

Role of Educational Empowerment in Shaping Health Awareness among Rural Women in Kanpur

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Abstract

Background: Educational empowerment can strengthen rural women's ability to understand health information, access healthcare services, and make informed health-related decisions.

Objective: The study aimed to examine the role of educational empowerment in shaping health awareness among rural women in Kanpur.

Methods: A quantitative descriptive-correlational research design was adopted. Data were collected from 100 rural women using a structured questionnaire. The data were analysed using IBM SPSS Statistics Version 26 through descriptive statistics, reliability analysis, one-sample tests, Spearman's correlation, regression analysis, and one-way ANOVA.

Results: Educational Empowerment showed high reliability (Cronbach's $\alpha = .956$), while Health Awareness also demonstrated excellent internal consistency ($\alpha = .981$). The mean score for Educational Empowerment was 4.365 (SD = .459) and for Health Awareness was 4.507 (SD = .468). A strong positive relationship was observed between educational empowerment and health awareness ($r = .743$, $p < .001$). Regression analysis showed that educational empowerment explained 57.3% of the variance in health awareness ($R^2 = .573$) and significantly predicted health awareness ($\beta = .757$, $p < .001$). Significant differences were also observed across educational qualification groups, $F(2,97) = 5.049$, $p = .008$.

Conclusion: Educational empowerment was significantly associated with higher health awareness among rural women. Strengthening health literacy, digital awareness, and community-based educational initiatives may further improve women's health knowledge and decision-making capacity.

Keywords: Educational Empowerment, Health Awareness, Health Literacy, Kanpur, Rural Women

1. INTRODUCTION

Education is one of the greatest factors which affect the social, economic and health development of women. Educational empowerment for rural women isn't limited to formal education; it's about being able to read and write, access reliable information, understand health messages, know how to use technology, feel confident in communicating with health care providers, and be involved in decisions regarding personal and family health. A woman with a quality education is likely to be better able to identify health problems, know how to prevent them, access the health care she needs, and make informed decisions about nutrition, hygiene, reproductive health, women's health and disease prevention. In the recent past, in India, women's education and empowerment are linked to better access to healthcare services and their ability to make decisions about health (Das et al., 2024; Vignitha et al., 2024).

Rural women are especially at risk of having low levels of health awareness as they are typically the main providers of nutrition and health care for their families. They have awareness of menstrual hygiene, maternal and reproductive health, nutrition, anaemia, family planning, immunization, communicable and non-communicable diseases, preventative screening and government health programmes which can impact their own health, as well as that of their children and other family members. But not all women are able to access health information and once they do, it is not necessarily understood or used effectively. In a resource poor rural area of India, the study of health literacy found that the active management of health and finding reliable health information was difficult, especially for those with lower levels of education (Passi et al., 2023). The same applies for the educational interventions and health-literacy programmes, which have been found to enhance maternal-health preparedness and women's involvement in preventive services (Ahmad et al., 2022).

As communications in the field of health has become increasingly digital, the value of educational empowerment has grown. The health message is distributed via mobile phone, social media, government mobile applications, health workers, community groups, digital campaigns and increasingly to rural populations. However, the use of technology does not automatically lead to health awareness. An education-related factor was still found to be significant to the use of mobile phones for health-related activities, with women from lower educational status being significantly less inclined to access digital health information compared to women with education (Pal et al., 2026). This implies that women can become empowered through education to evaluate information, grasp medical advice, interact with health care providers, and translate available information to suitable health behaviour. Community based participation can also complement this process, with women participating in health and nutrition interventions reporting increased empowerment and increased capacity to shape health practices in their family and community (Pradhan et al., 2023).

This relationship is significant in the context of the rural areas of Kanpur Nagar, Uttar Pradesh. Maternal and primary health services are provided in government health facilities and community-based healthcare system, however, there are identified gaps in accessing and utilization of healthcare services at the local level. Rathore et al. (2023a) had come across continued poor utilization of maternal and infant health services among rural residents of Kanpur Nagar and Rathore et al. (2023b) noted that there were gaps in quality antenatal-care visits and iron-folic acid use among specific groups of the rural population. Studies carried out in Kanpur Nagar have also emphasized on the role of education and information sources in menstrual hygiene awareness, with mothers and teachers being significant sources of information and education to adolescent girls (Singh et al., 2022). This suggests that the availability of health care does not necessarily result in effective health care behaviour, other factors such as awareness, education, information availability, family support, socio-economic status and women's decision-making ability are also likely to affect health outcomes.

