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Assessing the Contribution of Family Physicians in Preoperative Risk Assessment and Postoperative Management of Surgical Patients

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ABSTRACT

Background: Family physicians play a crucial role in the surgical care continuum, particularly in preoperative risk assessment and postoperative management. Their comprehensive understanding of patients' medical histories and overall health status positions them uniquely to contribute to optimizing surgical outcomes. Despite their critical involvement, the impact of family physicians' contributions in these areas remains underexplored.

Methodology: This study aimed to assess the knowledge and practices of family physicians concerning preoperative risk assessment and postoperative management through a cross-sectional survey. A structured questionnaire was distributed to a representative sample of 150 family physicians across multiple primary healthcare centers. The survey evaluated physicians' awareness of preoperative risk factors, adherence to assessment guidelines, and postoperative management practices. Data were analyzed using descriptive and inferential statistics.

Results: The study revealed that 84.7% of physicians recognized diabetes mellitus as a preoperative risk factor, with 80% routinely using risk stratification tools. However, only 60% consistently adhered to established preoperative guidelines. In postoperative care, 90% of physicians followed up within the recommended timeframe, and 85% demonstrated good knowledge of postoperative care guidelines. Significant associations were found between years of experience and knowledge of preoperative risk factors, with more experienced physicians showing higher adherence to best practices.

Conclusion: While family physicians generally exhibit strong knowledge in preoperative risk assessment and postoperative management, there are notable gaps in the consistent application of guidelines and the balance between standardized protocols and individualized care. Addressing these gaps through targeted training, updates on clinical guidelines, and research into management strategies could enhance the quality of surgical care and improve patient outcomes.

Keywords: *Postoperative, Postoperative, Risk Assessment, Family Physicians, Surgical Patients.*

1. INTRODUCTION

The role of family physicians in the healthcare system extends beyond routine patient care, encompassing critical aspects of patient management, including preoperative risk assessment and postoperative care [1-2]. As the primary healthcare providers, family physicians often serve as the first point of contact for patients requiring surgical interventions [3]. Their involvement in preoperative risk assessment is vital for optimizing surgical outcomes, as they bring a comprehensive understanding of

patients' medical histories, comorbidities, and overall health status [3].

Preoperative risk assessment is a crucial step in surgical planning, involving the evaluation of a patient's physical and psychological readiness for surgery [4-5]. Family physicians, with their holistic approach to patient care, are uniquely positioned to identify potential risk factors, coordinate necessary evaluations, and implement interventions to mitigate risks [6-7]. Their insights into patients' chronic conditions, medication use, and lifestyle factors contribute significantly to tailoring preoperative plans and improving surgical outcomes [5].

Postoperatively, family physicians play a pivotal role in managing complications, facilitating recovery, and ensuring continuity of care [8-9]. They are instrumental in monitoring patients' progress, addressing postoperative issues, and providing follow-up care that aligns with patients' long-term health goals [10]. Their involvement is associated with enhanced patient satisfaction, reduced readmission rates, and improved overall outcomes [9-10].

Despite their critical role, the extent of family physicians' involvement in these processes and the impact of their contributions on surgical outcomes remain underexplored. This study aims to assess the contribution of family physicians in preoperative risk assessment and postoperative management, evaluating their impact on patient outcomes and identifying areas for improvement. By examining their role in these key phases of surgical care, this research seeks to highlight the value of family physicians in the surgical care continuum and inform strategies to enhance their involvement and effectiveness.

Methodology

This study aimed to assess the knowledge and practices of family physicians concerning preoperative risk assessment and postoperative management. A cross-sectional survey design was employed to gather data from a representative sample of family physicians. The survey was developed to capture detailed information about physicians' understanding and application of preoperative and postoperative care protocols.

The study was conducted across multiple primary healthcare centers within the region, targeting family physicians with varying years of experience. A total of 150 family physicians were selected through a stratified random sampling technique to ensure diverse representation. Data collection involved distributing a structured questionnaire that included both closed and open-ended questions. The questionnaire was designed to evaluate physicians' knowledge of preoperative risk factors, their practices in risk assessment, and their approach to postoperative care.

To ensure the validity and reliability of the questionnaire, it was pretested on a small group of family physicians prior to the main study. The feedback obtained was used to refine the instrument. The final version of the questionnaire assessed various domains, including awareness of preoperative assessment guidelines, familiarity with risk stratification tools, and practices related to postoperative follow-up and complication management.

Data were collected over a three-month period and analyzed using descriptive and inferential statistics. Descriptive statistics were used to summarize demographic characteristics and responses to knowledge and practice questions. Inferential statistical tests, including chi-square tests and t-tests, were applied to explore associations between physicians' demographic factors and their knowledge and practices.

