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Ethical Decision-Making in Public Hospitals Management: Challenges and Models from Romania

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Abstract: Ethical decision-making is essential in healthcare management, particularly in addressing challenges such as resource constraints, stakeholder conflicts, and legislative ambiguities. The aim of this study is to explore the ethical decision-making process in public hospital management, including its challenges and models. The research objectives are to identify the ethical decision-making models employed by public hospital managers in Romania, to investigate how the ethical dilemmas influence the decision-making process in Romanian public hospital management and to determine the role of ethical values in the decision-making process undertaken by Romanian public hospital managers. To this end, quantitative survey data were collected from hospital managers to assess how ethical considerations shape managerial choices. The main research results reveal that ethical dilemmas, especially in areas like resource allocation and strategic planning, delay decision-making and increase its complexity. Ethical values such as fairness, transparency, and trust are central to guiding decisions, yet the lack of formal ethics training among many managers limits their ability to address these dilemmas effectively. Structured frameworks like the PLUS and IDEA models, while valuable, are underutilized, further hindering consistent ethical decision-making. This study highlights the need for mandatory ethics training, institutionalized decision-

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making models, and strengthened organizational policies to improve decision-making efficiency and integrity. By addressing these gaps, healthcare organizations can align with global standards, foster ethical cultures, and better meet the needs of patients, staff, and communities. This research provides valuable insights into ethical management in resource-constrained healthcare systems.

Keywords: ethical decision-making; healthcare management; public hospitals.

JEL classification: I19; L20; L30.

1. INTRODUCTION

Ethical considerations have become increasingly significant in organizational decision-making, particularly in contexts where decisions directly impact societal welfare, such as healthcare management. Modern organizations are not only evaluated by their operational and financial performance but also by their adherence to ethical principles. Ethical decision-making, which involves navigating moral issues and ensuring that decisions align with both legal and societal norms, plays a critical role in maintaining trust and accountability within organizations. Jones (1991) defines ethical decisions as those that are legally and morally acceptable to the larger community, emphasizing their dual significance in organizational and societal contexts.

Healthcare management, as a domain that intersects public welfare and organizational efficiency, presents unique ethical challenges. Decisions in this sector often involve competing priorities, such as balancing resource constraints with the obligation to provide equitable care. As Weber (2001) notes, healthcare is a public good that must be administered to meet the needs of the community while adhering to principles of fairness, equity, and transparency.

The Romanian healthcare system exemplifies the complexities of ethical decision-making in a transitional socio-economic context. Public hospital managers in Romania operate within a system characterized by resource scarcity, legislative ambiguities, and evolving societal expectations (Cumpăt *et al.*, 2024). Ethical dilemmas frequently arise in areas such as resource allocation, technology adoption, and strategic planning. For instance, managers must often prioritize between upgrading medical technologies and addressing pressing staffing needs, a situation further complicated by insufficient funding and bureaucratic inefficiencies (Poroch and Agheorghiesei, 2018).

Moreover, stakeholder conflicts are particularly pronounced in Romania's healthcare sector. Hospital managers must mediate between the often-divergent interests of patients, families, medical staff, and regulatory bodies. These challenges are compounded by external pressures, such as public scrutiny and political influence, which can further complicate ethical decision-making processes (Cumpăt *et al.*, 2024).

Despite the growing recognition of the importance of ethics in healthcare management, there is a lack of comprehensive research on how ethical values and training influence managerial decision-making in Romania. Our study found that the majority of hospital managers reported having no prior ethics training. The absence of formal ethics training among hospital managers is a significant barrier to addressing ethical dilemmas effectively (Holian, 2002; Shepherd *et al.*, 2021). This underscores the critical need for both organizational and individual development in ethical competencies to improve decision-making outcomes.

This study seeks to address this gap by exploring the patterns and models, challenges, and influences of ethical considerations in the decision-making processes of public hospital managers in Romania. By examining quantitative data this research aims to provide a comprehensive understanding of how ethical dilemmas and values shape managerial practices in this context.

The other parts of the paper are as follows: Section 2 highlights the relevance and implications of ethical decision-making in public hospitals; Section 3 is dedicated to the literature review; Section 4 presents the research hypotheses and their rationale; Section 5 details the methods; Section 6 presents the research results; Section 7 discusses the findings; Section 8 is dedicated to the study's conclusions and Section 9 highlights some limitations and future research directions. Finally, the reference list is provided at the end of the paper.

2. RELEVANCE AND IMPLICATIONS OF ETHICAL DECISION-MAKING IN PUBLIC HOSPITALS

2.1 Significance

Addressing ethical issues in healthcare management holds profound implications at societal, organizational, and managerial levels. Ethical decision-making is central to maintaining trust, ensuring equity, and upholding the integrity of healthcare systems. This study, focusing on the ethical dimensions of public hospital management in Romania, provides insights that are both theoretically and practically significant. To our knowledge, no prior research has systematically explored ethical decision making in Romania, making this investigation the first of its kind in the national healthcare setting.

2.2 Societal implications

Healthcare systems play a pivotal role in promoting public welfare, and ethical decision-making ensures that healthcare services are distributed fairly and equitably. As Weber (2001) emphasizes, healthcare is a public good, and its ethical administration directly impacts societal trust in healthcare institutions. Addressing ethical issues such as resource allocation and patient care safeguards vulnerable populations, promotes equity, and minimizes disparities in access to healthcare services. Furthermore, transparent and ethical managerial practices reinforce public confidence in the healthcare system, contributing to a broader sense of societal well-being and justice.

2.3 Organizational implications

Within healthcare organizations, ethical decision-making is integral to fostering a culture of accountability, transparency, and fairness. Ethical leadership encourages the establishment of robust policies and procedures that guide managers and staff in navigating complex ethical dilemmas. As Fulmer (2004) notes, embedding ethical values into organizational culture enhances governance and reinforces responsible decision-making at all levels. Moreover, organizations with strong ethical frameworks are better equipped to address conflicts among stakeholders, mitigate risks associated with unethical behavior, and maintain operational stability in resource-constrained environments.

Ethical practices also drive organizational effectiveness by improving relationships between management and staff, enhancing employee morale, and reducing turnover. By prioritizing fairness and justice in decisions, healthcare managers can create a work environment that motivates employees to align with organizational goals, fostering long-term stability and productivity.

2.4 Managerial implications

For managers, the ability to address ethical issues effectively is a critical competency that directly influences decision-making quality and outcomes. Ethical dilemmas in healthcare, such as those related to resource allocation, patient care prioritization, and conflicts among stakeholders, require managers to apply ethical principles while balancing organizational constraints and societal expectations. As Peer and Rakich (1999) suggest, hospital managers must evaluate the interests of diverse stakeholders and develop transparent decision-making frameworks that ensure fairness and consistency.

Ethics training and the adoption of structured ethical decision-making models, such as the IDEA framework and the PLUS model, empower managers to navigate these challenges more effectively. Furthermore, addressing ethical issues enhances managerial credibility, strengthens stakeholder relationships, and ensures alignment with broader organizational and societal values.

The societal, organizational, and managerial significance of addressing ethical issues in healthcare cannot be overstated. By fostering trust, ensuring equity, and promoting accountability, ethical decision-making serves as a cornerstone for effective healthcare management. This study's focus on the Romanian healthcare system highlights the broader relevance of ethics in addressing challenges in resource-constrained and evolving healthcare contexts, offering valuable insights for both practice and policy.

3. LITERATURE REVIEW

3.1 Ethical decision-making theories and models

Ethical decision-making in organizations has been extensively studied through various theoretical frameworks and models, each offering unique insights into how individuals and organizations navigate ethical dilemmas. These models provide structured approaches for identifying, analyzing, and resolving ethical issues, ensuring that decisions align with legal, moral, and organizational standards.

Ethical dilemmas in public healthcare management are often rooted in the tension between two fundamental ethical theories: deontological ethics, which emphasize duty, fairness, and the equitable treatment of all stakeholders, and utilitarian ethics, which prioritize actions that maximize overall benefit or efficiency (Daniels, 2000; Weber, 2001). In the context of resource allocation, managers must often balance deontological concerns for equity with utilitarian pressures for cost-effectiveness, making these theories highly relevant to the ethical challenges explored in this study.

3.1.1 Rest's simple ethical decision-making model

Rest's model (Rest, 1986) outlines a straightforward, four-component process for ethical decision-making: awareness, judgment, intention, and behavior. In the awareness stage,

individuals recognize the presence of an ethical dilemma. Judgment involves evaluating the moral rightness or wrongness of potential actions. Intention focuses on committing to ethical behavior, while behavior represents the implementation of the chosen course of action. This model emphasizes the necessity of first identifying an ethical issue as the foundation of the decision-making process.

3.1.2 Jones' model of moral intensity

Jones (1991) introduced the concept of moral intensity as a critical factor in ethical decision-making. Moral intensity refers to the extent of ethical significance attributed to a situation and is influenced by dimensions such as the magnitude of consequences, social consensus, probability of effect, temporal immediacy, proximity, and concentration of effect. Jones' model builds upon Rest's framework by incorporating the characteristics of the moral issue itself rather than focusing solely on the decision-maker or organizational context. This approach highlights how the perceived importance of an ethical dilemma affects individual behavior.

3.1.3 Trevino's interactionist model

Trevino's interactionist model (Trevino, 1986) posits that ethical decision-making in organizations results from the interplay between individual and situational factors. Individual factors include cognitive moral development, ego strength, field dependence, and locus of control, while situational factors encompass organizational culture, authority, and job-related pressures. The model underscores the dynamic nature of ethical decision-making, suggesting that organizational environments significantly influence ethical behaviors. Strong normative cultures are more likely to foster agreement on ethical behavior among members, whereas weak cultures may lead to reliance on subcultural norms.

3.1.4 Moral awareness decision-making model

Tenbrunsel and Smith-Crowe (2008) developed the moral awareness model, which integrates emotion and intuition into ethical decision-making. This model distinguishes between moral and amoral decision-making processes, identifying four possible outcomes: intentionally ethical, unintentionally ethical, intentionally unethical, and unintentionally unethical decisions. Moral awareness serves as the foundation for ethical decision-making but does not guarantee ethical outcomes, as the decision-making process can deviate based on contextual or individual factors.

3.1.5 The PLUS model

The PLUS model, developed by the Ethics and Compliance Initiative (2021), incorporates political, legal, universal, and self-focused filters to guide decision-making. The model emphasizes organizational ethics and evaluates decisions based on their alignment with policies, laws, universal principles, and personal standards of justice and fairness. By providing a structured ethical analysis framework, the PLUS model ensures that decisions are consistently aligned with organizational values and regulatory requirements.

3.1.6 The IDEA model

The IDEA model, developed by Trillium Health Partners ((n.d.)), offers a four-step process for ethical decision-making in healthcare: identifying the facts, determining relevant ethical principles, exploring options, and acting. The model incorporates conditions such as transparency, relevance, and compliance to ensure equitable and ethically sound decision-making. It is particularly suited for healthcare settings where decision-making often involves complex ethical challenges.

3.1.7 Ten-step ethical decision-making model

The ten-step model developed by Santosuosso (2016) combines moral experiences with business-oriented processes to evaluate ethical dilemmas. The model incorporates prioritization of ethical values and quantitative assessments of alternatives to guide decision-making. While the model offers a structured approach, its application requires further empirical validation.

