

Knowledge Mapping of ill effects of use of chulhas among Rural Women in Community

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Abstract

The majority of rural families cook on biomass fuels. Traditionally, biomass fuels like wood are burnt in "chulhas," which are steel or clay stoves manufactured at home. In India, indoor air pollution has a greater impact than in other nations. The objectives was set to assess the rural women's knowledge of ill effects of use of Chulhas and to determine if certain demographic factors and awareness of Chulhas' negative impacts are related. The study used a quantitative technique and a descriptive research strategy that was non-experimental with 60 Women from Rural community. The sampling strategy used was Non-Probability Convenience Sampling. The researchers employed a self-administered structured questionnaire. The tool had two sections. The sample's socio demographic variables and Section the self-administered, structured knowledge assessment, which was limited to 36 multiple-choice items. The tool reliability was assessed using the cronbach's alpha approach, and the outcome was 0.821. After receiving the consent of each responder, the tool's two components were given to a selected sample. When examining rural women's awareness of the negative effects of using chulhas, the majority of respondents (45%) have average knowledge, a small number of samples have bad information (33%), and the remaining sample (22%) has good knowledge. The first step in putting a programme in place to decrease exposure may be raising knowledge of the negative health consequences of indoor biomass cooking smoke.

Keywords: Knowledge, ill effects, chulha, Rural Women, Community.

Introduction

Despite the numerous issues with traditional use, such as safety concerns, time-consuming fuel collection, health risks, and decreased working efficiency, farm women continue to use traditional chulhas for cooking and still rely on firewood, cow dung cakes, crop residues, and charcoal as energy sources. One of the main factors contributing to the poor health of farm women and their children during cooking

is smoke from the traditional chulha. Another significant concern in the proliferation of health-related issues is indoor air pollution and air quality in rural households. (Singh et al., 2018)

The majority of rural families cook on biomass fuels. Traditionally, biomass fuels like wood are burnt in "chulhas," which are steel or clay stoves manufactured at home. The ineffective construction of traditional chulhas results in

frequent incomplete burning of these biomass fuels.

Indoor air pollution caused by the use of solid fuels for cooking and heating is one of the main risk factors for acute respiratory infections. Particularly vulnerable are women and young children, who spend the majority of their time near the home hearth. (Upadhyay et al., 2015)

In India, indoor air pollution has a greater impact than in other nations. According to estimates, 24% of urban households and 86% of rural households still utilise biomass fuels. The majority of these diseases' victims are women, which is indicative of the fact that women are in charge of cooking. (Dwivedi et al., 2011)

Statement of the Problem

“Knowledge Mapping of ill effects of use of chulhas among Rural Women in Community”

Objective of the study

- To assess the rural women's knowledge of ill effects of use of Chulhas
- To determine if certain demographic factors and awareness of Chulhas' negative impacts are related.

Assumptions

Rural Women may have less knowledge pertaining to ill effects of Chulhas

Operational Definitions

Material and Method

The study used a quantitative technique and a descriptive research strategy that was non-experimental. A total of 60 Women from Rural community were included in the study. The sampling strategy used was Non-Probability Convenience Sampling. The researchers employed a self-administered structured questionnaire on Ill effect of Chulha. The tool had two sections. The sample's socio demographic variables were assessed in Section I, which included Age, Type of use of cooking stove, Education and working/House wife. Section II This concerned the self-administered, structured knowledge assessment, which was limited to 36 multiple-choice items. Each correctly answered question received one mark (01marks), whereas erroneous answers received zero marks (0 marks). The tool reliability was assessed using the cronbach's alpha approach, and the outcome was 0.821. After receiving the consent of each responder, the tool's two components were given to a selected sample.

Findings

The data was analysed using descriptive and inferential statistics.

