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The BRISK³ Mind Model: A Conceptual Framework for Healthcare Entrepreneurship, Innovation, and Health System Transformation

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Abstract

Healthcare systems are increasingly challenged by rapid technological change, workforce shortages, escalating healthcare costs, demographic transitions, emerging disease threats, and growing demands for equitable, high-quality care. Addressing these multifaceted challenges requires healthcare professionals and organizations to move beyond conventional clinical expertise by embracing entrepreneurial thinking that fosters innovation, adaptability, strategic leadership, and sustainable value creation. Although numerous entrepreneurship theories and models exist, most were developed for commercial enterprises and do not adequately reflect the ethical, organizational, regulatory, and policy complexities that characterize healthcare systems.This paper introduces the BRISK³ Mind Model as a novel conceptual framework designed to cultivate entrepreneurial mindsets among healthcare professionals, healthcare organizations, and health system leaders. The framework seeks to integrate entrepreneurship, healthcare management, innovation, and public policy into a unified model capable of supporting healthcare transformation and long-term system resilience.A conceptual research design was adopted using an integrative review and synthesis of multidisciplinary literature on entrepreneurship, healthcare innovation, organizational leadership, health systems strengthening, implementation science, and public policy. Relevant theoretical perspectives were critically examined and synthesized to develop the proposed conceptual framework.The BRISK³ Mind Model comprises six interdependent dimensions: Business Opportunity Recognition, Risk Intelligence, Innovation Capability, Strategic Leadership, Knowledge Capital, and three foundational entrepreneurial mindsets—Growth Mindset, Systems Mindset, and Value-Creation Mindset. The model proposes that the interaction of these dimensions enhances healthcare professionals' and organizations' capacity to identify opportunities, manage uncertainty, stimulate

innovation, lead organizational change, translate knowledge into practice, and create sustainable value across healthcare systems.The BRISK³ Mind Model extends existing entrepreneurship literature by providing a healthcare-specific conceptual framework that integrates entrepreneurial thinking with leadership, innovation, and health system transformation. The framework offers practical guidance for healthcare professionals, educators, administrators, entrepreneurs, and policymakers while providing a theoretical foundation for future empirical validation and the development of standardized measurement instruments.

Keywords: BRISK³ Mind Model, Healthcare Entrepreneurship, Entrepreneurial Mindset, Healthcare Innovation, Strategic Leadership, Health Systems Strengthening, Healthcare Management, Organizational Resilience, Public Policy, Conceptual Framework

1. INTRODUCTION

Healthcare systems worldwide are undergoing profound transformation in response to demographic transitions, rapid technological advancement, epidemiological changes, escalating healthcare expenditures, workforce shortages, climate-related health threats, and rising public expectations for accessible, equitable, and high-quality healthcare services. These interconnected challenges have intensified pressure on healthcare organizations to improve efficiency, strengthen organizational resilience, and deliver patient-centred care while operating within increasingly constrained financial and human resources (World Health Organization [WHO], 2023; Organisation for Economic Co-operation and Development [OECD], 2023). Consequently, healthcare leaders are increasingly required to adopt innovative approaches that extend beyond conventional clinical expertise to encompass strategic thinking, organizational adaptability, and entrepreneurial capabilities.

Historically, healthcare systems have been designed primarily to diagnose, treat, and prevent disease. While these objectives remain fundamental, contemporary healthcare environments demand broader competencies that enable organizations and professionals to respond proactively to complex and rapidly evolving challenges. The emergence of digital health technologies, artificial intelligence, precision medicine, telehealth, and data-driven healthcare has fundamentally altered the manner in which healthcare services are organized, delivered, and evaluated (Topol, 2019; WHO, 2021). Simultaneously, global events such as the COVID-19 pandemic exposed vulnerabilities in healthcare systems and highlighted the importance of innovation, adaptability, and effective leadership in maintaining service continuity during periods of crisis (Keesara et al., 2020). These developments underscore the need for healthcare professionals who can identify opportunities, mobilize resources, manage uncertainty, and implement innovative solutions that improve both organizational performance and population health outcomes.

Entrepreneurship has traditionally been associated with the creation of new business ventures, opportunity recognition, resource mobilization, innovation, and economic development (Schumpeter, 1934). Over time, however, entrepreneurship has evolved into a broader concept encompassing entrepreneurial thinking, organizational renewal, intrapreneurship, social innovation, and public sector transformation (Kuratko et al., 2021). Contemporary entrepreneurship scholarship increasingly recognizes that entrepreneurial competencies are valuable not only for business owners but also for professionals working within established organizations who seek to create value through innovation, strategic decision-making, and organizational change (Shepherd, 2015). Within healthcare, entrepreneurship has emerged as a critical mechanism for improving service delivery, accelerating technology adoption, enhancing organizational performance, and addressing persistent health system challenges (Nambisan et al., 2019).

