

BASELINE SURVEY REPORT





آغا خان یونیورسٹی
THE AGA KHAN UNIVERSITY

MNCAH SERVICES, DISTRICT DADU BASELINE SURVEY REPORT

Department of Pediatrics and Child Health Services

COE Women and Child Health

Aga Khan University, Karachi

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LIST OF ABBREVIATIONS

AKU	Aga Khan University
ANC	Antenatal Care
BHU	Basic Health Unit
BP	Blood Pressure
CHC	Community Health Committee
CI	Confidence Interval
CMW	Community Midwife
COC	Contraceptives Oral Pills
COE	Centre of Excellence
END	Early Neonatal Death
ENMR	Early Neonatal Mortality Rate
FGD	Focus Group Discussion
FP	Family Planning
FWC	Family Welfare Centre
HCP	Health Care Provider
IDI	In-depth Interviews
IFA	Iron Folic Acid
IMR	Infant Mortality Rate
IUCD	Intra Uterine Contraceptive Device
IUD	Intra Uterine Device
KAP	Knowledge Attitude and Practices
KMC	Kangro Mother Care
LAM	Lactational Amenorrhea Method
LHW	Lady Health Worker
LND	Late Neonatal Death
MHM	Menstrual Hygiene Management
MICS	Multiple Indicator Cluster
MMR	Maternal Mortality Rate
MNCAH	Maternal, Neonatal, Child and Adolescent Health
MNCH	Maternal, Neonatal, And Child Health
MNP	Maternal Nutritional Product
MWRA	Married Woman of Reproductive Age
ND	Neonatal Death
NMR	Neonatal Mortality Rate
PDHS	Pakistan Demographic Health Survey
PNC	Postnatal Care
PND	Post Neonatal Death
POP	Progesterone Only Pills
SDG	Sustainable Development Goal
SDM	Standard Days Method
SES	Socio Economic Status
SRC	Swiss Red Cross

TBA	Traditional Birth Attendant
TL	Tubal Ligation
UC	Union Council
VIP	Ventilated Improved Pit
WHO	World Health Organization
WRA	Women of Reproductive Age

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EXECUTIVE SUMMARY

In Sindh Province, SRC is contributing to improving MNCH services in collaboration with the Aga Khan University (AKU) in District Dadu, Sindh since 2012. This project (the third phase of MNCH Project) titled as “Strengthening Maternal, Neonatal, Child and Adolescent Health Services (MNCAH Services) was conceived in 2019, as a follow up to the previous interventions with the addition of two new interventions, Menstrual Hygiene Management (MHM) and Safe Drinking Water.

This report presents the results of the baseline survey conducted in Taluka Johi, District Dadu. It included five union councils (UCs) of Taluka Johi; Johi Town 1, Johi Town 2, Kamal Khan, Peer Mashaikh and UC Johi. The results in the report represent the catchment population of the above target areas. The results are presented cumulatively and as well as according to union council.

Access to safe drinking water is one of the basic determinants of health. Nearly 75% of the households had improved sources of water, with 21.6% of the houses availing water from hand pump (21.6%). In the survey, 22.4% of the households reported treating water through various methods to make it safe for drinking. However, only 2.6% were using an appropriate method of water treatment. Additionally, 21.9% of the households had no toilet facility.

Menstruation was found to be a barrier factor to the usual routine of women and stopped them from various religious obligations (67.3%) and going outside of the house for work or any other purpose (26.8%). On the whole, 74.6% of all women were prevented from doing some kind of social activity. 39.8% of menstruating women between the ages of 14 to 49 years did not use an absorbent and stayed in their usual dress. Almost all (94.8%) respondents had the opinion that young girls face problems at occurrence of menarche and most of them (84.9%) were in favour of providing information about menstruation to young girls in advance (before experiencing menarche).

Almost all (93%) of the Married Women of Reproductive Age (MWRA) had at least one antenatal check-up (ANC) visit. However, only 47.8% of the MWRA who had an ANC sought antenatal care in their first trimester. Less than half (47.6%) of the MWRA who availed ANC reported having at least four or more antenatal care check-ups during their last pregnancy. 43.4% of the deliveries had taken place at home and only 55.1% of all the deliveries were assisted by skilled care providers.

41.6% of mothers reported that one of their children had suffered through diarrhea and 18.8% reported blood in stool as well.

The baseline results highlight the need for improvement of health services in the target population. The results also give directions for community mobilization through efforts to bring about behaviour changes. These changes can further lead to increased awareness and acceptability regarding health and hygiene practices.

INTRODUCTION

Pakistan is one of the countries who shares burden of high MMR. Evidence from Pakistan Demographic and Health survey 2012-13 revealed maternal mortality ratio 276 / 100,000 live births and mortality under 5 were 89 deaths/1000 live birth. In order to achieve Sustainable Development Goals (SDGs) countries around the world are putting efforts to reduce maternal, neonatal and child death by implementing various interventions. In effort to achieve *SDGs 3 and 5* the World Health Organization (WHO) recommend encouraging all women to seek facility-based delivery, skilled care before, during and after childbirth and family planning can save the lives of mothers and newborns(1).

The reproductive, maternal, neonatal, and child health (MNCH) indicators remain unsatisfactory as per the Multiple Indicator Cluster (MICS) survey of District Dadu which states only 21.7% of pregnant women having received four or more ante-natal care checkups from a skilled care provider. Despite many years of health input, less than 50% of deliveries in Dadu take place at health facilities by skilled birth attendant while the remaining births are home deliveries or attended by non-skilled birth attendants(2).

While the maternal and child health in Pakistan has received considerable attention in the last 10 to 15 years, health and hygiene related to menstruation has not been a focus of any reproductive health intervention especially in rural settings. Research suggests that in Pakistan, women either lack awareness regarding the management of menstruation in a hygienic manner or cannot afford commercially available sanitary pads(3). Negative perceptions of menstrual hygiene lead to certain undesirable practices including restrictions on religious, social and domestic activities of a menstruating woman or girl. These practices include limitations on women's social mobility, alterations in dietary intake and bathing and use of unhygienic sanitary material, some even do not allow women to enter the kitchen when they are having their cycles (4).

Further contributing to MNCH related health issues, waterborne diseases are a major problem that the rural population is struggling with. In district Dadu use of safe drinking water is only 6.4%(2). This might be due to lack of access to quality drinking water as well as due to the incorrect treatment of drinking water.

Keeping in view, the dire health needs and to further contribute to an improved maternal, neonatal, child and adolescent girls' health status in Taluka Johi of District Dadu, the Swiss Red Cross (SRC) in collaboration with the Aga Khan University (AKU) aim to implement this present project MNCAH project with a special focus on Menstrual Hygiene Management (MHM). The project starts in January 2019 and will last until June 2020 (18 months) and will be implemented in 5 Union Councils (UC) with an approx. population of 80'000.

The project is based on community mobilization and an integrated intervention package of health interventions. Community mobilization will create awareness and improve community's knowledge, attitude and practices by promoting preconception care and maternal health

including ANC, facility-based delivery, postnatal care with focus on family planning, essential newborn care including kangaroo mother care (KMC) and early initiation of breast feeding and child health. Community mobilization teams, including community health workers-women and community health mobilizers-men, will conduct group sessions and generate referrals on need basis to encourage women and children to avail Maternal, Neonatal, Child and Adolescent Health (MNCAH) services for better health outcomes. The project will exclusively address issues of referral for which Community Health Committees (CHCs) will be established to strengthen timely referrals and availability of emergency funds (through CHCs). The project will also contribute funds to the CHCs while they maintain the funds through community's contribution.

To improve the quality of health services and to build the capacity of healthcare personnel, a practical training program will be arranged for various cadres of healthcare providers from targeted areas. The training will be interdisciplinary including multiple departments and faculty at Aga Khan secondary care Hospital Kharadar, Karachi. The senior faculty and staff will supervise these customized education program whereby the medical and paramedical staff of Taluka Johi will be able to witness and learn new skills and it will also facilitate knowledge sharing and expertise in clinical care leading to quality and innovation in health care.

Awareness on MHM among women and men in the community is also an objective of this intervention. Information will be provided to adolescent girls and women of reproductive age (WRA) group on menstruation, improving hygiene by properly disposing the used material and cleaning the body with soap and water and clearing myths and misperceptions on menstruation. In addition to this they will be trained on preparing re-usable sanitary pads at home by using cheap and locally available material.

Moreover, awareness will also be created on the importance of safe drinking water and various methods for treatment of water. Beneficiaries will be provided with water purification chlorine tablets at the household level to create demand and acceptability of chlorine treated water.

The project has the following three outcomes:

1. Quality of health care, in particular MNCAH, is improved.
2. Access to health services is improved.
3. Health behaviour in the target communities is improved.

Baseline Survey

The baseline study aimed to collect information from target population for to capture benchmark indicators status regarding maternal, neonatal, adolescent and child health (MNCAH) with specific focus on menstrual hygiene management and safe drinking water. It will also provide the basis to assess the impact of intervention at the end of the project.

Objectives of baseline Survey

The objectives of the baseline study were to assess the:

To determine the impact of community mobilization and implementation of integrated intervention on the following:

- To assess the Knowledge, Attitude & Practices (KAP) in selected community of Taluka Johi on MNCAH.
- To explore the knowledge and practices on Menstrual Hygiene Management (MHM) among adolescent girls and women of reproductive age.
- To determine the use of safe drinking water and acceptability and adaptability towards methods for making water safe for drinking.
- To benchmark the current status and to evaluate the impact of the interventions on MNCAH at the end of the project.

RESEARCH METHODOLOGY

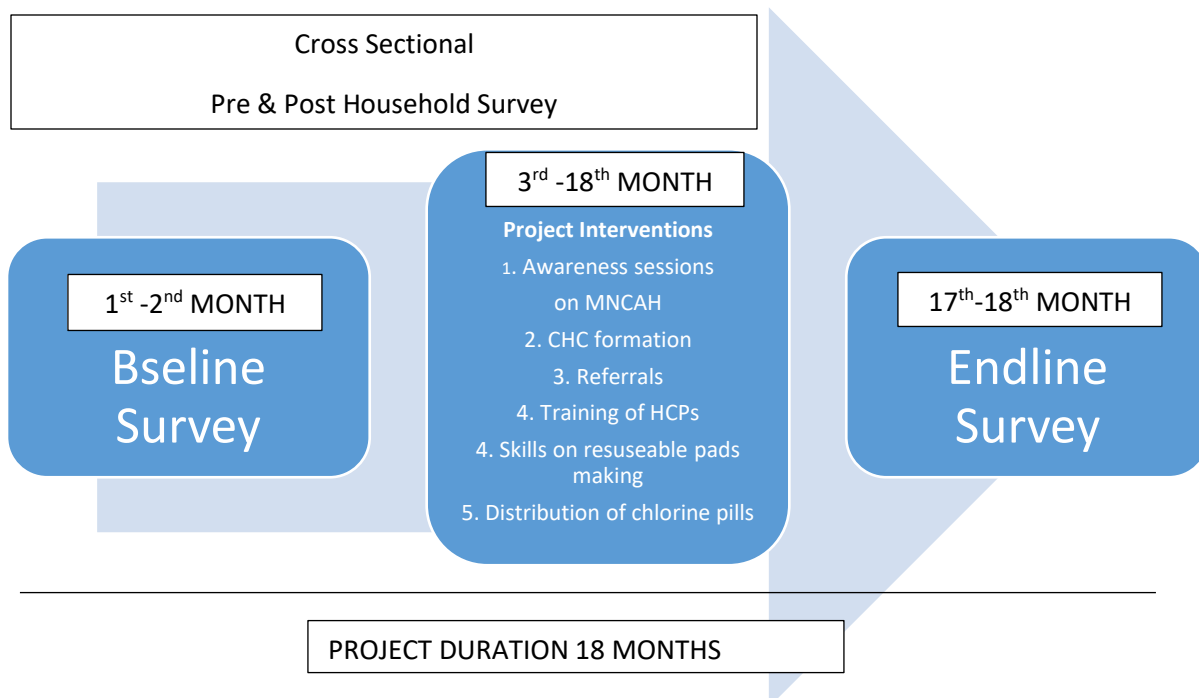
Study design

To assess the impact of intervention, we aimed to design cross sectional pre & post intervention household survey i.e. a baseline cross sectional and an end line cross sectional survey.

The survey was conducted at household level by adopting the mix method approach to achieve the objectives through following:

1. Quantitative Methodology
2. Qualitative Methodology

Quantitative component included a baseline cross-sectional household survey in target areas to capture key indicators related to MHM and MNCH at start of the project. For the qualitative component focus group discussions (FGDs) and in-depth interviews (IDIs) were conducted in order to explore the perceptions and behaviors particularly for MHM, prevailing in the target group.



Study Population

The study population were females aged 13 to 49 years and married women with at least one under 5 years child, living in the intervention UCs Taluka Johi. All those females who gave voluntary written informed consent were included in the household survey.

Study Sample

Sample size was computed using range of key indicators related to practices of MHM, safe drinking water and coverage of MNCH interventions. Maximum sample size was obtained on the basis of utilization of sanitary material during menstruation among women of reproductive ages (WRAs), considered for the survey.

We adopted comparison of two sequential survey approach to assess the impact of interventions for sample size estimation. Using a 90% response rate, 95% CI, 80% power, 1.5 design effect, proportion of women used sanitary pads (13%) and expected coverage of at the end line (20%). The sample size is appropriate to yield reliable estimates within acceptability limits.

The total sample size required is approximately 735 women which further divided proportionally among women of reproductive age (WRA) and married women of reproductive age (MWRA) in targeted UCs. The proportion division is acquired on the basis of Pakistan Demographic Health Survey (PDHS) 2012-13 to cover all survey objectives through this sample size.

Sampling Frame and Strategy

Recently Centre of Excellence (COE) Aga Khan University conducted a rapid census in all four target union councils for the identification of household for another project. Census data of that project was used for this study to determine the sampling frame of the survey.

For this survey union councils were treated as primary sampling unit (PSUs). The calculated sample size was distributed within union council and was further distributed among target villages using PPS approach. The households were the secondary sampling unit (SSU) across the union councils.

Systematic random sampling technique was used for the selection of households for data collection. A sample size of 735 Households was estimated, keeping a consideration of proportion to population size of each union council. In case of more than one eligible participant available in a household, Kish grid method was used for selection of participant.

Selection of households

The households were selected by calculating the sampling interval for each UC. First household was randomly selected near by a landmark in the survey area and then next households were selected by counting the acquired sampling interval. Only one eligible participant was selected from one household. The household is defined as a family with one head of household, eating and sleeping under the same roof.

Eligibility criteria for participants

Inclusion criteria:

Women of reproductive age (WRA) 13 to 49 years and married women of reproductive age (MWRA) having at least one under five years child were eligible participants. Eligible participant and parent or guardian of below age 18 years of adolescent girls were required to give consent

to participate in the survey. Only the permanent residents of that household could participate in the survey.

Exclusion criteria

The participant who were not a usual resident of the household or who was unable to communicate in Urdu, Sindhi, Pushto or Punjabi were not eligible for the study.

Development of baseline data collection tools

For survey data, quantitative questionnaire was developed. In addition to covering basic demographic details of the participants, the questionnaire contained information on the knowledge, attitudes, perceptions and practices pertaining to MNCAH, menstrual hygiene management (MHM) and safe drinking water. The questionnaire was translated in local language (Sindhi) to make it easier for the understanding of data collectors and the participants. Prior to actual data collection, the questionnaire was pretested in the field to resolve any potential issues related to the content and language.

Data collection procedures

A field research team had collected the data. Total 5 teams, each team consisting of 2 enumerators and one team leader were involved in the household survey. Before data collection, team were trained in data collection procedures and field operations. The training focus was on interviewing techniques, dress code, consent procedures, interpersonal skills, sampling methodology, mock interviews, daily documentation, dealing with refusals and data entry into electronic tablets.

The data was collected on electronic tablets in the field. A short debriefing session held each morning with data collection team to keep a check on data collection procedure and guide the team. The team leaders did supervision at field and provided support during the field activity. The project field coordinator had randomly visited the field site to monitor data collection activities.

Data management

Quantitative Data Management

Data was collected electronically on tablet devices. Electronic data collection software did not require access to Internet or cellular signal. At the end of each day, data was uploaded to the main data server in Data Management Unit at Aga Khan University.

Qualitative Data Management

Four experienced qualitative data collectors (two female & two male) had carry out Focus Group Discussions (FGDs) on MHM. Female data collectors conducted the FGDs with adolescent girls and married women. Men conducted In-depth Interviews (IDIs) with husbands/fathers. regarding MHM. Transcripts for both FGDs and IDIs were developed to later on analyse on NVIVO software.

Training of data collectors

Data collectors were provided a three days training on quantitative and qualitative research methods and field procedures. During the first two days they were provided orientation on data collection methods, interviewing skills and field norms. On the last day mock interviews and pilot testing were carried out before actual data collection.

Data Analysis

Quantitative data was analysed into STATA version 15. Descriptive statistics and simple frequency tables were generated to ascertain the information.

For the qualitative data collectors had written down notes and recorded the FGDs in the field. They had written detail notes immediately after returning from the field on the same day. Later on, these notes were transcribed. All the transcribed notes were analysed using thematic framework analysis.

Confidentiality and ethical consideration

Ethical approval was taken from the Ethical Review Committee at Aga Khan University. The aims and objectives of the survey were explained to the participants and written informed consent was taken from each participant. Participant's personal identity was kept confidential, and data sets were kept anonymous for analysis. All data files were protected by passwords and only senior staff had access to the data.

Data Entry and Data Quality Assurance

The data management team consists of data analyst and data entry operator. All data was double entered for purpose of sufficient accuracy. Data entry was started simultaneously with data collection and editing. Data quality was assured by performing dual and error checks simultaneously with data entry. 10% data was checked for validation at households.

HOUSING CHARACTERISTICS AND HOUSEHOLD POPULATION

This chapter describes socioeconomic characteristics of study population including housing facilities and sources of drinking water.

3.1 Housing Characteristics

Household characteristics and assets are good indicators of socioeconomic status of a household and of community at large. Table 3.1 describes the ownership of the house and availability of rooms in the house including with respect to sleeping and cooking purpose. About 89 percent of respondents owned the house they were living in. Majority of the households (74%) had one room for sleeping and (45%) were having a separate kitchen for cooking.

