Proceeding of the International Conference on Public Health, Vol. 7, Issue 1, 2022, pp. 11-25

ISSN 2424 – 6735 online
DOI: https://doi.org/10.17501/24246735.2022.7102

IMPLEMENTATION OF A COMMUNITY HEALTH EDUCATION INITIATIVE IN RURAL INDIA: LESSONS LEARNT

Battepati D[1]*, Manhas A[2]*, Khan K[3], Sharma A[4], Joseph E[3], Sheehan C[5], Gee B[6] and Kumar VA[7]

[1]*The University of Toledo College of Medicine, Toledo, OH/USA*

[2]*Uniformed Services University of the Health Sciences, Bethesda, MD/USA*

[3]*Pardada Pardadi Educational Society, Uttar Pradesh/India*

[4] *Pennsylvania State University, State College, PA/USA*

[5]*Johns Hopkins University, Internal Medicine, MD/USA*

[6] *Wilderness Medicine Institute of NOLS, Lander, WY/USA*

[7]*Wayne State University, Detroit, MI/USA*

Abstract: The Community Health Education Initiative, inspired by a needs assessment conducted in Uttar Pradesh, aimed to improve health education in a rural community by addressing pertinent health topics. The primary focus was to create a self-sustainable model in which local Women Educational Leaders (WELs) were trained by the research team to educate their village on chosen health topics. A pilot study was conducted among the high-school girls of Pardada Pardadi Educational Society. Our research team curated and administered a multiple-choice questionnaire (A1) to assess baseline knowledge, taught the material using educational handouts, and then administered the same questionnaire (A2). There was a statistically significant improvement between A1 and A2, demonstrating internal validity. This same initiative was then attempted among the villagers with the WELs as educators and there was no statistically significant improvement between A1 and A2, indicating poor knowledge retention of the learned health topics. We believe this initiative's effectiveness in the village was impacted by multiple elements. Many villagers were unable to read/write Hindi, rendering educational materials ineffective. In the future, utilizing pictorials and oral storytelling would likely be more effective. The WELs were also uncomfortable teaching the men given the traditional gender roles present in this society. One solution would be to reform WEL training to overcome this barrier. It is important to recognize that despite how thorough the creation of a multi-perspective program may be in theory, there will always be unanticipated variables that can influence effectiveness. These 'lessons learnt' from the field will not only aid consecutive phases of this project but will also serve as a model for investigators pursuing similar endeavors in rural health education.

Keywords: rural, initiative, education, health, lessons, India

Corresponding Authors: *dhanushyab@gmail.com and *ashna.manhas1723@gmail.com

Introduction

Background

Rural communities, when compared to their urban counterparts, face greater disparities that yields poor health status. (Strasser et. al., 2016). While there may be many factors that influence this disparity, two large contributors are lack of health literacy and a shortage of health care professionals. There is a well-established relationship between literacy and health status; mainly that evidence of a literate society is associated with better social determinants of health (Schillinger, 2021). These include economic stability, presence of comprehensive healthcare, stable housing, and stable food sources. And while the WHO has confirmed the shortage of healthcare professionals has affected nearly every country, it is especially scarce in rural areas of developing and low-income countries (Global Health Workforce Alliance, 2014). With such conditions, the onus for improving the overall health of such societies often falls to the communities themselves by means of health education programs. These are often conducted by local governments and carried out by community health workers (CHWs). While there is scant literature documenting the obstacles that can occur when implementing rural health education programs, none have attempted self-sustaining programs run by the rural participants themselves nor have attempted to evaluate the program's effectiveness by quantitative means (Hamidzadeh et. al., 2019).

Aims

The Community Health Education Initiative (CHEI) was created with the aim of addressing gaps commonly seen in rural community health education programs. Programs were typically run by CHWs rather than members of the society themselves, and there are few studies that have quantitatively assessed the effectiveness of their CHW-run community-based programs (Hamidzadeh et. al., 2019). Our aim was to evaluate the self-sustainable nature of CHEI via quantitative measures and document the obstacles encountered along the way, providing potential solutions for further iterations of this project. Our hope is to have this project's structure serve as a model for future endeavors in other rural communities as well.

