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Survey Spotlight

Fostering Community Resilience: A Multi-dimensional Community Health Analysis and Evaluation in Aurahi Rural Municipality, Nepal

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ABSTRACT

INTRODUCTION: Community health diagnosis is a crucial process for assessing the health status, identifying problems, available resources, and setting priorities for interventions within a community. This comprehensive assessment serves as a valuable data repository, guides program evaluation, policy formulation, and ensures community participation. The specific objectives of this study were to define health problems, identify resources, set planning priorities, implement and evaluate health actions, identify vulnerabilities, and explore social and environmental linkages to health in Aurahi Rural Municipality. **MATERIALS AND METHODS:** A cross-sectional study using quantitative and qualitative methods was conducted in May-June 2022 by medical students across Aurahi's 6 wards. Systematic random sampling selected 835 households. Data tools included questionnaires, checklists, anthropometry, and guides for interviews/focus groups. Primary data came from household surveys, interviews, focus groups, and observations. **RESULTS:** The population exhibited an expansive age structure with the largest 20-24 year group. Agriculture was the main occupation (43%). Major health problems were diarrhoea (92%), pneumonia (54%), tuberculosis (80%), hypertension (57%), anaemia (41%), scabies (67%), COVID-19 (98% knowledge). Maternal health challenges included adolescent marriages (50% at 15-18 years), home deliveries (46%), low antenatal care visits (<4 times, 33%), inadequate breastfeeding practices (45% not providing colostrum). Child malnutrition was 6% moderately malnourished, 3% severely malnourished. Family planning awareness was 60%, utilization 37%. **CONCLUSION:** Aurahi Municipality confronts critical sanitation, nutrition, maternal/child health, and family planning challenges necessitating community-focused, multi-sectoral actions. Initiatives promoting handwashing/ORS, school health education, and adolescent health awareness were initial steps, but sustained efforts through engagement and collaboration are crucial for lasting improvements in this rural population's well-being.

Keywords: Community health diagnosis, maternal and child health, nutrition

INTRODUCTION

Background

As per WHO, community health diagnosis is a detailed assessment of citizen's health and influencing factors, guiding interventions and actions. Its practical relevance in healthcare planning lies in serving as a data reference, presenting a holistic view of the community, identifying priority areas for intervention, guiding resource allocation and work plans, fostering collaboration, and forming the basis for evaluation indicators.

To start a community health diagnosis project, a committee with stakeholders is formed, resources are assessed, and the scope is defined. Quantitative and qualitative data are gathered using surveys and reliable methods. Statistical tools are used to analyze and for comparing local and district information. The diagnosis should cover community health status, determinants, and potential for healthy city development. Lastly, communicate findings are projected through presentations, press releases, and thematic events to policymakers, health professionals, and the public [1].

Rationale

Community Health Diagnosis is a crucial process that uncovers a community's health needs and challenges, guiding interventions and solutions based on a thorough assessment of determinants and resources. It serves as a valuable data repository for the Department of Public Health, aiding in program evaluation and policy formulation. Additionally, it provides practical exposure, fostering decision-making skills, ethical considerations, and community participation for overall well-being. This

study's specific objectives include defining health problems, identifying resources, setting planning priorities, ensuring community participation, implementing and evaluating health actions, identifying vulnerabilities, and exploring social and environmental linkages.

In essence, this comprehensive study seeks to empower the community by providing insights into their health landscape, setting the stage for targeted and impactful interventions that address the unique needs of the population.

MATERIALS AND METHODS

Following the MBBS curriculum, the 16th batch of Janaki Medical College, conducted a thorough four-weeks Community Health Diagnosis from May 16, 2022, to June 12, 2022. This initiative was executed under the careful supervision and backing of Community medicine department. Our batch was mentored by esteemed faculty members and received valuable assistance from dedicated female community health volunteers (FCHVs).

Study design and setting

An intricately designed descriptive cross-sectional study, incorporating a blend of qualitative and quantitative methodologies, was implemented for this study endeavor. Our investigation homed in on Aurahi rural municipality (5 wards namely: Deuri, Parwaha, Aurahi, and Harusaha) situated in the heart of Dhanusha district of Madhesh Pradesh. The meticulous selection of the study population was calibrated to mirror the demographic composition of Aurahi municipality. Maithili was the most spoken language in the area covering 95% of the population.

