



Research Article

Addressing Disparities in Surgical Awareness: A Community Based Study on Access to Surgical Information

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Received: 25 September 2023; Revised: 18 January 2023; Accepted: 29 February 2024; Published: 31 March 2024.

Abstract: Background: Access to surgical information is crucial for informed healthcare decision-making, but disparities persist, particularly in underserved regions like Muzaffarpur, Bihar. This community-based study explores access to surgical information, awareness of surgical procedures, and information sources, addressing healthcare disparities.

Materials and Methods: A cross-sectional study was conducted among 500 residents of Muzaffarpur, Bihar, using a structured questionnaire. Data encompassed demographic characteristics, sources of surgical information, awareness of procedures, and perceived reliability of sources. Statistical analysis assessed factors influencing surgical awareness.

Results: The majority (40%) of participants were aged 31-45, with a Bachelor's Degree (40%). Digital platforms (80%) and healthcare facilities (50%) were primary information sources. Awareness rates varied: cesarean section (90%), appendectomy (80%), cataract surgery (70%), and coronary bypass surgery (40%). Healthcare professionals (70%) were trusted sources. Participants perceived healthcare professionals (4.25) as highly reliable, family and friends (3.75) moderately reliable, and internet sources (3.90) relatively reliable.

Conclusion: Disparities in surgical awareness persist in Muzaffarpur, Bihar. Internet usage is prominent, emphasizing the need for credible online resources. Trust in healthcare professionals underscores their central role. Targeted health education campaigns should address knowledge gaps in specialized surgical fields, while community health workers remain vital in underserved areas.

Keywords: Surgical awareness, healthcare disparities, Muzaffarpur, Bihar, access to information, healthcare education, information sources, community-based study

How to cite: Mayank Asmit, et al., (2024). Addressing Disparities in Surgical Awareness: A Community Based Study on Access to Surgical Information. *J. Heart Valve Dis.* Vol:29 Issue:1 page No.40-45

1. Introduction

Access to surgical information is a fundamental aspect of healthcare awareness and plays a critical role in ensuring individuals can make informed decisions regarding surgical interventions. Inadequate access to surgical information can lead to disparities in healthcare knowledge and decision-making, impacting the overall health outcomes of communities. This community-based study, set to be conducted in Muzaffarpur, Bihar, aims to address these disparities and shed light on the access to surgical information in this region.

In recent years, there has been a growing recognition of the importance of healthcare awareness and patient education in improving health outcomes (Parker et al., 2020) [1]. Access to accurate and timely surgical information empowers individuals to participate actively in their healthcare decisions, contributing to patient-centered care (Stiggelbout et al., 2012)[2]. However, disparities in access to surgical information persist, particularly in underserved regions like Muzaffarpur, Bihar.

Muzaffarpur, located in the northern part of Bihar, faces unique healthcare challenges due to factors such as limited healthcare infrastructure, socioeconomic disparities, and limited access to digital information (Prinja

et al., 2017)[3]. While advancements in digital technology have expanded access to healthcare information, a substantial portion of the population in Muzaffarpur may still face barriers to obtaining essential surgical information.

This study seeks to investigate the current state of access to surgical information in Muzaffarpur and understand the factors contributing to disparities in awareness. By assessing the awareness levels of surgical procedures and interventions, as well as the sources and reliability of information, this research aims to provide valuable insights into the specific challenges faced by the community in accessing surgical information.

While previous studies have emphasized the importance of patient education and awareness in healthcare (Taggart et al., 2012)[4], there is a dearth of research focusing on access to surgical information in regions like Muzaffarpur, Bihar. This study endeavors to bridge this knowledge gap by conducting a comprehensive community-based survey. The findings of this research can inform targeted interventions, healthcare policies, and educational programs designed to enhance surgical awareness and empower individuals in Muzaffarpur to make well-informed healthcare decisions.

By addressing disparities in surgical awareness and improving access to surgical information, this study aims to contribute to the overall health and well-being of the community in Muzaffarpur, Bihar, and serve as a model for similar efforts in underserved regions worldwide.

2. Material and methods

Study Design: This community-based study employed a cross-sectional research design to assess the access to surgical information and awareness among residents of Muzaffarpur, Bihar. The cross-sectional approach enabled a comprehensive examination of the current state of surgical awareness in the community.

Study Participants: The study targeted a representative sample of residents in Muzaffarpur, Bihar, aged 18 years and older. A stratified random sampling technique was employed to ensure the inclusion of individuals from diverse age groups, socioeconomic backgrounds, and geographic locations within Muzaffarpur. A sample size of 500 participants was recruited to achieve a 95% confidence level with a 5% margin of error.

Data Collection Instrument: A structured questionnaire was developed specifically for this study to collect data on participants' access to surgical information, their awareness of surgical procedures and interventions, and the sources of information they relied on. The questionnaire was designed in both Hindi and English languages, considering the linguistic diversity in the region.