Materials and Methods

The Global Health Section of the Department of Emergency Medicine at Wayne State University (WSU) School of Medicine in the United States and the Pardada Pardadi Educational Society (PPES) in Uttar Pradesh, India collaborated to create CHEI and develop a unique education intervention to increase healthy practices among the adults in the village of Anupshahr.

Study Design

This project is a cross-sectional, observational study using convenience sampling. The first phase of the project began on July 23, 2018. A letter of intent was obtained from the board of PPES, and ethics committee approval was obtained from WSU Institutional Review Board (IRB). After reviewing the protocol, the study was determined to be an exempt study based on definition codified in the Common Rule at 45 CFR 46 and FDA regulation by the WSU IRB (#: 2020 099).

Setting

Uttar Pradesh, with its population of nearly 200 million, is well known for being the most populous state in India. Of its total population, 29.5% live below the poverty line of ₹27,000 ($400) per annum (Uttar Pradesh Population 2011 - 2021, 2011). Uttar Pradesh also ranks among the lowest with regard to primary education and literacy (Uttar Pradesh Population 2011 - 2021, 2011).

Anupshahr is a rural town in the Bulandshahr district of Uttar Pradesh and has a literacy rate lower than the state average. It is in this town that PPES works to improve primary education, with a special attention placed on girls' education. This K-12, all-girls school is also a non-profit organization is dedicated to the academic, economic, and social empowerment of girls and women (Pardada Pardadi Educational Society). The focus is primarily on females due to the cultural favoritism for boys and men in this part of India (Jayachandran, 2015). Girls who attend this school are not only given free education, but are also provided job opportunities, healthcare, and an overall improved quality of life.

Involvement of Local Community

PPES is much more than just a school; its Community Development Division (CDD) regularly partners with women from the local villages to foster social empowerment and financial independence. For this study, the CDD selected enthusiastic women to act as Women Education Leaders (WEL) in their villages to be the main educators as well as the source of CHEI's autonomous nature. Integrated community leaders are a vital part of the success of an education intervention, which is why CHEI put a heavy emphasis on involving local women as well as village elders (Blanchard, et. al, 2021). Medical students, physicians, social workers, and other allied health professionals worked with the local PPES staff and the WELs to educate our intended population.

Health Education Topics

A prior needs assessment conducted in the villages surrounding Anupshahr was completed by the research team in 2016. This not only revealed an overall lack of healthcare and health education, but also identified the disease conditions most pertinent to the villagers of Anupshahr. As a result, the following health topics were selected: handwashing, diarrhea prevention/treatment, first aid, and cardiopulmonary resuscitation. Diarrhea is the third leading cause of childhood mortality in India (Lakshminarayanan & Jayalakshmy, 2015), and hand washing can prevent 30% of diarrhea-related sickness (Show Me the Science - Why Wash Your Hands?). The combined effects of inadequate sanitation, unsafe water supply and poor personal hygiene are responsible for 88% of childhood deaths from diarrhea (Lakshminarayanan & Jayalakshmy, 2015). Timely care for traumatic injury is difficult in remote communities, so bolstering villagers' first-aid skills is critical. Cardiovascular disease is the leading cause of mortality in India, thus teaching cardiopulmonary resuscitation to village members is very relevant (Prabhakaran et al., 2016).

Educational Materials

The education materials consisted of presentations, handouts, and questionnaires. The research team created PowerPoint presentations and handouts in both English and Hindi using guidelines from the World Health Organization and the Center for Disease Control and Prevention. The presentations

included mostly pictorials with limited English words for the PPES students and in Hindi for the villagers. Each presentation also had an interactive component that the team created to make the presentation enjoyable and to reinforce the content of the presentations. The activities were: practicing CPR on mannequins, making tourniquets, handwashing, and learning how to prepare oral rehydration solutions.

Single-paged handouts were also created that corresponded with each of the PowerPoint presentations. These handouts included diagrams that summarized the content of each presentation and were distributed in English to the students and in Hindi to the village members following the presentation.