Table 3. 1– Percentage distribution of housing characteristics by union councils (UCs)

Characteristics	Overall	Union Councils				
		Johi Town 1	Johi Town 2	Kamal Khan	Peer Mashaikh	Johi UC
Residence status						
Owned	88.6	82.3	73	97.5	92.9	94.8
Rented	6.1	13.8	16.1	1.7	1.4	0.5
Others	5.3	3.8	10.9	0.8	5.7	4.8
Separate Kitchen						
Yes	45.4	60.8	38.7	58	41.4	35.7
No	54.6	39.2	61.3	42	58.6	64.3
Rooms for living						
1	73.8	37.0	67.2	85.7	79.3	90.5
2	18.2	40.0	22.6	11.8	16.4	6.7
3	8.0	23.0	10.2	2.5	4.3	2.9
Total Number	736	130	137	119	140	210

Household Drinking Water Facilities:

Access to safe drinking water is one of the basic determinants of better health. The sources of water suitable for drinking (piped water, public tap/standpipe, tube well, borehole, protected dug well and springs, and rainwater) are identified as improved sources. Improved sources of

water protect against outside contamination and the water is more likely to be safe for drinking.

Table 3.2 describes the percent distribution of various sources of water reported by the respondents. Nearly 75% of the households had improved sources of water, with about 21.6% of houses having water from hand pump. Among the users of unimproved sources of water, the cart with small tank water was on the top (12.9%).

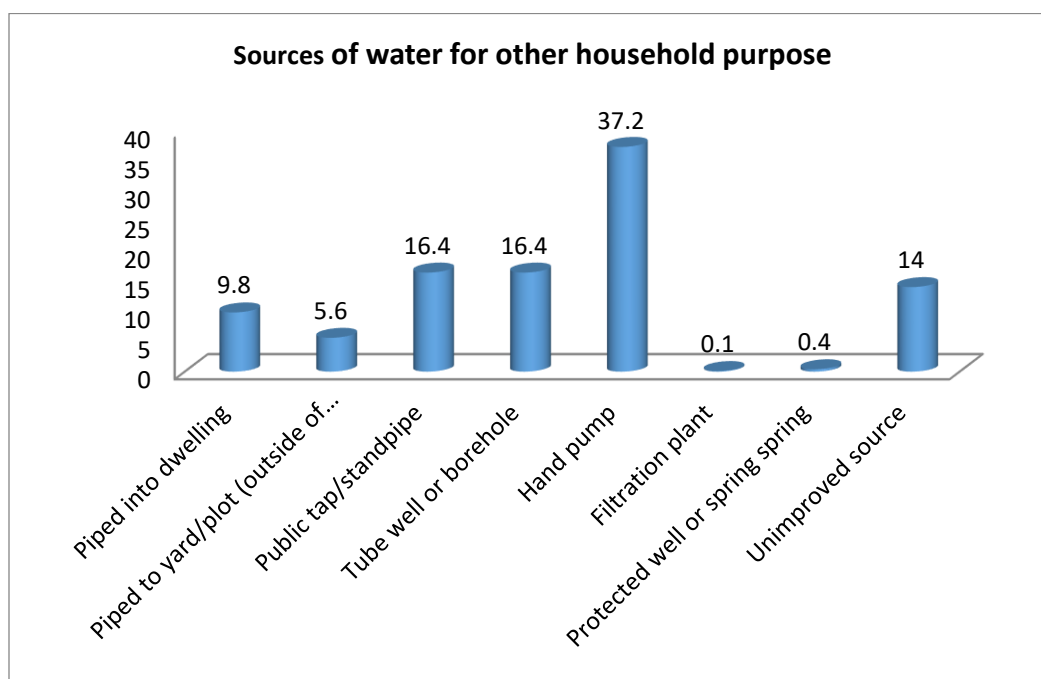
Table 3. 2– Percent distribution of households by source of drinking water

Characteristics	Overall	Union Councils				
		Johi Town 1	Johi Town 2	Kamal Khan	Peer Mashaikh	Johi UC
<i>Improved sources of drinking water</i>						
Piped into dwelling	11.7	32.3	23.4	2.5	4.3	1.4
Piped to yard/plot (outside of dwelling)	14.9	15.4	6.6	37.8	20.7	3.3
Public tap/standpipe	17.1	5.4	3.6	24.4	27.1	22.4
Tube well or borehole	8.8	5.4	5.1	12.6	5	13.8
Hand pump	21.6	16.9	11.7	13.4	25	33.3
Filtration plant	0.8	3.1	0	0	0.7	0.5
Rainwater	0.1	0.0	0.0	0.0	0.0	0.5
	75.0	78.5	50.4	90.7	82.8	75.2
<i>Unimproved sources of drinking water</i>						
Unprotected well	1.0	0.0	0	0	3.6	1
Cart with small tank	12.9	13.1	43.8	0	7.9	3.4
Surface water (river/dam/ lake /pond/ stream/canal/ Irrigation channel)	0.5	0.0	0	0	0	1.4
Bottled water	4.3	8.4	0	3.4	3.6	5.7
Other Specify	6.3	0.0	5.8	5.9	2.1	13.3
	25.0	21.5	49.6	9.3	17.2	24.8
Total Percentage	100	100	100	100	100	100

According to PDHS 2017-18, bottled water was classified safe for drinking only if households were using water for cooking and hand washing from an improved source(5). The availability of water within premises was also explored.

Figure 3.1 shows that 9.8% households were using piped into dwelling and 5.6% had piped into yard as a source of water for other purposes like cooking, washing and bathing. Utilization of two sources: public tape/standpipe or tube well/borehole was equal (16.4%) among households. Hand pump was the major source used by 37.2% households. Filtration plant (0.1%) and protected well or spring (0.4%) were also being used by the households.

Figure 3.1– Percentage distribution of main source of water used for other purposes



Availability of Drinking Water

Table 3.3 describes the percent distribution of availability of water. 63.6% households reported that drinking water was available without any interruption or break down of supply in last six months. The households, who experienced interruption (36.4%) in supply of water, had an interruption of average 7.2 days at standard deviation of ± 11.87 .

The availability of water within premises was also explored. 37% households have drinking water available within their premises.

Table 3. 3– Percent distribution of households by availability of drinking water

Characteristics	Overall	Union Councils				
		Johi Town 1	Johi Town 2	Kamal Khan	Peer Mashaikh	Johi UC
Interruption in water availability						
Experiencing no interruptions	63.6	76.9	66.4	73.1	75.0	40.5
Experiencing interruptions	36.4	23.1	33.6	26.9	25.0	59.5
Average days of interruptions experienced (Means \pm SD)	7.23 ± 11.87	8.33 ± 7.74	4.02 ± 8.75	13.22 ± 17.45	12.71 ± 17.09	5.07 ± 8.88
Availability of water within premises						
Water available within premises	37.1	63.8	42.3	15.1	29.3	34.8

Water Treatment Prior to Drinking

Water is crucial resource for livelihood of people and sustained development. Unsafe drinking water affects human health in many ways. The contaminated water spreads water borne diseases such as Typhoid, Cholera, Dysentery, Malaria and others. Therefore, this is of prime importance to drink safe water. As per PDHS 2017-18, methods of boiling, filtering and choline are considered as appropriate methods of water treatment to make it safe for drinking.

In the survey, 22.4% households reported to treat water through various methods to make it safe for drinking. Out of these 2.6% households were using an appropriate method of water treatment.

Table 3. 4– Percent distribution of households by treatment of water prior to drinking

Characteristics	Overall	Union Councils				
		Johi Town 1	Johi Town 2	Kamal Khan	Peer Mashaikh	Johi UC
Water treatment						
Use of any water treatment method	22.4	5.4	6.9	2.9	2.6	4.6
Boil	1.9	0.7	1.0	0.0	0.1	0.1
Use water filter	0.7	0.5	0.0	0.0	0.1	0.0
Strain it through a cloth	18.3	3.9	5.8	2.3	2.3	3.9
Solar disinfection	0.3	0.0	0.1	0.1	0.0	0.0
Let it stand and settle	1.1	0.1	0.0	0.4	0.0	0.5
Add alum	0.1	0.1	0.0	0.0	0.0	0.0
Appropriate water treatment						
*Percentage using appropriate treatment method	2.6	1.2	1.0	0.0	0.3	0.1
Total number	736	130	137	119	140	210

*Percentage for appropriate water treatment methods includes Boil and use of water filter

Most common water treatment method was 'strain through a cloth' as 18.3 percent. 1.1% households were using the method let it stand and settle followed by 1.9% boiling, 0.7% use of water filter, 0.3% solar disinfection and 0.1% use of adding alum to the water respectively.

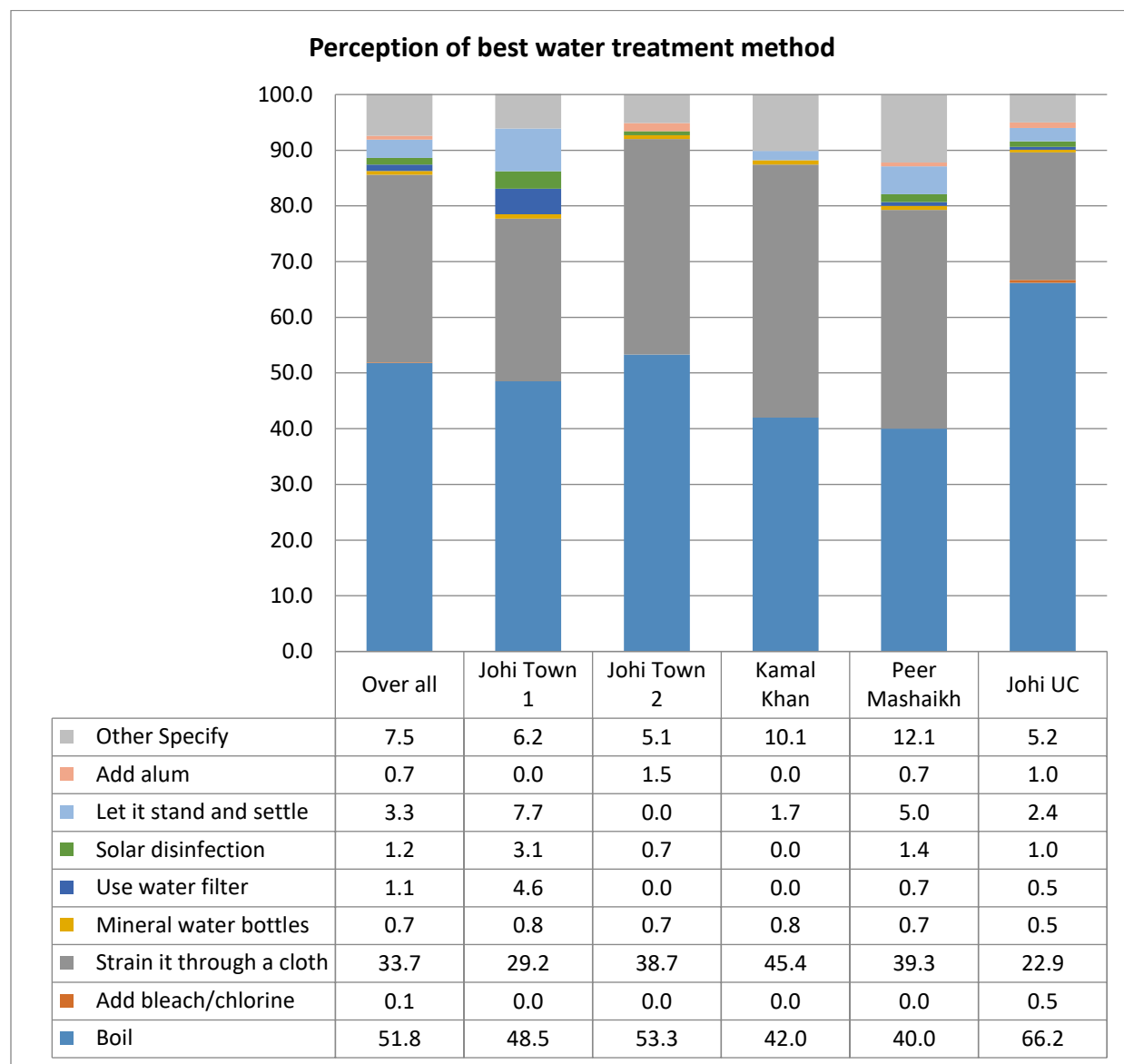
Cost Spent on Drinking Water Treatment

1.8% households reported to share some money like (PKR: 5-10) in account of purchasing alum to add into the water.

Best Water Treatment Method

People were asked for their opinion to share the best method to make water safe for drinking. About half of the respondents (51.8%) thought boiling is the best method followed by straining through cloth and let it stand and settle methods indicated by 33.7% and 3.3% respectively. The other methods included solar disinfection by 1.2%, water filter was responded by 1.1% and bottle water and adding alum each was specified by 0.7% respondents.

Figure 3. 2– Percentage distribution of perception of best water treatment method



Sanitation Facilities

The improved sanitation facilities are likely to reduce the spread of communicable diseases by ensuring hygienic separation of human waste coming into contact. Improved sanitation facilities which are nonshared includes flush/pour flush toilets to piped sewer systems, septic tanks, and pit latrines; ventilated improved pit (VIP) latrines; pit latrines with slabs. Most of the household who had a sanitation facility, 75.8% (Table 3.6) of them were using improved toilet facilities. A substantial percentage of 21.9% households had no toilet facility.

Table 3. 5– Percent distribution of households by treatment of water prior to drinking

Characteristics	Overall	Union Councils				
		Johi Town 1	Johi Town 2	Kamal Khan	Peer Mashaikh	Johi UC
Improved facility						
Flush to piped sewer system	20.1	69.2	16.8	5.9	8.6	7.6
Flush to septic tank	8.7	7.7	1.5	1.7	12.1	15.7
Flush to pit latrine	42.3	20.0	67.2	61.3	37.9	31.9
Pit latrine with slab	3.1	0.8	5.8	2.5	2.9	3.3
Flush to somewhere else	1.5	0.0	4.4	0.0	1.4	1.4
Flush, don't know where	0.1	0.0	0.7	0.0	0.0	0.0
	75.8	97.7	96.4	71.4	62.9	59.9
Unimproved facility						
Pit latrine without slab/Open pit	0.5	0.0	1.5	0.0	0.0	0.5
Bucket toilet	0.1	0.0	0.0	0.8	0.0	0.0
Hanging toilet	0.1	0.0	0.0	0.0	0.7	0.0
	0.7	0.0	1.5	0.8	0.7	0.5
No facility						
No facility/bush/field	21.9	2.3	0.7	26.9	36.4	35.2
Others	1.6	0.0	1.5	0.8	0.0	4.3
	23.5	2.3	2.2	27.7	36.4	39.5
Total	100.0	100.0	100.0	100.0	100.0	100.0

Among the improved sanitation facility, flush to pit latrine was mostly used by 42.3% households. 20.1% of the households used flush to piped sewer system. 8.7% of the respondents reported the use of flush to septic tank followed by 3.1% Pit latrine with slab, flush to somewhere else and flush to not know source were 1.5% and 0.1% respectively.

Less than 1 percent of households (0.7%) had unimproved sanitation facility which included 0.4% pit latrine without slab or open pit, 0.1% had bucket toilet and a similar percent of households had hanging toilet.

3.2 Socio-Economic Status Index

Socioeconomic status (SES) is a theoretical construct encompassing individual, household, and/or community access to resources. It is commonly conceptualized as a combination of economic, social, and work status, measured by income or wealth, education, and occupation, respectively (6).

A composite score was created as a measure of socio-economic status using range of variables including ownership of assets, land, livestock, household construction, source of drinking water and sanitation facilities. The principal component analysis was performed to construct wealth

score using above defined indicators. The surveyed household is then ranked according to the wealth score and is finally divided into 5 equal parts (quintiles) from lowest (poorest) to highest (richest).

The wealth index is an economic indicator assumed to provide information on long-term wealth status of household using assets. It intended to provide relative categorization of a household by wealth, from poorest to richest. The wealth scores calculated are applicable for only the data set they are based on.

Table 3. 6– Percent distribution of households by wealth

Wealth Index (quintiles)	Overall (n=736)	Union Councils				
		Johi Town 1 (n=130)	Johi Town 2 (n=137)	Kamal Khan (n=119)	Peer Mashaikh (n=140)	Johi UC (n=210)
Poorest	148 (20.1)	2 (1.5)	7 (5.1)	28 (23.5)	27 (19.3)	84 (40.0)
Poor	147 (20.0)	8 (6.2)	21 (15.3)	35 (29.4)	38 (27.1)	45 (21.4)
Middle	147 (20.0)	17 (13.1)	26 (19.0)	32 (26.9)	31 (22.1)	41 (19.5)
Rich	147 (20.0)	32 (24.6)	45 (32.8)	14 (11.8)	24 (17.1)	32 (15.2)
Richest	147 (20.0)	71 (54.6)	38 (27.7)	10 (8.4)	20 (14.3)	8 (3.8)
n	736	130	137	119	140	210

Wealth quintiles indicate that 40.1% of population is poor out of which 20.1% are the poorest. Similar percent of population (40%) were in rich categories, equally concentrating in both levels which are rich and richest. 20% households were in middle category of the wealth quintile. Interpretation of wealth quintiles of this area should be done with caution as this is already a low-income areas and assessment of wealth quintiles is artificially dividing already poor population into a distribution, which may not be the true reflection of actual SES status (Table 3.6).

3.3 Household Population

The household unit in this survey refers to a family (group of people) who live together in the same dwelling unit (s), who acknowledge one adult male or female as the head of the household, who share the same housekeeping arrangements, and who are considered a single unit. 736 households were selected to be the part of the study.

Considering the De jure population (all persons who are usual residents of the selected households, whether they stayed in the household the night before the interview), the total population in the selected households was 4,374; yielding a household size of 5.9. Of the total population, 50.5% of the individuals were male and 49.5% were females.

Table 3.7 shows percentage distribution of population by age; 18.4% of population was children under age five years and adolescent age group (10-19 years) was 26%. Adult population of age

19 to 64 years accounted for 65% proportion of the population while the dependent group of population that is 65 and above was 0.5%.