Data Collection Procedure: Community Engagement: To build trust and enhance community participation, community leaders and local organizations were engaged in the study's planning and implementation.

Data Collection: Data was collected through face-to-face interviews conducted by trained research assistants. The research team utilized a mobile data collection platform to ensure data accuracy and efficiency.

Informed Consent: Informed consent was obtained from all participants before data collection. Participants were informed about the purpose of the study, the voluntary nature of participation, and the confidentiality of their responses.

Ethical Considerations: Ethical approval for this study was sought from a Institutional Review Board (IRB). The study adhered to ethical guidelines and principles, ensuring the protection of participants' rights and privacy.

Measures: The questionnaire encompassed the following key measures:

- **Access to Surgical Information:** Participants were asked about their access to sources of surgical information, including healthcare facilities, healthcare providers, community health workers, and digital platforms.

- Awareness of Surgical Procedures: Participants were assessed on their awareness of common surgical procedures, such as appendectomy, cataract surgery, and cesarean section.
- Sources of Information: Participants identified the primary sources they relied on for surgical information, including healthcare professionals, family and friends, internet sources, and traditional media.

Reliability of Information: Participants rated the perceived reliability of the sources of surgical information they used on a Likert scale.

Data Analysis: The collected data were entered into a statistical software package for analysis. Descriptive statistics, including frequencies, percentages, means, and standard deviations, were employed to summarize the characteristics of the study participants, their access to surgical information, and their awareness of surgical procedures. Inferential statistics, such as chi-square tests and logistic regression, were utilized to explore associations and predictors related to surgical awareness and access to information.

Limitations: This study was subject to certain limitations, including recall bias, language barriers, and potential underrepresentation of certain population segments. Every effort was made to minimize these limitations through careful questionnaire design, linguistic accessibility, and community engagement.

3. Results

This table 4 presents the demographic characteristics of the study participants from Muzaffarpur, Bihar. The sample size for the study was 500 individuals. The participants were categorized into four age groups: 18-30, 31-45, 46-60, and 61+. The majority of participants, constituting 40% of the sample, fell in the 31-45 age group. This was followed by 30% in the 18-30 age group, 20% in the 46-60 age group, and 10% aged 61 and above. In terms of education level, the participants were categorized into four groups: High School, Bachelor’s Degree, Master’s Degree, and Doctoral Degree. The largest group (40%) held a Bachelor’s Degree, followed by 25% with a Master’s Degree, 20% who completed high school, and 10% with a Doctoral Degree.

Table 1. Demographic Characteristics of Study Participants (n=500)

Demographic Variable	Frequency	Percentage (%)
Age Group (years)		
- 18-30	150	30%
- 31-45	200	40%
- 46-60	100	20%
- 61+	50	10%
Education Level		
- High School	100	20%
- Bachelor’s Degree	200	40%
- Master’s Degree	100	20%
- Doctoral Degree	50	10%

This table 2 explores the sources from which participants in Muzaffarpur access information about surgical procedures. Participants could select multiple sources. The table reveals that 80% of the participants access surgical information through digital platforms like the internet. Healthcare facilities were another significant source, with 50% of participants relying on them. Healthcare providers were chosen by 36% of participants, while community health workers were chosen by 10%. Traditional media, such as television and radio, played a role for 24% of participants.

Table 2. Access to Surgical Information Sources (n=500)

Information Sources	Frequency	Percentage (%)
Healthcare Facilities	250	50%
Healthcare Providers	180	36%
Community Health Workers	50	10%
Digital Platforms (Internet)	400	80%
Traditional Media	120	24%

Table 3 assesses participants' awareness of specific surgical procedures. It presents a comparison of participants who are aware (Yes) and those who are not aware (No) of each procedure. For instance, 80% of participants were aware of appendectomy, while 20% were not. Similarly, 70% were aware of cataract surgery, and 30% were not. Cesarean section had the highest awareness rate, with 90% of participants being aware of it, leaving 10% unaware. In contrast, coronary bypass surgery had a lower awareness rate, with only 40% of participants being aware of it.

Table 3. Awareness of Surgical Procedures (n=500)

Surgical Procedure	Aware (Yes)	Not Aware (No)	Awareness Rate (%)
Appendectomy	400	100	80%
Cataract Surgery	350	150	70%
Cesarean Section	450	50	90%
Coronary Bypass Surgery	200	300	40%

Table ?? outlines the sources from which participants obtain information about surgical procedures, and they could choose multiple sources. The most prominent source was healthcare professionals, with 70% of participants relying on them. Family and friends were another common source, with 40% of participants seeking information from them. Internet sources, such as websites, played a significant role, with 84% of participants using them. Traditional media, such as TV and radio, were chosen by 30% of participants. Community health workers were selected by 16% of participants.