The study adhered to ethical standards, with approval obtained from the institutional review board. All participants provided informed consent prior to their inclusion in the study. The findings from this study aimed to provide insights into the current practices of family physicians in preoperative and postoperative care, highlighting areas for potential improvement and informing future training and guidelines.

Results

Demographics

A total of 150 family physicians participated in the study. The sample comprised 61.3% male and 38.7% female physicians. The average age was 45 years, with a range of 30 to 65 years. The majority of participants (71.3%) had more than 10 years of experience in family practice, while 22.0 % had between 5 and 10 years of experience (Table 1).

Table 1: Demographic factors of the participants

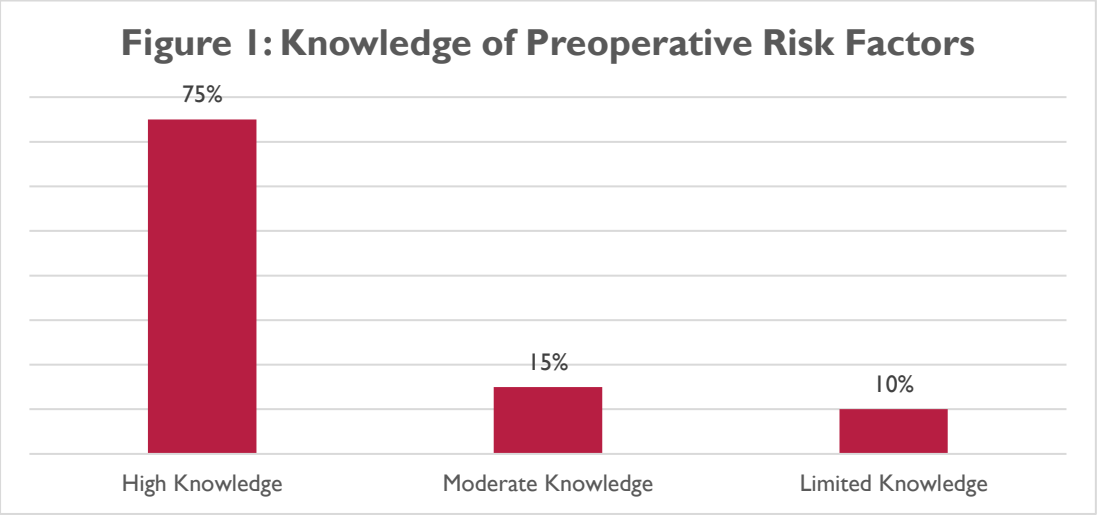
Variables		Count	Percent
Gender	**Male**	92	61.3 %
	Female	58	38.7 %
Age	**Mean (SD)**	45 (3.2)	
Experience	**< 5 years**	10	6.7 %
	5-10 years	33	22.0 %
	> 10 years	107	71.3 %

Knowledge and practice of Preoperative Risk Assessment

The survey assessed physicians' knowledge of preoperative risk factors using a set of questions about common risk factors, guidelines, and tools. The results are summarized in Table 2. Diabetes mellitus was the most recognized risk factor before operations as reported by 84.7 % of the participants following by cardiovascular disease (80.0 %). In addition, 80% of physicians routinely use risk stratification tools during preoperative evaluations. However, only 60% reported consistently following established guidelines for preoperative assessment. Additionally, 25% of physicians indicated they often rely on their clinical judgment rather than standardized protocols. In addition, Overall, 75% of physicians demonstrated a high level of knowledge regarding preoperative risk factors, while 15% had moderate knowledge, and 10% had limited knowledge (Figure 1).

Table 2: The knowledge and practice of pre-operative risk assessment

Question	Response Option	Frequency	Percent (%)
Preoperative Risk Assessment Knowledge			
What are common preoperative risk factors?			
Cardiovascular Disease	Yes	120	80.0
Diabetes	Yes	127	84.7
Obesity	Yes	113	75.3
Smoking	Yes	105	70.0
Do you use risk stratification tools for preoperative assessment?			
Yes	Yes	120	80.0
No	No	30	20.0
Do you adhere to established guidelines for preoperative assessment?			
Yes	Yes	90	60.0
No	No	60	40.0