Table 3. 7– Percent distribution of population by age and sex

Characteristics	Overall	Union Councils				
		Johi Town 1	Johi Town 2	Kamal Khan	Peer Mashaikh	Johi UC
Age						
> 5 Years	807 (18.4)	118 (16.1)	139 (18.1)	140 (19.0)	157 (18.6)	253 (19.5)
5 - 9 Years	744 (17.0)	116 (15.9)	127 (16.6)	116 (15.7)	155 (18.4)	230 (17.7)
10 - 14 years	631 (14.4)	103 (14.1)	90 (11.7)	136 (18.5)	131 (15.6)	171 (13.2)
15 -19 years	509 (11.6)	83 (11.4)	91 (11.9)	74 (10.0)	88 (10.5)	173 (13.3)
20 - 24 years	328 (7.5)	59 (8.1)	68 (8.9)	46 (6.2)	58 (6.9)	97 (7.5)
25 - 29 years	324 (7.4)	71 (9.7)	58 (7.6)	39 (5.3)	57 (6.8)	99 (7.6)
30 - 34 years	226 (5.2)	40 (5.5)	49 (6.4)	32 (4.3)	43 (5.1)	62 (4.8)
35 - 39 years	275 (6.3)	59 (8.1)	55 (7.2)	40 (5.4)	48 (5.7)	73 (5.6)
40 - 44 years	181 (4.1)	24 (3.3)	17 (2.2)	53 (7.2)	37 (4.4)	50 (3.9)
45 - 49 years	168 (3.8)	27 (3.7)	25 (3.3)	34 (4.6)	27 (3.2)	55 (4.2)
50 - 54 years	95 (2.2)	11 (1.5)	30 (3.9)	14 (1.9)	25 (3.0)	15 (1.2)
55 - 59 years	34 (0.8)	6 (0.8)	7 (0.9)	4 (0.5)	6 (0.7)	11 (0.8)
60 - 64 years	32 (0.7)	8 (1.1)	5 (0.7)	7 (0.9)	6 (0.7)	6 (0.5)
65 - 69 years	8 (0.2)	2 (0.3)	2 (0.3)	0 (0.0)	1 (0.1)	3 (0.2)
70 - 74 years	8 (0.2)	3 (0.4)	3 (0.4)	1 (0.1)	1 (0.1)	0 (0.0)
75 - 79 years	3 (0.1)	1 (0.1)	0 (0.0)	0 (0.0)	2 (0.2)	0 (0.0)
80 +	1 (0.0)	0 (0.0)	0 (0.0)	1 (0.1)	0 (0.0)	0 (0.0)
n	4374	731	766	737	842	1298
Sex						
Male	2209 (50.5)	363 (49.7)	387 (50.5)	360 (48.8)	435 (51.7)	664 (51.2)
Female	2165 (49.5)	368 (50.3)	379 (49.5)	377 (51.2)	407 (48.3)	634 (48.8)
n	4374	731	766	737	842	1298

3.4 Education of Population

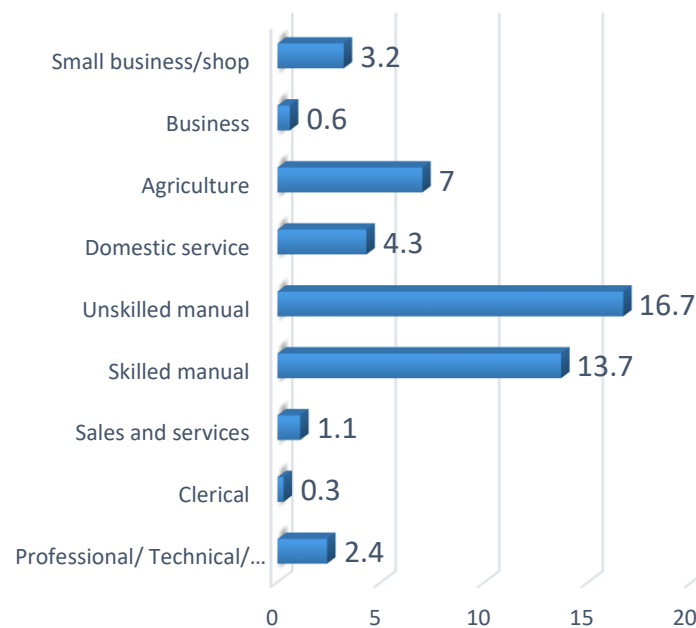
Table 3. 8– Percent distribution of population age 5 and above by education

Characteristics	Overall	Union Councils				
		Johi Town 1	Johi Town 2	Kamal Khan	Peer Mashaikh	Johi UC
No Education	1,989 (55.8)	264 (43.1)	299 (47.7)	408 (68.3)	368 (53.7)	650 (62.2)
Primary (1-5 years)	897 (25.1)	173 (28.2)	159 (25.4)	132 (22.1)	199 (29.1)	234 (22.4)
Middle (6-8)	232 (6.5)	56 (9.1)	57 (9.1)	21 (3.5)	41 (6.0)	57 (5.5)
Secondary (9-10)	207 (5.8)	51 (8.3)	46 (7.3)	19 (3.2)	36 (5.3)	55 (5.3)
Higher (11-16)	242 (6.8)	69 (11.3)	66 (10.5)	17 (2.8)	41 (6.0)	49 (4.7)

The table shows education status of adult population of age 5 years and above by highest level of education achieved. More than half of the population 55.8% had no education. Among those who had formal education, 25.1% acquired primary education, 6.5% completed middle school, 5.8% did secondary and 6.8% of respondents received secondary or higher education (Table 3.8).

3.5 Occupation

Figure 3. 3 - Percentage distribution of specific occupation among population.



The figure (3.3) shows the occupation status of population who were above 15 years of age. 2.4% were employed in professional/technical/ managerial occupations, 0.3% in clerical and 1.1% in sales. The individuals involved in economic activity as skilled manual labor were 13.7%, unskilled manual labor 16.7% and 4.3 in domestic services. Involvement in agriculture work was by 7.0%. Some individuals as 0.6% owned a business while 3.2% had small business or shops. Table (3.9) provides information that 0.5% of the population were retired. Among those who were currently not involved in an economic activity, 6.9% males and females were students, 26.7% housewives and 12.8% had no income activity.

Table 3. 9– Percent distribution of population by occupation (Above 15 years of age)

Characteristics	Overall	Union Councils				
		Johi Town 1	Johi Town 2	Kamal Khan	Peer Mashaikh	Johi UC
Professional/ Technical/ Managerial	49 (2.4)	9 (2.4)	20 (5.2)	3 (0.9)	7 (1.9)	10 (1.7)
Clerical	6 (0.3)	1 (0.3)	3 (0.8)	0 (0.0)	1 (0.3)	1 (0.2)
Sales and services	22 (1.1)	2 (0.5)	16 (4.1)	1 (0.3)	3 (0.8)	0 (0.0)
Skilled manual	284 (13.7)	58 (15.5)	41 (10.6)	42 (12.8)	78 (20.6)	65 (10.8)
Unskilled manual	345 (16.7)	45 (12.1)	62 (16.1)	72 (21.9)	77 (20.4)	89 (14.8)
Domestic service	88 (4.3)	2 (0.5)	29 (7.5)	11 (3.3)	8 (2.1)	38 (6.3)
Agriculture	144 (7.0)	16 (4.3)	0 (0.0)	34 (10.3)	32 (8.5)	62 (10.3)
Business	12 (0.6)	4 (1.1)	1 (0.3)	2 (0.6)	1 (0.3)	4 (0.7)
Small business/shop	66 (3.2)	26 (7.0)	11 (2.8)	9 (2.7)	4 (1.1)	16 (2.7)
Retired	10 (0.5)	1 (0.3)	4 (1.0)	0 (0.0)	1 (0.3)	4 (0.7)
Housewife	553 (26.7)	97 (26.0)	111 (28.8)	94 (28.6)	84 (22.2)	167 (27.7)
Student	142 (6.9)	33 (8.8)	36 (9.3)	6 (1.8)	28 (7.4)	39 (6.5)
None	265 (12.8)	62 (16.6)	36 (9.3)	45 (13.7)	40 (10.6)	82 (13.6)
Others (Specify)	82 (4.0)	17 (4.6)	16 (4.1)	10 (3.0)	14 (3.7)	25 (4.2)
N	2068	373	386	329	378	602

CHARACTERISTICS OF RESPONDENTS

This chapter describes the characteristics of respondents which included Women of Reproductive Age (WRA). Since this survey specifically focused to include adolescent girls hence respondents were included from minimum age of 14 years and maximum to 49 years of age.

4.1 Background Characteristics of respondents

Basic Characteristics

A total of 736 women were interviewed. Among the respondents, 490 were currently married and 245 were unmarried. The median age of the women interviewed was 25 years. Majority of women were in the age group of 14-19 years (28.1%) i.e adolescents. The second highest percentage of respondents' peaks at 22.1% followed by 18.2% and 14% in age groups 20-24 years and 30-34 years respectively. About 11.7% of women were in age bracket of 35-39 years, while 4.6% in 40-44 years and 1.2% in 45 to 49 years age brackets.

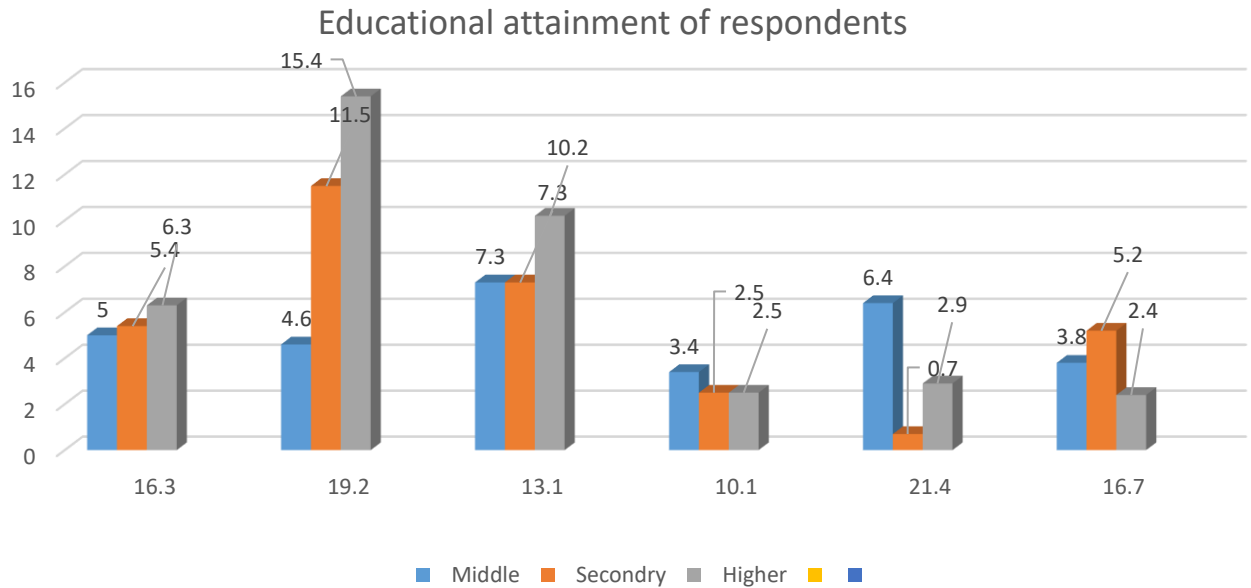
Table 4. 1– Percent distribution of respondents by age groups

Characteristics	Overall (n=736)	Union Councils				
		Johi Town 1 (n=130)	Johi Town 2 (n=137)	Kamal Khan (n=119)	Peer Mashaikh (n=140)	Johi UC (n=210)
Age						
<=14 years	21 (2.9)	1 (0.8)	1 (0.7)	6 (5.0)	7 (5.0)	6 (2.9)
15 -19 years	186 (25.3)	28 (21.5)	36 (26.3)	24 (20.2)	36 (25.7)	62 (29.5)
20 - 24 years	134 (18.2)	26 (20.0)	29 (21.2)	22 (18.5)	25 (17.9)	32 (15.2)
25 - 29 years	163 (22.1)	36 (27.7)	28 (20.4)	24 (20.2)	24 (17.1)	51 (24.3)
30 - 34 years	103 (14.0)	15 (11.5)	26 (19.0)	15 (12.6)	22 (15.7)	25 (11.9)
35 - 39 years	86 (11.7)	21 (16.2)	13 (9.5)	13 (10.9)	17 (12.1)	22 (10.5)
40 - 44 years	34 (4.6)	3 (2.3)	2 (1.5)	14 (11.8)	7 (5.0)	8 (3.8)
45 - 49 years	9 (1.2)	0 (0.0)	2 (1.5)	1 (0.8)	2 (1.4)	4 (1.9)
Mean ±SD	25.80 ± 7.98	26.13 ± 7.13	25.26 ± 7.14	26.71 ± 8.82	25.88 ± 8.51	25.38 ± 8.15
Median	25.0	25.0	25.0	26.0	25.0	25.0

4.2 Educational Attainment

About 67% women had no formal education. Among those who had a formal education, a highest proportion of 16.3% acquired primary education followed by 6.3% who got higher (11 grades or more) education. 5% attended middle school and nearly same proportion 5.4% of respondents received secondary education (Figure 4.1).

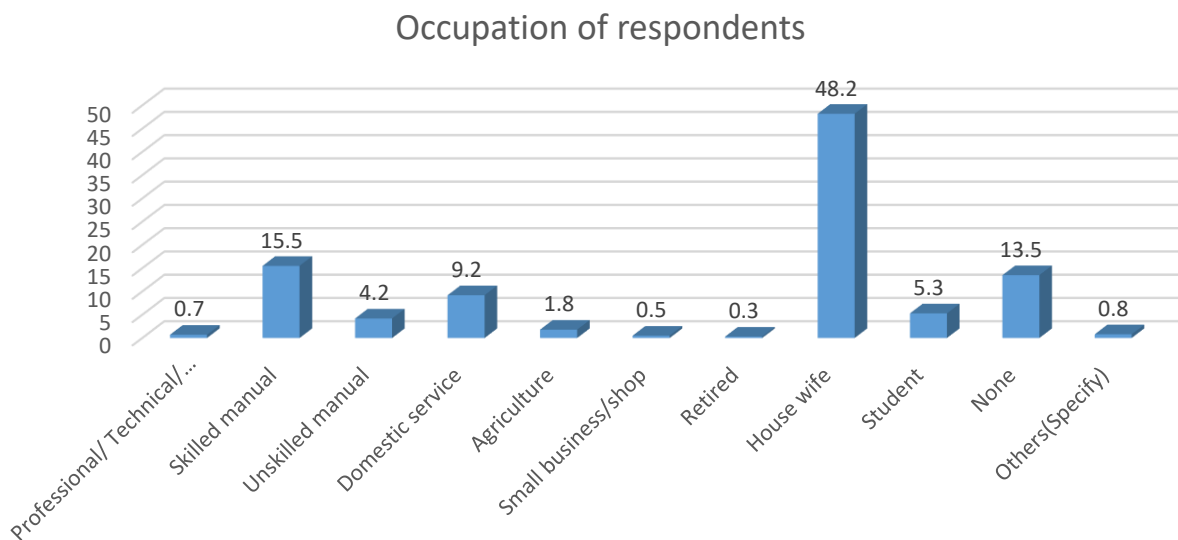
Figure 4. 1 – Percent distribution of women by highest level of schooling attended or completed



4.3 Occupational Status

About 68.1% did not have any occupation including 48.2% housewives, 13.5% who reported to do nothing and 5.3% students. Among those who specified to have an occupation included 15.5% skilled manual labor, followed by 9.2% domestic labor and 4.2% unskilled manual labor.

Figure 4. 2 – Percent distribution of women by Occupation



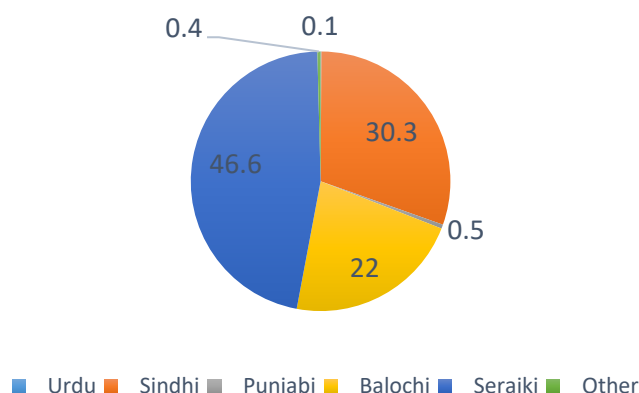
0.7% women were engaged as professional/technical/ managerial occupation followed by 1.5% in agriculture, and 0.5 in small business / shops. 0.3% were retired from their jobs.

4.4 Ethnicity

Participants of the survey, largely belonged to Seraiki (46.6%), followed by Sindhi (30.3%), and Balochi (22.0%) speaking groups.

Figure 4. 3 – Percent distribution of respondents by ethnicity

Ethnicity of respondents



Ethnically dominant groups varied amongst union councils (UCs). In Johi town 1 dominant ethnic group was Sindhi speaking (42.3%), followed by equal proportion of Seraiki (31.5%) and Balochi (22.3%) speaking women. In Johi town 2, commonly spoken languages were Seraiki (65%) and Sindhi (21.9%). In Kamal Khan, majority of respondents belonged to Seraiki (39.5%) and Balochi (32.8%). In Peer Mashaikh, most commonly spoken language was Sindhi (40.0%) and Balochi (32.1%). In UC Johi, majority of respondents were Seraiki (60.5%) and Sindhi (23.3%). UC wise detail of all ethnic groups is mentioned in below (Table 4.2).

Table 4. 2– Union council wise percent distribution of respondents by ethnicity

Characteristics	Overall	Union Councils				
		Johi Town 1	Johi Town 2	Kamal Khan	Peer Mashaikh	Johi UC
Urdu	1 (0.1)	0 (0.0)	1 (0.7)	0 (0.0)	0 (0.0)	0 (0.0)
Sindhi	223 (30.3)	55 (42.3)	30 (21.9)	33 (27.7)	56 (40.0)	49 (23.3)
Punjabi	4 (0.5)	4 (3.1)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Balochi	162 (22.0)	29 (22.3)	17 (12.4)	39 (32.8)	45 (32.1)	32 (15.2)
Seraiki	343 (46.6)	41 (31.5)	89 (65.0)	47 (39.5)	39 (27.9)	127 (60.5)
Other Specify	3 (0.4)	1 (0.8)	0 (0.0)	0 (0.0)	0 (0.0)	2 (1.0)
N	736	130	137	119	140	210

MENSTRUAL HYGIENE MANAGEMENT

This chapter describes the knowledge, attitude and practices of women of reproductive age (WRA) regarding menstrual hygiene management. This section of questionnaire was administered with women who currently menstruate (women who had their menses in last 12 months). Out of total 736 women of age 14 to 49 years, 735 women were currently menstruating (Table 5.1). Hence this section of questionnaire was further conducted with 735 women.