Questionnaires were created to collect demographic information and baseline knowledge of each of the aforementioned topics using multiple choice and free-response questions, as found in the Appendix. The questionnaires were written in English for the schoolchildren and subsequently translated to Hindi by the CDD members for the villagers. The same questionnaire was used both for initial assessment (A1) and reassessment (A2).

Initial Structure

The research team trained the CDD on the four topics over the course of two days and reviewed it with them several times prior to implementation. The intended teaching structure was as shown in Figure 1 below. A1 was given to the villagers by the CDD member before the first presentation and the A2 questionnaire was to be given six months later.

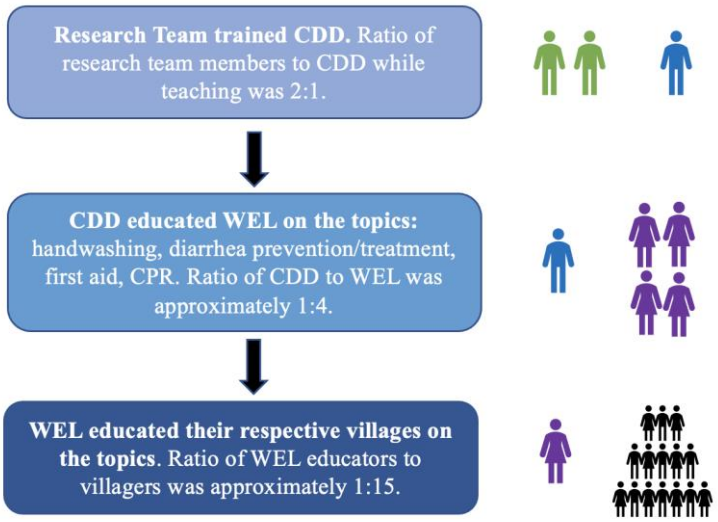

Figure 1: The training structure of CHEI

Internal Validation of Questionnaire Using PPES Students

The students were the participants in the pilot phase of this intervention. The data from A1 before education and A2 after education allowed us to measure the validity and accuracy of the presentation in concordance with the questionnaire.

Table 1: Comparing the scores of PPES students prior to and immediately after education

	Students	
	A1 (N = 63)	A2 (N = 74)
	% Correct	% Correct
Q7	79.4	85.1
Q8	76.2	95.9
Q9	1.6	56.8
Q12	12.7	55.4
Q13	54.0	39.2
Q14	25.4	81.1
Q18	63.5	54.1
Q22	0.0	1.4
Q23	50.8	54.1
Overall Average	40.4	58.1

Based on the results of A2 in comparison to A1, Q13 and Q18 were removed as they were considered incongruent with the materials prepared for the villagers. This was the only modification made to the villagers' A1 and A2.

Results and Discussion

Results

The objective data from the multiple-choice responses were used as the main means of knowledge analysis. The quantitative results of this investigation had some limitations, the most significant of which was that the same set of individuals could not be recruited and retained to complete both A1 and A2. Consequently, our results represent two convenience samples of villagers obtained six months apart. Our analytic results are limited to summary statistics.

Table 2: The results of A1 and A2 taken six months apart

	Villagers			
	A1 (N = 673)	A2 (N = 578)	All (N = 1251)	p-value
	% Correct	% Correct	% Correct	
Q7	77.3	59.7	69.1	0.0013

Q8	62.1	56.1	59.3	0.134
Q9	23.6	29.1	26.1	0.4437
Q12	52.6	31.0	42.6	0.0013
Q14	48.7	55.5	51.9	0.7787
Q22	7.3	12.3	9.6	0.3743
Q23	31.1	32.5	31.7	0.5916
Overall Average	43.9	42.9	43.4	

Across all questions to the villagers in both participant samples, 43.4% of the questionnaire was completed correctly. Only three of the seven questions were answered correctly more than 50% of the time. These observations indicate a potentially substantial need among the villages to increase first aid knowledge when correlating the results with the questions from Table 1.

In treating the data as two time-separated convenience samples, there were two questions with percentage scores differing by more than 10%. In both cases, scores were lower in A2. Question 7 was answered correctly 77.3% in A1, but only 59.7% in A2. Question 12 also exhibited a marked decrease from 52.3% correct to 31.8%.