Healthcare entrepreneurship differs substantially from entrepreneurship in conventional commercial settings because healthcare organizations operate within environments characterized by complex regulatory requirements, ethical obligations, multidisciplinary collaboration, evidence-based practice, and accountability to diverse stakeholders. Entrepreneurial decisions in healthcare must simultaneously consider patient safety, clinical effectiveness, financial sustainability, regulatory compliance, workforce well-being, and public trust. Consequently, entrepreneurial success in healthcare cannot be evaluated solely in terms of financial performance but must also encompass improvements in healthcare quality, accessibility, equity, patient outcomes, and health system resilience (WHO, 2023).

Despite increasing scholarly interest in healthcare entrepreneurship, the existing literature remains fragmented. Many studies focus on specific aspects such as digital health innovation, health technology entrepreneurship, organizational innovation, hospital management, or healthcare leadership without integrating these dimensions into a unified conceptual framework (Agarwal et al., 2023). Similarly, entrepreneurship theories—including Schumpeter's Innovation Theory (Schumpeter, 1934), Effectuation Theory (Sarasvathy, 2001), the Resource-Based View (Barney, 1991), Dynamic Capability Theory (Teece et al., 1997), Entrepreneurial Orientation Theory (Lumpkin & Dess, 1996), and Diffusion of Innovation Theory (Rogers, 2003)—have substantially advanced understanding of entrepreneurial behaviour but were not specifically developed to address the distinctive characteristics of healthcare systems.

This theoretical fragmentation presents both scholarly and practical challenges. Healthcare educators lack comprehensive frameworks for teaching entrepreneurial competencies to medical and allied health professionals. Hospital administrators often implement innovation initiatives without an integrated understanding of the entrepreneurial capabilities required for sustainable organizational transformation. Policymakers increasingly advocate healthcare innovation and public-private collaboration but have limited conceptual guidance regarding the entrepreneurial competencies necessary to support health system reform. Collectively, these gaps highlight the need for a healthcare-specific framework that integrates entrepreneurship, leadership, innovation, knowledge management, and strategic decision-making within a single conceptual model.

The importance of entrepreneurial competencies has become particularly evident in the pursuit of Universal Health Coverage (UHC) and the Sustainable Development Goals (SDGs). Achieving equitable, accessible, and high-quality healthcare requires continuous innovation in service delivery, financing, workforce management, digital health, and governance (United Nations, 2015; WHO, 2023). Entrepreneurial healthcare professionals are uniquely positioned to identify unmet health needs, develop innovative solutions, establish cross-sector partnerships, optimize scarce resources, and generate sustainable value for patients and communities. Consequently, entrepreneurship should be viewed not merely as a business competency but as a strategic capability for strengthening health systems and improving population health.

Although several models have been proposed to explain entrepreneurial behaviour, most focus on isolated constructs such as innovation, opportunity recognition, leadership, or organizational capability. Few models explicitly acknowledge the dynamic interaction among these competencies within healthcare environments. Furthermore, existing frameworks seldom incorporate healthcare-specific considerations such as evidence-based practice, ethical responsibility, patient-centred care, interdisciplinary collaboration, and health policy implementation. This omission limits their applicability to healthcare organizations seeking to balance innovation with clinical excellence and public accountability.

To address this gap, this paper introduces the BRISK³ Mind Model, a novel conceptual framework specifically designed for healthcare entrepreneurship. The model conceptualizes entrepreneurial capability

as the synergistic interaction of six interconnected dimensions: Business Opportunity Recognition (B), Risk Intelligence (R), Innovation Capability (I), Strategic Leadership (S), Knowledge Capital (K), and three foundational entrepreneurial mindsets comprising Growth Mindset, Systems Mindset, and Value-Creation Mindset (³). Together, these dimensions provide a holistic perspective on how healthcare professionals and organizations can identify opportunities, navigate uncertainty, generate innovation, translate knowledge into practice, lead organizational transformation, and create sustainable value across healthcare systems.

Unlike existing entrepreneurship frameworks, the BRISK³ Mind Model is not limited to venture creation or commercial enterprise. Instead, it positions entrepreneurship as a multidimensional capability applicable to clinicians, hospital managers, public health professionals, policymakers, researchers, educators, and healthcare organizations. The framework recognizes that entrepreneurial thinking in healthcare must simultaneously advance innovation, organizational performance, patient outcomes, ethical practice, and health system resilience. By integrating concepts from entrepreneurship, healthcare management, organizational leadership, implementation science, and public policy, the BRISK³ Mind Model provides a comprehensive foundation for understanding entrepreneurial behaviour within contemporary healthcare systems.