Table 5. 1– Percent distribution of respondents by current status of their menstruation

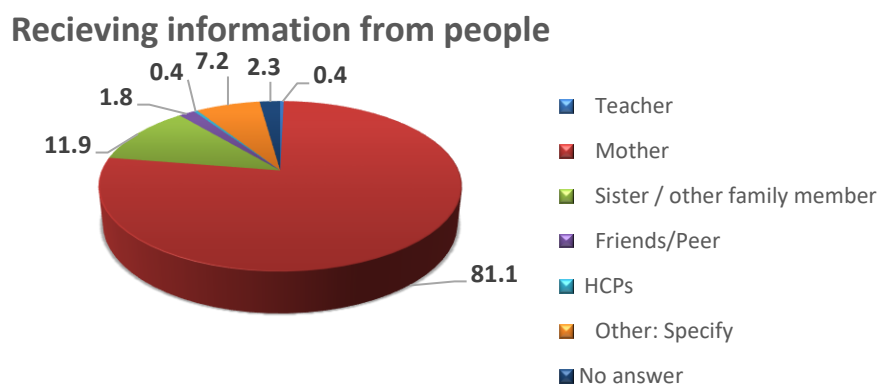
Characteristics	Overall	Union Councils				
		Johi Town 1	Johi Town 2	Kamal Khan	Peer Mashaikh	Johi UC
Currently menstruating women	735 (99.9)	130 (100.0)	137 (100.0)	119 (100.0)	140 (100.0)	209 (99.5)
Stopped menstruation	1 (0.1)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	1 (0.5)
N	736	130	137	119	140	210

Only one woman reported to have stopped her menses for last two years.

5.1 Knowledge and Practices regarding Menstruation

There seemed no formal way of providing information regarding menstruation in the study area. Mothers were the main person (81%) to share the information on menstruation to their daughters. The second highest source to provide this information (12%) was sister or any other family member for example grandmother, aunts, sister in law etcetera (Detail and UC wise breakdown is available in Table 5.2).

Figure 5. 1 – Percent distribution of respondents by receiving information from people/Women



Women also received information from other people (7.2%), 1.8% friends or peers and 0.4% from Health Care Providers (HCPs). A proportion of 2.3% respondents opt to not respond to the questions.

Table 5. 2 – Union council wise percent distribution of respondents by receiving information from people

Characteristics	Overall	Union Councils				
		Johi Town 1	Johi Town 2	Kamal Khan	Peer Mashaikh	Johi UC
Teacher	3 (0.4)	1 (0.8)	0 (0.0)	1 (0.8)	1 (0.7)	0 (0.0)
Mother	596 (81.1)	110 (84.6)	108 (78.8)	98 (82.4)	123 (87.9)	157 (75.1)
Grandmother	20 (2.7)	9 (6.9)	3 (2.2)	2 (1.7)	3 (2.1)	3 (1.4)
Sister	43 (5.9)	10 (7.7)	6 (4.4)	6 (5.0)	10 (7.1)	11 (5.3)
Other female family member	24 (3.3)	2 (1.5)	6 (4.4)	7 (5.9)	8 (5.7)	1 (0.5)
Friends/Peers	13 (1.8)	2 (1.5)	3 (2.2)	3 (2.5)	1 (0.7)	4 (1.9)
Health Care Providers (HCPs)	3 (0.4)	0 (0.0)	1 (0.7)	1 (0.8)	0 (0.0)	1 (0.5)
Other: Specify	53 (7.2)	4 (3.1)	12 (8.8)	9 (7.6)	3 (2.1)	25 (12.0)
No answer	17 (2.3)	2 (1.5)	0 (0.0)	2 (1.7)	3 (2.1)	10 (4.8)
N	735	130	137	119	140	209

Table 5.2 reflects that mother after being the major source of source of transferring information on menstrual hygiene management, second sources of information varied across the union councils. As sister was the second main person of providing this information 7.7% and 7.1% in Johi Town 1 and Peer Mashaikh respectively. In other three areas; Johi Town 2, Kamal Khan and UC Johi respondent shared to have this information from others as 8.8%, 7.6% and 12% respectively.

Education is the key to build knowledge of adolescent girls if we can taught them before they start menstruating but it is obvious that provision of information at schools is almost none.

Medical complains and their management during menstruation

Occurrence of menstruation affects lives of girls and women every month and in many ways. Medical complains which causes uncomfortable feelings, painfulnees or stress are one of the factors posing barriers on daily routine life. So, women were asked about the medical complains they experience and how they manage it.

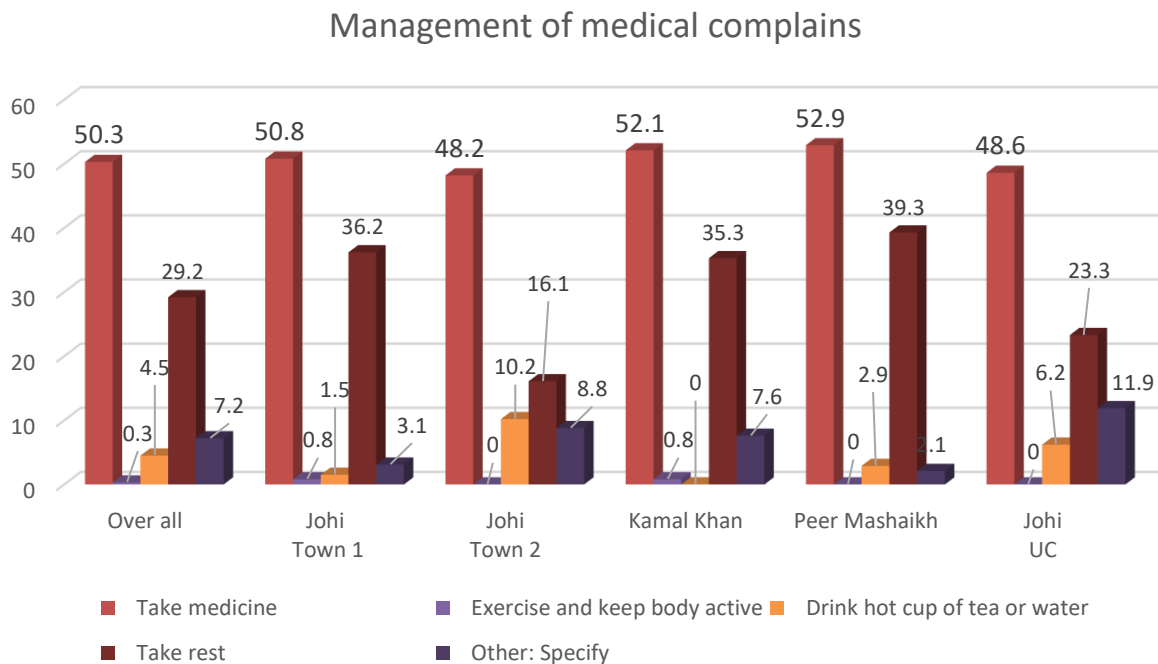
Repondents complained to suffer from abdominal pain (54.6%), fatigue (35.1%), headache (27.7%) and mood swings (5.3%). Some other complains than these were mentioned by 35.6% women (Table 5.3).

Table 5. 3– Percent distribution of respondents by suffering from medical complains

Characteristics	Overall	Union Councils				
		Johi Town 1	Johi Town 2	Kamal Khan	Peer Mashaikh	Johi UC
Fatigue	258 (35.1)	56 (43.1)	28 (20.4)	25 (21.0)	61 (43.6)	88 (41.9)
Abdominal pain / Dysmenorrhea	402 (54.6)	81 (62.3)	65 (47.4)	44 (37.0)	93 (66.4)	119 (56.7)
Headache	204 (27.7)	37 (28.5)	21 (15.3)	35 (29.4)	58 (41.4)	53 (25.2)
Mood swings	39 (5.3)	8 (6.2)	13 (9.5)	1 (0.8)	4 (2.9)	13 (6.2)
Others(specify)	262 (35.6)	38 (29.2)	65 (47.4)	61 (51.3)	51 (36.4)	47 (22.4)
No answer	11 (1.5)	0 (0.0)	0 (0.0)	5 (4.2)	2 (1.4)	4 (1.9)
Total	735	130	137	119	140	209

Regarding the management of medical complains, most of the respondents (50.3%) shared that they take medicine followed by taking rest (29.2%). Around 4.5% women mentioned to have some hot drinks like tea or water during menstruation. Around 7.2% women had some other ways of management while 0.3% mentioned physical exercise . Figure 5.3 provides UC wise practices of managing medical complains among respondents.

Figure 5. 2 – Percent distribution of respondents by management of medical complains



Avoidance of activities during Menstruation

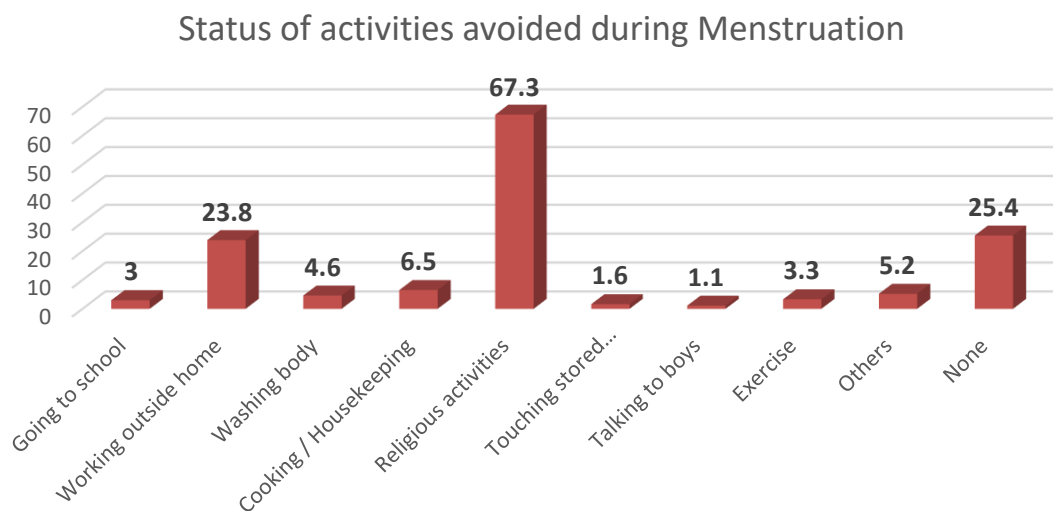
Although menstruation is a natural process and signals to a normal menstrual health of a woman during reproductive years of life, but due to cultural beliefs and practices it may hold back the full participation of women in the society and day to day life. To understand such socio-cultural practices in rural Sindh, participants were asked if they themselves avoid any routine activity or usual practice or have specific concerns towards food intake during menstruation. 74.6% women mentioned to avoid many social, religious and educational activities including bathing and day to day household chores.

Table 5. 4– Percent distribution of respondents by avoiding any activity during menstruation

Characteristics	Overall	Union Councils				
		Johi Town 1	Johi Town 2	Kamal Khan	Peer Mashaikh	Johi UC
Avoided any activity during menstruation	74.6	86.2	93	58	73.6	64.1
Avoided no activity during menstruation	25.4	13.8	7.0	42.0	26.4	35.9
Total	100	100	100	100	100	100

Most of the women (67.3%) restricted themselves from religious activities in person as well as gatherings. Adolescent girls and women did not fully participate in community due to menstruation by avoiding, working outside home 23.8%, going to school 3% and talking to boys 1.1%.

Figure 5. 3 – Percent distribution of women if they avoid any activities during menstruation



In regard to take part in household chores, 6.5% women did not cook food or do the housekeeping. 1.6% of these women did not even touch to the stored food or the food utensils. Women also shared to not wash their bodies during menstrual cycle by 4.6% and not doing exercise 3.3%. Some women (5.2%) also avoided the activities categorized as 'other'. Out of total women, 25% mentioned to keep going with their usual practices and without being interrupted due to menstruation. UC wise information of avoiding certain activities during menstruation is mentioned in Table 5.3.

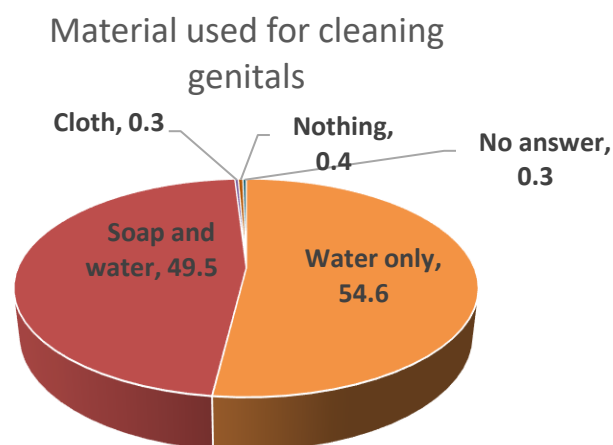
Table 5. 5– Union council wise percent distribution of women if they avoid any activities during menstruation

Characteristics	Overall	Union Councils				
		Johi Town 1	Johi Town 2	Kamal Khan	Peer Mashaikh	Johi UC
Going to school	22 (3.0)	7 (5.4)	5 (3.6)	2 (1.7)	4 (2.9)	4 (1.9)
Working outside home	175 (23.8)	45 (34.6)	49 (35.8)	37 (31.1)	31 (22.1)	13 (6.2)
Washing the body	34 (4.6)	4 (3.1)	6 (4.4)	13 (10.9)	7 (5.0)	4 (1.9)
Cooking / Housekeeping	48 (6.5)	6 (4.6)	11 (8.0)	19 (16.0)	5 (3.6)	7 (3.3)
Attending religious functions	495 (67.3)	107 (82.3)	117 (85.4)	50 (42.0)	92 (65.7)	129 (61.7)
Touching stored food/utensils	12 (1.6)	0 (0.0)	0 (0.0)	8 (6.7)	2 (1.4)	2 (1.0)
Talking to boys	8 (1.1)	0 (0.0)	0 (0.0)	1 (0.8)	3 (2.1)	4 (1.9)
Exercise	24 (3.3)	0 (0.0)	5 (3.6)	14 (11.8)	4 (2.9)	1 (0.5)
Others(specify)	38 (5.2)	7 (5.4)	1 (0.7)	7 (5.9)	23 (16.4)	0 (0.0)
None	187 (25.4)	18 (13.8)	7 (5.1)	50 (42.0)	37 (26.4)	75 (35.9)
Total	735	130	137	119	140	209

Cleaning and bathing during Menstruation

Washing the body practices during menstruation was further explored (Figure 5.4). Blood is a favourable environment for bacteria to grow which is why it is important to rinse the genital area during periods. Women were asked for their practice of using material to wash their genitals. 49.5% women washed or clean their genitals with soap and water while 54.6% used only water. 0.4% respondents said to not clean the genitals followed by 0.3% who

Figure 5. 4 – Percent distribution of women by use of material to wash genitals



used a cloth while a similar percent of respondents did not answer for this question. As far as bathing is concerned, it is really important to keep good hygiene through bathing and staying clean and healthy during menstruation. It helps prevent illness and infections from bacteria and viruses. In addition, taking bath by warm water also ease the period pain. When asked from the respondent about their bathing routine during menstruation, 13% took a bath after period is over.

Majority 69.3% had it daily followed by 13.6% who had it on every second day. 3.7% women shared to have it on third day.

Table 5. 6– Percent distribution of respondents by bathing practices during menstruation

Characteristics	Overall	Union Councils				
		Johi Town 1	Johi Town 2	Kamal Khan	Peer Mashaikh	Johi UC
Daily	509 (69.3)	87 (66.9)	85 (62.0)	77 (64.7)	89 (63.6)	171 (81.8)
Every second day	100 (13.6)	26 (20.0)	22 (16.1)	12 (10.1)	20 (14.3)	20 (9.6)
Every third day or less	27 (3.7)	5 (3.8)	3 (2.2)	6 (5.0)	11 (7.9)	2 (1.0)
When finished period	96 (13.1)	10 (7.7)	27 (19.7)	24 (20.2)	19 (13.6)	16 (7.7)
Other: Specify	1 (0.1)	1 (0.8)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
No answer	2 (0.3)	1 (0.8)	0 (0.0)	0 (0.0)	1 (0.7)	0 (0.0)
n	735	130	137	119	140	209

Alteration in food intakes during Menstruation

Table 5. 7– Percent distribution of respondents by bathing practices during menstruation

Characteristics	Overall	Union Councils				
		Johi Town 1	Johi Town 2	Kamal Khan	Peer Mashaikh	Johi UC
Avoiding certain foods						
Yes	337 (45.9)	56 (43.1)	69 (50.4)	52 (43.7)	59 (42.1)	101 (48.3)
No	388 (52.8)	73 (56.2)	63 (46.0)	67 (56.3)	80 (57.1)	105 (50.2)
Other	4 (0.5)	0 (0.0)	1 (0.7)	0 (0.0)	0 (0.0)	3 (1.4)
Don't know	6 (0.8)	1 (0.8)	4 (2.9)	0 (0.0)	1 (0.7)	0 (0.0)
Hot / cold food affects menstruation						
Hot / cold type of foods affects	173 (23.5)	31 (23.8)	34 (24.8)	42 (35.3)	37 (26.4)	29 (13.9)
No affect	523 (71.2)	92 (70.8)	89 (65.0)	72 (60.5)	98 (70.0)	172 (82.3)
Don't know	39 (5.3)	7 (5.4)	14 (10.2)	5 (4.2)	5 (3.6)	8 (3.8)
n	735	130	137	119	140	209

Eating the right food is very important at every stage of life. Especially during menstruation, a healthy diet may help in regulating cycle, reducing the risk of Premenstrual Syndrome (PMS), constipation or diarrhea, muscles weakness as well as in improvement of fluid retention and mood changes. It was found that 45.9% women were avoiding the intake of certain foods during menstruation while 52.8% said to not consciously avoid any specific kind of food due to periods. 23.5% respondents were affirmed for affects of certain foods on menstruation which they assume hot or cold and so to alter respondent's behavior to eat or not to eat them during the period.

Problems faced by young girls at Menarche

Menstruation is a natural phenomenon for women which occurs in adolescence and continues throughout their reproductive life years. Onset of menarche is not less than a trauma for an adolescent girl who never received informal or formal information in prior to occurring. Mostly being ignorant about menstruation, girls even are unable to describe it or even asking for help and do not know what to do when they begin menstruating.

Table 5. 8– Percent distribution of respondents by opinion on problems faced by young girls at menarche

Characteristics	Overall	Union Councils				
		Johi Town 1	Johi Town 2	Kamal Khan	Peer Mashaikh	Johi UC
Feels anxiety and stress	636 (86.5)	94 (72.3)	113 (82.5)	109 (91.6)	128 (91.4)	192 (91.9)
She thinks she has got a medical problem	204 (27.8)	25 (19.2)	18 (13.1)	46 (38.7)	58 (41.4)	57 (27.3)
She is unaware of what to do	138 (18.8)	24 (18.5)	12 (8.8)	40 (33.6)	31 (22.1)	31 (14.8)
She does not share it with anyone	275 (37.4)	49 (37.7)	47 (34.3)	52 (43.7)	70 (50.0)	57 (27.3)
She does not face any problem	38 (5.2)	9 (6.9)	8 (5.8)	7 (5.9)	5 (3.6)	9 (4.3)
Other, specify	11 (1.5)	1 (0.8)	6 (4.4)	1 (0.8)	0 (0.0)	3 (1.4)
n	735	130	137	119	140	209

Almost all (94.8%) respondents had opinion that young girls face problems at occurrence of menarche. Among these, most of the women 86.5% mentioned that she suffers through the feelings of anxiety and stress. 37.4% thought that the young girls don't share it with any one (Perhaps, It indicates that girls are unable to share while experience menarche due to fear, anxiety and not knowing what is happening). Around 27.8% women highlighted the problem that girls being unaware of menstruation process, think that they have caught a disease. 18.8% respondent shared that adolescent girls do not know what they should do now (Table 5.8).