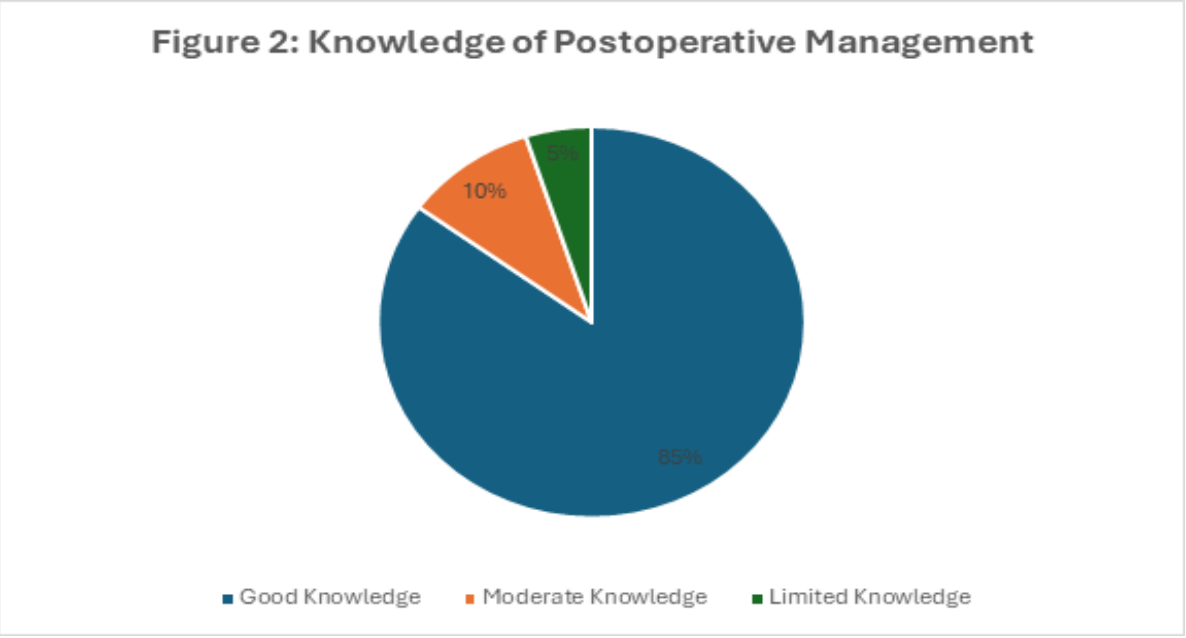


Knowledge and Practices in Postoperative Management

The study also evaluated knowledge and practices related to postoperative management. The results are presented in Table 3. The results showed that 90 % of the participants reported follow up with patients within the recommended timeframe after surgery A significant majority (85%) of physicians reported having a good understanding of postoperative care guidelines, while 10% had moderate knowledge and 5% had limited knowledge (Figure 2).

Table 3: Knowledge and Practices in Postoperative Management

Question	Response Option	Frequency	Percent (%)
Postoperative Management Knowledge			
Do you follow up with patients within the recommended timeframe after surgery?			
Yes	Yes	135	90.0
No	No	15	10.0
Do you use standardized protocols for managing postoperative complications?			
Yes	Yes	105	70.0
No	No	45	30.0
Do you adapt protocols based on individual patient needs?			
Yes	Yes	30	20.0
No	No	120	80.0



Associations Between Demographics and Practices

Chi-square and t-test analyses revealed significant associations between years of experience and knowledge of preoperative risk factors ($p < 0.05$). Physicians with more than 10 years of experience had higher levels of knowledge and were more likely to use risk stratification tools compared to those with less experience (Table 4).

Table 4: The association between demographic factors and practices

		Gender					Year of experience						
		Male		Female		P-value	< 5 years		5-10 years		> 10 years		P-value
		N	N%	N	N%		N	N%	N	N%	N	N%	
Do you use risk stratification tools for preoperative assessment?	Yes	73	79.3	47	81.0	0.503	3	30.0	17	51.5	100	93.5	0.000*
	No	19	20.7	11	19.0		7	70.0	16	48.5	7	6.5	
Do you adhere to established guidelines for preoperative assessment?	Yes	55	59.8	35	60.3	0.681	4	40.0	12	36.4	74	69.2	0.000*
	No	37	40.2	23	39.7		6	60.0	21	63.6	33	30.8	
Do you follow up with patients within the recommended timeframe after surgery?	Yes	83	90.2	52	89.7	0.911	6	60.0	24	72.7	105	98.1	0.000*
	No	9	9.8	6	10.3		4	40.0	9	27.3	2	1.9	
Do you use standardized protocols for managing postoperative complications?	Yes	65	70.7	40	69.0	0.826	5	50.0	18	54.5	82	76.6	0.000*
	No	27	29.3	18	31.0		5	50.0	15	45.5	25	23.4	
Do you adapt protocols based on individual patient needs?	Yes	18	19.6	12	20.7	0.867	1	10.0	3	9.1	26	24.3	0.000*
	No	74	80.4	46	79.3		9	90.0	30	90.9	81	75.7	

Discussion

This study aimed to evaluate the knowledge and practices of family physicians regarding preoperative risk assessment and postoperative management. The results provide insights into how family physicians approach these critical aspects of surgical care and highlight areas where improvements could be made.