As per the systematic review of the literature conducted on the recent literature from the year 2022 to 2026, there is a relationship between education, health literacy, women empowerment, community participation and access to information with health awareness and healthcare utilization. Ahmad et al. (2022) found that education-based interventions on health literacy led to an increased level of birth preparedness among rural women, Passi et al. (2023) identified health-literacy abilities differences based on education, Pradhan et al. (2023) showed that women's participation in the community health and nutrition interventions increased women empowerment, Das et al. (2024) demonstrated that women's empowerment led to better utilization of maternal care services and Vignitha et al. (2024) emphasized the need of considering women's empowerment in India as a multidimensional concept. Recent research has pointed to the persisting household, organisational, economic and facility-level challenges obstructing women's access to health care (Pradhan & De, 2025), and Pal et al. (2026) found that education and digital literacy were increasing in significance for rural women's engagement with mobile technology for health information. In view of this, there is only limited research available which has looked specifically at the direct influence of educational empowerment on imparting comprehensive health awareness among the rural women of Kanpur, thus highlighting the need for the present investigation.

This study therefore proposes to explore the influence of educational empowerment on health awareness patterns of the rural women of Kanpur. It aims, in particular, to examine the relationships between educational level, functional literacy, access to health information, digital literacy, exposure to health awareness programmes, and participation in educational and/or community activities and women's knowledge and awareness of nutrition, hygiene, reproductive and maternal health, disease prevention, preventative screening, family planning, access to government services, and their health-seeking behaviour. The study also seeks to explore educational/socioeconomic disparities in health awareness, and the extent to which increase in educational empowerment is correlated to increased awareness, increased decision making power and increased health awareness/practices among rural

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women. The results will yield valuable data to develop focused educational, digital-literacy, community-health and awareness-building programs to better the health and wellness of rural women in Kanpur.

2. OBJECTIVES OF THE STUDY

- ❖ To assess the level of educational empowerment among rural women in Kanpur
- ❖ To examine the level of health awareness among rural women in Kanpur
- ❖ To investigate the relationship between educational empowerment and health awareness among rural women
- ❖ To determine the influence of educational empowerment on health awareness among rural women in Kanpur
- ❖ To examine differences in health awareness across different educational qualification groups of rural women

3. MATERIALS AND METHODS

3.1. Research Design

The current study adopted a quantitative and descriptive-correlational research design to study the role of the educational empowerment in the formation of awareness about health among rural women in Kanpur. The study was aimed at clarifying the link between the educational empowerment and the various aspects of health awareness which were learning about nutrition, personal hygiene, reproductive and maternal health, family planning, disease prevention, seeking health service and the awareness of government health service. A structured survey was used to gather empirical data, thereby allowing variations in the knowledge of health to be explored according to educational status, functional literacy status, digital literacy, health information access and involvement in educational or health awareness programmes. The research design also allowed an analysis of the impact of educational empowerment on knowledge and informed decisions of rural women regarding health issues.

3.2. Study Area

It was carried out in the rural areas of Kanpur district, Uttar Pradesh, India. Information was collected from women from various educational, economic and demographic backgrounds with the inclusion of selected rural blocks and villages of Kanpur.

3.3. Sample Size

The study was conducted on a sample of 100 rural women of selected rural areas in Kanpur district. In case of respondents, they were selected based on the eligibility criteria and sampling method used in the study.

3.4. Sample Selection Criteria

3.4.1. Inclusion Criteria

- ❖ Women aged 18 years and above were included in the study.
- ❖ Women who were permanent or regular residents of the selected rural areas of Kanpur were included.
- ❖ Women who had been residing in the selected study area for at least one year were considered eligible.
- ❖ Women from different educational backgrounds, including those with no formal education, primary, secondary, higher secondary, and higher education, were included.
- ❖ Women who were willing to participate in the study and provided informed consent were included.

- ❖ Women who were able to understand and respond to the questionnaire or interview schedule were considered eligible.

3.4.2. Exclusion Criteria

- ❖ Females below 18 years of age were excluded.
- ❖ Women who were temporary visitors or non-residents of the selected rural areas were excluded.
- ❖ Women who were unable to provide reliable responses because of communication difficulties were excluded.
- ❖ Women who did not provide informed consent were excluded.
- ❖ Questionnaires that were incomplete or substantially unanswered were excluded from the final analysis.
- ❖ Duplicate, inconsistent, or unreliable responses were excluded during the data-screening process.