Solution to the problems faced by young girls at Menarche

The respondents were further asked for the possible solution who had considered that adolescent girls faces problems at menarche. Most of the women (85.9%) responded that adolescent girls by themselves should share it with others (Mother, elderly woman at home,

sister, friend, relatives or peer) when they experience the menarche. However, 21.5% women said that others (Mother, elderly woman at home, sister, friend, relatives or peer) should provide her information about menstruation prior to the onset of menarche (Table 5.9). Some respondents (2.4) provided the solution that she should seek help while experience the menarche followed by 1.7% who suggested that teacher or school should be providing this information to the adolescent girls.

Table 5. 9– Percent distribution of respondents by solution to the problems faced by young girls at menarche

Characteristics	Overall	Union Councils				
		Johi Town 1	Johi Town 2	Kamal Khan	Peer Mashaikh	Johi UC
She should share about her menarche with others	599 (85.9)	85 (70.2)	107 (82.9)	103 (92.0)	110 (81.5)	194 (97.0)
Others should tell her at the age of menarche in advance	150 (21.5)	36 (29.8)	24 (18.6)	45 (40.2)	38 (28.1)	7 (3.5)
Giving knowledge through teacher or school	12 (1.7)	6 (5.0)	2 (1.6)	0 (0.0)	4 (3.0)	0 (0.0)
She should seek help	17 (2.4)	11 (9.1)	0 (0.0)	1 (0.9)	5 (3.7)	0 (0.0)
Other	5 (0.7)	2 (1.7)	2 (1.6)	0 (0.0)	1 (0.7)	0 (0.0)
n	697	121	129	112	135	200

Providing information to the young girls before onset of Menarche

Respondents were asked directly if young girls should be aware of menstruation before actually experiencing the menarche. Most of the respondents as 84.9% were in favour of providing the information about menstruation to the young girls before they experience their first cycle.

Table 5. 10– Percent distribution of respondents by solution to the problems faced by young girls at menarche

Characteristics	Overall	Union Councils				
		Johi Town 1	Johi Town 2	Kamal Khan	Peer Mashaikh	Johi UC
Girls should be informed in advance before menarche						
Yes	624 (84.9)	111 (85.4)	118 (86.1)	93 (78.2)	110 (78.6)	192 (91.9)
No	102 (13.9)	19 (14.6)	15 (10.9)	24 (20.2)	28 (20.0)	16 (7.7)
Don't know	9 (1.2)	0 (0.0)	4 (2.9)	2 (1.7)	2 (1.4)	1 (0.5)
N	735	130	137	119	140	209
Person to share information with young girls						
Mother, elder, sister, friend, relatives or peer	622 (99.7)	109 (98.2)	118 (100.0)	93 (100.0)	110 (100.0)	192 (100.0)
School teacher	32 (5.1)	21 (18.9)	2 (1.7)	0 (0.0)	8 (7.3)	1 (0.5)
A health worker	23 (3.7)	18 (16.2)	0 (0.0)	0 (0.0)	5 (4.5)	0 (0.0)
n	624	111	118	93	110	192

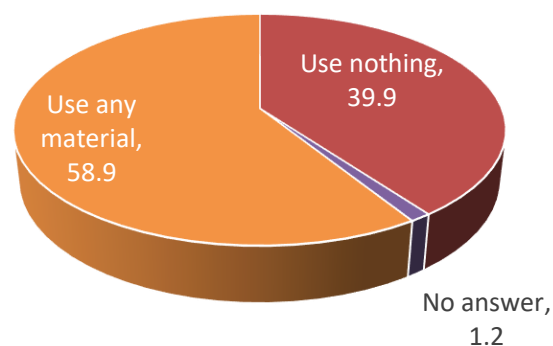
Most of the women (99.7%) were of opinion that mother, elder, sister, friend, relatives or peer shall be the person to provide this information. School teacher and health workers were mentioned by 5.1% and 3.7% respondents respectively (Table 5.10).

5.2 Access to Sanitary Material for Menstrual Hygiene Management

Use of an absorbent

Menstruation comes with numerous challenges that affect physical, social and psychological well-being of adolescent girls and women of reproductive age (WRA) along with limited access to manage their menstruation hygienically with dignity.

Figure 5. 5– Percent distribution of women by status of managing menstrual blood



As shown in the figure 5.5, 58.9% women were using a material of any type for managing menstrual blood. 39.9% women reported to not use any material during menstruation for absorption of blood. A small number of 1.2% did not answer to the question.

Among the respondents who used an absorbent, 28% were using disposable type of sanitary material which included commercially available pads 14.8% followed by old clothes, new clothes and cotton and wool as 10.1%, 2.4% and 0.7% respectively (Table 5.11).

Around 30.9% respondent used reusable material including old cloths/towel (23.4%), reusable pads (6.4%) and some other type of material (1.1%).

Table 5. 11– Percent distribution of respondents by use of material during menstruation

Characteristics	Overall	Union Councils				
		Johi Town 1	Johi Town 2	Kamal Khan	Peer Mashaikh	Johi UC
Disposable material						
New cloth	18 (2.4)	2 (1.5)	0 (0.0)	2 (1.7)	4 (2.9)	10 (4.8)
Old cloth	74 (10.1)	11 (8.5)	2 (1.5)	17 (14.3)	16 (11.4)	28 (13.4)
Disposable / commercially available pads	109 (14.8)	43 (33.1)	30 (21.9)	8 (6.7)	4 (2.9)	24 (11.5)
Cotton/wool	5 (0.7)	0 (0.0)	0 (0.0)	1 (0.8)	1 (0.7)	3 (1.4)
Reusable material						
Reusable pads	47 (6.4)	13 (10.0)	2 (1.5)	17 (14.3)	15 (10.7)	0 (0.0)
Reusable cloth/towel	172 (23.4)	22 (16.9)	47 (34.3)	21 (17.6)	34 (24.3)	48 (23.0)
Other	8 (1.1)	0 (0.0)	6 (4.4)	0 (0.0)	0 (0.0)	2 (1.0)
None	293 (39.9)	39 (30.0)	50 (36.5)	48 (40.3)	65 (46.4)	91 (43.5)
No answer	9 (1.2)	0 (0.0)	0 (0.0)	5 (4.2)	1 (0.7)	3 (1.4)
n	735	130	137	119	140	209

5.3 Hygiene Management of Menstrual Material

Disposing off the menstrual absorbents

Disposing the disposable absorbents:

Safe disposal of menstrual waste is of high importance to confined the negative impacts on users themselves, others who may become in contact, community water and sanitation system and the environment.

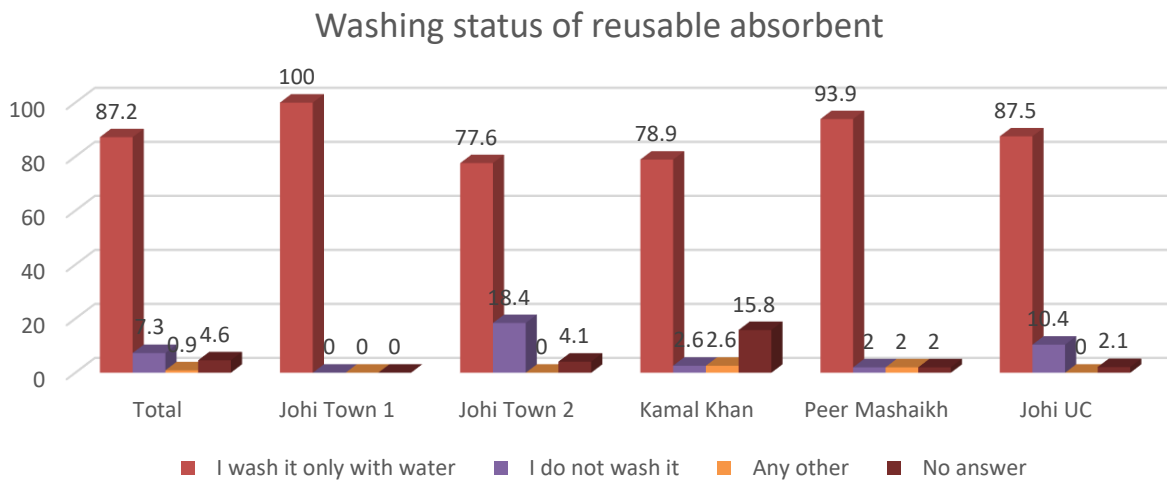
Table 5. 12 – Percent distribution of respondents by disposing off the disposable absorbents

Characteristics	Overall	Union Councils				
		Johi Town 1	Johi Town 2	Kamal Khan	Peer Mashaikh	Johi UC
I get rid of it in the field / bush	54 (26.2)	1 (1.8)	9 (28.1)	9 (32.1)	7 (28.0)	28 (43.1)
I put it into the latrines	25 (12.1)	7 (12.5)	2 (6.3)	2 (7.1)	7 (28.0)	7 (10.8)
I use waste bins	86 (41.7)	42 (75.0)	17 (53.1)	2 (7.1)	3 (12.0)	22 (33.8)
I burn them	2 (1.0)	0 (0.0)	0 (0.0)	2 (7.1)	0 (0.0)	0 (0.0)
Other: Specify	11 (5.3)	1 (1.8)	3 (9.4)	1 (3.6)	0 (0.0)	6 (9.2)
No answer	13.6	5 (8.9)	1 (3.1)	12 (42.9)	8 (32.0)	2 (3.1)
n	206	56	32	28	25	65

Most of disposable material users (pads, clothes and cotton) 41.7% disposed off the used material in to the dust bins. However, 26.2% users threw it in fields and bushes followed by 5.3% others (Forexample to throw it into open space outside of house) and 1% who burned it. About 13.6% respondents didn't share this information.

Disposing the reusable absorbents:

Figure 5. 6– Percent distribution of respondents by washing status of reusable absorbents



Most users (87.2%) of reusable pad and clothes used to wash them with water only. Astoundingly, 7.3% users said to not wash their material and reuse it next time. 4.6% of them did not repond to the question while 0.9% had other response.

Drying the reusable absorbents

Table 5. 13– Percent distribution of respondents by drying status of reusable absorbents

Characteristics	Overall	Union Councils				
		Johi Town 1	Johi Town 2	Kamal Khan	Peer Mashaikh	Johi UC
In the sun outside	181 (41.8)	38 (41.8)	39 (44.8)	10 (15.2)	39 (52.7)	55 (47.8)
In the shade outside	4 (0.9)	3 (3.3)	1 (1.1)	0 (0.0)	0 (0.0)	0 (0.0)
In the sun inside	15 (3.5)	5 (5.5)	1 (1.1)	0 (0.0)	4 (5.4)	5 (4.3)
In the shade inside	47 (10.9)	7 (7.7)	4 (4.6)	14 (21.2)	10 (13.5)	12 (10.4)
Hidden under other cloths	83 (19.2)	12 (13.2)	3 (3.4)	28 (42.4)	31 (41.9)	9 (7.8)
Hidden elsewhere	80 (18.5)	10 (11.0)	0 (0.0)	38 (57.6)	25 (33.8)	7 (6.1)
Multiple Response*						

Reusing the menstrual material have no harm in it if washed properly which means with soap and dried in the sunlight. As Sun's heat is a natural sterilizer. Most users (41.8%) dried the reusable material in sun outside i.e under direct sun followed by drying the reusable material hidden under other clothes and hidden elsewhere by 19.2% and 18.5%. Some users 10.9% mentioned to leave the material inside the shade and let it dry there, 3.5% dried it in the sun inside which means sunrays were reaching to the material while less than one percent (0.9%) had spread the material in the shade outside.

Storing the reusable absorbents

Table 5. 14– Percent distribution of respondents by storing the reusable absorbents

Characteristics	Overall	Union Councils				
		Johi Town 1	Johi Town 2	Kamal Khan	Peer Mashaikh	Johi UC
Don't store	110 (25.4)	25 (27.5)	23 (26.4)	23 (34.8)	11 (14.9)	28 (24.3)
In a closed place (Box/drawer/closet/clean bag)	247 (57.0)	49 (53.8)	31 (35.6)	39 (59.1)	58 (78.4)	70 (60.9)
In an open place (under bed etc.)	15 (3.5)	0 (0.0)	4 (4.6)	6 (9.1)	1 (1.4)	4 (3.5)
Other place	28 (6.5)	10 (11.0)	10 (11.5)	1 (1.5)	4 (5.4)	3 (2.6)
No answer	38 (8.8)	7 (7.7)	19 (21.8)	0 (0.0)	2 (2.7)	10 (8.7)
Multiple Response*						

Keeping the reusable menstrual absorbants safe at a place is necessary to prevent it from dust and insects which may cause harm to the health. Most of the respondents 57% store the material at a closed place followed by 25.4% who don't store it specifically, 6.5% kept the material on other places (Forexample in the latrine) and 3.5% placed it in an open place. Some respondents 8.8% did not repond to the questions.

Using and disposing off the disposable absorbents

Table 5. 15 – Percent distribution of respondents by storing the reusable absorbents

Characteristics	Overall	Union Councils				
		Johi Town 1	Johi Town 2	Kamal Khan	Peer Mashaikh	Johi UC
Frequency of changing the absorbent						
Once a day	91 (21.1)	24 (26.4)	20 (23.5)	11 (16.7)	13 (17.6)	23 (20.0)
Twice a day	208 (48.3)	50 (54.9)	30 (35.3)	33 (50.0)	37 (50.0)	58 (50.4)
3 times or more a day	125 (29.0)	17 (18.7)	31 (36.5)	22 (33.3)	24 (32.4)	31 (27.0)
Don't change	2 (0.5)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	2 (1.7)
No answer	5 (1.2)	0 (0.0)	4 (4.7)	0 (0.0)	0 (0.0)	1 (0.9)
Reasons for changing						
Hygiene purpose	278 (64.8)	71 (78.0)	55 (64.7)	38 (57.6)	44 (59.5)	70 (61.9)
Heavy bleeding	201 (46.9)	42 (46.2)	37 (43.5)	32 (48.5)	41 (55.4)	49 (43.4)
Low quality of material	6 (1.4)	0 (0.0)	0 (0.0)	1 (1.5)	0 (0.0)	5 (4.4)
Other place: Specify	8 (1.9)	2 (2.2)	4 (4.7)	0 (0.0)	0 (0.0)	2 (1.8)

Users of disposable absorbent (clothes and pads) were asked how frequently they changed the material and why (Table 5.14). Most of the respondents (48.3%) changed their disposable absorbent twice a day followed by 29% and 21.1% did it thrice a day or more and once a day, respectively. Few women (1.2%) did not answer for this question while 0.2% women reported to not change the absorbent until period is over. Most of the women 64.8% shared the purpose of changing the absorbent to maintain their hygiene. 46.9% women shared the reason of changing the absorbent due to heavy bleeding while other did it due to low quality of absorbent.

Availability and affordability of absorbents

Table 5. 16 – Percent distribution as per the availability of absorbents in the market

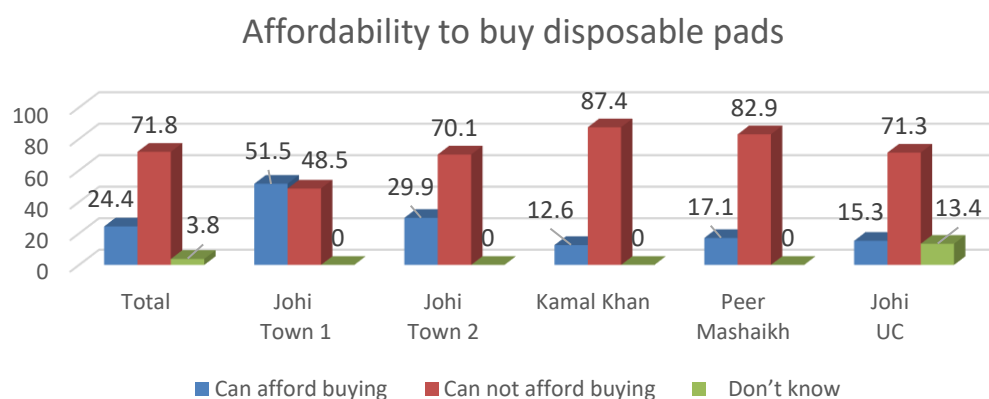
Characteristics	Overall	Union Councils				
		Johi Town 1	Johi Town 2	Kamal Khan	Peer Mashaikh	Johi UC
New cloth	248 (33.7)	88 (67.7)	14 (10.2)	72 (60.5)	49 (35.0)	25 (12.0)
Old cloth	29 (3.9)	15 (11.5)	0 (0.0)	3 (2.5)	7 (5.0)	4 (1.9)
Disposable / commercial pads	489 (66.5)	99 (76.2)	120 (87.6)	68 (57.1)	74 (52.9)	128 (61.2)
Tampon	15 (2.0)	9 (6.9)	1 (0.7)	3 (2.5)	2 (1.4)	0 (0.0)
Tissue/toilet roll	49 (6.7)	31 (23.8)	1 (0.7)	5 (4.2)	11 (7.9)	1 (0.5)
Cotton/wool	80 (10.9)	36 (27.7)	5 (3.6)	13 (10.9)	20 (14.3)	6 (2.9)
Reusable pads	107 (14.6)	41 (31.5)	0 (0.0)	46 (38.7)	20 (14.3)	0 (0.0)
Reusable cloth/towel	96 (13.1)	34 (26.2)	0 (0.0)	41 (34.5)	19 (13.6)	2 (1.0)
Other: Specify	33 (4.5)	4 (3.1)	2 (1.5)	1 (0.8)	7 (5.0)	19 (9.1)
None	87 (11.8)	8 (6.2)	10 (7.3)	9 (7.6)	21 (15.0)	39 (18.7)
No answer	64 (8.7)	8 (6.2)	3 (2.2)	18 (15.1)	21 (15.0)	14 (6.7)
N	735	130	137	119	140	209

Most of the respondents mentioned the availability of menstrual absorbents in the market including disposable / commercially available pads (66.5%) followed by new cloth (33.7%), reusable pads (14.6%) and reusable / towel (13.1%). Women also indicated the availability of cotton (10.9%), tissue and toilet rolls (6.7%), old cloth (3.9%) as well as tampon (2.0%). Some other material was mentioned by 4.5%.

