14.29%)
		35-40%	1(7.14%)
		40-50%	3(21.43%)
		>50%	7(50.00%)
		1-3	3(21.43%)

14	Average Number of children per couple in area of service	4-5	10(71.43%)
		6-7	1(7.14%)

Table-23: LHSs' Experience and Views as FPRH Services Provider

4.9.2 Barriers faced by LHSs

Some LHS listed side effects of contraceptives, unsupportive attitude of husbands and no supply of medicines / contraceptives as barrier to their working effectively.

Side effects of contraceptives:

"In the beginning people were afraid of using condom saying that they tear and Copper T causes fatness. So, it was difficult to convince them."

"Side effects of contraceptives are affecting weak women in the community i.e., women with blood pressure problems, bleeding after pills/ injections."

Uncooperative Husbands:

"Husband's non-cooperative attitude to use of condoms is a barrier"

"First, husbands of many women do not comply with the advice of LHSs. The priority of their husbands is to complete the family, some feel shy at the start while some women's mothers- in- law prohibit them to do this."

No supply of contraceptives and Medicines:

"Women ask for contraceptives again and again, but we are not getting them since last year."

"There are low medicine supplies for the LHSs to give out."

4.10. LHSs' Views on Volunteers' support for LHWs and themselves

Most LHS were happy with the work the volunteers had done. They also were positive about LHWs ability to recruit volunteers. Some said they had helped the LHWs in identifying and convincing volunteers to work with them.

The LHS who were not in favor of volunteers' support for LHWs didn't see any need for it. According to them the LHWs had been working for many years by themselves and were doing a good job. They were convinced that nobody works without money and recruiting unpaid volunteers will neither benefit the

"Yes, I was sure that these people would guide the people in the community well and they were from our support group. When we asked them to work with us, they agreed readily."

"Yes, I was sure that these people would guide the people in the community well and they were from our support group. When we asked them to work with us, they agreed readily."

"Yes, according to my LHW, volunteers are guiding very well to the women in the community. People listen to them and trust them. They take pregnant women to the doctor and under the supervision of LHW, they give them best advices about family planning."

There were some who were skeptical about the volunteers agreeing to work without any pay or work responsibly without pay and others who didn't think the LHWs needed help.

> *"We were thinking that it was too difficult to manage and to ask them for work. How will the volunteer work responsibly without any pay?"*
>
> *"We were thinking that this will not get benefits for volunteers and to the LHW's as it seems useless and an extra burden on us."*
>
> *"Getting volunteers on our side was really a difficult task because no one agreed to work without money. LHW are working on their own for so many years. So, there is no need for volunteers."*

Despite the mixed views about the availability of unpaid volunteers and the need of LHWs for their help, 71 percent said they would encourage LHWs to continue working with the volunteers they had recruited for the project and all were in favor of testing the initiative in the whole of Punjab.

N.	Variable	Responses	Freq. (%)
14	Volunteers facilitated the work of LHWs	No	5(35.71%)
		Yes	9(64.29%)
14	Would encourage LHW to continue working with volunteers	No	4(28.57%)
		Yes	10(71.43%)
14	This Initiative is for whole of Punjab	No	0(0.00%)
		Yes	14(100.00%)

Table-24: LHSs views on the contribution of volunteers and the continuation of their work after the project

5- DISCUSSION

Our interviews with the LHWs and LHSs provided insights on the providers' practices and perspective on FPRH. Both the LHWs and LHSs were overall positive about their own performance and the effectiveness of services provided by them. Their own FPRH practices and utilization of services show that 'they practice what they preach' as regards the recommended practices during pregnancy and delivery. What is of concern however is their preference for secondary and tertiary care services and despite a high use of modern contraceptives, their higher than the recommended number of children. They are therefore failing to present themselves as role models for the communities they serve.

On the matter of the need for volunteers' help and support for the LHWs, most of them gave a positive feedback. A number of the ones who had concerns about finding volunteers willing to work unpaid, and the need of LHWs for volunteers, changed their views after five months of working with the volunteers. They had managed to recruit 900 CWVs, found relatives and friends ready to volunteer and also got a positive response from the community who were familiar with their work and trusted and respected them. Most expressed satisfaction with the work the volunteers had performed during the project with some even calling them their 'right arm.' The ones who were not supportive of the idea of volunteers, after experiencing working with them

continued with their complaint about non-availability of people willing to work without pay. A small number also continued to believe that the LHWs didn't need any help or support. Never-the-less a majority of this group were happy with the work the volunteers had done and said that they would continue working with the volunteers they had recruited. They were also not averse to the idea of scaling up of the initiative to the whole of the Punjab Province.

While we were not able to test the effectiveness of the volunteers in increasing knowledge and improving FPRH practices in the community, more specifically of the less than the 24 years old married women group, our study has shown that volunteers willing to work unpaid are available even in economically challenged communities and they have the potential to provide support to LHWs and spread counselling message in the community. Our CWV model is similar to the Care Group Model and its modified Integrated Care Group Model. The effectiveness and sustainability of these models have been tested and reported in the literature.[14,15] Our model integrates volunteers with the LHWs program and doesn't require any extra expenditures on paid promotors and supervisors. Therefore it is a no cost intervention both scalable and sustainable and we recommend that a scaling up of the project to some other districts may be done along with the testing of the model in rural and far flung areas to modify it according to the context and needs of those areas.

Two findings of the project which were not among the primary objectives of our study are related to socio-cultural values of the communities in in which the LHWs and LHSs provide services. One is the finding that girls' families, more especially families they are married into, don't allow them to continue their general education after marriage. However when it comes to a skill development education with the prospect of earning, like that of LHW or LHS, than they have no problem and provide full support and facilitation to them. The other finding is the empowerment of LHWs and LHSs owing to their jobs. Almost all respondents expressed personal satisfaction with their jobs and pride and delight with the way the community gives them respect and trust. They also reported increased mobility and interaction with the community beside their financial independence. This gives a clear message that poor and marginalized communities have not much use for general education of girls and need skills development education for them which enables them to support their families financially. Skills which give girls financial independence also empower them.

[14] Perry H. et al. Care Groups I: An Innovative Community-Based Strategy for Improving Maternal, Neonatal, and Child Health in Resource-Constrained Settings
Global Health: Science and Practice Sep 2015, 3 (3) 358-369; **DOI:** 10.9745/GHSP-D-15-00051

[15] Testing an Integrated Care Group Model for Community-based Health Promotion in Burundi. Operations Research Brief December 2013. https://www.concernusa.org/wp-content/uploads/2015/03/Concern-Knowledge-Operations-Research-Brief-Burundi.pdf