3.5. Study Variables

3.5.1. Dependent Variable

The present study used a variable called health awareness of rural women as a dependent variable. This was an indicator of the knowledge and understanding of rural women about various health-related issues of their personal and family health. The variable was measured using nutrition and anaemia indicators, personal and menstrual hygiene indicators, reproductive health and maternal health indicators, family planning indicators, immunization indicators, communicable diseases and non-communicable diseases indicators, preventive health practices indicators, screening indicators, government health programmes indicators and appropriate health-seeking behaviour indicators. The overall health awareness score was used to capture how much people know about health risks, how to prevent it, available health care services and what they do need to do in order to keep themselves healthy and well.

3.5.2. Independent Variables

Educational empowerment was considered as the primary independent variable of the study. It encompassed formal educational level, functional literacy, health literacy in reading and understanding health-related information, access to education materials, digital literacy, education exposure to health awareness programmes, use of mass media and digital platforms to obtain health information, and trust in acquired knowledge when making health-related decisions. Socio-demographic variables like age, marital status, occupation, family type, household income, number of children, access to health facilities and involvement in any community or self-help group were also taken into consideration as they may affect the relationship between educational empowerment and awareness of health.

3.6. Data Collection Methods

Both primary and secondary sources were used for data collection. Data collection methods used for primary data were structured questionnaire or structured interview schedule, which was designed based on the objectives of the study and existing literature. The questionnaire contained mostly closed questions, and included questions about demographic characteristics, educational status, functional literacy, digital literacy, health information access, attendance in educational programmes, and awareness of various health issues. Likert scale items were used to assess respondents' perception, confidence, information access, and decision making abilities where applicable.

The data were collected by face to face interaction with the eligible rural women of selected villages. The questions were explained in simple language if respondents had difficulty understanding the questions. Secondary data was collected from research articles, government reports, NFHS Reports, health policies, books and other published literature on Women education, empowerment, Health

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literacy, Rural healthcare and Health Awareness. Both primary and secondary data were used; which contributed to the comprehensive understanding of the study problem.

3.7. Procedure

The research process started with the designing of a structured questionnaire that was based on the objectives of the study and a detailed study of the available literature on educational empowerment, women's health and health awareness. The questionnaire aimed to gather data on the socio-demographic profile, level of education, literacy, access to digital media, access to health-related information, involvement in awareness-raising activities, knowledge about health and healthcare-seeking behaviour.

Pre-testing of the research instrument was conducted to determine the clarity, relevance, appropriateness and consistency of the instrument with the study objective before the main data collection. A pilot test was done with a small number of women from the rural area who were not part of the main sample. The problems faced in the pilot test were taken into account and the necessary changes were made. The internal consistency of all scales that were relevant to the study were assessed using Cronbach's alpha, with acceptable reliability before the final survey was administered.

Following the completion of questionnaire, the respondents were approached in rural areas of Kanpur selected. Thereafter, after completion of questionnaire, the respondents were approached in the selected rural areas of Kanpur. Each subject was informed about the purpose of the study; informed consent was taken before the questionnaire was applied. Data gathered during the pre-determined study period. All questionnaires were thoroughly checked after data collection. Responses that were not complete, duplicated, and/or inconsistent were eliminated. Respondents were then typed and entered into a structured database for statistical analysis which was valid responses.

3.8. Data Analysis

The data collected were analysed using IBM SPSS Statistics, Version 26. The demographic characteristics, educational empowerment, and health-awareness levels displayed by the respondents were summarized by descriptive statistics like frequencies, percentages, means, and standard deviations. Differences and relationships of the variables were evaluated using inferential tests such as Chi-square test, t-test, ANOVA and correlation analysis. Multiple regression analysis was conducted to determine the significant determinants of health awareness, and to evaluate the effect of educational empowerment. A p value of < 0.05 was deemed statistically significant.