3.1.8 Ethics checklist

The ethics checklist approach, pioneered by Bivins (2017), provides a reflective framework for ethical decision-making, focusing on privacy, bias, transparency, and other ethical considerations. This approach allows for consistency and justification in decisions while enabling the identification of ethical risks across projects and actions. It is especially valuable in healthcare, where decisions may directly impact patient rights and outcomes.

3.2 Ethical challenges in healthcare management

Healthcare management is fraught with ethical challenges that arise from the complex interplay of resource limitations, patient care priorities, and stakeholder conflicts. These challenges require managers to navigate competing interests while upholding ethical principles, organizational objectives, and societal expectations (Holian, 2002; Shepherd *et al.*, 2021).

The allocation of limited resources is one of the most significant ethical dilemmas in healthcare management. Managers must often decide how to distribute funds, staff, and technology equitably while maintaining efficiency and effectiveness (Daniels, 2000). Ethical challenges arise when resources are insufficient to meet all demands, forcing managers to prioritize certain areas over others. For instance, decisions regarding the adoption of new medical technologies or infrastructure expansion may compete with the need for staff development or direct patient care (Persad *et al.*, 2009). Legislative ambiguities, rapid technological advancements, and organizational constraints further exacerbate the complexity of these decisions.

Weber (2001) emphasizes that resource allocation in healthcare involves the fair distribution of public goods, ensuring access to appropriate services regardless of patients' financial means. Ethical decision-making in this context requires impartial evaluation of resource demands and the establishment of clear, fair prioritization procedures.

Patient care presents another critical ethical challenge for healthcare managers, as it involves balancing organizational constraints with the duty to provide high-quality, equitable care. Ethical issues in this domain often include decisions related to patient admission, treatment prioritization, and discharge, particularly in the face of resource limitations such as bed shortages or staff shortages. Additionally, managers must address informed consent,

patient privacy, and disparities in access to care. As Weber (2001) and Morrison (2008) argue, healthcare managers hold a moral obligation to create environments that support safe and effective patient care, requiring them to possess a deep understanding of ethical principles alongside operational and financial expertise.

Conflicts among stakeholders - patients, families, medical staff, regulatory bodies, and community members - are a pervasive ethical challenge in healthcare management. These conflicts often stem from divergent needs, values, and expectations. For example, while patients and their families may prioritize personalized care, hospital administrators must often focus on operational efficiency and cost-effectiveness. Similarly, tensions may arise between management and medical staff regarding resource allocation, workload distribution, or policy implementation. External pressures, such as union advocacy for employee rights or public demands for improved services, further complicate these dynamics.

Peer and Rakich (1999) highlight the unique role of hospital managers in addressing these conflicts, noting that their decisions affect all stakeholders within and beyond the organization. Ethical decision-making in this context requires managers to evaluate the interests of various constituencies impartially and to adopt transparent, inclusive processes that promote fairness and trust.

Healthcare managers operate in an environment where ethical challenges are both ubiquitous and multifaceted. Addressing these challenges requires a robust understanding of ethical principles, transparent decision-making processes, and the ability to navigate the competing interests of stakeholders. By prioritizing fairness, accountability, and communication, managers can strive to uphold ethical standards while ensuring the effective operation of healthcare organizations.

3.3 Influence of ethical values and training

The integration of ethical values and training has been widely recognized as a crucial factor in enhancing decision-making effectiveness, particularly in the ethically complex environment of healthcare management. Ethical values provide a moral framework for managers, while ethics training strengthens their ability to navigate dilemmas and implement sound decision-making processes (American College of Healthcare Executives, 2020; Khaghanizadeh *et al.*, 2023).

Ethical values, such as fairness, trust, compassion, and integrity, form the foundation of ethical decision-making in healthcare organizations. These values guide managers in prioritizing competing interests and resolving ethical dilemmas in ways that align with both organizational objectives and societal expectations. Walker (1993) identifies core ethical values, including trust, respect, justice, and responsibility, as universally accepted principles that underpin ethical decision-making, irrespective of cultural or religious differences. Managers operating within a value-driven framework are more likely to foster trust and cooperation among stakeholders, resulting in decisions that are perceived as equitable and just (American College of Healthcare Executives, 2020).

The presence of a strong ethical value system within an organization can also help mitigate the negative impact of ethical dilemmas. For instance, prioritizing transparency and accountability enables managers to address conflicts arising from resource allocation or stakeholder disagreements more effectively. These values act as a stabilizing force, ensuring

that decision-making processes remain consistent and morally defensible, even in challenging circumstances (Andersson *et al.*, 2022).

Ethics training is a critical tool for enhancing the capacity of managers to address ethical challenges systematically. Training programs provide decision-makers with the skills and knowledge required to apply ethical reasoning, resolve conflicts, and utilize structured decision-making models effectively. Research by O'Fallon and Butterfield (2013) emphasizes the positive impact of ethics education on managerial decision-making, demonstrating that trained managers are better equipped to integrate ethical principles into their professional practices. This leads to decisions that are more aligned with organizational and societal ethical standards.

Despite its importance, the absence of formal ethics training remains a significant challenge in healthcare management. Data from our study show that 74% of hospital managers in Romania reported having no prior ethics training. This lack of training was shown to negatively influence the speed and quality of decision-making, particularly in areas such as resource allocation and strategic planning. The findings underscore the necessity of incorporating ethics training into managerial development programs to address these deficiencies and improve ethical competence (Holian, 2002; Shepherd *et al.*, 2021).

Ethics training not only benefits individual managers but also contributes to the development of an ethical organizational culture. A strong ethical culture provides a supportive environment for managers by offering clear guidelines, reinforcing ethical norms, and embedding ethical considerations into organizational practices. Trevino (Trevino, 1986) highlights the critical role of organizational culture in influencing ethical behavior, noting that a normative culture fosters greater agreement among members regarding appropriate conduct. Conversely, weaker cultures lead to a reliance on subcultural norms, increasing variability in ethical decision-making practices.

Organizations that prioritize ethics training are better positioned to establish and sustain ethical cultures. These cultures encourage ethical behavior across all levels of the organization, attract employees who share similar values, and create a feedback loop that reinforces ethical practices. This alignment between ethics training and organizational culture strengthens the overall decision-making capacity of healthcare institutions, promoting better outcomes for patients, staff, and the community (American College of Healthcare Executives, 2020).

4. RESEARCH AIM, RESEARCH OBJECTIVES AND RESEARCH HYPOTHESES

The aim of this study is to explore the ethical decision-making process in public hospital management, focusing on its challenges and models.

The research objectives are threefold:

O1. To identify the ethical decision-making models employed by public hospital managers in Romania.

O2. To investigate how the ethical dilemmas influence the decision-making process in Romanian public hospital management.

O3. To determine the role of ethical values in the decision-making process undertaken by Romanian public hospital managers.

Ethical decision-making in healthcare management is a multidimensional process influenced by various models, dilemmas, and values. This study investigates these dimensions within the context of public hospital management in Romania, where ethical challenges are particularly pronounced due to systemic and resource constraints.

The study tests three research hypotheses formulated based on the literature review.

H1: Public hospital managers in Romania underutilize structured ethical decision-making models, such as the PLUS and IDEA frameworks.

H_{01}: Public hospital managers in Romania make regular use of structured ethical decision-making models such as the PLUS and IDEA frameworks.

H_{11}: Most public hospital managers in Romania underutilize structured ethical decision-making models such as the PLUS and IDEA frameworks.

The study by Cumpăt *et al.* (2024) found that Romanian public hospital managers predominantly rely on administrative, adaptive, and incremental models rather than structured ethical models like PLUS or IDEA, indicating underutilization of formal ethical decision-making frameworks (Cumpăt *et al.*, 2024). Guo (2020) also underscores the potential benefits of structured models like DECIDE, yet shows they are not consistently adopted in practice.

H2: Ethical dilemmas encountered by public hospital managers in Romania significantly delay and complicate the decision-making process.

H_{02}: Ethical dilemmas encountered by public hospital managers in Romania have no significant impact on the timeliness or complexity of the decision-making process

H_{12}: Ethical dilemmas encountered by public hospital managers in Romania significantly delay and complicate the decision-making process.

Ethical dilemmas arising from limited resources, legislative ambiguity, and conflicting stakeholder interests were found to significantly increase decision-making complexity and delays during the COVID-19 pandemic (Cumpăt *et al.*, 2024). Oliver and Holian support this by highlighting how political pressure and moral conflict impair decision-making in public health systems (Holian, 2002; Oliver, 2006).

H3: Ethical values, such as fairness, transparency, and trust, significantly influence managerial decision-making in Romanian public hospitals.

H_{03}: Ethical values such as fairness, transparency, and trust do not significantly influence managerial decision-making in Romanian public hospitals.

H_{13}: Ethical values such as fairness, transparency, and trust significantly influence managerial decision-making in Romanian public hospitals.

Ethical values emerged as a key factor in guiding Romanian hospital managers' decisions, especially under pandemic conditions, with respondents frequently referencing principles like respect, responsibility, and compassion (Cumpăt *et al.*, 2024). Walker (1993) affirms that values like trust and fairness form the foundation of ethical decisions in complex environments.

5. METHODS

5.1 Research design: method and instrument

This study adopts a quantitative research design based on a survey, to investigate ethical decision-making within the management of public hospital units in Romania. The integration of this method provides a comprehensive framework to examine the patterns, challenges, and influences of ethical dilemmas and values on managerial decision-making processes (Rest, 1986; Trevino, 1986; Jones, 1991). This quantitative approach enables the statistical analysis of associations and trends across the participant population, offering measurable insights into the ethical landscape of hospital management.

The quantitative design utilizes a survey instrument with 31 closed questions (a 6-point Likert scale (ranging from "to a very small extent" to "to a very large extent") and 18 open questions, designed to measure the prevalence and impact of ethical dilemmas and values across various domains of managerial decision-making. Additionally, the survey captures the extent to which public hospital managers apply specific ethical decision-making models in their professional practice (Casali, 2009; Mohammadi *et al.*, 2024). This approach provides a nuanced and comprehensive understanding of ethical decision-making within the context of Romanian public healthcare management. For this paper, only part of the questions from the questionnaire were analysed, in accordance with our stated research aim.

5.2 Population research and data collection

The study targeted managers of public hospital units in Romania as its primary participants. To be eligible for inclusion, participants were required to meet the following criteria:

- Hold a managerial position within a public hospital;
- Be employed under a formal management contract with the hospital's supervising authority;
- Represent any public hospital, irrespective of its size, regional location, or the manager's professional experience.

The survey population was identified using data provided by the Romanian National Institute of Statistics (Institutul Național de Statistică, 2021) which reported a total of 368 public hospitals across Romania. Contact details for the hospital managers were obtained through publicly available information on hospital websites. Invitations to participate in the study were sent via email, and follow-up phone calls were made to confirm receipt and encourage responses. To ensure adherence to research ethics, an Informed Consent statement was provided at the beginning of the questionnaire. Participants were fully informed about the purpose of the study, the content of the questionnaire, the voluntary nature of their participation, the confidentiality of the personal data collected, and the anonymization of their responses. Access to the survey was allowed only after participants had read the Informed Consent and explicitly agreed to take part in the research.