Discussion

CHEI aimed to both quantitatively assess the feasibility of a project of this magnitude in rural India as well as elucidate some of the obstacles that would be faced by others attempting to implement similar interventions in similar settings. Rural community health education has long been considered a difficult topic to conduct research in due to the fact that it is challenging to design a measure by which to assess the success of an education intervention in a rural community (Shield et al., 2018). What makes this project both novel and relevant is its self-sustaining nature and that the attempt was made to quantify the intervention's effectiveness. Ultimately, CHEI hopes to ensure that the knowledge is not only retained by the WELs, but also extends to the Anupshahr villagers.

Attempting to identify the obstacles encountered when implementing educational programs in rural settings is not a novel idea. A similar program was conducted in Iran, in which the obstacles preventing the Iranian rural population from participating in the health education programs were evaluated (Hamidzadeh, et. al. 2019). In this interview-structured study, 22 participants were directly asked what their reasoning was for not participating in the health education programs run by the CHWs. One of the largest obstacles identified in this study was lack of trust in the CHWs. This can greatly affect sustainability of such health education initiatives, which is why WEL were utilized in the CHEI. This study, while elucidating, was qualitative and did not directly evaluate the effectiveness of the health education programs themselves. This was the largest gap in literature that this research team attempted to address.

The main objectives of this initiative were to increase health awareness and knowledge among the villagers as well as to create a self-sustainable, health education initiative. Given the project's novelty, the 9.5-hour time difference present between the U.S. and India, and the physical distance between the research team and the PPES staff resulted in a delay in both project implementation and timeline

maintenance. In the future, it may be more fitting to have a more local research team present to work closely with training the local team, therefore creating more sustainability.

The following sections highlight the different elements that we believe impacted this intervention's viability and should be considered when attempting similar programs in other rural communities. We also suggest potential solutions for each of these obstacles.

Procedural Changes

There were some anticipated hurdles for which adjustments were taken into consideration prior to project implementation, such as adapting the villagers' A1 and A2 to the PPES students' results. However, there were multiple unexpected barriers that were faced in the village setting. One such variable was that while all villagers were verbally fluent in Hindi, they were unable to read or write the language. As this was the language used in the questionnaire, this changed the procedure from having each villager individually take A1 to having the research team and CDD administer and record the answers for each person. This made the parts of the presentations and handouts written in Hindi obsolete in aiding retention and understanding. Due to the lack of literacy, it may also be prudent to consider changing the medium of teaching entirely. Instead of using presentations and handouts, switching to oral storytelling may be more fruitful, as seen in similar remote communities (Shield et al., 2018).

Questionnaire

One of the aspects of this study that contributed to the limited effectiveness of its quantitative analysis was the questionnaire itself. While the questionnaire encompassed a total of nine objective questions out of a total of twenty-three to gauge initial knowledge and retention, two were removed before being administered to the villagers due to incongruency with the material taught. To improve the quantitative nature of this study in the future it would be prudent to increase the amount of data by increasing the number of objective questions. This would in turn increase the power of the study (Power). In terms of strengthening the overall impact on rural communities, it would also be worthwhile to utilize the qualitative data gathered from A1/A2 and pursue mixed method analysis. There are likely many hindrances to improving the overall health of villages that would be better gleaned with qualitative data rather than quantitative (Hamidzadeh, et. al, 2019).

Gender Roles in Rural Indian Society

In addition to our focus on education retention, women empowerment was also a significant aspect of this project. The WELs were the primary drivers of disseminating knowledge throughout the villages; the CHEI hoped to emphasize the significance of women leadership in this community by giving them the responsibility to be educators within their villages. The intended teaching structure of each health topic was that the CDD members would teach the WELs on day one and for the WELs to teach the same presentation to their villages on the following day. The first part of the teaching module initiated in this structure was highly effective in terms of interest and engagement. Based on feedback from the WELs, they found the chosen health topics extremely relevant to their daily lives and important to teach to the rest of the village; however, when it came to them teaching the other villagers, it became clear that they were not as comfortable teaching the men. This led to the CDD team members unexpectedly taking over most of the presentation.