4. RESULTS

The descriptive statistics of the respondents' socio-demographic characteristics are presented in Table 1. There were 100 responses to the age, marital status, educational qualification and occupation questions, and 96 responses to the monthly family income and number of children questions. The mean "age category" was 2.05 (SD = 0.757), with the majority of the respondents focused in the lower to middle age categories. Marital status had a mean of 1.51 (SD = 0.718) indicating more married women. The mean of educational qualification was 3.57 (SD = 0.555) which was quite high, showing that most of the respondents were of the higher educational categories included in the study. There was a large range of background occupations (M = 2.42, SD = 1.394). All valid respondents were in the same income category with a mean family income of 1.00 and no variation (SD = 0.000). The overall average number of children was 1.79 (SD = 0.457), indicating focus on the smaller numbers of children. A valid sample of 92 was obtained, meaning that complete data was available on all the demographic variables.

Table 1 Descriptive Statistics

Variable	N	Minimum	Maximum	Mean	Std. Deviation
Age	100	1	3	2.05	.757
Marital Status	100	1	3	1.51	.718

Educational Qualification	100	2	4	3.57	.555
Occupation	100	1	5	2.42	1.394
Monthly Family Income	96	1	1	1.00	.000
Number of Children	96	1	3	1.79	.457
Valid N (listwise)	92				

Table 2 shows the demographic distribution of the respondents who were part of the study (n = 100). As far as age was concerned, the most sizable age group was 21-30 years (43%), followed by 31-40 years (31%) and below 20 years (26%). In terms of marital status, most of them were married (62%), followed by unmarried (25%) and widows (13%). Educationally, the highest proportion of the respondents (60%) had attained higher secondary education, while the secondary school and primary school had 37% and 3% respectively. Agricultural workers constituted the largest population (42%) while homemakers had 29%, wage labourers 16% and other occupations 13% of the population with regard to occupation. The number of respondents who reported income less than ₹10,000 per month were 96, and there were no respondents with information missing for this income variable, and hence there was not much variation observed in this variable at the monthly family income level. In terms of number of children, 72% (4 did not report) had 1–2 children, and 22% said they had no children. Demographic profile revealed that the sample was mainly comprised of young (age 21–30), married and higher-secondary-educated rural women and a large number of them were engaged in agricultural activities, with low-income families.

Table 2 Demographic Statistics

Variable	Category	Frequency	Percent	Valid Percent	Cumulative Percent
Age	Below 20 years	26	26.0	26.0	26.0
	21–30 years	43	43.0	43.0	69.0
	31–40 years	31	31.0	31.0	100.0
	Total	100	100.0	100.0	
Marital Status	Married	62	62.0	62.0	62.0
	Unmarried	25	25.0	25.0	87.0
	Widow	13	13.0	13.0	100.0
	Total	100	100.0	100.0	
Educational Qualification	Primary	3	3.0	3.0	3.0
	Secondary	37	37.0	37.0	40.0
	Higher Secondary	60	60.0	60.0	100.0
	Total	100	100.0	100.0	
Occupation	Homemaker	29	29.0	29.0	29.0
	Agricultural Worker	42	42.0	42.0	71.0
	Wage Labour	16	16.0	16.0	87.0
	Other	13	13.0	13.0	100.0
	Total	100	100.0	100.0	
Monthly Family Income	Below ₹10,000	96	96.0	100.0	100.0
	Missing/System	4	4.0	—	—
	Total	100	100.0	—	—
Number of Children	None	22	22.0	22.9	22.9
	1–2	72	72.0	75.0	97.9
	3–4	2	2.0	2.1	100.0
	Missing/System	4	4.0	—	—

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	Total	100	100.0	—	—
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As presented in Table 3, the internal consistency of all the 3 study scales was high, ranging from .956 to .993, which is greater than the .70 standard. The alpha for the 6 items in Educational Empowerment was .956 and for Health Awareness, it was .981 for 9 items. Likewise, the reliabilities of the Healthcare Utilization scale ($\alpha = .990$), Health Decision-Making scale ($\alpha = .988$), Barrier Perception scale ($\alpha = .963$), and Overall Perception scale ($\alpha = .993$) were very high. The reliability of the questionnaire items in each construct suggests that they were highly consistent and that each construct was measuring the same dimension.