CHD site profile

The area under consideration was the Hashpurkathpulla municipality to the north, Dhanauji rural municipality to the south, Bideha municipality to the east, and Janakpur sub-metropolitan to the west. The total area is 25.56 sq. km, with coordinates ranging from 85.98^0 N to 86.90^0 N latitude and 26.70^0 E to 26.90^0 E longitude. The altitude is 44 meters above sea level. The Community Health Diagnosis (CHD) site focused on Aurahi rural municipality, consisting of 6 wards and 14 villages. The population, based on the voter's ID list from the rural municipality in 2079, was 26,860, and there were 4,846 families according
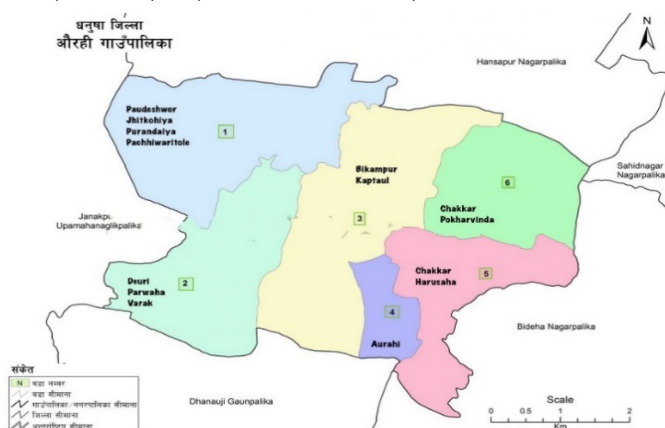
to the Preliminary CBS Report for the 2021 census [2]. Fig-1 CHD site

Participants, sample size, and sampling technique

The sample size for households (HH) in each municipality was calculated with consideration of the morbidity status of the respective areas. From the pool of 4,846 households, we selected a representative 20% using a simple random sampling technique, a total of 969. However, we were only able to visit 835 households. The sampling frame for Aurahi rural municipality was meticulously determined, comprising of approximately 835 households, primarily identified by the name of the family head.

Sampling unit

The household sample which comprised of individuals aged 18 years and above, were considered as participants for the interviews. Moreover, mothers with under-five children from the sampled households were included in the survey for pertinent insights. Reproductive age married couples within the sample households were specifically addressed for family planning discussions, and under-five children were assessed for both nutritional measurements and knowledge of immunization. The survey extended its scope to cover various aspects such as food, quality of living, and adolescent health.

Unit of analysis

Our study participants were drawn from diverse groups, including household heads, mothers of under-five children, and married women of reproductive age. To ensure a thorough representation, we visited each ward within the municipality, employing a systematic random sampling method to select households. The data collection tools employed encompassed pre-tested questionnaires, an observation checklist, a weighing machine (for both children and adults), a measuring tape and a Shakir's tape. The survey spanned two carefully selected wards, with detailed general information presented in the table 1. The household survey questionnaire covered a wide array of topics, including demographic profiles, educational status, occupation, morbidity, health and sanitation, MCH-related parameters, and family planning. Following data collection, comprehensive compilation, and analysis were conducted using IBM SPSS Statistics 29.0, incorporating both observational and cross-sectional study methodologies.

Data collection procedure and study variables

A cohort of 50 students was organized into two distinct groups to gather data from Aurahi rural municipality. The data collection process involved a comprehensive approach, incorporating various methods for primary data acquisition. These methods encompassed social mapping, interviews with Female Community Health Volunteers (FCHVs), observations, anthropometric measurements, self-administered questionnaires, Focus Group Discussions (FGDs), and both formal and informal meetings.

For the secondary data component, information was sourced from the municipality office and Loharpatti health post. Quantitative data was obtained through face-to-face interviews, focusing on collecting detailed and numerical information. Anthropometric measurements were undertaken to assess nutritional status, and household

Table-1	Tools and Techniques	
TECHNIQUE	**TOOLS**	**STUDY GROUP**
QUANTITATIVE METHODS		
Health survey	Questionnaire	Household Head Mothers of under 5 children School children Pregnant women Eligible couples
Anthropometry	Weighing machine Tailor's tape Shakir's tape	Under 5 years of Children
QUALITATIVE METHODS		
Observation	Observation Checklist	Household
In-depth interview (IDI)	IDI guideline	Female community health worker (FCHV)
Focus group discussion (FGD)	FGD guideline	Adolescents