Part I : Demographic parameters are described in terms of frequency and percentage

Table 1: Demographic Variable Distribution

n= 60

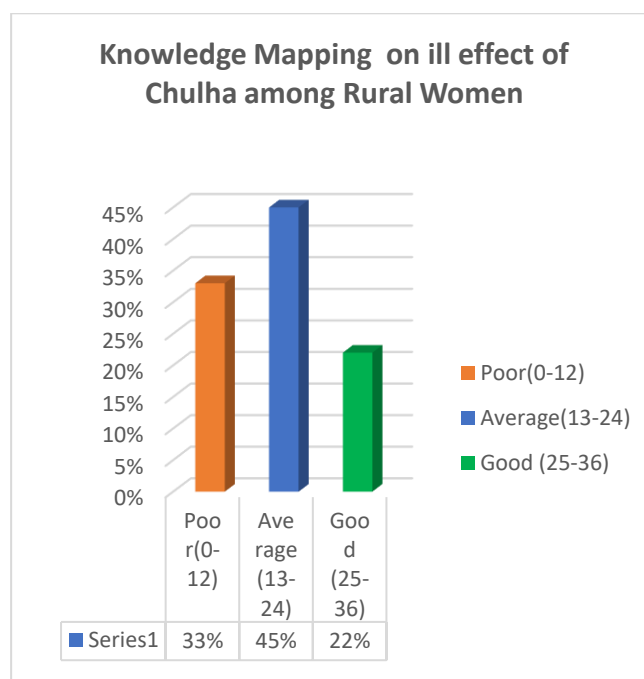
Variables		Frequency (f)	Percentage (n)
Age (Years)	19-30	33	55 %
	31- 40	20	33.3 %
	40 and above	07	11.7 %
Type of Use of cooking stove	Chulha	12	20 %

	stove	04	6.7%
	Gas stove	10	16.7%
	Chulha and other means of cooking stove	34	56.6%
	Other	Nil	Nil
Education	Primary Education	43	71.7%
	Secondary Education	05	8.8%
	Higher education	03	05%
	Illiterate	09	15%
Working status of Women	Working	11	18.3%
	Non working	49	81.7%

Table 1-Majority of respondents 55% were from 19-30years . 56.6 % of respondents were using Chulha and other means of cooking stove and 20 % of respondents were using chulha alone for cooking. The majority of the samples 88% had completed secondary education and 15% respondents were illiterate. 81.7% of rural women were non working.

Section II –Data of Rural womens' knowledge on ill effect of chulhas.

Fig 1: Knowledge Mapping on ill effect of Chulha among Rural Women



The figure represents the bulk of respondents have average knowledge (45%), while a small proportion of samples have bad information (33%), and 22% of respondents have good knowledge on the negative effects of chulha.

Section III

Table 2: Association between knowledge assessment and selected demographic variable Since

- As the p-value is less than 0.05, there is a significant link between rural women's age and awareness of Chulha's negative effects (p value 0.003)
- As the p-value is greater than 0.05, the kind of cooking gas consumption by rural women did not significantly correlate with their awareness of Chulha's negative effects (p value 1.012)
- As long as the p-value is more than 0.05, there is no association between rural women's education and their awareness of Chulha's negative effects (p value 0.512)
- As the p-value is less than 0.05, there is a significant correlation between rural women's employment level and their knowledge of Chulha's negative effects (p value 0.012)

Discussion

The current study's findings revealed that the bulk of respondents (45%) have average knowledge, a few samples (33%) have bad knowledge, and 22% have good awareness about the negative effects of Chulha. Similar results were presented in a cross-sectional research among household women who spend the most of their time cooking at home in the rural field practise region. There were 400 housewives in the research. The majority of them (80.8%) were aware that smoking has a negative impact on one's health. Additionally, they had a favourable opinion on alternative fuels. In the research, the majority of

participants (92.1%) expressed a willingness to switch to a cleaner fuel. (Alex et al., 2018)

According to a different survey, 80% of rural women cooked inside using just wood fire and no ventilation. Compared to the other two groups, rural mothers reported two to three times as many cases of respiratory illness in themselves and their offspring. Only 20% of participants realised smoking created issues in children, and only 13% of them considered it was a reason for concern, despite being aware of the harmful effects of smoking on their own health. Women were eager to modify their cooking habits once they were aware of the negative impacts, but they could not afford cleaner fuels or better stoves. (Edelstein et al., 2008)

Conclusion:

When examining rural women's awareness of the negative effects of using chulhas, the majority of respondents (45%) have average knowledge, a small number of samples have bad information (33%), and the remaining sample (22%) has good knowledge. The first step in putting a programme in place to decrease exposure may be raising knowledge of the negative health consequences of indoor biomass cooking smoke.