5.3 Instrument validity and reliability testing

The research tool was initially validated through expert review (Elangovan and Sundaravel, 2021) by four specialists in Management. They analyzed the questionnaire and confirmed its quality and suitability to be applied for collecting data for its intended purpose. Additionally, Exploratory Factor Analysis (EFA) was conducted to assess the validity and Cronbach's alpha was calculated to evaluate the reliability prior to its application.

The Exploratory Factor Analysis (EFA) using Varimax rotation identified three latent dimensions underlying respondents' ethical decision-making behaviors (Casali, 2009; Mohammadi *et al.*, 2024). The first factor, labeled Strategic Dilemma Intensity, was characterized by strong negative loadings on variables such as budget dilemmas, technology dilemmas, and budget-related values, indicating a dimension centered on the perceived frequency and weight of high-stakes, resource-sensitive ethical challenges. The second factor, Policy and Structure-Oriented Reasoning showed high positive loadings on recruitment and strategy dilemmas, along with moderate associations with structured models like the PLUS and 10-Steps models.

This dimension appears to reflect a leadership-oriented ethical reasoning style, grounded in institutional policy and formal frameworks. The third factor, Consultative and Model Application, captured moderate negative loadings on consultative behaviors, such as expert consultation, practice-based reasoning, and experiential knowledge, while simultaneously aligning positively with values and dilemmas in technology and strategy. Collectively, these three factors explain a meaningful portion of variance in ethical decision behaviors and provide evidence of multidimensional ethical reasoning profiles among hospital managers. These findings support the development of targeted interventions and training strategies aligned with specific ethical reasoning tendencies in healthcare leadership.

The Cronbach's alpha for the 17 Likert-scale items was 0.86, indicating strong internal consistency. Since values above 0.70 are considered acceptable (according various sources, see Taber (2018)), this result confirms that the items reliably measure related aspects of ethical dilemmas, consultative practices, and model use. The high reliability supports the instrument's validity in assessing ethical decision-making behaviors among hospital managers.

The reliability analysis, as measured by Cronbach's alpha shown in Table no. 1, provides strong support for the internal consistency of the constructs used in the study. The Operational Ethics Values construct – which includes items related to Budget Values, Recruitment Values, Technology Values, and Strategy Values – achieved a Cronbach's alpha of 0.90, indicating good reliability (as considered by different researchers, see Taber (2018)), and suggesting that these variables consistently reflect a coherent underlying dimension of ethical considerations related to institutional operations. In contrast, the Decision-Making Frameworks construct, which comprises the PLUS Model, Checklist Model, 10-Steps Model, and IDEA Model, yielded a Cronbach's alpha of 0.70, reflecting acceptable reliability. This level of internal consistency supports the validity of grouping these items as a distinct factor representing formal ethical reasoning approaches.

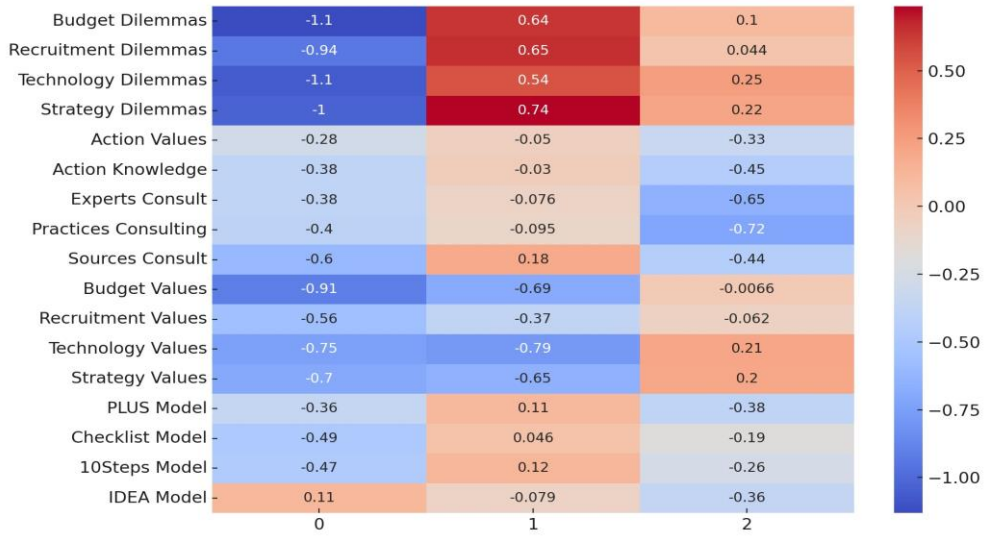

Figure no. 1 – Factor Analysis

Table no. 1 – Cronbach's Alpha Values for Internal Consistency of Ethical Constructs

Construct	Items Included	Cronbach's Alpha (α)	Interpretation
Decision-Making Frameworks	PLUS Model, Checklist Model, 10-Steps Model, IDEA Model	0.70	Acceptable reliability
Operational Ethics Values	Budget Values, Recruitment Values, Technology Values, Strategy Values	0.90	Excellent reliability

Bartlett's Test of Sphericity produced a chi-square value of 73.48 ($p < 0.001$), indicating that the correlation matrix significantly differs from an identity matrix. This result confirms that the variables are sufficiently intercorrelated and that the dataset meets the assumptions necessary for conducting factor analysis, supporting the presence of underlying latent structures within the ethical decision-making measures.

5.3.1 Sample and response rate

A non-probabilistic sampling method was employed to select a sample of 186 managers. Among them, 122 participants fully completed the survey, resulting in an initial response rate of 65.6%. However, due to the unavailability of accreditation data for certain hospitals where the respondents were managers, only 92 of these responses (a final response rate 49.46%, that was considered in our statistical analysis) were included in the final analysis. To ensure diverse representation, the distribution of respondents was documented across Romania's development regions, as shown in Table no. 2.

The study's participants exhibit diverse demographic and professional characteristics, as well as institutional contexts, as illustrated by the visualizations. Participants are categorized based on their ethics training status (Yes/No), with notable geographic variability in training participation, as shown in Figure no. 2. Gender is categorized as Male, Female, or Not Answered, with educational attainment distributed across BSc, MSc, and PhD levels. The Figure no. 3 highlights that MSc qualifications dominate among male participants, while a significant proportion of female participants hold PhDs.

Institutional characteristics provide additional context, including hospital bed count (under 150 beds, 150–250 beds, 251-350 beds, 351-500 beds, over 500 beds) and hospital administration or governing body (e.g., Ministry of Health, City Council, County Council) as shown in Figure no. 4. The dataset also identifies hospitals by geographic location.

5.4 Data Analysis and Presentation

Data analysis was conducted using Python programming language version 3.2 and utilizing pandas, NumPy, and SciPy libraries.

The survey data were analyzed using descriptive statistical techniques (frequency analysis, significance tests - Gamma coefficients, and the Chi-square test) and Exploratory Factor Analysis (EFA) to identify underlying trends and patterns and models in ethical decision-making in public hospital management.

The analyzed data are presented below in graphs and tables (authors' elaboration based on statistical results) and text.

Table no. 2 – Distribution of managers participating in the study by development regions

Region	Number of Respondents	Percentage (%)	Response Rate (%)
North-West	16	13.1	32
Center	15	12.3	31
North-East	32	26.2	65
South-East	17	13.9	44
South-Muntenia	9	7.4	17
Bucharest-Ilfov	12	9.8	22
Southwest-Oltenia	11	9.0	31
West	10	8.2	31
Total	**122**	**100**	

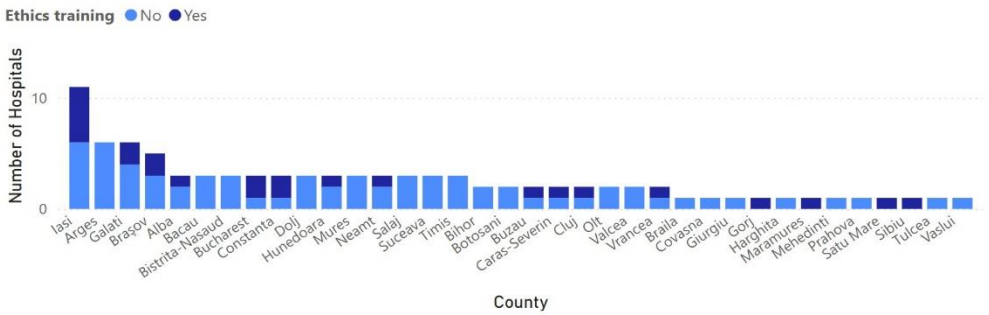

Figure no. 2 – Number of Hospitals per County by Ethical Training

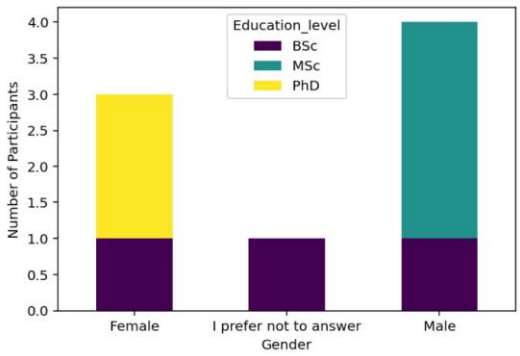

Figure no. 3 – Distribution of Study Participants by Gender and Education Level

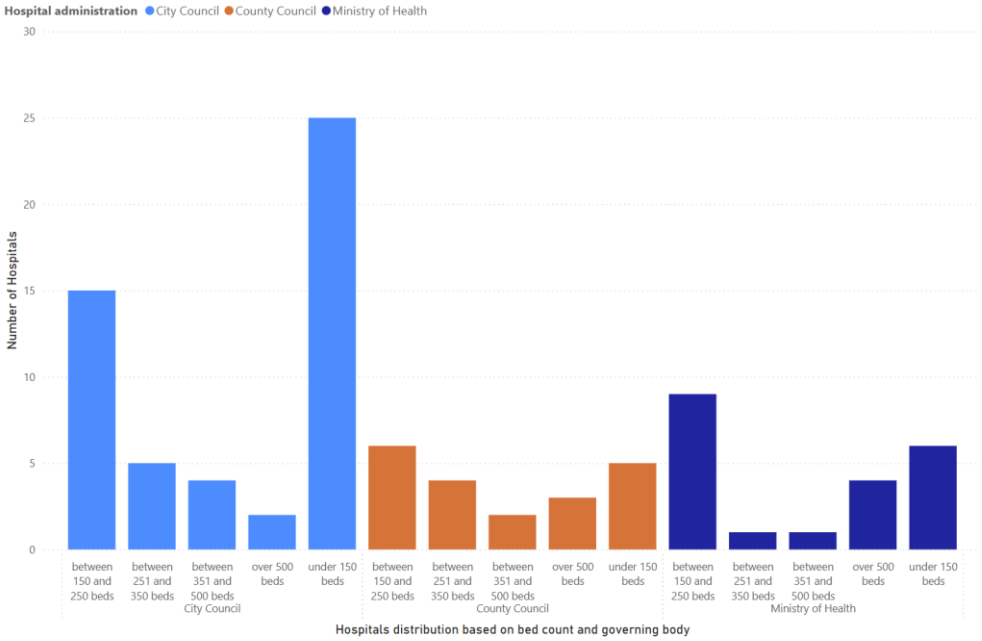

Figure no. 4 – Distribution of study participants by bed count and governing body