Fig-2| Population by 5-year age group and sex(Municipality) from CBS
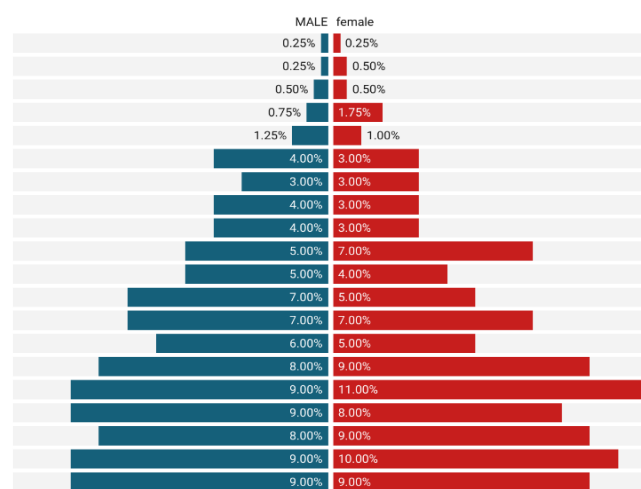
Fig-3|Population by 5-year age group and sex (Sample)

observations were conducted to gain insights into living conditions.

Qualitative data, crucial for a holistic understanding, was gathered through FGDs and In-Depth Interviews (IDIs) conducted among diverse groups within the community.

In the analysis phase, the unit of analysis comprised of household heads, mothers of under-five children, and married women of reproductive age. To maintain rigor and consistency, selected tools and techniques were used as outlined in Table 1, offering a general overview of the instruments employed in the survey. This inclusive and meticulous approach ensured a comprehensive understanding of the rural community's socio-economic and health dynamics.

Ethical Consideration

A separate ethical clearance for this study was not acquired because this study was conducted as part of the community health diagnosis program within the MBBS curriculum, which is mandatory for every batch of medical students. This study was carried out as per the guidelines of the Declaration of Helsinki and was approved by the Department of Community medicine, Janaki Medical College, Ramdaiya, Janakpur. Informed consent was obtained from each respondent after explaining the objectives and methods of the study and anonymity was maintained. In case of children, consent was taken from their legal guardians. There was no potential harm to participants.
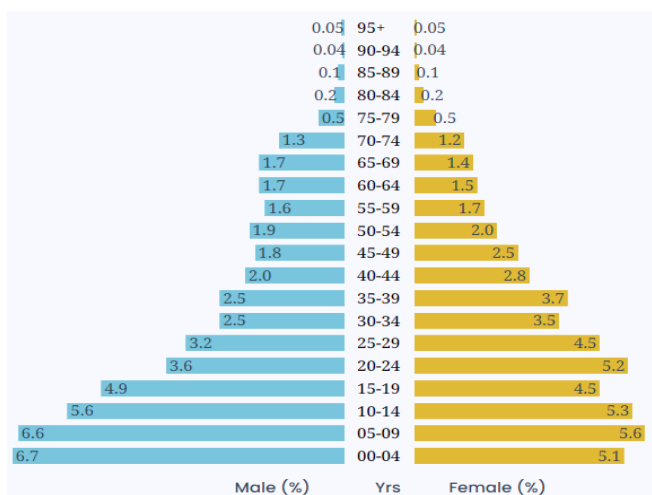
Table 2	Socio-economic status of participants at Aurahi rural municipality (n= 835)	
Characteristics	**Number (%)**
Education level	
Primary qualification	334 (40)
Secondary qualification	175 (21)
Higher education	76 (9)
Illiterate	250 (30)
Main source of income	
Agriculture	359 (43)
Foreign employment	183 (22)
Business	75 (26)
Labour	75 (9)
Religion	
Hindu	793 (95)
Islam	42 (5)
Type of family	
Nuclear	442 (53)
Joint/	393 (47)

RESULTS AND DISCUSSION

The demographic structure in figure 2 and figure 3 revealed in our sample survey aligns with the population pyramid of Aurahi rural municipality provided by the Central Bureau of Statistics (CBS), Nepal, [2] both indicating an expansive nature. The most prominent age group in the municipality comprised of individuals aged 20 to 24 years, (20%) of the total population. The least populated age group was 95+ years, followed by 90-94 years.

The overall literacy rate was 70% which is more compared to national statistics (about 63.8%), agriculture was the main source of income (55.1%) which is more compared to the sample (43%), Hindu was the most followed religion (90.1%) which is low in compared to sample and Maithili was the most spoken language (95%), which was higher compared to National Population and Housing Census(NPHC)-2021 (80.6%) [2].