Table 3 Reliability Statistics

Scale	Cronbach's Alpha	N of Items
Educational Empowerment	.956	6
Health Awareness	.981	9
Healthcare Utilization	.990	5
Health Decision-Making	.988	5
Barrier Perception	.963	4
Overall Perception	.993	3

The descriptive statistics for the one sample for Educational Empowerment and Health Awareness for 100 respondents are shown in Table 4. Educational Empowerment recorded a high mean score of 4.3650 (SD = .4585, SE = .0459), while Health Awareness showed an even higher mean of 4.5067 (SD = .4675, SE = .0468). The results showed that overall, educational empowerment and health awareness scores were significantly higher than the neutral point of 3 on the five-point scale, suggesting that the majority of respondents reported high levels of these factors. The relatively low standard deviations are also indicative of a fairly homogenous response from the sample.

Table 4 One-Sample Statistics

Variable	N	Mean	Std. Deviation	Std. Error Mean
Educational Empowerment	100	4.3650	.4585	.0459
Health Awareness	100	4.5067	.4675	.0468

Table 5 indicates that the mean score of Educational Empowerment and Health Awareness were significantly higher than the neutral test value, which was 3. Educational Empowerment recorded a mean difference of 1.3650, with $t(99) = 29.768$, $p < .001$, and a 95% confidence interval ranging from 1.274 to 1.456. Health Awareness showed an even larger mean difference of 1.5067, with $t(99) = 32.228$, $p < .001$, and a 95% confidence interval from 1.414 to 1.599. The results both times were positive and showed that there was a significant difference in the extent to which the respondents mentioned their level of educational empowerment and awareness of health.

Table 5 One-Sample Test

Variable	t	df	Sig. (2-tailed)	Mean Difference	95% CI Lower	95% CI Upper
Educational Empowerment	29.768	99	.000	1.3650	1.274	1.456
Health Awareness	32.228	99	.000	1.5067	1.414	1.599

Variable	Effect Size	Standardizer	Point Estimate	95% CI Lower	95% CI Upper
Educational Empowerment	Cohen's d	.4585	2.977	2.517	3.433
	Hedges' correction	.4621	2.954	2.498	3.407
Health Awareness	Cohen's d	.4675	3.223	2.732	3.710
	Hedges' correction	.4711	3.198	2.711	3.682

Table 7 Correlations

		Educational Empowerment	Health Awareness
Spearman's rho	Educational Empowerment		
	Correlation Coefficient	1.000	.743
	Sig. (2-tailed)	.	.000
	N	100	100
	Health Awareness		
	Correlation Coefficient	.743	1.000
	Sig. (2-tailed)	.000	.
	N	100	100

Table 8 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
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1	.757 ^a	.573	.568	.3071	.573	131.397	1	98	.000
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As can be seen in Table 9, the regression model on the effect of Educational Empowerment on Health Awareness is significant. The regression sum of squares was 12.394; the residual sum of squares was 9.244 and the F value was 131.397 ($p < .001$). This suggests the Educational Empowerment had significant contribution to variance for Health Awareness and the regression model was appropriate for predicting the Health Awareness of rural women.

Table 9 ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	12.394	1	12.394	131.397	.000^b
	Residual	9.244	98	.094		
	Total	21.638	99			

Table 10 shows regression coefficients and it was concluded that regression coefficient of Educational Empowerment on Health Awareness was significant and positive. The unstandardized coefficient was $B = .772$, and the standardized beta coefficient was $\beta = .757$. This relation was statistically significant ($t = 11.463$, $p < .001$) and the 95% confidence interval for B was .638 to .905 (excluding zero). This suggests a strong correlation between increased educational empowerment and increased health awareness in rural women of Kanpur.

Table 10 Coefficients

Model	Variable	Unstandardized B	Std. Error	Standardized Beta	t	Sig.	95% CI Lower	95% CI Upper
1	(Constant)	1.139	.295	—	3.854	.000	.552	1.725
	Educational Empowerment	.772	.067	.757	11.463	.000	.638	.905

Table 11 shows differences in mean Health Awareness scores across educational qualification groups. The health-awareness scores of respondents with secondary education was the highest ($M = 4.667$, $SD = .441$), followed by those with higher secondary education ($M = 4.433$, $SD = .462$), and respondents with primary education had a mean score of 4.000. The mean Health Awareness score was 4.507 ($SD = .468$) overall. The obtained result shows that the awareness of health was high among all the educational groups with some variations among them based on educational qualification.