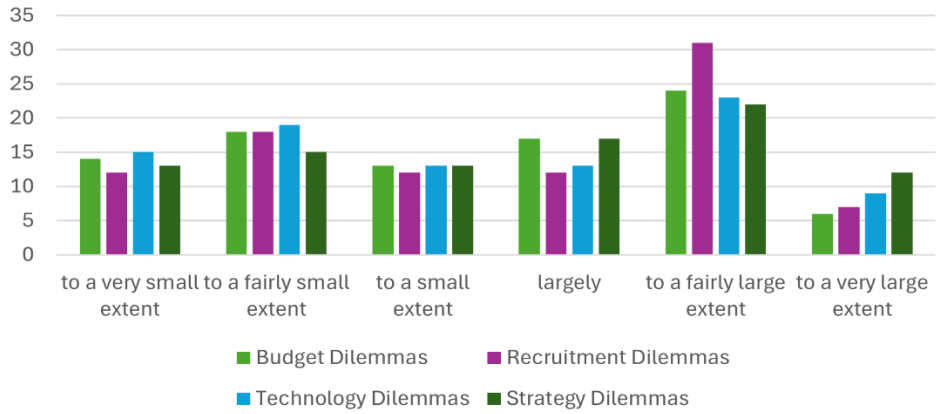

Figure no. 5 – Frequency distribution of importance levels for dilemmas

6. RESULTS

6.1 Decision-making models used by Romanian public hospital managers

The frequency distribution results reveal that ethical dilemma influence decision-making across all categories, but with notable differences in response patterns. While the most common response overall is "to a fairly large extent", its dominance varies among dilemma types as shown in Figure no. 5. Recruitment dilemmas exhibit the highest concentration at the "fairly large extent" level, indicating that ethical concerns strongly shape hiring decisions. Budget, strategy, and technology dilemmas also show high responses in this category, but with a more even distribution across moderate levels. Technology dilemmas, in particular, have a broader spread, with a substantial number of responses in the "to a small extent" and "to a very small extent" categories, suggesting that ethical considerations in technology-related decisions may be more variable or context-dependent. The response "to a very large extent" appears most prominently in strategy dilemmas, reinforcing the critical role of ethical concerns in long term planning and decision-making. Conversely, responses at the lowest influence level are relatively infrequent across all categories, indicating that ethical dilemmas are rarely perceived as having no impact on decision-making.

The distribution of ethical decision-making models, as depicted in Figure no. 6, illustrates how different frameworks are utilized in decision-making processes. The responses show that structured ethical models play a significant role, with the highest concentrations in the "largely" and "to a very large extent" categories. Among the models, the PLUS Model and 10 Steps Model exhibit the most pronounced influence, with a high frequency of responses in the "largely" and "to a very large extent" categories. This suggests that these models are widely adopted for ethical decision-making, likely due to their structured approach in evaluating ethical dilemmas. The IDEA Model also demonstrates strong influence, though its distribution is slightly more spread out, with notable responses in "to a fairly large extent" and "largely" categories. The Checklist Model follows a similar pattern but shows a slightly higher concentration in moderate influence levels, suggesting that while it is used frequently, it may not be as dominant as the PLUS and 10 Steps Models in guiding decision-making. Lower

influence levels ("to a very small extent" and "to a fairly small extent") appear infrequently, indicating that these models are rarely disregarded. However, the distribution shows some variation across models, with the Checklist Model and IDEA Model displaying a more balanced spread across all levels.

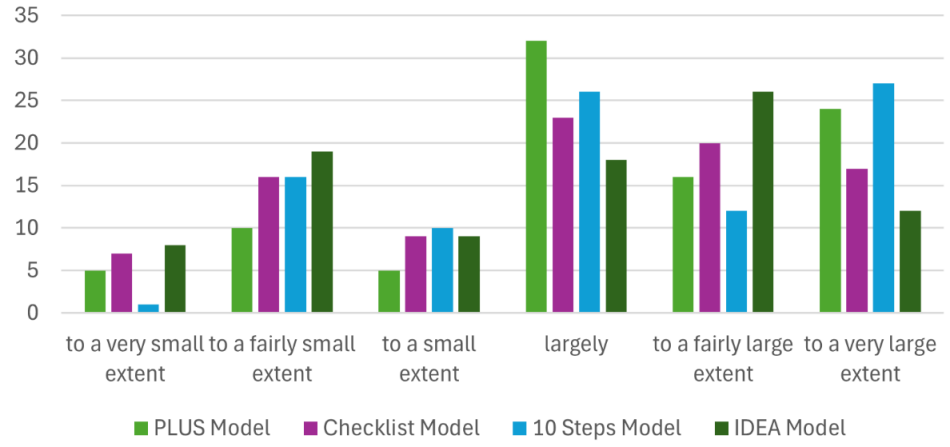

Figure no. 6 – Frequency distribution of importance levels for models

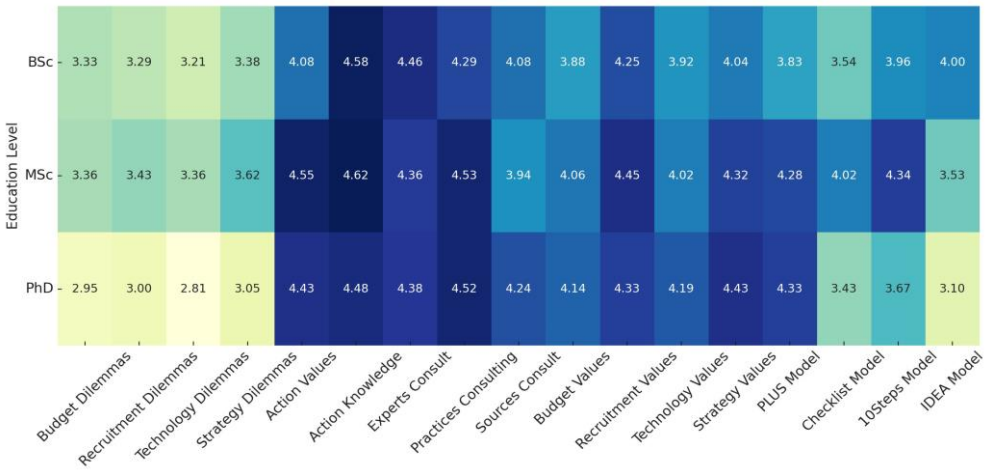

Figure no. 7 – Likert averages by education level

In Figure no. 7 we show how different education levels (BSc, MSc, PhD) relate to responses on ethical dilemmas, value-based actions, and use of ethical decision models. MSc holders show consistently higher average scores across most dilemma and model usage categories, especially for: Budget and Strategy Dilemmas, PLUS Model and 10-Steps Model, and Consultation-based decision-making (Experts Consult, Sources Consult). PhD holders have slightly lower or moderate scores in some model-related categories but still engage

heavily in value-based action and strategy-related dilemmas. BSc holders generally reported lower averages in use of formal ethical models and in facing recruitment dilemmas.

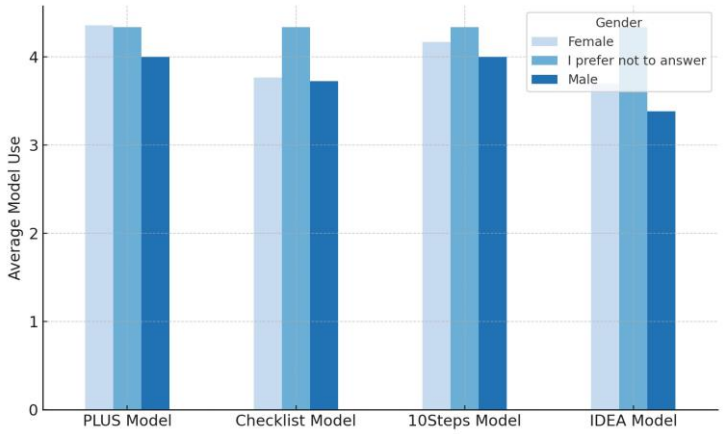

Figure no. 8 – Model use by gender

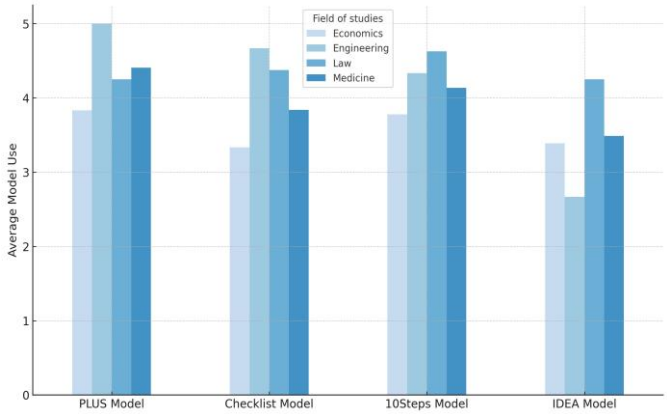

Figure no. 9 – Model use by field of study

The Likert scale used in this study is appropriate for measuring how hospital managers perceive and apply ethical principles in their decision-making. Likert-type scales are widely used in healthcare and organizational research because they help assess values, attitudes, and behaviors that cannot be directly observed (Boone and Boone, 2012). In the case of ethical decision-making, concepts like fairness, trust, and the use of ethical models are subjective and vary across individuals. The Likert scale allows these concepts to be measured in a structured way, using a range of responses such as "to a very small extent" to "to a very large extent." This format follows standard practices for evaluating attitudes and perceptions. Trevino's interactionist model (Trevino, 1986) shows that ethical decisions depend on both personal values and the work environment, both of which are effectively captured using this type of scale. The

reliability of the scale is confirmed by a Cronbach's alpha value of 0.90 as shown in Table no. 1, indicating strong internal consistency. Additionally, Walker (1993) highlights that ethical values like trust and respect are best assessed through personal reflection, further supporting the use of Likert scales in ethics research.

In Figure no. 8 we compare the model use by gender. Female respondents tend to report slightly higher use of all ethical decision-making models, especially the PLUS Model and 10-Steps Model. Male respondents show lower averages, with a notably smaller difference in the Checklist Model. Respondents marked as Other have slightly lower or comparable use but the sample size may be small (not visible from current data).

In Figure no. 9 we show that respondents from Medicine and Economics use ethical decision-making models more frequently, particularly the PLUS and 10-Steps models. Law professionals also report high use, especially of the Checklist Model. Engineering/Other fields show lower engagement with all models, possibly due to less formal ethics training in those disciplines.