Table 3 |Environmental status of Aurahi rural municipality (n=835)	
Types of toilets	**Number (%)**
Modern	100 (12)
Pit holes	167 (20)
Septic	568 (68)
Water waste management	
Managed	676 (81)
Unmanaged	159 (19)
Solid waste management	
Managed	676 (81)
Unmanaged	159 (19)
Source of water	
Hand pump	793 (95)
Tap water	42 (5)
Purification of Water	
Filtering	25 (3)
Boiling	8 (1)
None	802 (96)

Type of materials used in House			
Type	**Pakkah**	**Semi-Pakkah**	**Kaccha**
	Number (%)	Number (%)	Number (%)
House	300 (36)	117 (14)	418 (50)
Floor	576 (69)	167 (20)	284 (11)
Wall	409 (49)	150 (18)	276 (33)
Roof	484 (58)	301 (36)	50 (6)

Types of Kitchens	
Inside House	702 (84)
Outside House	133 (16)
Type of chulo used	
Traditional	284 (34)
LPG	467 (56)
Both	84 (10)

Table 4	Food Habits of Aurahi rural municipality (n=835)	
Major Crops/ Staple food	**Number (%)**
Rice	668 (80)
Wheat	159 (19)
Others	8 (1)
Food Habit	
Vegetarian	75 (9)
Non-Vegeterian	760 (91)

Frequency of Food Materials Intake				
Food Materials	**Daily**	**Once A Week**	**Twice A Week**	**Once a Month**
	Number (%)	Number (%)	Number (%)	Number (%)
Green leafy Vegetables	501 (60)	83 (10)	234 (28)	17 (2)
Fruits Intake	100 (12)	225 (27)	42 (5)	468 (56)
Milk Consumption	626 (75)	75 (9)	92 (11)	42 (5)
Egg, Meat	17 (2)	342 (41)	326 (39)	150 (18)

Daily Water Consumption	Number (%)
1000ml-3000ml	434 (52)
3000ml-6000ml	401 (48)
Knowledge of a balanced diet	
Knowledgeable	367 (44)
Non-Knowledgeable	468 (56)

Family structures were found as 53% Nuclear and 47% Joint/extended families.

In Aurahi, among 835 individuals, sanitation practices varied. Waste management (including kitchen garden, sewage, dumping, and incineration) was 81%, and 19% was unmanaged. Water sources were mainly hand pumps (95%), and purification practices were limited, with 3% filtering and 1% boiling, leaving 96% consuming water without purification. Most of the houses were in Pakkah (table 3).

In contrast to the NPHC-2021 data, our sample showed higher usage of septic toilets (68%), compared to the NPHC-2021's 34.4%. However, pit holes were less prevalent in our sample at 20%, contrasting with the NPHC-2021's 48.07%. Regarding drinking water sources, our sample had a higher reliance on handpumps at 95%, whereas the NPHC-2021 reported 86.5%. Tap water usage was lower in our sample at 5%, while the NPHC-2021 indicated 11.80%. In terms of cooking methods, our sample exhibited a lower percentage of traditional methods at 34%, contrasting with

the NPHC-2021's 46%. The use of LPG for cooking was higher in the NPHC-2021 data at 56%, compared to our sample's 34% [2].

Table 5	Personal Hygiene(n=835)	Number (%)
The practice of brushing teeth		826 (99)
Brushes teeth with		
• Toothpaste		651 (78)
• Daitwan		167 (20)
• Both		17 (2)
Frequency of brushing teeth		
• Once a day		651 (78)
• Twice a day		176 (21)
• Doesn't brush		8 (1)
Washing hands before a meal		244 (99)
Washing hands after using the toilet		818 (98)
The practice of bathing		826 (99)
Location of bathing		
• Bathroom		367 (44)
• Hand pump		468 (56)
The practice of nail trimming		826 (99)

The primary staple food consumed was rice, accounting for 80%, while wheat made up 19%. Majority of the population (91%), were identified as non-vegetarian. However, 56% did not know about balanced diet (table 4).

According to a study done in rural areas, 95% of people consumed green leafy vegetables and 85% consumed milk but our sample reported 60% and 75% respectively. 68% of people consumed approx. 2.5L of water which was higher compared to our sample of 52% [3].

In Aurahi municipality, among 835 residents, 99% practiced regular teeth brushing, 78% brushed once a day, 99% washed hands before meals (99%), and 44% used bathrooms (table 5).

According to the Annual Report 2078-79, 57.2% of deliveries occurred in institutional settings, surpassing the sample rate of 54%. Among non-institutional deliveries, 55% were under the supervision of Skilled Birth Attendants, aligning with our sample's rate of 55%. The report also highlights a commendable 83% vaccination rate for pregnant women with the TD vaccine, exceeding the sample rate of 63%. Furthermore, 48.8% of pregnant women attended ANC more than 4 times, almost aligning with our sample (42%) (table 6).