Table 11 Descriptive Statistics

Educational Qualification	N	Mean Health Awareness	Std. Deviation
Primary	3	4.000	.000
Secondary	37	4.667	.441
Higher Secondary	60	4.433	.462
Total	100	4.507	.468

The differences among educational qualification groups were statistically significant, and were confirmed by an ANOVA ($F(2,97) = 5.049$, $p = .008$), as summarized in Table 12. The significance value was less than .05, therefore the null hypothesis (no difference between the educational groups) was accepted. This suggests that educational qualification was significantly related to the disparities in health awareness level of rural women. This result should be treated with some caution, however, as there were only three respondents in the primary education group.

Table 12 ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	2.040	2	1.020	5.049	.008
Within Groups	19.598	97	.202		
Total	21.638	99			

5. DISCUSSION

In the present study, high level of educational empowerment with mean score of 4.365 and health awareness ($M = 4.507$) was obtained among rural women of Kanpur. Instead, only 10% of rural women of Ayodhya had high awareness of reproductive health whereas 60% revealed low awareness. They also found that educational level was significantly related to reproductive-health awareness ($p = .017$). The difference indicates that the respondents in this study might have received more education, or more information about health. But, both studies confirm the significance of education on the understanding of reproductive health and general health of women. Additionally, Tripathi et al. (2024) observed significant educational gaps in healthcare utilization among rural mothers in India. Fully using maternal and newborn health services was significantly lower for women with no formal education than for women with higher levels of education. So the current results are consistent with recent evidence that higher education can enhance health knowledge and involvement with healthcare.

The most powerful result in this research was that there was a significant positive correlation between educational empowerment and health awareness ($r = .743$, $p < .001$). Regression analysis also revealed that the variation in health awareness was 57.3 % due to educational empowerment ($R^2 = .573$). Tripathi et al. (2024) also found that education of the mother was one of the factors to be considered for healthcare access among the rural women of India. They found that women with more education were more likely to use maternal and newborn health services than women with no education. Sinha and Sharma (2024) have also shown that a digital media education intervention significantly enhanced breast cancer knowledge and preventive practices among rural women in the state of Bihar. Similarly, Mainaz et al. (2024) found that a health education programme with a structured approach could significantly improve the knowledge of breast health among rural women in Karnataka. They also found that after the intervention, women's BSE practices significantly increased. The result of the present study is confirmed by these comparative results, indicating that educational empowerment is a powerful tool for enhancing women's understanding and use of health-related information.

The present study also showed that educational qualification group was significant, $F(2,97) = 5.049$, $p = .008$. The pattern, however, was not entirely linear as respondents with secondary education had slightly higher awareness as compared to those with higher-secondary education. This means that formal education may not necessarily be the only variable to explain health awareness among rural women. Srivastav et al. (2025) also found that the use of antenatal care and communication with the Anganwadi and ASHA workers were significant factors in increasing reproductive-health awareness, beyond education. The findings of Mainaz et al. (2024) also showed that women with low baseline level of health knowledge benefitted significantly from the health education that had been provided in a structured format. Similarly, Sinha and Sharma (2024) found digital interventions in educational practices could enhance health knowledge and preventive actions among rural women. These results suggest that health workers, health community programmes, digital health information and hands-on health education can complement the formal education system. Hence, the present study indicates that the enhancement of formal education and functional health education is essential to make rural women aware about their health in Kanpur.

6. CONCLUSION

The present study found that there is a strong relationship between the educational empowerment and health awareness among the rural women of Kanpur. Both the educational empowerment and health awareness scores were high, suggesting that the individuals had relatively positive levels of educational and health-related awareness. More important, the high level of the correlation between the two constructs highlighted that more empowered women generally had more awareness about health related issues. The regression analysis also showed the significant contribution of educational empowerment with an R-squared value of 57.3%, indicating a significant contribution of this. This study confirms that educational empowerment is one of the key factors that could contribute to empowering women to access, understand, assess and utilize health information.

The marked gap in the health awareness among the educational qualification groups also suggests that educational level has an impact on women's health-related knowledge even if not all the times. Other sources of women's understanding of health issues can include their exposure to health professionals, community programmes, digital information and to health education in practice. In this context, rural women's health promotion must go beyond formal education and include other elements such as functional health literacy, digital education, community-based awareness creation and the use of health communication that is easy to access. Enhancing these aspects of educational empowerment may be helpful in improving health-related decision-making and well-being of rural women in Kanpur.