Although the women were enthusiastic about the idea of leading such efforts, gender roles defined by the culture in this rural community can be a potential obstacle for the long term. One of the issues is attributed to lack of male support. In rural India and many other parts of the developing world, gender-based power inequalities shape society. They are trained to not challenge discrimination, subordination, and subjugation at various levels (Gupta et al., 2017). This is a deep-rooted cultural issue, and one that is exceedingly difficult to completely resolve in the short run. A study in Odisha, India looked at male engagement as a strategy to improve utilization of maternal, newborn and child health services (Fotso et al., 2015). The study implemented this strategy to target one of the barriers for women to access reproductive health services which is due to the gender-based power inequalities in reproductive-health decision making. Women heavily relied on their husbands in making health-related decisions. One way to alleviate the issue of gender inequality in relation to our project and continue to empower women is to increase male engagement by emphasizing the relevance of the health topics to them. Many of the topics were related to changing practices related to cooking and cleaning - duties that largely fall to women in this society. By emphasizing how knowledge on these topics can directly improve their ability to work, the men may find the information more applicable and therefore be more engaged. One approach may be to have the CDD team, which is composed of all men, educate the men while the WEL teach the women villagers. This segregation in teaching has been done before in such rural communities with positive feedback (Shield et al., 2018).

To further combat this disparity and to increase the WEL's self-confidence, another solution is to offer more WEL training opportunities - focusing on "training the trainers" (Mormina & Pinder, 2018). Given the WEL's lack of formal education, increased training on these topics may take several sessions to maximize understanding and retention. Having an oral assessment with each topic would function as an important gauge in assessing whether WELs are retaining the knowledge effectively enough to train others. It would also be beneficial to have multiple practice sessions with the CDD before trying to present to the villagers. It is also important that the research team formalize the role given to the WEL, such as holding them accountable for knowledge dissemination in their respective villages. This has shown to build a consensus on standards and expectations in other similar studies. We believe that it will also foster motivation and increase levels of engagement within the community (Shield et al., 2018).

Another solution to increase women empowerment is to involve local female schoolchildren, which has been done in earlier studies (Findley et al., 2012). This aligns with the PPES mission of furthering the education of their female students and having them stay involved in their local communities to uplift others. As the PPES students are role models in their villages, utilizing their assistance may be fruitful for future endeavors. We envision that the female students will help empower WELs to teach the villagers.

Literacy

While the research team anticipated a dearth of formal education in our target population, we did not accurately how it would affect the results. It is known that higher literacy is associated with increased knowledge retention. This parallels our study which demonstrated that the PPES students, who have had more years of formal education, had a higher percentage of questions answered correctly on A2 than the villagers (Sanders et. al, 2014). For those with considerable formal education, general

knowledge retention is not seen as an obstacle; however, considering education retention in a rural setting was a potential obstacle that had to be addressed.

The majority of village members were unable to read and write in Hindi, which rendered sections of the education materials ineffective and also altered the procedure for completing questionnaires. Instead of the villagers individually taking A1 and A2, they were administered by the CDD and research team. This extended the amount of time it took to complete data collection for a village, as there were few fluent Hindi speakers among the research team. Taking this into account, it would be advisable to have the educational materials have pictorials with limited words in the next phase. As there is no way to circumvent the dearth of literacy present in the villagers, a way to expedite the questionnaire administration process would be to involve the PPES students from the respective villages to assist in administration. Though the level of illiteracy was unanticipated, it did not affect our ability to collect data in the long run, which was a defining characteristic in this project.

Timeline Changes & Future Research

The initial timeline for this project was created with the expectation that it would be completed in five years across all of the Anupshahr villages with later iterations covering new topics such as fire safety, reproductive health, fever management, and asthma. However, given the obstacles that were faced during this pilot phase of the project, the research team took time to evaluate the aforementioned limitations and restructure the CHEI model, at which time the COVID-19 crisis began in India. This halted all CHEI progress, as local resources were diverted to aid the immediate welfare of the villagers and the focus was placed on maintaining social distancing. There has been continued communication with the CDD throughout this crisis, as India is still plagued with COVID-19, and new timelines are being evaluated for moving forward with the next phase. The curriculum is also incorporating the lessons learnt with the goal of improved effectiveness of the overall CHEI with every iteration.