The average age of marriage was highest in 15-18 years age group, constituting 50%, which is slightly less compared

Table 6	Maternal Health Care(n=583)	Number (%)
Age of marriage (Years)		
13-15		146 (25)
15-18		292 (50)
18-21		122 (21)
>22		23 (4)
Age of 1st pregnancy (Years)		
<20 years		175 (30)
>20 years		410 (70)
Times of Pregnancy		
Once		68 (12)
Twice		140 (26)
Thrice		259 (47)
More than thrice		81 (15)
ANC Visit (n=548)		
≥ 4times		230 (42)
< 4 times or not visited at all		181 (33)
4 times		137 (25)
Reason for not Visiting ANC (n=130)		
Not considered Important		50 (39)
No Knowledge		47 (36)
Faraway Health Centre		9 (7)
No permission from Home		12 (9)
other reasons		12 (9)
Iron supplements		340 (62)
T.D Vaccine During Pregnancy		345 (63)
Location Of Delivery (n=548)		
Hospitals		294 (54)
Home		254 (46)
Help During Delivery (n=254)		
Family Members		114 (45)
Health workers		89 (35)
Trained Pregnancy Workers		51 (20)
Item for umblical incision (n=254)		
new blade		208 (82)
Scissors		46 (18)
Items for application on umbilical incision (n=254)		
Oil		69 (27)
Medicine/chlorhexidine		59 (23)
Ointment		81 (32)
Turmeric		10 (4)
Didn't use anything at all		35 (14)

to the National Survey's reported rate of 41.7% [3,4].

According to DHS-2022, 69% of the pregnant women were delivered by skilled health care providers which is more in comparison to the sample (55%). 95% used clean instruments for cord cutting which is more in the sample(85%) [5].

Table 7| Newborn Health Care (n=548)	
	Number (%)
Colostrum feeding	114 (45)
Reason for not feeding colostrum milk	
Not a tradition	163 (64)
Couldn't feed	33 (13)
Dirty Milk	58 (23)
Breast feeding time after birth	
As soon as possible	56 (22)
After an Hour	86 (34)
After a day	112 (44)
Exclusively breastfeeding	137 (54)
Amount of breastfeeding	
On Intervals	124 (49)
On Crying	109 (43)
At Free Time	21 (8)
Weaning	
Dairy Milk	282 (51)
Packaged Milk	47 (9)
None	219 (40)
Time of weaning	
<4 months	15 (6)
>6 months	186 (73)
4-6 months	15 (6)
Solid food fed	
Pudding	273 (50)
Sarvottam Pitho	150 (27)
As normal Adult	125 (23)
Knowledge of making sarvottam pitho	
Yes	94 (37)
No	114 (45)
Never Heard	46 (18)

Table 8| Knowledge, Attitude, and Practice of Common Disease by Participants (n=831)			
Diseases	Knowledge (Yes) Number (%)	Attitude (Positive) Number (%)	Practice (Yes) Number (%)
Worm Infestation	192 (23)	175 (21)	167 (20)
Diarrhea	751 (90)	659 (79)	768 (92)
Pneumonia	643 (77)	701 (84)	451 (54)
Asthma	659 (79)	709 (85)	659 (79)
Covid-19	818 (98)	609 (73)	818 (98)
Tuberculosis	684 (82)	768 (92)	668 (80)
HIV/AIDS	501 (60)	350 (42)	309 (370
Hypertension	785 (94)	659 (79)	476 (570
Anaemia	584 (70)	409 (49)	342 (41)
Scabies	726 (87)	568 (68)	559 (67)
Malaria	743 (89)	768 (92)	192 (23)
Kala-Azar	526 (63)	100 (12)	67 (8)
Diabetes	726 (87)	676 (81)	267 (32)
Hyperthyroidism	476 (57)	359 (43)	334 (40)

Fig-4 Pie chart on child immunization

Colostrum milk was fed by only 45% of the mothers and exclusive breastfeeding was practiced by 54% of the mothers. For weaning, 51% introduced dairy milk, and 64% of them started weaning after 6 months. Additionally, 27% fed sarvottam pitho (table 7).