REFERENCES

- Ahmad, D., Mohanty, I., & Niyonsenga, T. (2022). Improving birth preparedness and complication readiness in rural India through an integrated microfinance and health literacy programme: Evidence from a quasi-experimental study. *BMJ Open*, 12(2), e054318. <https://doi.org/10.1136/bmjopen-2021-054318>
- Das, S., Deepak, & Singh, R. R. (2024). Does empowering women influence maternal healthcare service utilization? Evidence from National Family Health Survey-5, India. *Maternal and Child Health Journal*, 28(4), 679–690. <https://doi.org/10.1007/s10995-023-03823-0>
- Mainaz, M., Guthigar, M., & Naik, P. (2024). Effectiveness of a health educational program in enhancing breast cancer knowledge among women in rural Karnataka, South India. *Cureus*, 16(3), e56157. <https://doi.org/10.7759/cureus.56157> (PMC)
- Pal, V., Kumar, I., Barua, K., Gohar, M., Srivastava, S., Mahajan, H., Singh, N. P., Chaudhary, R., Bansal, T., Gupta, T., Ahmed, T., & Singhal, T. (2026). Dialing into health: Assessing the reach, use, and impact of mobile phones on health awareness among rural women in the Rural Health Training Centre area of District Gautam Buddha Nagar, Uttar Pradesh, India. *BMC Health Services Research*. <https://doi.org/10.1186/s12913-026-15008-w>

- Passi, R., Kaur, M., Lakshmi, P. V. M., Cheng, C., Hawkins, M., & Osborne, R. H. (2023). Health literacy strengths and challenges among residents of a resource-poor village in rural India: Epidemiological and cluster analyses. *PLOS Global Public Health*, 3(2), e0001595. <https://doi.org/10.1371/journal.pgph.0001595>
- Pradhan, M. R., & De, P. (2025). Women's healthcare access: Assessing the household, logistic and facility-level barriers in India. *BMC Health Services Research*, 25, 323. <https://doi.org/10.1186/s12913-025-12463-9>
- Pradhan, M. R., Unisa, S., Rawat, R., Surabhi, S., Saraswat, A., Reshmi, R. S., & Sethi, V. (2023). Women empowerment through involvement in community-based health and nutrition interventions: Evidence from a qualitative study in India. *PLOS ONE*, 18(4), e0284521. <https://doi.org/10.1371/journal.pone.0284521>
- Rathore, R., Nigam, S., & Barman, S. K. (2023a). A study on utilization of maternal and infant health services in rural area of district Kanpur Nagar. *International Journal of Community Medicine and Public Health*, 10(4), 1513–1516. <https://doi.org/10.18203/2394-6040.ijcmph20230932>
- Rathore, R., Nigam, S., & Barman, S. K. (2023b). Coverage and quality of maternal and infant health services in rural area of District Kanpur Nagar. *Indian Journal of Community Health*, 35(3), 339–343. <https://doi.org/10.47203/IJCH.2023.v35i03.016>
- Singh, S., Tyagi, P., Anand, D., & Gupta, R. (2022). Assessment of knowledge and practice regarding menstrual hygiene among adolescent girls in government school of Kanpur Nagar: A descriptive cross-sectional study. *International Journal of Community Medicine and Public Health*, 9(3), 1412–1415. <https://doi.org/10.18203/2394-6040.ijcmph20220704>
- Sinha, N., & Sharma, A. (2024). Digital media intervention for breast cancer awareness among rural women: A quasi-experimental study from Bihar, India. *Clinical Epidemiology and Global Health*, 28, 101705. <https://doi.org/10.1016/j.cegh.2024.101705> (Directory of Open Access Journals)
- Srivastav, S., Singh, A., & Shukla, P. (2025). Assessment of socio-economic profile and reproductive health knowledge among rural women of Ayodhya District. *European Economic Letters*, 15(2). <https://doi.org/10.52783/eel.v15i2.3181> (EEL)
- Tripathi, P., Chakrabarty, M., Singh, A., & Let, S. (2024). Geographic disparities and determinants of full utilization of the continuum of maternal and newborn healthcare services in rural India. *BMC Public Health*, 24, 3378. <https://doi.org/10.1186/s12889-024-20714-3> (pubmed.ncbi.nlm.nih.gov)
- Vignitha, B., Debnath, A., PVS, A., Sai, T. K., & Charag, S. (2024). Women's empowerment in India: State-wise insights from the National Family Health Survey 5. *Cureus*, 16(7), e65509. <https://doi.org/10.7759/cureus.65509>