Conclusion

This study aimed to gauge the effectiveness of the self-sustainable CHEI as well as document the limitations encountered while implementing the program. Given the results of A1 and A2, the research team was not effective at producing a self-sustainable health education program run by the local WEL. The obstacles faced in the field, however, were well-documented by the research team, leading to high yield takeaway points that can be utilized by other teams looking to implement similar programs in other rural settings.

This paper serves as a realistic example for project coordinators and research teams interested in improving community health education in any rural setting. It is important to recognize that despite how thorough the creation of a multi-perspective program may be in theory, there will always be unanticipated variables met in the field that can influence intervention effectiveness. We feel that our perspective on this topic as well as our experiences in the field will benefit the research team for consecutive phases of this project. Our hope is to have this project structure and our ‘lessons learnt’ both serve as a model for investigators pursuing future education endeavors in rural communities.

Acknowledgements

Late Mrs. Renuka Gupta, CEO of Pardada Pardadi Educational Society, was integral and essential to the conduction of the CHEI. Additionally, the staff at PPES including the Community Development Division and the staff at the Prana Health Clinic were monumental in the intervention as well.

Declaration of Interest Statement

The authors declare that they have no conflict of interests.

References

Blanchard, A. K., Ansari, S., Rajput, R., Colbourn, T., Houweling, T. A., Isac, S., Anthony, J., & Prost, A. (2021). Understanding the roles of community health workers in improving perinatal health equity in rural Uttar Pradesh, India: A qualitative study. *International Journal for Equity in Health*, 20(1). https://doi.org/10.1186/s12939-021-01406-5

Findley, S. E., Matos, S., Hicks, A. L., Campbell, A., Moore, A., & Diaz, D. (2012). Building a consensus on community health workers' scope of practice: lessons from New York. *Am J Public Health*, 102(10), 1981-1987. https://doi.org/10.2105/AJPH.2011.300566

Fotso, J. C., Higgins-Steele, A., & Mohanty, S. (2015). Male engagement as a strategy to improve utilization and community-based delivery of maternal, newborn and child health services: evidence from an intervention in Odisha, India. BMC Health Serv Res, 15 Suppl 1, S5. https://doi.org/10.1186/1472-6963-15-S1-S5

Global Health Workforce Alliance (Ed.). (2014). (rep.). A Universal Truth: No Health Without A Workforce. World Health Organization. Retrieved from https://www.who.int/publications/m/item/hrh_universal_truth.

Gupta, S., Maliye, C., Deshmukh, P., Raut, A., Dongre, A., & Garg, B. (2017). Gender power dynamics in rural area of India. *International Journal of Medical Science and Public Health*, 1. https://doi.org/10.5455/ijmsph.2017.0821908082017

Hamidzadeh, Y., Hashemiparast, M., Hassankhani, H., & Allahverdipour, H. (2019). Obstacles for Iranian rural population to participate in health education programmes: A qualitative study. *Family Medicine and Community Health*, 7(1). https://doi.org/10.1136/fmch-2018-000020

Jayachandran, S. (2015). The Roots of Gender Inequality in Developing Countries. *Annual Review of Economics*, 7, 63-88.

Lakshminarayanan, S., & Jayalakshmy, R. (2015). Diarrheal diseases among children in India: Current scenario and future perspectives. *J Nat Sci Biol Med*, 6(1), 24-28. https://doi.org/10.4103/0976-9668.149073

Mormina, M., & Pinder, S. (2018). A conceptual framework for training of trainers (ToT) interventions in global health. *Global Health*, 14(1), 100. https://doi.org/10.1186/s12992-018-0420-3

Pardada Pardadi Educational Society. https://education4change.org/aboutUs/page/1

Power. (n.d.). STAT 200: Elementary Statistics. Retrieved from https://online.stat.psu.edu/stat200/lesson/6/6.5.