In the Annual Report 2078-79, 35.5% of women started breastfeeding within 1 hour after delivery, more than the sample rate of 34%. However, exclusive breastfeeding was lower at 33.1% compared to the sample's 54%, and only 33.2% of children aged 6-8 months were on weaning, falling below the sample rate of 73%. These variations suggest opportunities for targeted interventions to improve breastfeeding practices and weaning patterns [4].
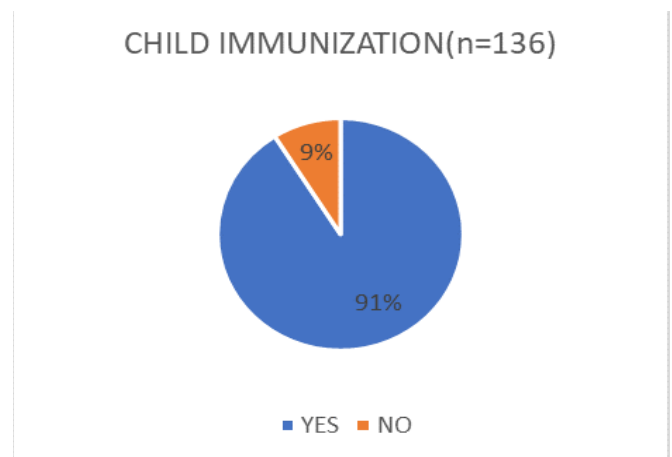
Among the sample population, 30% had worm infestation, 8% experienced Asthma, 28% had Scabies.

In the Annual Report 2078-79, in Madhesh Pradesh, Kala-Azar constituted 9%, which was higher than the sample rate of 5%. Diarrhea cases were 22%, significantly lower in the sample at 40%. Pneumonia accounted for 19%, slightly higher in the sample at 23%. TB represented 15%, notably higher in the sample at 2.5%. HIV/AIDS constituted 20%, with a higher sample rate of 1.80%. In the case of COVID-19 vaccination, 86% received a full dose, considerably higher than the sample rate of 34% [4].

In the Annual Report 2078-79, the incidence of anemia

Table 9|Nutritional status of under 5 children of Aurahi Rural Municipality (n=136)	
	Number (%)
MUAC	
Normal	128 (94)
Moderately acute malnutrition	5 (4)
Severe acute malnutrition	3 (2)
Weight for age	
Normal	124 (91)
Severely Acute Malnutrition (SAM)	4 (3)
Moderately Acute Malnutrition (MAM)	8 (6)

cases was reported at 23% and 39%, which notably exceeded the lower sample rate of 12% [3,5]. In a study on the prevalence of diabetes mellitus in Nepal, 18% of the participants were found to have diabetes, which is higher compared to the sample rate of 13% [7]. In a study conducted in Terai region of Nepal, the prevalence of malaria had decreased from 17% to 4%, indicating positive outcomes [8]. According to a survey, 27% of the population had thyroid dysfunction which is more compared to our sample(25%) [9]. 17% of the population had hypertension in rural areas of Madhesh Pradesh which is low compared to the sample(40%) [5].

In the Fig-4, Out of 136 children, 91% of them were Immunized with vaccines and 86% of the children's parents were aware of the schedule of immunization. 93% was the vaccination coverage of Madhesh Pradesh which

Table 10|Knowledge and practice regarding Family planning of Aurahi rural municipality (n=830)	
	Number (%)
Knowledge about family planning	498 (60)
Family planning used by respondents	307 (37)
Method of family planning (n=324)	
Permanent method	81 (25)
Temporary method	210 (65)
Natural	20 (6)
Both (Temporary and Permanent)	13 (4)
Reasons For No Family Planning(n=204)	
No Permission from the Family	67 (33)
Religious Reasons	16 (8)
Fear/Shyness	84 (41)
Not available	37 (18)
Services of Family Planning Received(n=308)	
Health Post	185 (60)
Hospital	3 (1)
Pharmacy	89 (29)
FCHV	31 (10)

aligns with the sample (91.0%) [4].

Out of 136 children, 94% MUAC was found to be normal, 4% were moderately acute malnourished, and 2% were severely acute malnourished (table 9).

Out of 136 children under 5 years old, 95% were normal (weight for age), 3% were severely acute malnourished, 3% were moderately acute malnourished based on the GOMEZ classification [10]

Among the 830 respondents, 60% demonstrated awareness of family planning, while 37% actively utilized family planning devices. Of the 308 couples receiving family planning services, 60% obtained them from health posts, 1% from hospitals, 29% from pharmacies, and 10% from Female Community Health Volunteers (FCHVs) (table 10).

In the Annual Report 2078-79, the utilization of permanent family planning methods among couples in Aurahi rural municipality was reported at 25%, showing a significant difference compared to the sampled data, which indicated a lower prevalence of 61.4% [4].