Around 11.8% women replied as none regarding the availability of absorbents in the market while 8.7% did not respond to the question (Table 5.17).

Respondents were further asked if they could afford buying commercially available disposable pads. Most of the respondents 71.8% replied to not able to afford buying them. Around 24.4% could afford it while 3.8% were not sure about it (Figure 5.6).

Figure 5. 7 – Percent distribution of women if they avoid any activities during menstruation



Skilled or interested in making home made pads

About 6.9% women reported to know how to make a home made pad while most of them (86.7%) did not and 6.4% had not answered it. When asked to the respondents who did not know it or had not answered to the prior question, 78.3% were positive to learn it. Around 20% did not show any interest by replying 'no' and 0.9% respondents had no answer for it.

Table 5. 17 – Percent distribution as per the availability of absorbents in the market

Characteristics	Overall	Union Councils				
		Johi Town 1	Johi Town 2	Kamal Khan	Peer Mashaikh	Johi UC
Know to prepare homemade pad						
Yes	51 (6.9)	8 (6.2)	2 (1.5)	19 (16.0)	19 (13.6)	3 (1.4)
No	637 (86.7)	121 (93.1)	135 (98.5)	100 (84.0)	118 (84.3)	163 (78.0)
No answer	47 (6.4)	1 (0.8)	0 (0.0)	0 (0.0)	3 (2.1)	43 (20.6)
N	735	130	137	119	140	209
Interested in learning to prepare						
Yes	530 (78.3)	95 (78.5)	109 (80.1)	81 (81.0)	103 (75.7)	142 (77.2)
No	141 (20.8)	21 (17.4)	27 (19.9)	18 (18.0)	33 (24.3)	42 (22.8)
No answer	6 (0.9)	5 (4.1)	0 (0.0)	1 (1.0)	0 (0.0)	0 (0.0)
n	677	121	136	100	136	184

MATERNAL HEALTH

This chapter represents the status of reproductive health status and behaviors of married women in the reproductive age: 15 to 49 years. Out of total 736 study participants, there were 490 women of age 14 to 49 years with average 29.7 (SD±6.58) and median age 29 years. Therefore, this section of the questionnaire was administered with 490 respondents.

6.1 Last Pregnancy History

The World Health Organization (WHO) recommended that the expectant mothers should receive at least eight antenatal care (ANC) visits during pregnancy with the first visit during the first trimester(7).

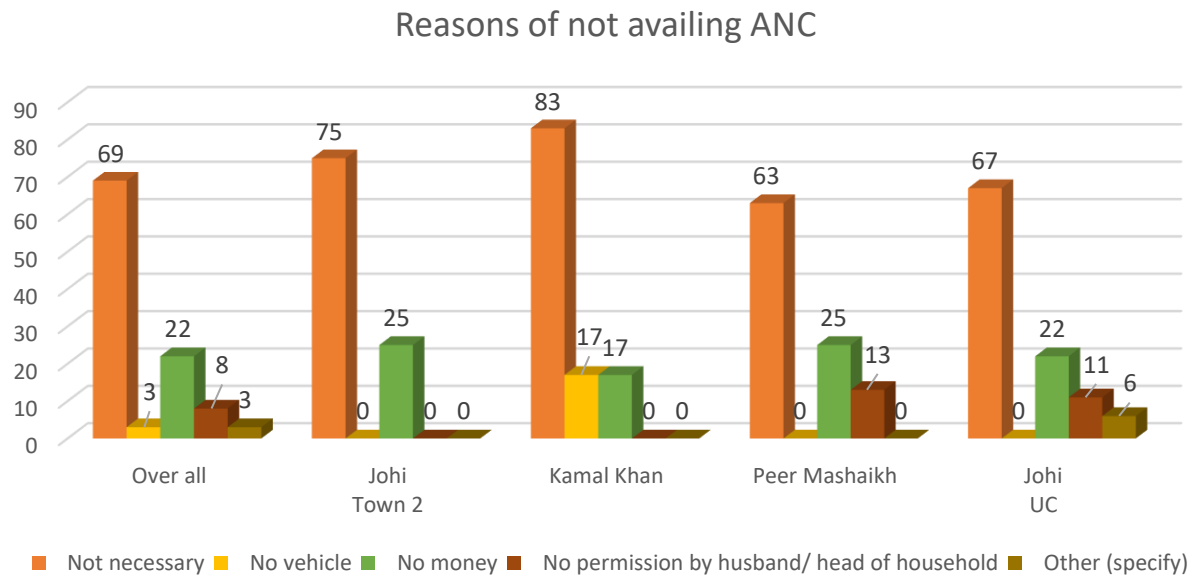
Antenatal Care

Table 6. 1 – Percent distribution as per Antenatal Care (ANC) status

Characteristics	Overall 490	Union Councils				
		Johi Town 1 87	Johi Town 2 91	Kamal Khan 78	Peer Mashaikh 94	Johi UC 140
Antenatal care						
Received Antenatal care	454 (92.7)	87 (100.0)	87 (95.6)	72 (92.3)	86 (91.5)	122 (87.1)
Number of ANC Visits availed						
1	44 (9.7)	7 (8.0)	7 (8.0)	8 (11.1)	9 (10.5)	13 (10.7)
2	103 (22.7)	8 (9.2)	18 (20.7)	16 (22.2)	25 (29.1)	36 (29.5)
3	108 (23.8)	21 (24.1)	10 (11.5)	8 (11.1)	16 (18.6)	36 (29.5)
4 or more	216 (47.6)	51 (58.6)	52 (59.8)	40 (55.6)	36 (41.9)	37 (30.3)
First ANC visit time						
3rd trimester	89 (19.6)	6 (6.9)	16 (18.4)	16 (22.2)	14 (16.3)	37 (30.3)
2nd trimester	148 (32.6)	17 (19.5)	31 (35.6)	21 (29.2)	26 (30.2)	53 (43.4)
1st trimester	217 (47.8)	64 (73.6)	40 (46.0)	35 (48.6)	46 (53.5)	32 (26.2)
Check up by HCP						
Doctor	412 (90.7)	75 (86.2)	77 (88.5)	69 (95.8)	81 (94.2)	110 (90.2)
Nurse	21 (4.6)	0 (0.0)	8 (9.2)	2 (2.8)	0 (0.0)	11 (9.0)
Midwife	17 (3.7)	10 (11.5)	1 (1.1)	1 (1.4)	4 (4.7)	1 (0.8)
CMW (community midwife)	2 (0.4)	2 (2.3)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
DAI-TBA	1 (0.2)	0 (0.0)	0 (0.0)	0 (0.0)	1 (1.2)	0 (0.0)
LHW (lady health worker)	1 (0.2)	0 (0.0)	1 (1.1)	0 (0.0)	0 (0.0)	0 (0.0)
n	454	87	87	72	86	122

Around 93% of the sampled women sought ANC; out of which, 47.6% had four or more ANC visits during their last pregnancy. Almost similar number of women (47.8%) made their first ANC visit during the first trimester of their pregnancy while 32.6% had it in their second trimester. Majority of them were checked by skilled providers i.e. doctors (90%), nurses (4.6%), midwives (3.7%) and CMWs (0.4%). Whereas among those who did not receive ANC, many (69%) did not find it necessary and less than a quarter (22%) did not had enough money (Figure 6.1)

Figure 6. 1 – Percent distribution of respondents by reasons of not availing ANC



Antenatal Care components:

Questions were asked about the services received by women during ANC visits of their last pregnancy (Table 6.2). These services included ultrasound (91.4%), blood pressure (83%) and weight measurement (21.6%). Blood and urine sampling was done for 60% and 40.7% pregnant women respectively. During these visits, they also received counselling on nutrition (43.6%), breast feeding (33.5%) and family planning (28%).

Table 6. 2 – Percent distribution as per antenatal care components received during last pregnancy

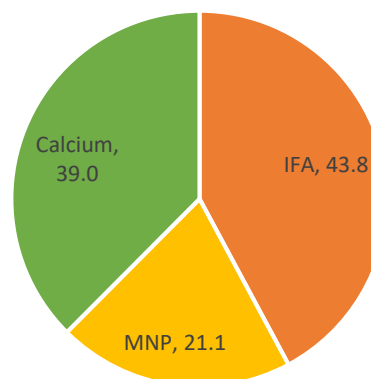
Characteristics	Overall	Union Councils				
		Johi Town 1	Johi Town 2	Kamal Khan	Peer Mashaikh	Johi UC
ANC components delivered						
Weight measured	98 (21.6)	26 (29.9)	17 (19.5)	11 (15.3)	18 (20.9)	26 (21.3)
Height measured	17 (3.7)	5 (5.7)	3 (3.4)	3 (4.2)	1 (1.2)	5 (4.1)
BP measured	377 (83.0)	72 (82.8)	69 (79.3)	62 (86.1)	74 (86.0)	100 (82.0)
Urine test	185 (40.7)	47 (54.0)	38 (43.7)	29 (40.3)	20 (23.3)	51 (41.8)
Blood test	275 (60.6)	55 (63.2)	58 (66.7)	42 (58.3)	45 (52.3)	75 (61.5)
Ultrasound	415 (91.4)	77 (88.5)	82 (94.3)	61 (84.7)	83 (96.5)	112 (91.8)
Received						
Maternal nutritional supplement	90 (19.8)	9 (10.3)	19 (21.8)	25 (34.7)	10 (11.6)	27 (22.1)
Counselling on Nutrition	198 (43.6)	20 (23.0)	53 (60.9)	43 (59.7)	15 (17.4)	67 (54.9)
Counselling on Breastfeeding	152 (33.5)	16 (18.4)	36 (41.4)	35 (48.6)	21 (24.4)	44 (36.1)
Counselling on family Planning	127 (28.0)	13 (14.9)	32 (36.8)	35 (48.6)	19 (22.1)	28 (23.0)
Other (specify)	10 (2.2)	2 (2.3)	0 (0.0)	4 (5.6)	2 (2.3)	2 (1.6)
N	454	87	87	72	86	122

When asked about the place of ANC visits, it was found that approximately 40% consulted private clinics while more than a quarter visited government (28.9%) and private (28.4%) hospitals. Information regarding tetanus vaccination demonstrated that 60.2% women received two doses and 22.9% received three doses during their last pregnancy.

Intake of IFA, MNP and Calcium:

The present study findings also revealed that less than half (43.8%) of the pregnant WRA were prescribed and provided iron folic acid (IFA) during their last pregnancy whereby vast majority i.e. 91.5% took these supplements on daily basis. Nearly half (49.5%) of the total pregnant WRA who consumed IFA, continued it for 1-3 months followed by a quarter (24.5%) of them, who sustained its use for 7 or more months. On the other hand, micronutrient products (MNP) were utilized by 21.1% of the respondents. Among these, 27% took it daily and 23% on weekly basis while 47% rarely used it. In the similar context, more than one third (39%) WRA were suggested to take calcium supplements and a large proportion i.e. 70.6%

Figure 6. 2– Percent distribution of respondents by intake of IFA, MNP and Calcium



took it on daily basis.

Pregnancy Outcome

Vast majority (98.6%) of the females had a live birth and 0.6% had twin live births in their last pregnancy. However, 0.6% had a stillbirth and 0.2% had a miscarriage/abortion.

Table 6. 3 – Percent distribution of respondents by pregnancy outcome

Characteristics	Overall	Union Councils				
		Johi Town 1	Johi Town 2	Kamal Khan	Peer Mashaikh	Johi UC
Pregnancy outcome						
Live birth	483 (98.6)	86 (98.9)	89 (97.8)	75 (96.2)	94 (100.0)	139 (99.3)
Still birth	3 (0.6)	0 (0.0)	1 (1.1)	2 (2.6)	0 (0.0)	0 (0.0)
Miscarriage/abortion	1 (0.2)	0 (0.0)	0 (0.0)	1 (1.3)	0 (0.0)	0 (0.0)
Twin Live birth	3 (0.6)	1 (1.1)	1 (1.1)	0 (0.0)	0 (0.0)	1 (0.7)
n	490	87	91	78	94	140

Place of delivery

Moreover, the commonest place of delivery was found to be the home (43.4%) followed by government (28.4%) and private (14.4%) hospitals. Some other facilities where delivery took place included private hospitals (14.4%) and clinics (9.5%), government health centers (2.3%) and at government dispensaries (0.2%). One woman reported to have delivered on the way delivery (0.2%) while going to the hospital.

Table 6. 4 – Percent distribution of respondents by place of delivery for a live birth

Characteristics	Overall	Union Councils				
		Johi Town 1	Johi Town 2	Kamal Khan	Peer Mashaikh	Johi UC
Home	211 (43.4)	28 (32.2)	36 (40.0)	39 (52.0)	43 (45.7)	65 (46.4)
Government hospital	138 (28.4)	19 (21.8)	30 (33.3)	18 (24.0)	33 (35.1)	38 (27.1)
Government clinic / health center	11 (2.3)	2 (2.3)	3 (3.3)	4 (5.3)	0 (0.0)	2 (1.4)
Government dispensary	1 (0.2)	0 (0.0)	1 (1.1)	0 (0.0)	0 (0.0)	0 (0.0)
Private hospital	70 (14.4)	32 (36.8)	8 (8.9)	9 (12.0)	13 (13.8)	8 (5.7)
Private clinic	46 (9.5)	3 (3.4)	12 (13.3)	3 (4.0)	4 (4.3)	24 (17.1)
Private maternity home	8 (1.6)	3 (3.4)	0 (0.0)	1 (1.3)	1 (1.1)	3 (2.1)
Other	1 (0.2)	0 (0.0)	0 (0.0)	1 (1.3)	0 (0.0)	0 (0.0)
N	486	87	90	75	94	140

Skilled assistance during delivery

Assistance from a skilled birth attendant during delivery is considered a key factor in reducing maternal and neonatal mortality. More than half (55.1%) deliveries were assisted by skilled birth attendants. Among these majority by doctors (42.4%) followed by nurse (8.8%), community midwife (3.1%) and lady health visitors (0.8%). Delivery of slightly less than half women i.e. 44.8% were assisted by either Dai/Traditional or others (Table 6.5).

Table 6. 5 – Percent distribution of respondents by place of delivery for a live birth

Characteristics	Overall	Union Councils				
		Johi Town 1	Johi Town 2	Kamal Khan	Peer Mashaikh	Johi UC
Skilled assistance						
Doctor	206 (42.4)	50 (57.5)	32 (35.6)	24 (32.0)	42 (44.7)	58 (41.4)
Lady health visitor	4 (0.8)	1 (1.1)	1 (1.1)	0 (0.0)	0 (0.0)	2 (1.4)
Nurse	43 (8.8)	6 (6.9)	14 (15.6)	8 (10.7)	3 (3.2)	12 (8.6)
Community midwife	15 (3.1)	3 (3.4)	2 (2.2)	3 (4.0)	5 (5.3)	2 (1.4)
	55.2	68.9	54.5	46.7	53.2	52.8
Unskilled assistance						
Lady health worker	3 (0.6)	0 (0.0)	2 (2.2)	0 (0.0)	0 (0.0)	1 (0.7)
Dai/TBA	206 (42.4)	27 (31.0)	38 (42.2)	35 (46.7)	44 (46.8)	62 (44.3)
Relative	8 (1.6)	0 (0.0)	1 (1.1)	4 (5.3)	0 (0.0)	3 (2.1)
Other (specify):	1 (0.2)	0 (0.0)	0 (0.0)	1 (1.3)	0 (0.0)	0 (0.0)
	44.8	31.1	45.5	53.3	46.8	47.2

Postnatal Care

The postnatal period can be defined as the first six weeks after birth. Postnatal care is critical to the health and survival of a mother and her newborn. Data from the current study (Table 6.6) revealed that more than a quarter (28.6%) women had received postnatal checkup after delivery. More than half (57.0%) of these women had only one checkup while 31.0% had two postnatal visits within 40 days after delivery.

Postnatal care included BP measurement (82.1%), breast feeding (47.1%), checking of temperature (46.4%), per vaginal examination (45.7%), nutrition (37.1%) and family planning (35%) related counselling. During postnatal time period, 15.3% of the study participants were also informed about complications.

Table 6. 6 – Percent distribution of respondents by availing postnatal care

Characteristics	Overall	Union Councils				
		Johi Town 1	Johi Town 2	Kamal Khan	Peer Mashaikh	Johi UC
Received PNC						
Yes	140 (28.6)	36 (41.4)	32 (35.2)	22 (28.2)	28 (29.8)	22 (15.7)
Number of PNC availed						
1	80 (57.0)	23 (63.0)	18 (56.3)	10 (45.5)	18 (64.3)	11 (50.0)
2	43 (31.0)	11 (31.3)	10 (32.3)	7 (31.8)	8 (28.6)	7 (31.8)
More than 2	17 (12.0)	2 (5.7)	4 (11.4)	5 (22.7)	2 (7.2)	4 (18.1)
Services received						
BP measurement	115 (82.1)	34 (94.4)	21 (65.6)	16 (72.7)	27 (96.4)	17 (77.3)
Checked temperature	65 (46.4)	13 (36.1)	18 (56.3)	10 (45.5)	13 (46.4)	11 (50.0)
Per vaginal examination	64 (45.7)	28 (77.8)	8 (25.0)	13 (59.1)	9 (32.1)	6 (27.3)
Nutrition	52 (37.1)	5 (13.9)	14 (43.8)	13 (59.1)	5 (17.9)	15 (68.2)
Breast feeding	66 (47.1)	9 (25.0)	19 (59.4)	13 (59.1)	7 (25.0)	18 (81.8)
Family planning	49 (35.0)	6 (16.7)	19 (59.4)	14 (63.6)	6 (21.4)	4 (18.2)
Skin to skin contact	10 (7.1)	0 (0.0)	2 (6.3)	5 (22.7)	0 (0.0)	3 (13.6)
N	140	36	32	22	28	22

6.1 Family Planning

Contraceptive knowledge

The use of family planning helps women avoid unintended and untimely pregnancies, and reduces risks of unsafe abortions. Contraceptives help women space the births of their children, which directly benefits the health of the mother and infants. When asked about knowledge of family planning, 471 (96.1%) had knowledge of at least one method of family planning, whereas 19 (3.9%) did not.

Knowledge about any method of family planning was universal (96.1%). Among modern methods, most commonly mentioned names were injectable (95.5%), pills (94.9%), IUD (68.6%), implant (66.9%) and condoms (38.4%). Traditional methods mentioned by women were; LAM (18.7%), SDM (16.8%) and withdrawal (3.2%). Permanent methods; female sterilization and vasectomy were known by 44.8% and 1.9% respectively (Table 6.7).