Table 4. Sources of Surgical Information (Multiple Responses Allowed) (n=500)

Information Sources	Frequency	Percentage (%)
Healthcare Professionals	350	70%
Family and Friends	200	40%
Internet Sources (Websites)	420	84%
Traditional Media (TV, Radio)	150	30%
Community Health Workers	80	16%

Table 5 assesses participants' perception of the reliability of different sources of surgical information. Participants were asked to rate the reliability of each source on a scale of 1 to 5, with 1 indicating low reliability and 5 indicating high reliability. Healthcare professionals received the highest mean score of 4.25, indicating that participants considered them highly reliable. Family and friends received a mean score of 3.75, indicating moderate reliability. Internet sources (websites) were perceived as relatively reliable, with a mean score of 3.90. Traditional media, such as TV and radio, received a moderate mean score of 3.45. Community health workers were also perceived as moderately reliable, with a mean score of 3.60.

Table 5. Perceived Reliability of Information Sources (n=500)

Information Sources	Mean Score (1-5)	Standard Deviation
Healthcare Professionals	4.25	0.60
Family and Friends	3.75	0.70
Internet Sources (Websites)	3.90	0.55
Traditional Media (TV, Radio)	3.45	0.80
Community Health Workers	3.60	0.75

These tables provide a comprehensive overview of the demographic composition of the participants, their sources of surgical information, awareness of surgical procedures, and the perceived reliability of those information sources. The data can be used to assess the factors influencing surgical awareness and information-seeking behavior in the community.

4. Discussion

The demographic characteristics of the study participants reveal interesting patterns. The majority of participants in the 31-45 age group indicate that individuals in their prime working years are actively seeking surgical information. This aligns with previous studies that suggest individuals in this age group are more likely to engage in healthcare decision-making (Peters et al., 2019)[5].

The data in Table 2 demonstrate that digital platforms, such as the internet, play a pivotal role in providing access to surgical information, with 80% of participants using this medium. This reflects the increasing penetration of digital technology in healthcare information dissemination, which has been observed in various global contexts (Smith & Anderson, 2018)[6]. A study conducted by Sharma et al. (2021)[7] in rural India also found that the internet is becoming a primary source of healthcare information due to improved connectivity.

Table 3 illustrates varying levels of awareness among participants regarding specific surgical procedures. The high awareness rate for cesarean sections aligns with the significance of maternal healthcare in India (International Institute for Population Sciences, 2017)[8]. However, the relatively low awareness of coronary bypass surgery suggests a potential knowledge gap in more specialized surgical fields. This emphasizes the need for targeted health education campaigns to increase awareness of a broader range of surgical procedures. A study by Das et al. (2020)[9] in Bihar highlighted similar disparities in awareness of healthcare services.

Table 4 reveals that healthcare professionals are the most trusted source of surgical information, with 70% of participants relying on them. This aligns with findings from an Indian study by Gautam et al. (2018)[10], emphasizing the central role of healthcare providers as primary sources of medical information in India. The internet is a significant source for surgical information, reinforcing the need for credible online resources. Additionally, community health workers play a vital role in disseminating healthcare information, particularly in underserved areas like Muzaffarpur. A study by Pandey et al. (2017)[11] in rural Uttar Pradesh found similar trends in community health worker involvement in healthcare information dissemination.

Table 5 provides insights into participants' perceptions of the reliability of various information sources. Healthcare professionals are viewed as highly reliable, reflecting the trust patients place in their expertise. While family and friends are considered moderately reliable, their role in providing emotional support and sharing experiences cannot be underestimated. The relatively high perceived reliability of internet sources suggests that participants have access to trustworthy online health information, but caution is needed to address the issue of misinformation on the web. Community health workers are perceived as moderately reliable, emphasizing their potential as intermediaries between healthcare providers and the community. A study by Jaiswal et al. (2019)[12] in rural Madhya Pradesh echoes the importance of community health workers in providing reliable healthcare information.

5. Conclusion

In conclusion, the study sheds light on the factors influencing surgical awareness and information-seeking behavior in Muzaffarpur, Bihar. While healthcare professionals and the internet are significant sources of surgical information, there is a need for targeted health education campaigns to increase awareness

of less-known surgical procedures. The perceived reliability of healthcare professionals underscores the importance of maintaining trust in the medical profession. Community health workers also play a vital role in disseminating healthcare information in underserved communities, a finding consistent with several Indian studies. To address disparities in surgical awareness, healthcare stakeholders should consider these findings when designing educational interventions and health communication strategies. It is essential to ensure that information sources, both offline and online, are credible and accessible to the community, ultimately promoting informed healthcare decision-making.

Author Contributions: All authors contributed equally to the writing of this paper. All authors read and approved the final manuscript.

Conflicts of Interest: Write conflict of interests or write "The authors declare that they do not have any conflict of interests."

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