Prabhakaran, D., Jeemon, P., & Roy, A. (2016). Cardiovascular Diseases in India: Current Epidemiology and Future Directions. *Circulation*, 133(16), 1605-1620. https://doi.org/10.1161/CIRCULATIONAHA.114.008729

Sanders, K., Schnepel, L., Smotherman, C., Livingood, W., Dodani, S., Antonios, N., . . . Silliman, S. (2014). Assessing the impact of health literacy on education retention of stroke patients. *Prev Chronic Dis*, 11, E55. https://doi.org/10.5888/pcd11.130259

Schillinger, D. (2021). Social Determinants, health literacy, and disparities: Intersections and controversies. *HLRP: Health Literacy Research and Practice*, 5(3). https://doi.org/10.3928/24748307-20210712-01

Shield, J. M., Kearns, T. M., Garŋgulkpuy, J., Walpulay, L., Gundjirryirr, R., Bundhala, L., . . . Judd, J. (2018). Cross-Cultural, Aboriginal Language, Discovery Education for Health Literacy and Informed Consent in a Remote Aboriginal Community in the Northern Territory, Australia. *Trop Med Infect Dis*, 3(1). https://doi.org/10.3390/tropicalmed3010015

Show Me the Science - Why Wash Your Hands? https://www.cdc.gov/handwashing/why-handwashing.html

Strasser, R., Kam, S. M., & Regalado, S. M. (2016). Rural Health Care Access and policy in developing countries. *Annual Review of Public Health*, 37(1), 395–412. https://doi.org/10.1146/annurev-publhealth-032315-021507

Uttar Pradesh Population 2011 - 2021. (2011). Retrieved from https://www.census2011.co.in/census/state/uttar+pradesh.html

Appendix

Questionnaire provided to schoolchildren and rural participants; corrected answers bolded.

1. What is your gender? M F
2. Which Village are you from? _____
3. How old are you?
   A. >10 years
   B. 10-13 years
   C. 14-16 years
   D. 16-20 years
   E. 21+ years
4. How much knowledge do you have on the following topics? 1 – none, 5- a great deal

A. Diarrhea	1	2	3	4	5
B. Wound care	1	2	3	4	5
C. Handwashing	1	2	3	4	5
D. First aid	1	2	3	4	5
E. CPR	1	2	3	4	5

<u>Diarrhea</u>

5. Have you ever had to deal with a severe case of diarrhea? Yes No

If yes, did you use home remedies or medications and what kinds?

_____

6. Where is the source of your drinking water?

_____

7. What is diarrhea defined as?

   A. 1-2 loose or watery stools in a day

   B. 2-3 loose or watery stools in a day

   C. **3+ loose or watery stools in a day**

8. Who is affected by diarrhea more severely?

   A. Children

   B. Middle aged adults

   C. Elderly

9. What is the number one way to prevent diarrhea?

   A. Eating healthy

   B. Washing hands

   C. Keeping household tidy

   D. Bathing

Wound Care

10. Have you ever had a severe cut or wound before? Yes No

    If yes, how did you manage cleaning and stopping bleeding?

    _____

11. Do you have access to bandages and ointments to treat wounds? Yes No

12. How should you apply pressure to a wounded area?

   A. Use whole palm to apply pressure

   B. Use 1-2 fingers to the area

   C. Use both hands

13. What is the first step before you treat someone's wound?

   A. Cover the wound

B. Wash the wound

C. Wash your hands

D. **Control bleeding**

14. How often should you change dressing for a wound?

A. Every 6 hours

B. Every 12 hours

C. Every 24 hours

D. Every 36 hours

Handwashing

15. Do you wash your hands after every time you use the washroom? Yes No

16. Do you have hand soap in your washroom at home?
Yes No

17. Do you wash your hands before you eat a meal? Yes No

18. For how many seconds should you wash your hands?

A. 5 seconds

B. 10 seconds

C. 15 seconds

D. **30 seconds**

First Aid

19. Who is the first person you go to immediately in case of a minor injury or emergency?

_____

20. Do you know how to control bleeding from a wound or cut? Yes No

21. Do you know how to temporarily fix a broken bone? Yes No

22. What is the recovery position? (What side does the person lie on)

A. On left side

B. On right side

C. Flat on back

D. Flat on stomach

23. Where can you not check for a person's pulse?

A. Forehead

B. Left side of neck

C. Chest