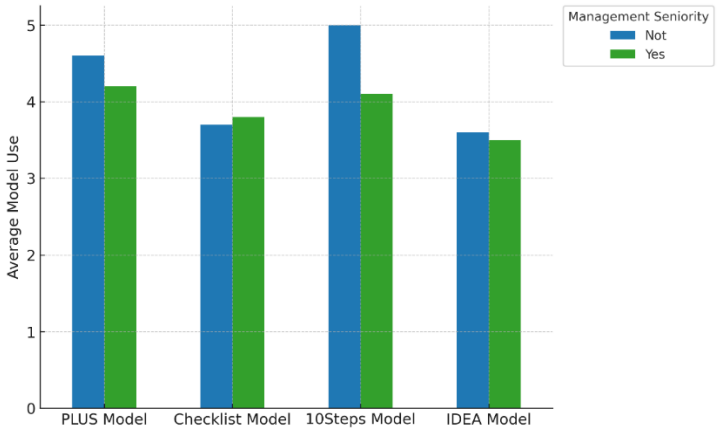

Figure no. 10 – Model use by Management Seniority

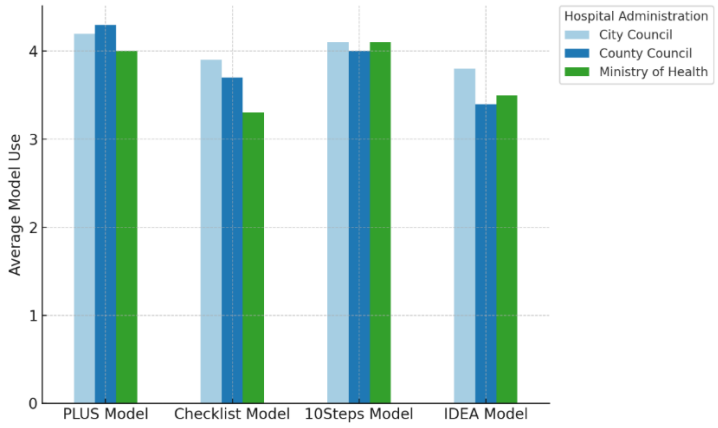

Figure no. 11 – Model use by hospital administration

In Figure no. 10 we show that senior managers (Yes) demonstrate significantly higher usage of all four models. This reflects a leadership-influenced emphasis on structured ethical frameworks, consistent with best practices in hospital governance. Non-senior managers (Not) have lower but still notable engagement, especially with the Checklist model perhaps due to its simplicity or procedural focus.

In Figure no. 11 we show that hospitals administered by the city council exhibit the highest average usage of structured ethical models, particularly the PLUS Model. Ministry of Health, managed institutions show lower usage, suggesting potential gaps in centralized ethics oversight. While hospitals administered by county councils fall in between, reflecting moderate engagement.

6.2 Testing the research hypotheses

6.2.1 Hypothesis 1: Use of structured ethical decision-making models (H1)

The adoption of structured ethical decision-making models is an essential aspect of enhancing the quality and consistency of managerial decisions in healthcare. This study has examined usage of four ethical models: the PLUS framework, the IDEA model, the 10 Steps model, and the Checklist model. Additional models were grouped under Other Models. The ranking use models use is shown in Figure no. 12.

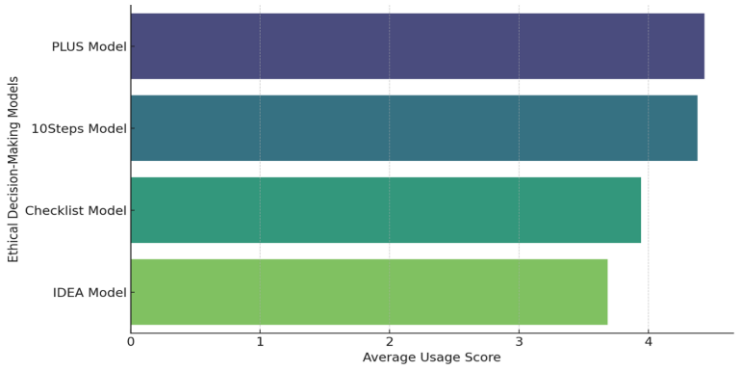

Figure no. 12 – Ranking models by usage

6.2.1.1 The PLUS framework

The PLUS model, developed by the Ethics Resource Center (Ethics and Compliance Initiative, 2021), is widely recognized for its systematic approach to ethical decision-making. The model incorporates filters such as Political, Legal, Universal, and Self (PLUS) to guide managers in analyzing the ethical implications of their decisions. These filters assess whether decisions align with organizational policies, applicable laws, universal ethical principles, and personal standards of justice and fairness. Managers employing the PLUS model benefit from its focus on organizational ethics, providing a structured pathway to navigate complex ethical dilemmas.

The significance test for the PLUS model, shown in Figure no. 13, highlights key predictors influencing its application. Strategy Dilemmas and Action Knowledge show the highest significance, indicating that the model is strongly linked to strategic decision-making and ethical knowledge availability. Technology Values and Strategy Values also play a role, reinforcing ethical considerations in strategic planning and technology-related decisions. However, external consultations appear less significant, suggesting a reliance on internal ethical frameworks over external inputs.

Figure no. 14 further illustrates the impact of these variables on the PLUS model. Sources Consult and Practices Consulting emerge as the most influential factors, indicating that while external input may not be statistically significant, it still holds practical importance in shaping ethical decision-making. Technology Dilemmas and Action Values also rank highly, reinforcing the idea that ethical decision-making in technology and action-driven contexts plays a critical role. In contrast, Strategy Values and Technology Values have the lowest impact, aligning with their lower significance in the statistical model. This suggests that while strategic and technological ethical values contribute to decision-making, their direct influence on the use of the PLUS model is limited.

Survey findings reveal that the PLUS framework is applied by a subset of Romanian hospital managers, particularly in decisions related to policy compliance and resource allocation. Managers using this model reported improved alignment of their decisions with institutional ethical standards, enhancing both decision-making efficiency and stakeholder trust. However, the prevalence of its adoption remains limited, highlighting the need for broader dissemination and training on this model to improve its application in public hospitals.

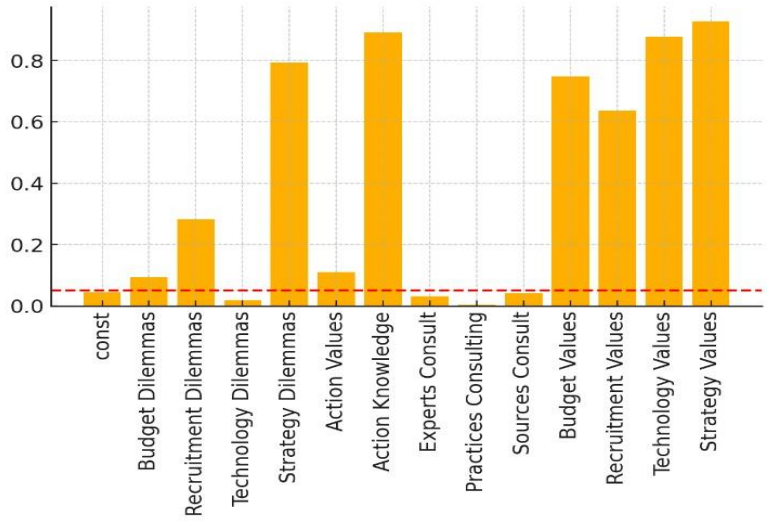

Figure no. 13 – Significance test of variables for PLUS model

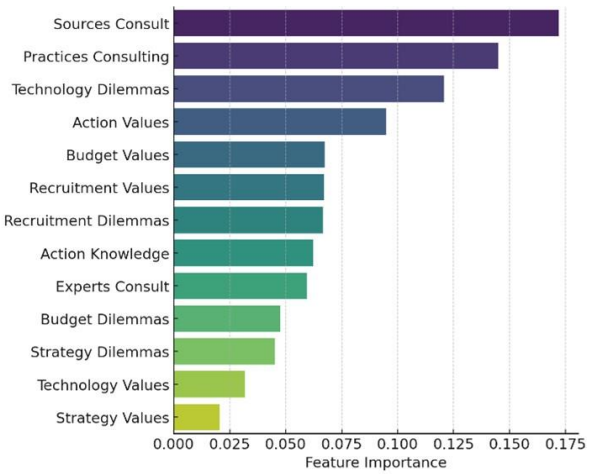

Figure no. 14 – Impact of variables on PLUS model

6.2.1.2 The IDEA model

The IDEA model, developed by Trillium Health Partners ((n.d.)), is specifically designed to address ethical dilemmas in healthcare. It provides a four-step process: Identify the facts, Determine relevant ethical principles, Explore options, and Act. The model emphasizes transparency, relevance, and compliance, making it particularly suited to the healthcare context where decisions often involve diverse and conflicting stakeholder interests.

Among the surveyed managers, the IDEA model was noted for its practical application in clinical and organizational decisions. Managers reported using the framework to guide decisions on patient care, technology acquisitions, and strategic planning, particularly in scenarios requiring a balance between competing ethical priorities. The model's emphasis on fairness and its structured approach to evaluating options were identified as key strengths. Nevertheless, its application remains inconsistent, as many managers lacked formal training in ethical frameworks.

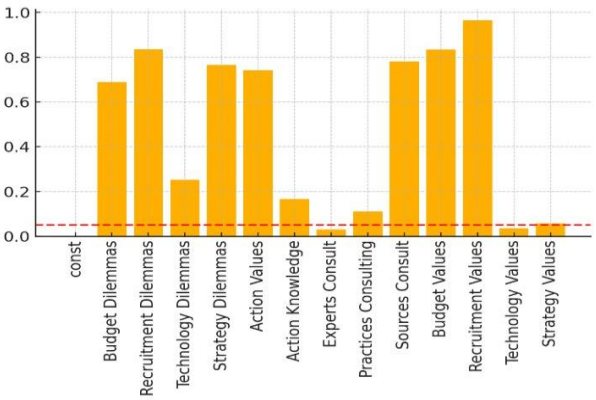

Figure no. 15 – Significance test of variables for IDEA model

The significance test results for the IDEA model, shown in Figure no. 15, highlight key factors influencing its use. Strategy Dilemmas and Action Values have the highest significance, indicating that the model is primarily applied in strategic decision-making and situations requiring strong ethical principles. Action Knowledge and Sources Consult also show notable significance, suggesting that access to ethical knowledge and external references contribute to its effectiveness.

The impact analysis in Figure no. 16 reinforces these findings, with Strategy Dilemmas and Action Values emerging as the most influential variables. Budget Dilemmas and Recruitment Dilemmas also have a significant impact, indicating that the IDEA model is widely used in financial and hiring-related ethical decisions. Meanwhile, Technology Values and Strategy Values show relatively low impact, suggesting that while strategic dilemmas are important, the specific ethical values associated with technology and strategy have a lesser role in driving the application of this model.

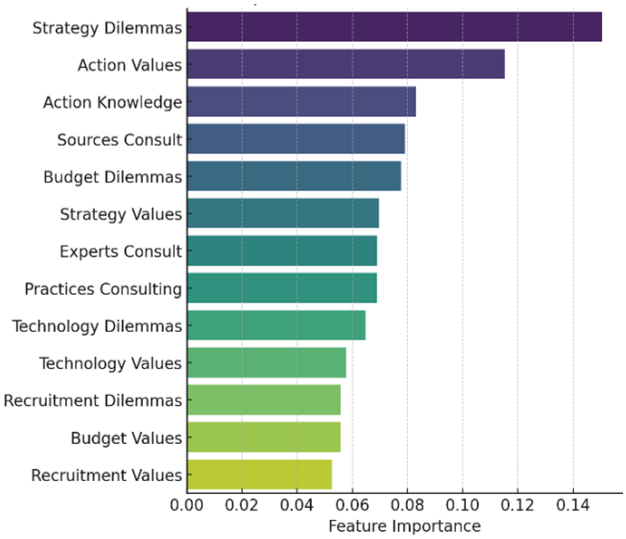

Figure no. 16 – Significance test of variables for IDEA model

6.2.1.3 The 10 steps model

The significance test results for the 10 Steps model, shown in Figure no. 17, highlight key variables influencing its application. Budget Dilemmas, Recruitment Dilemmas, and Technology Dilemmas show the highest significance, indicating that this model is widely applied in financial, hiring, and technology-related ethical decision-making. Strategy Dilemmas and Action Values also demonstrate notable significance, reinforcing the model's role in guiding ethical actions within strategic contexts.