Table 6. 7 – Percent distribution of respondents by knowledge of FP methods

Characteristics	Total 490	Johi Town UC-1 87	Johi Town UC-2 91	Kamal Khan 78	Peer Mashaikh 94	Johi 140
Knowledge of FP						
Yes	471 (96.1)	87 (100.0)	89 (97.8)	75 (96.2)	88 (93.6)	132 (94.3)
Methods of FP known						
Modern methods						
Condom	181 (38.4)	52 (59.8)	42 (47.2)	39 (52.0)	30 (34.1)	18 (13.6)
COC/POC	447 (94.9)	79 (90.8)	87 (97.8)	70 (93.3)	85 (96.6)	126 (95.5)
Injectable	450 (95.5)	77 (88.5)	87 (97.8)	72 (96.0)	84 (95.5)	130 (98.5)
IUCD	323 (68.6)	48 (55.2)	70 (78.7)	58 (77.3)	60 (68.2)	87 (65.9)
Implant	315 (66.9)	48 (55.2)	64 (71.9)	60 (80.0)	60 (68.2)	83 (62.9)
Traditional methods						
LAM	88 (18.7)	31 (35.6)	7 (7.9)	27 (36.0)	16 (18.2)	7 (5.3)
Withdrawal	15 (3.2)	5 (5.7)	7 (7.9)	3 (4.0)	0 (0.0)	0 (0.0)
SDM	30 (6.4)	16 (18.4)	3 (3.4)	5 (6.7)	6 (6.8)	0 (0.0)
Permanent methods						
TL	211 (44.8)	33 (37.9)	54 (60.7)	39 (52.0)	31 (35.2)	54 (40.9)
Vasectomy	9 (1.9)	1 (1.1)	1 (1.1)	4 (5.3)	0 (0.0)	3 (2.3)
Any other	1 (0.2)	0 (0.0)	0 (0.0)	1 (1.3)	0 (0.0)	0 (0.0)
Multiple response*						

Use of contraceptive methods

Approximately 43.9% women were current users of any method of family planning and 31.6% were using a modern method of contraception.

Table 6. 8 – Percent distribution of respondents by use of any or modern contraceptive method

Characteristics	Total 490	Johi Town UC-1 87	Johi Town UC-2 91	Kamal Khan 78	Peer Mashaikh 94	Johi 140
Use of FP method						
Current use of any method	215 (43.9)	36 (41.4)	46 (50.5)	41 (52.6)	38 (48.7)	54 (38.6)
Current use of any modern methods	155 (31.6)	31 (35.6)	33 (36.3)	18 (23.1)	27 (28.7)	40 (28.6)

Type of contraceptive methods currently in use

Among Modern, commonly used methods were injections (12.7%), pills (5.7%), condoms (5.1%), implants (1.6%) and IUCD (0.6%). Approximately, 11.4% of women were using LAM method while withdrawal and SDM were equally used as 0.4%. Interestingly, there was no user of vasectomy while female sterilization method (5.9%) was in use.

Table 6. 9 – Percent distribution of respondents by current use of methods

Characteristics	Overall	Union Councils				
		Johi Town 1	Johi Town 2	Kamal Khan	Peer Mashaikh	Johi UC
Modern methods						
Condom	25 (5.1)	11 (12.6)	8 (8.8)	1 (1.3)	3 (3.2)	2 (1.4)
Pills (COC/POC)	28 (5.7)	4 (4.6)	9 (9.9)	3 (3.8)	3 (3.2)	9 (6.4)
Injectable	62 (12.7)	6 (6.9)	12 (13.2)	6 (7.7)	12 (12.8)	26 (18.6)
IUCD	3 (0.6)	0 (0.0)	0 (0.0)	1 (1.3)	1 (1.1)	1 (0.7)
Implant	8 (1.6)	1 (1.1)	0 (0.0)	4 (5.1)	1 (1.1)	2 (1.4)
Traditional methods						
LAM	56 (11.4)	3 (3.4)	11 (12.1)	23 (29.5)	11 (11.7)	8 (5.7)
Withdrawal	2 (0.4)	1 (1.1)	1 (1.1)	0 (0.0)	0 (0.0)	0 (0.0)
SDM	2 (0.4)	1 (1.1)	1 (1.1)	0 (0.0)	0 (0.0)	0 (0.0)
Permanent methods						
TL	29 (5.9)	9 (10.3)	4 (4.4)	3 (3.8)	7 (7.4)	6 (4.3)

Postpartum family planning

Study findings also demonstrated that 11.8% respondents adopted some method of family planning within 42 days of their delivery. Of these methods, the commonest was the use of condoms (24%), followed by progesterone only pills (15%), LAM (14%), tubal ligation (14%) and implants (5%). Whereas 29% of them used other than these methods for family planning.

Birth spacing

Birth interval is an important determinant of maternal and newborn health outcomes. An interval of at least 24 months between two births is considered healthy. Participants were also asked about the minimum space between a live birth and the next pregnancy should be, where 9.2% responded that it should be less than 2 years, 22.4% thought it should be 2 years, while 68.4% responded for more than 2 years (Table 6.10).

Desire for next pregnancy

Women also expressed when they wanted another child, where 93 (19.0%) said they wanted a child within 2 years, 129 (26.3%) wanted to delay in for 2 or more years, 29 (5.9%) wanted a child but did not know when, 84 (17.1%) were undecided about having more children, and 146 (29.8%) did not want more children. Nine (1.8%) women could not have more children.

Table 6. 10 – Percent distribution of respondents by birth space interval

Characteristics	Overall	Union Councils				
		Johi Town 1	Johi Town 2	Kamal Khan	Peer Mashaikh	Johi UC
Less than 2 years	45 (9.2)	9 (10.3)	7 (7.7)	16 (20.5)	6 (6.4)	7 (5.0)
2 years	110 (22.4)	23 (26.4)	32 (35.2)	16 (20.5)	22 (23.4)	17 (12.1)
More than 2 years	335 (68.4)	55 (63.2)	52 (57.1)	46 (59.0)	66 (70.2)	116 (82.9)
n	490	87	91	78	94	140

6.2 Current Pregnancy

Intended pregnancy

15.1% respondents were currently pregnant. Of these 51% were intended pregnancies while 49% were unintended.

Antenatal care status

Most of these pregnant women were in their third trimester (57%), second highest proportion were in second trimester (34%) and remaining (9%) were in first trimester. 80% of total pregnant women had received at least first antenatal care checkup whereas 17% of them have received four or more checkups.

Table 6. 11 – Percent distribution of respondents by current pregnancy's antenatal care status

Characteristics	Overall 490	Union Councils				
		Johi Town 1 87	Johi Town 2 91	Kamal Khan 78	Peer Mashaikh 94	Johi UC 140
Currently pregnant women	74 (15.1)	14 (16.1)	12 (13.2)	10 (12.8)	12 (12.8)	26 (18.6)
Intended Pregnancy	38 (51)	10 (71)	4 (33)	3 (30)	6 (50)	15 (58)
Gestational age in trimester						
First trimester (1-13 weeks)	7 (9)	1 (7)	2 (17)	2 (20)	1 (8)	1 (4)
Second trimester (14-27 weeks)	25 (34)	4 (29)	5 (42)	2 (20)	2 (17)	12 (46)
Third trimester (28 or more weeks)	42 (57)	9 (64)	5 (42)	6 (60)	9 (75)	13 (50)
n	74	14	12	10	12	26
Received ANC						
Yes	59 (80)	13 (93)	11 (92)	7 (70)	11 (92)	17 (65)
No	15 (20)	1 (7)	1 (8)	3 (30)	1 (8)	9 (35)
n	74	14	12	10	12	
ANC Visits of current pregnancy						
1	18 (31)	4 (31)	1 (9)	0 (0)	4 (36)	9 (53)
2	21 (36)	5 (38)	4 (36)	5 (71)	2 (18)	5 (29)
3	10 (17)	0 (0)	2 (18)	1 (14)	5 (45)	2 (12)
4 or more	10 (17)	4 (31)	4 (36)	1 (14)	0 (0)	1 (6)
n	59	13	11	7	11	17

Antenatal Care components:

Questions were asked about the services received by currently pregnant women during ANC visits (Table 6.12). These services included ultrasound (65%), blood pressure (61%) and injections of tetanus toxoid (46%). Blood and urine sampling was done for 41% and 36% pregnant women respectively. 45% currently pregnant women were taking iron folic acid in form of tablets or syrup. No other antenatal care components were mentioned by women like height measurement, counselling or provision of nutritional supplement or micro nutrients.

Table 6. 12 – Percent distribution as per antenatal care components received during last pregnancy

Characteristics	Overall	Union Councils				
		Johi Town 1	Johi Town 2	Kamal Khan	Peer Mashaikh	Johi UC
ANC components delivered						
Weight measured	13 (18)	5 (36)	2 (17)	3 (30)	1 (8)	2 (8)
BP measured	45 (61)	10 (71)	8 (67)	6 (60)	11 (92)	10 (38)
Urine test	27 (36)	6 (43)	7 (58)	4 (40)	4 (33)	6 (23)
Blood test	30 (41)	8 (57)	4 (33)	6 (60)	6 (50)	6 (23)
Ultrasound	48 (65)	11 (79)	10 (83)	6 (60)	8 (67)	13 (50)
Tetanus toxoid	34 (46)	6 (43)	5 (42)	6 (60)	6 (50)	11 (42)
Iron folic tablet / Syrup	33 (45)	8 (57)	9 (75)	5 (50)	5 (42)	6 (23)
Maternal nutritional supplement	90 (19.8)	9 (10.3)	19 (21.8)	25 (34.7)	10 (11.6)	27 (22.1)
Counselling on Nutrition	198 (43.6)	20 (23.0)	53 (60.9)	43 (59.7)	15 (17.4)	67 (54.9)
Counselling on Breastfeeding	152 (33.5)	16 (18.4)	36 (41.4)	35 (48.6)	21 (24.4)	44 (36.1)
Counselling on family Planning	127 (28.0)	13 (14.9)	32 (36.8)	35 (48.6)	19 (22.1)	28 (23.0)
Other (specify)	10 (2.2)	2 (2.3)	0 (0.0)	4 (5.6)	2 (2.3)	2 (1.6)

Multiple response*

Pregnancy complications

During antenatal care visits, 61% of the currently pregnant women were informed about complication. Multiple complications were mentioned by respondents, majorly severe headache (58%) followed by extreme weakness (53%), high blood pressure (31%) and rapid or difficulty in breathing (29%).

Other reported complications included fever (22%), abdominal pain (Excluding labor pain) 16%, blurred vision (11%) and convulsions (9%). Breakdown is further available in Table 6.13.

Table 6. 13 – Percent distribution of currently pregnant women by complications

Characteristics	Overall	Union Councils				
		Johi Town 1	Johi Town 2	Kamal Khan	Peer Mashaikh	Johi UC
Informed of any complication during ANC						
Yes	45 (61)	11 (79)	8 (67)	6 (60)	7 (58)	13 (50)
No	29 (39)	3 (21)	4 (33)	4 (40)	5 (42)	13 (50)
N	74	14	12	10	12	26
Type of complication:						
Convulsions	4 (9)	1 (9)	0 (0)	2 (33)	1 (14)	0 (0)
High blood pressure	14 (31)	4 (36)	2 (25)	2 (33)	4 (57)	2 (15)
Severe anemia and difficulty in breathing	9 (20)	3 (27)	0 (0)	2 (33)	2 (29)	2 (15)
Severe headache	26 (58)	4 (36)	6 (75)	4 (67)	3 (43)	9 (69)
Blurred vision	5 (11)	1 (9)	1 (13)	0 (0)	2 (29)	1 (8)
Extreme weakness that unable to move	24 (53)	3 (27)	4 (50)	5 (83)	2 (29)	10 (77)
Abdominal pain (Excluding labor pain)	7 (16)	0 (0)	1 (13)	1 (17)	2 (29)	3 (23)
Rapid breathing/difficulty in breathing	13 (29)	5 (45)	0 (0)	3 (50)	1 (14)	4 (31)
Fever	10 (22)	5 (45)	1 (13)	1 (17)	1 (14)	2 (15)
Vaginal discharge	2 (4)	0 (0)	0 (0)	1 (17)	0 (0)	1 (8)
Premature rupture of membrane (Water leakage) before delivery (before 6 hours or more)	1 (2)	0 (0)	0 (0)	1 (17)	0 (0)	0 (0)
Any other	4 (9)	0 (0)	2 (25)	1 (17)	0 (0)	1 (8)

Preparation of delivery

Of the total currently pregnant women, 9% were saving money, 3% had arranged for transportation while 20% were registered for the delivery at a health facility.

Table 6. 14 – Percent distribution of currently pregnant women by delivery preparation

Characteristics	Overall	Union Councils				
		Johi Town 1	Johi Town 2	Kamal Khan	Peer Mashaikh	Johi UC
Money Saving	7 (9)	4 (29)	2 (17)	1 (10)	0 (0)	0 (0)
Transport arrangement	2 (3)	1 (7)	1 (8)	0 (0)	0 (0)	0 (0)
If yes, kind of transport arrangement:						
Own vehicle	1 (50)	0 (0)	1 (100)	0	0	0
Arranged money for rent	1 (50)	1 (100)	0 (0)	0	0	0
Registered for delivery at health facility	15 (20)	5 (36)	1 (8)	2 (20)	5 (42)	2 (8)

CHILD HEALTH

This chapter represents the health status of infants i.e children under one year at birth so, to have best possible estimates keeping the memory recall of their mothers limited upto one year. However for the diarrhea information was collected on under five year children who had suffered it in last two weeks, preceding the survey.

7.1 New Born Care

Birth weight and size

Regarding the postnatal care provided to the baby, it was noted that less than a third (30.9%) of the babies were weighed at birth. Birth weight was normal for a large proportion of babies (70%) while 30% were low birth weight. This was found either by the discharge card or mother's recall as only 14% mothers had a discharge card available for their newborns. Recalling the size of the baby at birth, many (72.7%) mothers declared that their baby had an average size in comparison to 15.7%, 6.4% and 3.6% women who considered that babies were smaller than average, very small or larger than average respectively.

Table 7. 1 – Percent distribution of infants by receiving postnatal care at birth

Characteristics	Overall	Union Councils				
		Johi Town 1	Johi Town 2	Kamal Khan	Peer Mashaikh	Johi UC
Baby weighed at birth						
Yes	77 (30.9)	19 (52.8)	17 (33.3)	15 (30.6)	15 (31.9)	11 (16.7)
No	140 (56.2)	15 (41.7)	21 (41.2)	32 (65.3)	29 (61.7)	43 (65.2)
Don't Know	32 (12.9)	2 (5.6)	13 (25.5)	2 (4.1)	3 (6.4)	12 (18.2)
N	249	36	51	49	47	66
Discharge card available						
Yes	11 (14)	2 (11)	0 (0)	5 (33)	1 (7)	3 (27)
Birth weight either mother recall or discharge card						
LBW	23 (30)	2 (11)	5 (29)	4 (27)	5 (33)	7 (64)
Normal	54 (70)	17 (89)	12 (71)	11 (73)	10 (67)	4 (36)
N	77	19	17	15	15	11
Baby size						
Larger than average	9 (3.6)	1 (2.8)	5 (9.8)	1 (2.0)	1 (2.1)	1 (1.5)
Average	181 (72.7)	31 (86.1)	31 (60.8)	39 (79.6)	35 (74.5)	45 (68.2)
Smaller than average	39 (15.7)	3 (8.3)	12 (23.5)	4 (8.2)	5 (10.6)	15 (22.7)
Very small	16 (6.4)	1 (2.8)	3 (5.9)	2 (4.1)	5 (10.6)	5 (7.6)
Don't Know	4 (1.6)	0 (0.0)	0 (0.0)	3 (6.1)	1 (2.1)	0 (0.0)
N	249	36	51	49	47	66

Gestational age at birth

Majority i.e. 85.9% of the study population had their babies born at term (completed 9 months) with 80% having gestational age between 37 weeks + 0 days to 41 weeks + 6 days. Substantial proportion of babies had their cord cut with scissor (43.8%) or blade (44.2%).

Table 7. 2 – Percent distribution of infants by receiving postnatal care at birth

Characteristics	Overall	Union Councils				
		Johi Town 1	Johi Town 2	Kamal Khan	Peer Mashaikh	Johi UC
Gestational age at birth						
Completed 9 months	214 (85.9)	36 (100.0)	35 (68.6)	41 (83.7)	45 (95.7)	57 (86.4)
Not completed	33 (13.3)	0 (0.0)	16 (31.4)	6 (12.2)	2 (4.3)	9 (13.6)
Don't Know /don't remember	2 (0.8)	0 (0.0)	0 (0.0)	2 (4.1)	0 (0.0)	0 (0.0)
N	249	36	51	49	47	66
If not completed, age at delivery						
28weeks+0 day – 30weeks+6day	3 (9)		0 (0)	1 (13)	0 (0)	2 (22)
31weeks+0 day – 33weeks+6day	3 (9)		0 (0)	0 (0)	2 (100)	1 (11)
34weeks+0 day – 36weeks+6day	1 (3)		1 (6)	0 (0)	0 (0)	0 (0)
37weeks+0 day – 41weeks+6day	28 (80)		15 (94)	7 (88)	0 (0)	6 (67)
N	35	0	16	8	2	9

Umbilical cord care

Majority mentioned that umbilical cord of their baby was cut by blade (44.2%) followed by scissors (43.8).

Table 7. 3 – Percent distribution of infants by receiving postnatal care at birth

Characteristics	Overall	Union Councils				
		Johi Town 1	Johi Town 2	Kamal Khan	Peer Mashaikh	Johi UC
Cutting the cord through;						
Knife	2 (0.8)	1 (2.8)	0 (0.0)	0 (0.0)	1 (2.1)	0 (0.0)
Scissors	109 (43.8)	18 (50.0)	23 (45.1)	19 (38.8)	18 (38.3)	31 (47.0)
Thread	1 (0.4)	0 (0.0)	0 (0.0)	1 (2.0)	0 (0.0)	0 (0.0)
Blade	110 (44.2)	16 (44.4)	14 (27.5)	26 (53.1)	28 (59.6)	26 (39.4)
Other	27 (10.8)	1 (2.8)	14 (27.5)	3 (6.1)	0 (0.0)	9 (13.6)
Something applied on cord						
Yes	240 (96.4)	35 (97.2)	48 (94.1)	45 (91.8)	47 (100.0)	65 (98.5)
No	7 (2.8)	1 (2.8)	3 (5.9)	2 (4.1)	0 (0.0)	1 (1.5)
Don't Know /don't remember	2 (0.8)	0 (0.0)	0 (0.0)	2 (4.1)	0 (0.0)	0 (0.0)
n	249	36	51	49	47	66

Furthermore, vast majority (96.4%) of the mothers were of the view that something was applied to the cord after it was cut and until it fell off.