In-depth interview with Female Community Health Volunteer (FCHV) of Aurahi rural municipality

In-depth interviews were conducted on June 6, 2022, with five Female Community Health Volunteers (FCHVs) from various villages in Aurahi rural municipality. Key points from the interviews revealed that four out of five FCHVs were educated up to the secondary level, and all had received training from different centers. The services provided by FCHVs covered a wide range, including support for pregnant women, intra-natal and post-natal women, infants, children under 5, adolescents, and elderly. Major challenges faced by FCHVs included convincing people to take immunizations and follow up on pregnancy-related conditions.

Despite initial complaints about biased treatment and resource distribution, proper counseling and identification of affected groups helped reduce these concerns. FCHVs carry a bag with essential materials and wear a green sari as their uniform. Common health issues identified by FCHVs include fever, diarrhea, high blood pressure, and unsanitary habits. Overall, FCHVs play a crucial role in providing diverse health services to the community, and challenges have diminished with increased awareness and government support, including incentives, monthly meetings, and ongoing training, contributing to the satisfaction of FCHVs in their roles.

Need Assessment

Top 10 health problems

- Hand hygiene and Diarrhea
- Child marriage
- Mother and Child Heathcare (MCH) problems
- Drinking non-purified water
- Low availability of Health Workers and Medicines
- Knowledge of ANC visits
- Hypertension
- Thyroid dysfunction
- Diabetes
- Adolescent Health(menstrual hygiene for females and peer pressure for boys)
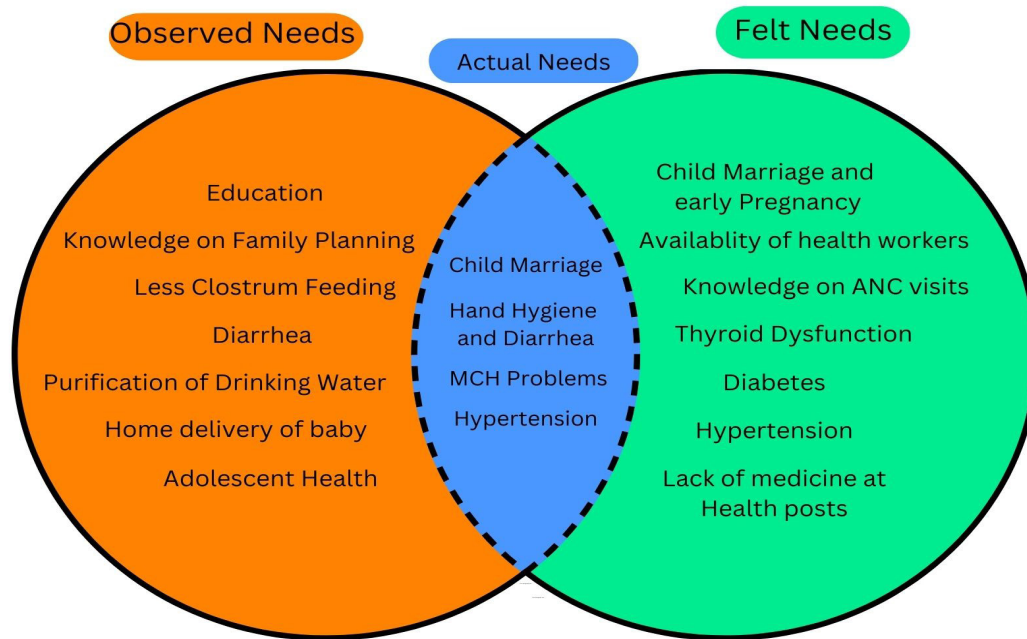
Problems	Importance	Community Concern	Seriousness	Prevalence	Manageability	Total
Child Marriage	+++	+++	+++	+++	++	14
MCH problems	+++	+++	++++	++	+++	15
Diarrhea and Hand Hygiene	+++	++++	++++	++	+++	16
Hypertension	++	+	++	+++	++	10

Focus Group Discussion

The focus group discussions on menstrual health and adolescence involved adolescents in Aurahi rural municipality, with separate discussions for male and female respondents. Female groups said that the average onset of menarche occurred at 12-13 years, with mothers, sisters, or friends being the primary confidantes. Menstrual complications included period cramps, back pain, dizziness, weakness, and headaches, with support mainly coming from mothers and schools. Cultural practices, daily life impacts, and coping mechanisms were also explored. Interestingly, instances of harassment were minimal, and students viewed menstruation as a normal aspect of physical changes.