The impact analysis in Figure no. 18 further supports these findings. Sources Consult and Practices Consulting emerge as the most influential factors, suggesting that while budget and recruitment dilemmas are significant, external consultation plays a crucial role in applying the 10 Steps model. Additionally, Technology Dilemmas, Budget Values, and Action

Knowledge show substantial influence, indicating that financial and technological ethical concerns are key drivers of this model. On the other hand, Strategy Values and Action Knowledge exhibit relatively lower importance in both significance and impact analyses, suggesting that while strategic ethical values are relevant, they are not primary determinants in the use of this model.

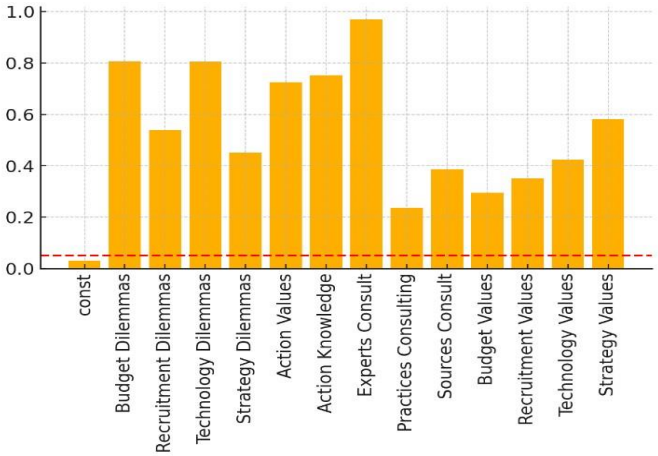

Figure no. 17 – Significance test of variables for 10 Steps model

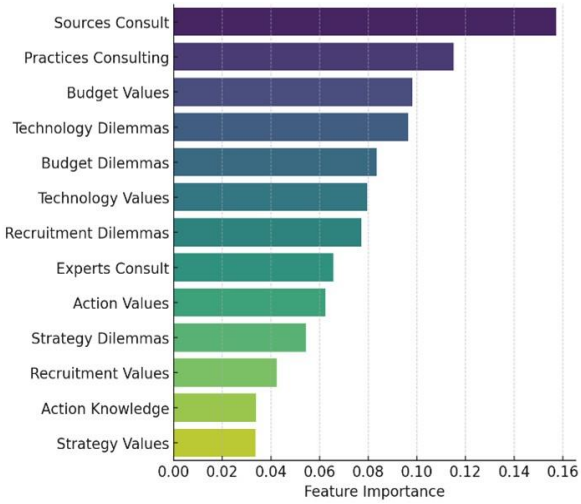

Figure no. 18 – Significance test of variables for 10 Steps model

6.2.1.4 The checklist model

The significance test results for the Checklist model, shown in Figure no. 19, identify key predictors influencing its application. Budget Dilemmas, Strategy Dilemmas, and Action Values

have the highest significance, suggesting that this model is particularly relevant for financial and strategic ethical decision-making. Action Knowledge and Practices Consulting also show notable significance, highlighting the role of structured ethical practices in decision-making.

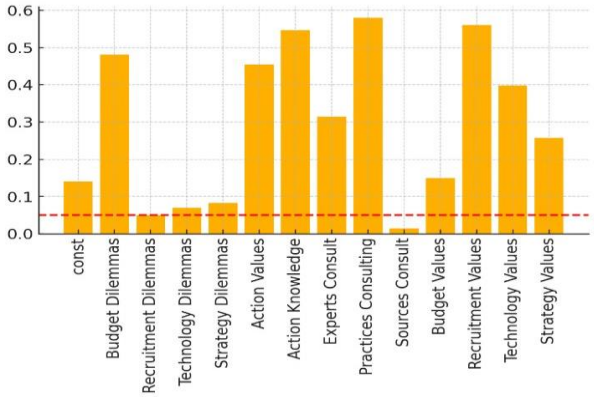

Figure no. 19 – Significance test of variables for Checklist model

The impact analysis in Figure no. 20 further supports these findings, with Sources Consult and Technology Dilemmas emerging as the most influential factors. This suggests that while budget and strategy dilemmas are statistically significant, external sources and technology-related ethical concerns also play a crucial role in applying the Checklist model. Budget Values and Action Values also demonstrate strong impact, reinforcing the model's reliance on ethical frameworks and financial considerations. On the other hand, Strategy Values and Recruitment Values exhibit lower significance and impact, indicating that while strategic and hiring ethical values are relevant, they are not primary drivers in the application of this model.

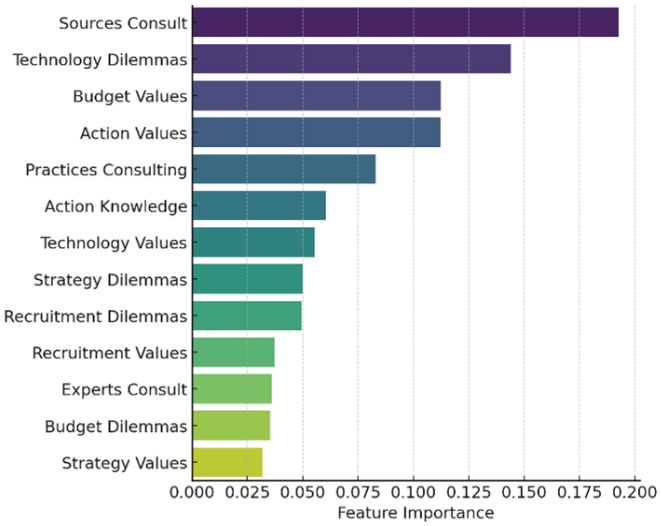

Figure no. 20 – Significance test of variables for Checklist model

In Figure no. 21 we compare the average use four ethical decision-making models between respondents who received ethics training and those who did not. Respondents with ethics training consistently show higher average usage of all four models. The 10-Steps Model and PLUS Model are especially more prominent among trained individuals. The Checklist Model sees the smallest difference between groups, suggesting it may be more universally accessible or simpler to apply without training.

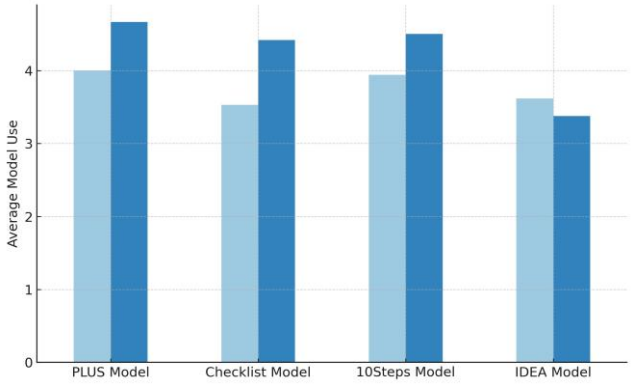

Figure no. 21 – Ethics Training vs. Model Use

The results of the study indicate that Romanian public hospital managers underutilize structured ethical decision-making models, thereby supporting H_{11} and rejecting the null hypothesis H_{01}. Although models such as the PLUS, IDEA, 10-Steps, and Checklist frameworks are recognized and available, their adoption remains inconsistent across institutions.

Figures no. 6 and no. 21 demonstrate that while some models (PLUS and 10-Steps) are used to a "fairly large" or "very large" extent by certain managers, the overall distribution of responses reveals significant variability and lower average use in larger hospitals and among managers without formal ethics training. Additional analyses in Figures no. 8, no. 9, no. 10, no. 11, no. 22 confirm that model usage correlates positively with prior ethics training, educational level, and managerial seniority. The significance and impact tests presented in Figures no. 13, no. 14, no. 15, no. 16, no. 17, no. 18, no. 19, no. 20 further highlight that while certain ethical dilemmas (especially strategy and budget-related) prompt the use of these models, other influencing factors, such as lack of formal training and institutional constraints, limit their widespread application.

These patterns validate the hypothesis that the majority of Romanian hospital managers do not routinely integrate structured ethical models into their decision-making processes.

6.2.2 Hypothesis 2: Influence of ethical dilemmas on decision-making complexity (H2)

Ethical dilemmas significantly affect the decision-making processes of public hospital managers, particularly by reducing the speed of response across critical areas such as budget allocation and strategic planning. Ethical dilemmas arise when

managers face conflicts between competing moral values or stakeholder interests, often requiring trade-offs that delay decision-making and complicate the prioritization of organizational objectives.

The study findings reveal that ethical dilemmas negatively influence decision-making speed in public hospital management. Respondents indicated that dilemmas related to resource allocation, stakeholder pressures, and legal ambiguities frequently result in delays in critical decisions. For example, decisions regarding budget adoption and resource allocation were significantly affected by ethical dilemmas, with respondents reporting a 19% influence to a large extent and over 50% reporting a notable influence across all specified areas (e.g., recruitment, technology acquisition, and strategic planning.

Budget allocation is one of the areas most impacted by ethical dilemmas. Managers must often decide how to distribute limited financial resources among competing priorities, such as upgrading technology, hiring staff, or expanding services. These decisions are further complicated by conflicting demands from stakeholders and insufficient guidance from legislation, which exacerbate delays. Strategic planning is similarly affected, as long-term decisions require balancing immediate organizational needs with the broader ethical implications of policies and actions. Respondents highlighted that legislative ambiguities and external pressures from stakeholders, such as unions or community groups, further contribute to delays in strategic planning.

Key factors contributing to the negative impact of ethical dilemmas on decision-making speed include a lack of ethics training, insufficient managerial experience, and the size of hospital units. For instance, statistical analysis showed significant correlations between the influence of ethical dilemmas and the number of hospital beds or the lack of ethics training among managers. Gamma coefficients revealed negative relationships, such as a -0.286 value for the effect of ethical dilemmas on budget allocation and hospital size, and a -0.196 value for the relationship between ethical dilemmas in technology acquisitions and ethics training studies.

The negative impact of ethical dilemmas on decision-making speed highlights the need for enhanced ethics training and organizational support to equip managers with the tools and frameworks required to address these challenges effectively. Ethical dilemmas not only slow decision-making processes but also increase the complexity of managerial responsibilities, requiring careful evaluation of competing interests and long-term consequences. Addressing these issues is essential to improving both the efficiency and ethical integrity of public hospital management.