Immediate care

Baby cried at birth:

The data also showed that majority i.e. 83.9% of the babies cried immediately after birth. Although those who did not cry at birth were either stimulated (65%), provided Ambu bagging (19%) or given mouth to mouth resuscitation (3%).

Table 7. 4 – Percent distribution of infants by crying immediately after birth

Characteristics	Overall	Union Councils				
		Johi Town 1	Johi Town 2	Kamal Khan	Peer Mashaikh	Johi UC
Baby cry immediately after birth						
Yes	209 (83.9)	34 (94.4)	40 (78.4)	38 (77.6)	40 (85.1)	57 (86.4)
No	37 (14.9)	2 (5.6)	10 (19.6)	9 (18.4)	7 (14.9)	9 (13.6)
Don't Know /don't remember	3 (1.2)	0 (0.0)	1 (2.0)	2 (4.1)	0 (0.0)	0 (0.0)
N	249	36	51	49	47	66
If no, what was done further						
Stimulation	24 (65)	1 (50)	8 (80)	4 (44)	6 (86)	5 (56)
Mouth to mouth (resuscitation)	1 (3)	0 (0)	0 (0)	1 (11)	0 (0)	0 (0)
Ambu bagging	7 (19)	1 (50)	2 (20)	2 (22)	1 (14)	1 (11)
Other (specify)	5 (14)	0 (0)	0 (0)	2 (22)	0 (0)	3 (33)
n	37	2	10	9	7	9

Baby got cleaned or bathed after birth:

In addition to this, vast majority i.e. 95.2% of the newborn babies were dried/cleaned by the person who conducted or assisted the delivery. Out of these, 67.1% were given their first bath after a few days of their birth, 25.7% were bathed within hours, 2.4% were given bath immediately/less than one hour and 1.6% were never given bath (Table 7.5).

Table 7. 5 – Percent distribution of infants by crying immediately after birth

Characteristics	Overall	Union Councils				
		Johi Town 1	Johi Town 2	Kamal Khan	Peer Mashaikh	Johi UC
Baby got dried/cleaned						
Yes	237 (95.2)	35 (97.2)	48 (94.1)	43 (87.8)	46 (97.9)	65 (98.5)
No	8 (3.2)	1 (2.8)	1 (2.0)	4 (8.2)	1 (2.1)	1 (1.5)
Don't Know /don't remember	4 (1.6)	0 (0.0)	2 (3.9)	2 (4.1)	0 (0.0)	0 (0.0)
N	249	36	51	49	47	66
Baby got bathed for the first time						
Immediately/less than 1 hour	6 (2.4)	0 (0.0)	0 (0.0)	5 (10.2)	1 (2.1)	0 (0.0)
Hour	64 (25.7)	4 (11.1)	9 (17.6)	9 (18.4)	6 (12.8)	36 (54.5)
Days	167 (67.1)	31 (86.1)	38 (74.5)	30 (61.2)	39 (83.0)	29 (43.9)
Never bathed	4 (1.6)	1 (2.8)	1 (2.0)	2 (4.1)	0 (0.0)	0 (0.0)
Don't Know / don't remember	8 (3.2)	0 (0.0)	3 (5.9)	3 (6.1)	1 (2.1)	1 (1.5)
n	249	36	51	49	47	66

Practicing Kangro Mother Care (KMC)

Moreover, 31.7% of the mothers were asked by the health care provider to put the baby on their bare (naked) chest for skin to skin contact and 92% placed them on their bare chest when the baby was naked.

Table 7. 6 – Percent distribution of infants by receiving KMC.

Characteristics	Overall	Union Councils				
		Johi Town 1	Johi Town 2	Kamal Khan	Peer Mashaikh	Johi UC
Mothers were asked by HCPs to put on bare chest						
Yes	79 (31.7)	12 (33.3)	13 (25.5)	21 (42.9)	9 (19.1)	24 (36.4)
No	160 (64.3)	22 (61.1)	35 (68.6)	25 (51.0)	38 (80.9)	40 (60.6)
Don't Know /don't remember	10 (4.0)	2 (5.6)	3 (5.9)	3 (6.1)	0 (0.0)	2 (3.0)
N	249	36	51	49	47	66
Baby was naked when placed on the bare skin of mother						
Yes	73 (92)	10 (83)	11 (85)	21 (100)	7 (78)	24 (100)
No	3 (4)	0 (0)	2 (15)	0 (0)	1 (11)	0 (0)
Don't Know /don't remember	3 (4)	2 (17)	0 (0)	0 (0)	1 (11)	0 (0)
n	79	12	13	21	9	24

7.2 Diarrhea

The information on diarrhoea as collected from mothers by asking mothers whether their child had any episode of diarrhoea in the 2 weeks before the survey. If the mother answered positively, she was further asked what she did to treat the diarrhoea.

41.6% mother told that one of their children had suffered through diarrhea and 18.8% reported blood in stool as well.

Table 7. 7 – Percent distribution of respondents by episode of diarrhea to their children

Characteristics	Overall	Union Councils				
		Johi Town 1	Johi Town 2	Kamal Khan	Peer Mashaikh	Johi UC
Under >5 years child had diarrhea						
Yes	204 (41.6)	28 (32.2)	55 (60.4)	27 (34.6)	32 (34.0)	62 (44.3)
No	285 (58.2)	59 (67.8)	36 (39.6)	51 (65.4)	61 (64.9)	78 (55.7)
Don't Know /don't remember	1 (0.2)	0 (0.0)	0 (0.0)	0 (0.0)	1 (1.1)	0 (0.0)
N	490	87	91	78	94	140
Child had Blood in stool in last 2 weeks						
Yes	18 (8.8)	1 (3.6)	4 (7.3)	1 (3.7)	4 (12.5)	8 (12.9)
No	186 (91.2)	27 (96.4)	51 (92.7)	26 (96.3)	28 (87.5)	54 (87.1)
n	204	28	55	27	32	62

All 204 children who suffered from diarrhea seek advice or received some sort of treatment to manage it. 56.4% sought treatment from private health facilities, 24.5% visited to public health facilities and around 13.2% did the self medication. Breakdown by source of treatment is mentioned in Table 7.9.

Table 7. 8 – Percent distribution of children by seeking treatment for diarrhea

Characteristics	Overall	Union Councils				
		Johi Town 1	Johi Town 2	Kamal Khan	Peer Mashaikh	Johi UC
Source of treatment						
Govt hospital	48 (23.5)	6 (21.4)	9 (16.4)	9 (33.3)	12 (37.5)	12 (19.4)
BHU/FWC	2 (1.0)	0 (0.0)	0 (0.0)	0 (0.0)	2 (6.3)	0 (0.0)
Pvt Hospital	42 (20.6)	10 (35.7)	9 (16.4)	4 (14.8)	8 (25.0)	11 (17.7)
Clinic	43 (21.1)	1 (3.6)	19 (34.5)	3 (11.1)	3 (9.4)	17 (27.4)
Pvt Doctor	30 (14.7)	7 (25.0)	6 (10.9)	2 (7.4)	3 (9.4)	12 (19.4)
Shop	4 (2.0)	0 (0.0)	1 (1.8)	1 (3.7)	1 (3.1)	1 (1.6)
Self-Medication	27 (13.2)	3 (10.7)	6 (10.9)	7 (25.9)	3 (9.4)	8 (12.9)
Other	8 (3.9)	1 (3.6)	5 (9.1)	1 (3.7)	0 (0.0)	1 (1.6)
n	204	28	55	27	32	62

Mortality

Maternal deaths for women age 15 to 49 years were recorded for last three years before the survey and children deaths of age 0 to 5 years occurred in last one year were recorded, during the survey from all 736 study households.

8.1 Maternal deaths

Eight maternal deaths were reported during the survey. Of these, 03 deaths occurred during labor and delivery, 01 due to cancer and remaining 04 had some other reasons.

Table 8. 1 – Number of maternal deaths of women age 15 to 49 years in last three years

Characteristics	Overall	Union Councils				
		Johi Town 1	Johi Town 2	Kamal Khan	Peer Mashaikh	Johi UC
Maternal death of age 15-49 years in last three years						
Yes	8 (1.1)	2 (1.5)	0 (0.0)	1 (0.8)	2 (1.4)	3 (1.4)
No	728 (98.9)	128 (98.5)	137 (100.0)	118 (99.2)	138 (98.6)	207 (98.6)
N	736	130	137	119	140	210
Occurring of death						
During Labor Or delivery	3 (38)	0 (0)	0	1 (100)	1 (50)	1 (33)
Any other reasons	5 (63)	2 (100)	0	0 (0)	1 (50)	2 (67)
N	8	2	0	1	2	3
Maternal death reason:						
Obstructed Labor	1 (33)	0	0	1 (100)	0 (0)	0 (0)
Placental disorder	1 (33)	0	0	0 (0)	1 (100)	0 (0)
Any Other Reason	1 (33)	0	0	0 (0)	0 (0)	1 (100)
N	3	0	0	1	1	1
Any other reason						
Cancer	1 (20)	0 (0)	0	0	1 (100)	0 (0)
Other	4 (80)	2 (100)	0	0	0 (0)	2 (100)
N	5	2	0	0	1	2

8.2 Child deaths

Twenty four deaths were reported during the survey. There were total 18 infant deaths. Of these, 13 were neonatal deaths (Days 0-28) and 05 were postneonatal deaths (Days 29-365) where as 06 deaths of children 1 to under 5 years were recorded. Hence there were total 24 deaths of children under five years.

Table 8. 2 – Number of child deaths of age under five years in last one years

Characteristics	Overall	Union Councils				
		Johi Town 1	Johi Town 2	Kamal Khan	Peer Mashaikh	Johi UC
Live births	279	39	54	54	53	79
Number of deaths						
END (0-7 days)	12	3	2	0	2	5
LND (8-28 days)	1	0	0	0	1	0
ND (0-28 days)	13	3	2	0	3	5
PND (29-364 days)	5	1	0	1	0	3
Infant deaths (under 1 year)	18	4	2	1	3	8
Child death (1 year to under 5 years)	6	0	1	2	1	2
Under 5 years deaths	24	4	3	3	4	10
Rates / 1000 live births						
ENMR	43.0	76.9	37.0	0.0	37.7	63.3
NMR	46.6	76.9	37.0	0.0	56.6	63.3
IMR	64.5	102.6	37.0	18.5	56.6	101.3
U5 Mortality Rate	86.0	102.6	55.6	55.6	75.5	126.6

DISCUSSION

The socioeconomic status of the target population reflects the standard of living in target areas. An encouraging finding is that most (88.6%) of the participants are owners of the houses they live in. Unfortunately, a majority (73.8%) of houses only have one room for the entire family to live in.

In terms of water and sanitation, three-quarters of households used an improved source of water for drinking purpose, over a third of households had a source of drinking water available within their household premises and 22.4% households treated the water through various methods to make it safe for drinking. However, a very small percentage (2.6%) used an appropriate treatment method. As per the most recent PDHS (2017-2018), 95% of people in Pakistan having access to an improved drinking source, but only 7% of households use appropriate treatment practices (15% in urban areas vs. 2% in rural areas) hinting at a need for more education/improvement in rural areas in the context of water sanitation, which correspond with our findings in rural settlements in Dadu (8). In fact, there has been a slight decline in the usage of appropriate water treatment practices, from 8% in 2012-13 to 7% in 2017-18. Based on our findings, access to improved sources of drinking water in our target study area is far below then the national average, but in line with rates from other rural areas, indicating an incomplete coverage of water supply in underprivileged and rural areas.

Although there have been substantial improvements in the use of improved sanitation facilities in the country in the past five years, 20% of households still continue to have no toilet facilities in rural areas of Pakistan according to the latest PDHS, which is similar to our study findings where 23.5% of households did not have a toilet facility (8).

The WRA included in our study sample had a median age of 25 years, with most belonging to the 15-19-year age category. Over two-thirds of them were uneducated (67%) and had no occupation (68%), with their education status varying across the union councils. However, the maximum achieved education level among participants was at the primary level. Since most of the target population is uneducated or undereducated, a basis was provided to implement community-based interventions and cater to adolescents at households. Community-based interventions have the potential to create awareness and educate women, who can then potentially bring about positive deviance by their own improved behaviors within their households and communities (9, 10). This can enable them to find better solutions to improved MNCAH behaviors for themselves and their peers, despite facing similar challenges and having no extra resources. For successful implementation, it is equally necessary for field teams to build rapport with these women and assist them in developing their networks and confidence.

Menstruation is a natural phenomenon which is not commonly discussed among our target population, or in society generally. Our study found that almost all (94.8%) respondents were of the opinion that young girls face problems at the onset of menarche, including feelings of anxiety and stress, inability to share their problems with anyone likely due to fear of what is

happening, being unaware of the menstruation process before they hit puberty and not knowing what to do. Similar results were presented in studies, mostly conducted in developed countries, that menarche and menstrual symptoms are associated with poor mental health in young adults, resulting in increased anxiety and depression (11, 12). It also creates feelings of disgust and shame in some (13). These findings have been supported by some studies conducted in India and Nigeria (4, 14). When respondents were asked for possible solutions for adolescent girls who face problems at menarche, most of them (85.9%) said that girls should be aware of menstruation before its onset. Most women (84.9%) were also in favour of providing information about menstruation to young girls before they experience their first cycle, which provides a hope of acceptance and a positive response towards our planned intervention to create awareness about MHM among adolescent girls and women in communities through awareness group sessions.

Research has explored that a menstruating woman faces many restrictions with specific domestic, religious and social activities due to negative perceptions about menstruation (13). In our study, 74.6% women could not participate in society or carry on with their day to day lives by restricting themselves from religious, social, educational and personal hygiene related activities. Many women avoided religious activities in person as well as gatherings, some skipped work outside their houses and a small percentage of adolescent girls skipped schools stopped talking to boys during menstruation. With regard to take part in household chores, 6.5% women did not cook food or perform housekeeping, 1.6% did not touch stored food or food utensils and a few women stopped exercising too. Our findings have also been supported by studies conducted in India and Nigeria (4, 14).

We also asked women about their practices of cleaning and bathing during their menstrual cycle, to which almost half the respondents washed themselves with soap and water while half only used water. Most women (69.3%) bathed daily, 13.6% bathed the second day of their cycle and 16.7% bathed on the third day or after their cycle was over. Various studies conducted throughout Asia have specifically reported varying cultural beliefs and practices related to menstruation and avoiding bathing due to a belief that bathing was unhealthy; it either prolongs the bleeding period, stops menstrual bleeding, or causes macerations of the skin. However, almost all women in the same study practiced thorough washing of their perineal area and used sanitary pads, which was not likely among our participants (15). In a South Indian study, approximately half the women restrained from showering during menstruation and avoided perineal care. The reported reasons for this abstention were poor habits of cleanliness, and the belief that showers increase pain intensity and would lead to discontinuation of menstrual flow (16).

We found that 45.9% women were avoiding the intake of certain foods during menstruation, in which 23.5% respondents were affirmed for affects of certain foods on menstruation which they assume hot or cold and so to alter respondent's behavior to eat them during this period. According to a literature review report by Khan (2000), adolescents and their mothers believed that eating foods considered to be too hot (dry fruits, liver, and eggs) or too cold (ice creams, yogurt, and green leafy vegetables) should be avoided during the menstrual period. Many foods

avoided are rich in iron and therefore iron deficiency anemia has been reported as a major health concern amongst adolescent females (17).

Majority of women never received informal or formal information about menstrual hygiene management. Mothers mainly shared information on menstruation with their daughters. Education is the key to building knowledge of adolescent girls if they can be made aware before the onset of menstruation. Unfortunately, only 0.4% of adolescent girls were informed about menstruation by their school teacher.

According to a study conducted in Pakistan, the affordability of sanitary pads is not the only reason for its under usage, rather, females are more comfortable with either using a cloth or homemade pads. It was found that 82% of Punjabi and 65% of Sindhi women preferred to use homemade pads, whereas 15% of Sindhi females do not use any material, but instead changed their trousers frequently to absorb bleeding (18). Our study results show that 39.9% of women reported non-use of any material during menstruation for absorption of blood. Among the respondents who used an absorbent, 28% used disposable sanitary material which included commercially available pads, 14.8% used old clothes, 10.7% used new clothes and the rest used cotton and wool. Around 30.9% of respondents used reusable material including old cloths/towel (23.4%), reusable pads (6.4%) and some other type of material (1.1%). Most of disposable material users (pads, clothes and cotton) 41.7% disposed off the used material in dust bins. However, 26.2% users threw it in fields and bushes. Most users (87.2%) of reusable pad and clothes used to wash them with water only. Astoundingly, 7.3% users did not wash their material and reused it. Most users (41.8%) dried the reusable material in sun outside. Such practices were found in other our south asians neighbouring countries. As a study conducted in India showed that 42.6% of respondents reused cloths for absorption of bleeding. However, the cloth needs to be hygienically washed and properly dried under sun to avoid bacterial contamination (19). Information collected from a study conducted in Bangladesh showed that 80% females reused the same cloth for absorption of bleeding, but among them only 42% dried the cloth in sunlight and the rest dried them in hiding (20).

Users of disposable absorbent (clothes and pads) were asked how frequently they changed the material and why. Most respondents (48.3%) changed their disposable absorbent twice a day followed by 29% and 21.1% who did it thrice a day or more and once a day, respectively. Most women changed the absorbent to maintain their hygiene and others did it due to heavy bleeding. Respondents were further asked if they could afford buying commercially available disposable pads. Most respondents were unable to afford them.

At the provincial level, Sindh has seen increased disparities between urban and rural settings. Reviewing the situation of District Dadu through MICS, estimates of basic demographic and health indicators show the dismal health situation in District Dadu. However MICS results dates back to 2014 and results of recently conducted MICS for Sindh, are awaited. Available findings of MICS showed that around 21.7% mothers had 4+ ANC visits, 50.2% of births were assisted by a skilled provider, 48.8% were delivered in a health facility and 19.7% used contraception (21). This status of health indicators in District Dadu in our findings is below the provincial and

national health indicators. As per our survey, 47.6% had four or more ANC visits during their last pregnancy, 56.4% deliveries took place at a facility while 55.1% deliveries were assisted by skilled birth attendants. With regard to the family planning, approximately 43.9% women were current users of any method of family planning and 31.6% were using a modern method of contraception.

CONCLUSION

For better understanding of community on improved health behaviors, we propose to initiate large scale awareness raising activities. An active role of public and private partners is mandatory on menstrual hygiene management through formal education in schools and communication through health workers at the household level. Sensitization and advocacy activities will be key to break the taboo around menstruation.

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