In the male group discussions, participants highlighted changes during adolescence, including voice variations, facial hair growth, and physical development leading to weight gain. Increased shyness, attraction to the opposite gender, and the impact of peer pressure on behavior and decision-making were common experiences. A decrease in emotional closeness with parents, heightened sexual awareness, and an increase in negative thoughts were reported among male respondents.

Micro Health Program

The micro health program held at Paudeshwor bazaar at ward no. 01, Aurahi rural municipality, focused on community engagement with a dual emphasis on effective handwashing techniques and the preparation of Oral Rehydration Solution (ORS). We were divided into two groups and one group's initiative aimed to disseminate crucial information widely, beginning with a comprehensive demonstration of the 7-step handwashing process given by WHO [11], to stress the importance of hand hygiene. Simultaneously, another group educated the community about the specific conditions warranting the use of ORS. Their demonstration provided step-by-step guidance on the proper preparation of ORS, ensuring a thorough understanding of these essential health practices along with knowledge of making it in the absence of ORS solution (with salt, water and sugar) [12].

The key message conveyed was the vital role of handwashing in disease prevention and a healthy lifestyle, particularly in conjunction with the preparation of ORS. The community was advised to consume ORS within 24 hours of preparation, and caution was emphasized to prevent overconsumption, which may lead to bloating. The program underscored the importance of proper treatment and identification of the causative agent of diarrhea alongside the consumption of ORS and the proper way of washing hands.

School Health Program

The School Health Program took place at Shree Secondary School in Deuri Parwaha, ward no. 02, with the primary objective of educating students (grades 1 to 5) on health practices, diseases, nutrition, and proper handwashing techniques. The program utilized materials such as charts, figures, and soap to cover topics including personal

hygiene, oral hygiene, handwashing, and maintaining a balanced diet. The assessment involved gauging student's knowledge, attitude, and practices (KAP) through direct and indirect questions. The curriculum emphasized interactive sessions and demonstrations, particularly focusing on the correct handwashing technique. The comprehensive approach aimed to instill crucial health knowledge and promote positive health practices among young learners.

Limitations

Several aspects and topics were not discussed in this paper due to the limitations of the pages and words of the journal. They include housing conditions, causative factors of diseases, patterns of food consumption, etc.

The percentages presented in this study have been rounded to the nearest whole number for simplicity.

CONCLUSION

Aurahi municipality grapples with a spectrum of challenges spanning education, occupation, religion, family structure, language, sanitation, health, vaccination, maternal and child well-being, malnutrition, and family planning. Educational disparities are evident with 35% completing primary education and a 30% illiteracy rate. Occupational imbalances are marked by heavy reliance on agriculture (55.1%) and limited engagement in foreign employment (22%). Religious disparities emerge with Hinduism dominating (95%). Family structures reveal a prevalence of nuclear (53%) and joint families (42%). Language discrepancies exist, as 80.6% identify Maithili as their mother tongue. Sanitation concerns encompass diverse practices and challenges in waste management. Health issues include worm infestation, asthma, hypertension, scabies, malaria, diabetes, and hyperthyroidism. Vaccination rates (86%) lag behind the sample (34%). Maternal and child health disparities are noted in breastfeeding, weaning habits, and institutional delivery rates (57.2%). Malnutrition concerns persist, and family planning awareness (60%) and utilization (37%) pose reproductive health challenges. Addressing these multifaceted issues necessitates a holistic community-focused approach and targeted interventions to improve overall well-being.

In response to the identified challenges in sanitation and personal hygiene within Aurahi municipality, a multi-faceted approach was adopted with targeted initiatives. The Micro Health Project conducted in Paudeshwor bazar had the specific objective of addressing community health issues, focusing on interventions such as the use of Oral rehydration solution (ORS) and promoting other relevant health practices. Simultaneously, a School Health Program was implemented at Shree Secondary School, Deuri Parwaha-02, to enhance health awareness and practices among students, particularly emphasizing proper handwashing techniques. Additionally, a Focus group discussion (FGD) was conducted to gather insights into adolescent health problems and tailor interventions accordingly. These initiatives were strategically designed to cater to the unique needs of both the broader community and the student population, ensuring a comprehensive approach to promoting sanitation, and personal hygiene, and addressing specific health concerns in Aurahi municipality. Through these initiatives, we not only contributed to community well-being but also gained valuable insights into the prevalence of different diseases. Additionally, we developed essential public speaking skills, enhancing our ability to effectively communicate crucial health information.

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