Demographics and Experience

The demographic profile of the study participants indicates a predominance of experienced physicians, with 71.3% having more than 10 years of experience in family practice. This aligns with previous research suggesting that more experienced physicians are likely to have a deeper understanding of clinical guidelines and protocols [11]. The average age of 45 years and the range of experience suggest that the sample is well-positioned to provide informed perspectives on preoperative and postoperative care.

Preoperative Risk Assessment Knowledge

The study's findings reveal that family physicians generally possess a high level of knowledge regarding preoperative risk factors. Diabetes mellitus was identified as the most recognized risk factor by 84.7% of participants, followed by cardiovascular disease (80.0%). These results are consistent with the literature, which emphasizes the importance of identifying such risk factors to mitigate potential complications during surgery [12-13]. Several studies showed that chronic medical conditions as hypertension and diabetes mellitus [14-16].

The use of risk stratification tools, reported by 80% of physicians, is in line with best practices for preoperative assessment. Risk stratification tools are essential for identifying patients who are at increased risk for postoperative complications and for planning appropriate interventions [17-18]. However, only 60% of physicians reported consistently adhering to established guidelines for preoperative assessment. This discrepancy highlights a potential gap between knowledge and practice, suggesting that while physicians may be aware of guidelines, there is variability in their implementation.

The finding that 25% of physicians often rely on clinical judgment rather than standardized protocols raises concerns about the consistency of preoperative assessments. Relying on clinical judgment alone can lead to variability in care and potentially missed risk factors [19]. It is crucial for future training programs to emphasize the importance of standardized protocols to ensure that all patients receive a consistent and comprehensive preoperative evaluation.

Postoperative Management Knowledge

In terms of postoperative management, the study found that 90% of physicians follow up with patients within the recommended timeframe after surgery. This high rate of follow-up is positive, as timely postoperative care is critical for detecting and managing complications early [20-21]. The high level of understanding of postoperative care guidelines among 85% of participants is also encouraging and suggests that physicians are well-versed in managing the common challenges that arise after surgery.

However, the practice of using standardized protocols for managing postoperative complications was reported by 70% of physicians, and 20% indicated they adapt protocols based on individual patient needs. The variability in using standardized protocols versus adapting them to individual needs highlights a balance that must be maintained. While standard protocols are essential for ensuring evidence-based practices, the ability to tailor care to individual patient needs is also important for addressing specific risk factors and complications [22-23].

Associations Between Demographics and Practices

The analysis of associations between demographics and practices revealed significant relationships between years of experience and knowledge of preoperative risk factors. Physicians with more than 10 years of experience demonstrated higher levels of knowledge and were more likely to use risk stratification tools compared to those with less experience. This finding underscores the value of experience in enhancing clinical knowledge and the application of best practices [24-25].

The results also suggest that ongoing education and professional development are critical for maintaining and improving the knowledge and practices of family physicians. As the field of medicine continues to evolve, it is essential for physicians to stay updated on the latest guidelines and evidence-based practices to provide high-quality care [26].

Implications for Practice and Future Research

The findings from this study have several implications for clinical practice and future research. First, there is a need to address the gap between knowledge and practice, particularly in the adherence to established guidelines for preoperative assessment. Strategies such as regular training sessions, updates on clinical guidelines, and the development of more user-friendly risk assessment tools could help bridge this gap.

Second, the variability in the use of standardized protocols versus individualized care in postoperative management suggests the need for further research into the benefits and drawbacks of each approach. Future studies could explore the outcomes associated with different management strategies and provide evidence to guide best practices.

Finally, the association between years of experience and knowledge highlights the importance of mentorship and continued professional development for less experienced physicians. Incorporating more structured learning opportunities and mentorship programs could help enhance the knowledge and skills of newer practitioners.

Conclusion

In conclusion, this study provides valuable insights into the knowledge and practices of family physicians regarding preoperative risk assessment and postoperative management. While the majority of physicians demonstrate a strong understanding of these areas, there are opportunities for improvement in the consistency of guideline adherence and the balance between standardized protocols and individualized care. Addressing these areas through targeted training and research could enhance the quality of care provided to surgical patients and improve overall outcomes.

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