The chi-square test results shown in Table no. 3 revealed several statistically significant associations between demographic characteristics and ethical behavior indicators. Notably, gender was significantly associated with multiple types of ethical dilemmas, including technology, strategy, recruitment, and budget dilemmas, suggesting that male and female respondents may experience or report ethical challenges differently. Ethics training was also significantly associated with engagement in technology and strategy dilemmas, indicating that formal training may heighten awareness or sensitivity to ethical issues in these areas. Additionally, age showed a significant relationship with the use of the PLUS and Checklist models, with mid-career professionals (aged 41–50) demonstrating higher reliance on structured ethical decision-making tools.

These findings highlight the importance of demographic and experiential factors in shaping how healthcare managers perceive and respond to ethical challenges in their institutions.

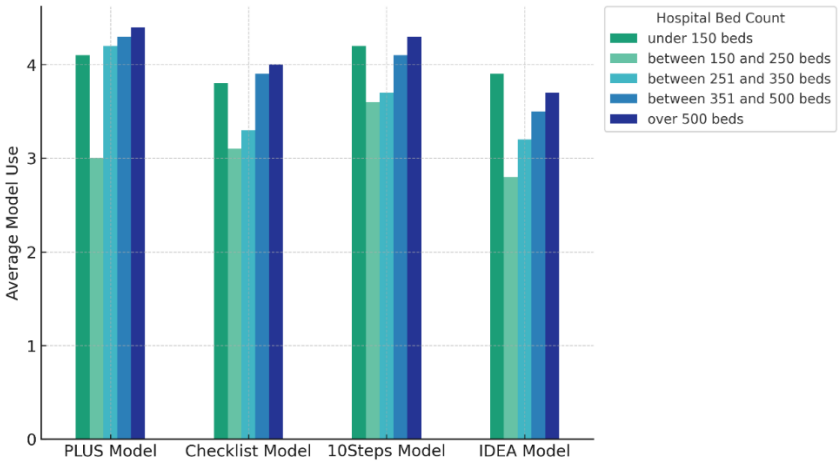

Figure no. 22 – Model Use by Hospital Bed Count

Table no. 3 – Chi-square test results

Independent Variable	Dependent Variable	p-value
Gender	Technology Dilemmas	0.0085
Ethics Training	Strategy Dilemmas	0.0119
Gender	Strategy Dilemmas	0.0146
Ethics Training	Technology Dilemmas	0.0157
Gender	Recruitment Dilemmas	0.0160
Gender	Budget Dilemmas	0.0185
Age	PLUS Model	0.0300
Age	Checklist Model	0.0422

In Figure no. 22 we show that respondents from hospitals with under 150 beds have the highest average use across nearly all models. As hospital size increases (especially beyond 500 beds), average model use tends to decrease, potentially reflecting bureaucratic or procedural barriers in larger institutions. Hospitals with 151-300 and 301-500 beds show moderate model engagement. Larger hospitals (over 500 beds) reported slightly higher average use of the PLUS and 10Steps models compared to smaller hospitals (under 150 beds), suggesting that greater institutional capacity and resources in larger facilities may support the adoption of more structured ethical frameworks. Nonetheless, the overall use of the IDEA model was consistently low across all hospital size categories, and the Checklist model showed only modest differences between groups. These findings indicate that while hospital size may play a modest role in shaping the uptake of certain ethical decision-making models, the underuse of structured frameworks remains a widespread issue in Romanian public hospitals, regardless of institution size. This underscores the need for targeted interventions to promote structured ethical practices across the system.

The analysis clearly supports H_{12}, confirming that ethical dilemmas significantly delay and complicate the decision-making processes of Romanian public hospital managers. Across all surveyed domains, particularly budget allocation, recruitment, technology acquisitions, and strategic planning, respondents reported that ethical concerns frequently introduced

uncertainty and slowed decision timelines. As shown in Figures no. 17, no. 18, no. 19, and no. 20, a large proportion of managers indicated that dilemmas impacted their decisions to a "fairly large" or "very large" extent. Statistical associations reinforce these perceptions: gamma coefficients revealed negative relationships between decision-making speed and hospital size or lack of ethics training, while chi-square tests in Table no. 3 identified significant links between demographic variables (gender, training, age) and dilemma-related constraints. These findings reject the null hypothesis H_{02} and confirm that ethical dilemmas are not peripheral but rather central challenges that shape both the timing and complexity of managerial decisions in Romanian public hospitals.

6.2.3 Hypothesis 3: Role of ethical values in decision-making (H3)

Ethical values play a central role in guiding managerial decision-making, particularly in the ethically complex environment of healthcare management. Core values such as fairness, transparency, compassion, and integrity provide a moral framework for managers, influencing their ability to navigate ethical dilemmas and make decisions that align with organizational and societal expectations. This section explores the relationship between ethical values, training, and decision-making efficiency, drawing on empirical findings from the Romanian healthcare context.

6.2.3.1 Correlations between ethical values and decision-making efficiency

The findings indicate that ethical values significantly influence decision-making efficiency in key managerial areas such as budget allocation, staff recruitment and development, technology acquisitions, and strategic planning. Managers who prioritize ethical principles, such as equity and transparency, are better equipped to resolve conflicts and address resource constraints effectively. For example, fairness and shared decision-making enable managers to evaluate competing priorities impartially, ensuring that decisions are not only efficient but also morally defensible.

In this study, 55% of respondents reported that ethical values, such as competence, community benefit, and sustainability, largely influenced the speed and quality of decision-making across all specified areas. This demonstrates that the integration of ethical values into managerial processes can enhance both the effectiveness and ethical integrity of decision.

6.2.3.2 Impact of ethics training on decision-making

Ethics training emerges as a critical factor in strengthening the role of ethical values in managerial decision-making. Managers who have undergone formal ethics training demonstrate a higher capacity to apply ethical principles systematically, resulting in more efficient decision-making processes. For instance, the study found significant positive correlations between ethics training and decision-making efficiency in areas such as resource allocation and technology acquisitions. Gamma coefficients of 0.320 and 0.279 were reported for the influence of ethics training on decision-making efficiency in these domains, underscoring the importance of formal ethical education.

Conversely, the absence of ethics training was associated with reduced decision-making efficiency. A substantial proportion (74%) of respondents reported no prior ethics training, a factor that likely contributed to slower responses in addressing ethical dilemmas. This

highlights the need for targeted ethics training programs to enhance managers' ability to integrate ethical values into their decision-making processes.

6.2.3.3 Ethical values and organizational culture

The role of ethical values extends beyond individual decision-makers to shape organizational culture, which in turn influences decision-making efficiency. Organizations that foster a strong ethical culture provide managers with clear guidelines and a supportive environment for implementing ethical values. As Trevino (1986) notes, a normative organizational culture enhances alignment among members regarding ethical behavior, reducing ambiguity and increasing decision-making speed and effectiveness.

The findings also indicate that managers in organizations with a well-established ethical culture are more likely to make decisions that reflect core ethical values. This alignment promotes consistency, reduces conflicts, and ensures that decisions align with both organizational goals and societal expectations.

The frequency distribution of ethical decision-making practices, as illustrated in Figure no. 23, reveals notable patterns in how individuals engage with ethical considerations in their decision-making processes. The results indicate that the most common responses fall within the "largely" and "to a very large extent" categories, highlighting the strong reliance on structured ethical frameworks across all practice areas. Among the different practices, Action Knowledge and Practices Consulting exhibit the highest concentrations at "largely" and "to a very large extent", suggesting that ethical decision-making is strongly informed by established knowledge and consultation practices. Action Values also follow a similar pattern, reinforcing the idea that ethical principles play a fundamental role in guiding decisions. Experts Consult and Sources Consult show a slightly more distributed pattern, with a significant number of responses in the "to a fairly large extent" category. This distribution suggests that while expert advice and external sources are widely used, they may not always be the primary determinants in ethical decision-making compared to direct knowledge and internal practices. Conversely, responses at the lowest influence levels ("to a very small extent" and "to a fairly small extent") are minimal across all categories, indicating that ethical practices are rarely disregarded in decision-making. However, some variation exists in the frequency of moderate responses, particularly in Sources Consult, which shows a wider spread across influence levels.

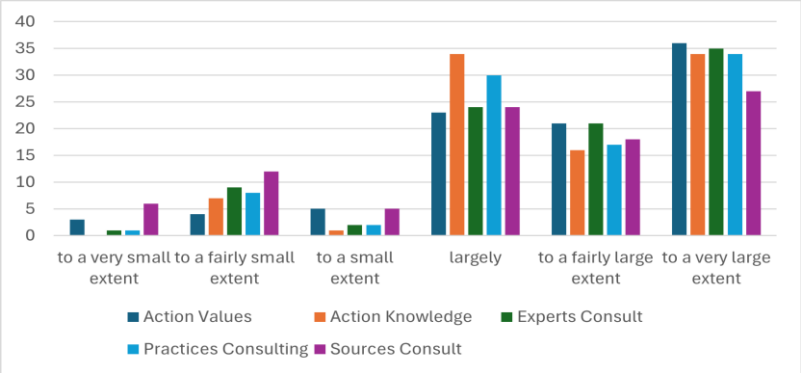

Figure no. 23 – Distribution of importance levels for practices

The distribution of ethical values, as shown in Figure no. 24, highlights how different value dimensions influence decision-making across budget, recruitment, technology, and strategy contexts. The data indicates a strong emphasis on ethical values, with the most common responses clustered in the "largely" and "to a very large extent" categories. Recruitment Values and Budget Values show the highest frequency at "to a very large extent", underscoring the strong ethical considerations applied in financial decisions and hiring practices. Strategy Values and Technology Values also display significant representation at this level, though their distribution is slightly more balanced, with notable responses in "to a fairly large extent" and "largely" categories. A more even distribution appears in the moderate influence categories, with responses in "to a small extent" and "to a fairly small extent" across all value types. Budget Values show a broader spread, suggesting that financial considerations may sometimes allow for more flexibility in ethical prioritization compared to recruitment and strategy-related decisions. Responses at the lowest influence levels ("to a very small extent") are minimal across all categories, reinforcing that ethical values are rarely disregarded in decision-making. However, slight variations exist, particularly within Technology Values, where responses are distributed more widely.

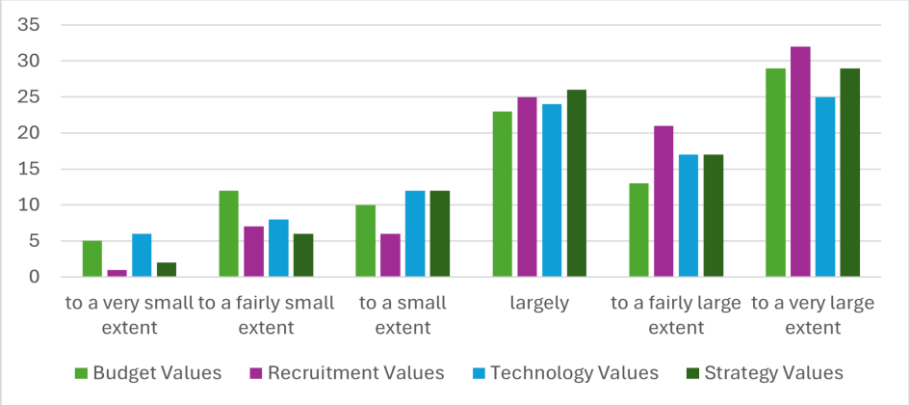

Figure no. 24 – Distribution of importance levels for values

The findings provide strong support for H_{13}, affirming that ethical values such as fairness, transparency, and trust play a significant role in shaping managerial decisions in Romanian public hospitals. Survey responses consistently reflected high ratings for the influence of ethical values across all decision-making domains, with over 55% of managers reporting that these values guided their actions "to a very large extent." Figures no. 23 and no. 24 illustrate the widespread prioritization of ethical considerations in budget allocation, recruitment, strategy development, and technology decisions. Furthermore, statistical analysis revealed that managers with ethics training were significantly more likely to apply these values systematically. The strong internal consistency of value-related items (Cronbach's alpha = 0.90) further reinforces the validity of these constructs. These results reject the null hypothesis H_{03} and confirm that ethical values are not only abstract principles but function as practical decision-making tools that enhance both efficiency and integrity within public hospital management.