Ethical consideration: The study was approved by the Institute Research Committee. Before beginning the investigation, each sample gave their informed consent. Throughout the study, confidentiality and privacy were preserved.

References

1. Alex, P., K. G., K., Baisil, S., A. U., S., & Badiger, S. (2018). Assessment of awareness and attitude of rural women towards ill-effects of indoor air pollution and their perception regarding alternate cooking fuel usage in Mangalore. *International Journal Of Community Medicine And Public Health*, 5(9), 4092.

- <https://doi.org/10.18203/2394-6040.ijcmph20183600>
2. Dwivedi, N., Kunwar, N., & Srivastava, S. (n.d.). Indian Rural Women : A Study on Smokeless Chulhas. Retrieved December 16, 2022, from www.shodh.net
 3. Edelstein, M., Pitchforth, E., Asres, G., Silverman, M., & Kulkarni, N. (2008). Awareness of health effects of cooking smoke among women in the Gondar Region of Ethiopia: a pilot survey. BMC International Health and Human Rights, 8, 10. <https://doi.org/10.1186/1472-698X-8-10>
 4. Singh, R., Chaudhary, R. P., Choudhary, G. K., & Gautam, U. S. (2018). Impact of Smokeless Chulha for Farm Women to Improve Quality of Life: On Farm Trial. Int.J.Curr.Microbiol.App.Sci. <http://www.ijemas.com>
 5. Upadhyay, A. K., Singh, A., Kumar, K., & Singh, A. (2015). Impact of indoor air pollution from the use of solid fuels on the incidence of life threatening respiratory illnesses in children in India Environmental and occupational health. BMC Public Health, 15(1), 1–9. <https://doi.org/10.1186/S12889-015-1631-7/TABLES/2>
 6. Hazari, Nida Fatima, And V. Vijaya Lakshmi. "Effectiveness Of 2 D Animated Film On Nutrition And Ealth Practices Of Rural Women." International Journal Of Communication And Media Studies (Ijcms) 7.4 (2017): 45-52.
 7. Hazari, Nida Fatima, And V. Vijaya Lakshmi. "Assessing The Effectiveness Of E-Learning Education Material On Nutrition And Health Attitude Of Rural Women: A Quasi Experimental Study." International Journal Of Educational Science And Research (Ijesr) 7 (2017): 63-70.
 8. Hazari, Nida Fatima, And V. Vijaya Lakshmi. "E-Learning And Computer-Based Multimedia Education Intervention And Its Effect On The Relationship Between Knowledge, Attitude And Practices Of Rural Women." International Journal Of Computer Networking, Wireless And Mobile Communications (Ijcnwmc) 7 (2017): 1-8.
 9. Anitha, R. O. N. D. L. A., Bhoopendra Kumar Singh, And J. Afifa. "An Evaluation Of Drudgery Reducing Agricultural Technologies Developed For Farm Women." International Journal Of Agricultural Science And Research 9.2 (2019): 35 42 (2019).
 10. Mrunalini, A. "Performance Evaluation Of Head Load Manager To An Alternative Means To Carry Loads By Rural Women." International Journal Of Agricultural Science And Research 6.1 (2016): 263-268.
 11. Singh, N. E. H. A. "A Study On Knowledge Of Rural Women Towards Mass Media And Its Usage In Bikaner District." International Journal Of Educational Science And Research (Ijesr) 8.2 (2018): 63-70.