6.2.3.4 Prevalence and challenges

Despite the potential benefits of structured ethical models, their adoption among public hospital managers in Romania is not widespread. A significant proportion of managers indicated limited familiarity with these frameworks, citing a lack of formal ethics training as a primary barrier. Moreover, organizational constraints, such as resource limitations and legislative ambiguities, further impede the consistent application of these models.

7. DISCUSSION

7.1 Implications for hospital management

The interplay of ethical dilemmas, values, and decision-making frameworks has significant implications for hospital management. Ethical dilemmas, often arising from conflicts between competing interests or limited resources, negatively impact decision-making speed and quality, as demonstrated in our study and supported by (Holian, 2002; Shepherd *et al.*, 2021). Areas such as budget allocation, technology acquisition, and strategic planning are particularly vulnerable to delays caused by ethical ambiguities and stakeholder pressures (Peer and Rakich, 1999; Casali, 2009). Managers must balance these challenges while ensuring their decisions align with ethical principles and organizational goals (Trevino, 1986; Jones, 1991).

Ethical values, such as fairness, trust, and transparency, provide a moral foundation for navigating these dilemmas (Walker, 1993). Managers who integrate these values into their decision-making processes are more likely to achieve equitable outcomes that foster trust among stakeholders (Weber, 2001; Fulmer, 2004). However, the absence of ethics training among a significant proportion of managers in Romania has been identified as a critical barrier, limiting their ability to effectively apply ethical principles and decision-making frameworks (Holian, 2002; Shepherd *et al.*, 2021; Khaghanizadeh *et al.*, 2023). Structured decision-making models, such as the PLUS and IDEA frameworks, offer practical tools for addressing ethical dilemmas systematically (Trillium Health Partners, n.d.; Ethics and Compliance Initiative, 2021). These models enhance transparency, consistency, and accountability in decision-making (Santosuosso, 2016; Bivins, 2017). However, their limited adoption in Romanian public hospitals indicates a need for increased training and awareness to maximize their potential benefits (Holian, 2002; Shepherd *et al.*, 2021). By adopting these models more broadly, hospital managers can improve the ethical and operational efficiency of their decisions.

7.2 Theoretical implications

The findings of this study contribute to the theoretical understanding of ethical decision-making in public healthcare management by confirming and extending existing knowledge in several ways. First, our results confirm prior research suggesting that structured ethical decision-making models, despite their recognized utility (Holian, 2002; Guo, 2020) remain underutilized in practice due to lack of training and institutional support. This aligns with findings from other public sector and healthcare contexts, which highlight the persistence of intuitive and ad hoc decision-making approaches (O'Fallon and Butterfield, 2013; Shepherd

et al., 2021). Second, the study reinforces earlier evidence that ethical dilemmas significantly delay and complicate managerial decisions (Daniels, 2000; Oliver, 2006), especially in resource-constrained environments such as Romania's public healthcare system. Finally, the strong influence of ethical values, such as fairness, transparency, and trust—on decision-making supports the theoretical models that emphasize the normative role of individual and organizational ethics in public service management (Walker, 1993; Weber, 2001). By situating these findings within the broader theoretical context, this study underscores the need to integrate ethical principles, structured frameworks, and institutional support to improve decision-making efficiency and integrity in healthcare management.

7.3 Comparison to global practices

When compared to global practices, the findings from this study highlight areas of alignment and divergence in ethical decision-making within Romanian public hospitals. Internationally, ethical decision-making frameworks such as the PLUS model and IDEA model are widely recognized and implemented across healthcare institutions to navigate complex dilemmas effectively (Trillium Health Partners, n.d.; Guo, 2020; Ethics and Compliance Initiative, 2021). Countries with robust healthcare ethics infrastructures often mandate ethics training as part of managerial development programs, ensuring that decision-makers are equipped with the necessary tools and knowledge to address ethical challenges (American College of Healthcare Executives, 2020; Andersson *et al.*, 2022).

In contrast, the Romanian context reveals significant gaps in ethics training and the adoption of structured models (Holian, 2002; Shepherd *et al.*, 2021). While international practices emphasize proactive measures, such as regular ethics audits and the institutionalization of ethical cultures, Romanian hospitals face challenges such as legislative ambiguities, resource constraints, and limited training opportunities (Daniels, 2000; Persad *et al.*, 2009). These systemic issues hinder the consistent application of global best practices in ethical decision-making.

Nevertheless, some parallels can be drawn. Similar to other countries, Romanian managers grapple with stakeholder conflicts, resource allocation dilemmas, and the tension between operational efficiency and ethical accountability (Oliver, 2006; Mohammadi *et al.*, 2024). The findings underscore the importance of integrating global ethical standards into local healthcare systems while addressing context-specific challenges to ensure effective decision-making.

7.4 Recommendations

To enhance ethical decision-making in Romanian public hospitals, several improvements are recommended:

- Strengthen Ethics Training Programs: Mandatory ethics training for hospital managers should be introduced, focusing on practical applications of decision-making models such as the PLUS and IDEA frameworks. Training should include case studies, workshops, and simulations tailored to the healthcare context to build capacity and confidence in ethical decision-making (American College of Healthcare Executives, 2020; Andersson *et al.*, 2022; Khaghanizadeh *et al.*, 2023).

- Develop Comprehensive Organizational Policies: Hospitals should implement robust ethical policies that provide clear guidelines for addressing common dilemmas, such as resource allocation and stakeholder conflicts. These policies should be aligned with international best practices while considering the specific challenges of the Romanian healthcare system (Daniels, 2000; Morrison, 2008; Khaghanizadeh *et al.*, 2023).
- Foster Ethical Leadership Practices: Leadership development programs should emphasize the role of ethical values in decision-making. Ethical leadership, characterized by transparency, fairness, and accountability, can serve as a model for organizational behavior, encouraging a culture of ethical integrity across all levels of the institution (Trillium Health Partners, n.d.; Santosuosso, 2016; Bivins, 2017; Ethics and Compliance Initiative, 2021).
- Institutionalize Ethical Decision-Making Models: Hospitals should formally adopt decision-making frameworks like the PLUS and IDEA models, integrating them into organizational procedures and managerial workflows. This can be achieved through policy revisions, training sessions, and regular evaluations of ethical decision-making practices (Trillium Health Partners, n.d.; Santosuosso, 2016; Bivins, 2017; Ethics and Compliance Initiative, 2021).
- Enhance Stakeholder Engagement: Transparent and inclusive processes should be implemented to involve stakeholders in ethical decision-making. This includes creating ethics committees or forums where diverse perspectives can be considered, promoting fairness and accountability (Holian, 2002; Oliver, 2006; Casali, 2009; Shepherd *et al.*, 2021).

By addressing these recommendations, Romanian public hospitals can strengthen their ethical decision-making processes, align with global standards, and ensure better outcomes for patients, staff, and the broader healthcare system. These improvements will not only enhance operational efficiency but also reinforce public trust in the integrity of healthcare institutions.

8. CONCLUSIONS

This study highlights the significant influence of ethical dilemmas and values on managerial decision-making model in Romanian public hospitals. Ethical dilemmas, particularly in areas such as budget allocation, strategic planning, and resource distribution, negatively impact decision-making speed and efficiency. These challenges often stem from conflicts between competing stakeholder interests, legislative ambiguities, and limited resources. The findings emphasize that ethical dilemmas can complicate managerial responsibilities, delay critical decisions and increase the complexity of balancing organizational and societal demands. These findings should be interpreted within the Romanian public healthcare context, which is also shaped by challenges such as legislative ambiguities and political pressures, as previously documented, alongside the ethical issues explored in this study

Ethical values, such as fairness, transparency, and trust, were found to be pivotal in guiding decision-making processes and model. Managers who integrate these values into their practices achieve more consistent and equitable outcomes. However, the study also revealed a critical gap in ethics training, with a significant proportion of managers lacking formal education in ethical decision-making frameworks. Structured models such as the PLUS and IDEA frameworks, while beneficial, remain underutilized, underscoring the need for greater awareness and training.

The interplay of ethical dilemmas, values, and decision-making frameworks highlights the importance of fostering an ethical organizational culture and implementing targeted ethics education to address these challenges effectively.

While the recommendations proposed in this study, such as mandatory ethics training and the development of institutional policies, are grounded in the findings and are concrete and applicable, we acknowledge that the study did not collect data on the potential costs or organizational barriers to implementation, such as financial constraints or resistance to change. Future research should explore these aspects to support a more comprehensive understanding of the feasibility and sustainability of such interventions in the Romanian healthcare context.

9. LIMITATIONS AND FUTURE RESEARCH DIRECTIONS

This study is subject to several limitations. The sample size, while representative of Romanian public hospital managers, was first constrained by a relatively moderate response rate. However, other studies involving Romanian public hospital managers also reveal the difficulty of data collecting in this field and similarly low response rates in questionnaire-based research (see for example, the research of Țurlea *et al.* (2011) or a more recent one conducted by Rotaru and Edelhauser (2024)). Another limitation might be considered the non-probabilistic sampling method used, which may limit the generalizability of the findings, but despite its disadvantages, this method is based on the availability of the respondents (Creswell, 2014). Additionally, the study's cross-sectional design captures a snapshot of managerial practices but does not account for the evolving nature of ethical challenges over time, therefore future research is needed to address this aspect.

The methodological limitations of this study may have implications for interpreting the findings. The use of a non-probabilistic, availability-based sample and a cross-sectional design limits generalizability and precludes causal inference. The response rate of approximately 49% also raises the possibility of self-selection bias. For example, it is possible that managers more interested in or attentive to ethical issues were more likely to participate, which could result in an overestimation of the use of ethical models. However, as our study did not collect data on non-respondents, this remains a potential bias that future research should examine using more representative sampling strategies.

Future research should address these limitations through longitudinal studies that explore changes in ethical decision-making practices over extended periods. Such studies could provide deeper insights into the long-term impact of ethics training, organizational culture, and policy interventions. Expanding the sample size and incorporating managers from diverse healthcare contexts, including private hospitals and international settings, would also enhance the applicability of findings. Furthermore, comparative studies examining the adoption of ethical models in different cultural and institutional environments could provide valuable insights into global best practices in ethical healthcare management.

By addressing these gaps, future research can contribute to a more comprehensive understanding of ethical decision-making, enabling healthcare organizations to navigate ethical dilemmas more effectively and align their practices with both organizational goals and societal expectations.

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