This study makes three principal contributions to the literature. First, it proposes an original healthcare-specific conceptual framework that synthesizes established entrepreneurship theories into an integrated model applicable to healthcare practice, management, and policy. Second, it advances the emerging field of healthcare entrepreneurship by explicitly incorporating leadership, knowledge management, systems thinking, and value creation into a unified conceptual structure. Third, it establishes a theoretical platform for future empirical research aimed at validating the BRISK³ Mind Model, developing standardized measurement instruments, and examining its applicability across diverse healthcare settings and geographical contexts.

The remainder of this paper is organized as follows. The next section reviews the evolution of healthcare entrepreneurship and identifies key theoretical and empirical developments that inform the proposed framework. This is followed by a discussion of the study's theoretical foundations and conceptual development process. The BRISK³ Mind Model is then presented and explained in detail, after which its practical, managerial, educational, and policy implications are discussed. Finally, directions for future research and conclusions are presented.

2. BACKGROUND OF THE STUDY

Healthcare systems have undergone remarkable transformation over the past century, evolving from predominantly curative models of care to complex, multidisciplinary systems that emphasize prevention, patient-centred care, technological innovation, and sustainable health system development. This transformation has been driven by scientific discoveries, advances in medical technology, globalization, demographic changes, and increasing recognition of health as a fundamental determinant of economic and social development (World Health Organization [WHO], 2023). Despite these advances, healthcare systems continue to face persistent challenges, including widening health inequalities, increasing disease burdens, workforce shortages, escalating operational costs, and growing demand for high-quality healthcare services. These challenges require solutions that extend beyond traditional clinical practice and call for new approaches to leadership, innovation, and organizational management.

Historically, healthcare professionals have been educated primarily to diagnose disease, provide clinical care, and adhere to evidence-based medical practice. While these competencies remain indispensable, the complexity of contemporary healthcare demands additional capabilities that enable professionals to

identify opportunities, solve organizational problems, manage uncertainty, and implement innovative solutions. Increasingly, physicians, nurses, pharmacists, public health practitioners, and healthcare administrators are expected to function as change agents capable of improving healthcare delivery through innovation, strategic leadership, and effective resource management (Berwick, 2016). Consequently, entrepreneurship is emerging as a complementary competency that enhances the capacity of healthcare professionals to create value beyond direct patient care.

Entrepreneurship has evolved considerably since its early conceptualization by Schumpeter (1934), who described entrepreneurs as innovators responsible for introducing new products, processes, and organizational forms that stimulate economic development through "creative destruction." Contemporary entrepreneurship extends beyond business creation to include opportunity recognition, organizational renewal, social innovation, strategic decision-making, and value creation across both private and public sectors (Kuratko et al., 2021). In recent years, entrepreneurship has increasingly been recognized as a multidisciplinary phenomenon with important applications in healthcare, education, public administration, and nonprofit organizations.

The emergence of healthcare entrepreneurship reflects this broader understanding of entrepreneurship. Rather than focusing exclusively on establishing private healthcare businesses, healthcare entrepreneurship encompasses the identification and implementation of innovative solutions that improve healthcare delivery, organizational efficiency, patient outcomes, and population health. Healthcare entrepreneurs may include clinicians developing novel service models, hospital managers redesigning organizational processes, policymakers introducing innovative governance mechanisms, researchers commercializing scientific discoveries, and public health professionals implementing community-based interventions. Consequently, entrepreneurship within healthcare should be viewed as a strategic capability applicable across clinical, managerial, academic, technological, and policy domains.

The COVID-19 pandemic further accelerated the importance of entrepreneurial thinking within healthcare systems. During the pandemic, healthcare organizations rapidly adopted telemedicine, artificial intelligence, remote patient monitoring, digital health platforms, innovative supply chain strategies, and cross-sector collaborations to maintain continuity of care under unprecedented circumstances (Keesara et al., 2020). These experiences demonstrated that organizational resilience depends not only on financial and physical resources but also on the entrepreneurial capabilities of healthcare professionals who can recognize opportunities, mobilize resources, adapt to uncertainty, and implement innovative solutions in real time. As healthcare systems continue to recover from the pandemic while preparing for future public health emergencies, entrepreneurship has become increasingly recognized as a critical determinant of organizational adaptability and health system resilience.

Parallel to these developments, international organizations have increasingly emphasized innovation as a cornerstone of sustainable healthcare development. The World Health Organization (WHO) has consistently advocated strengthening health systems through innovation, workforce development, digital transformation, and effective leadership, while the Organisation for Economic Co-operation and Development (OECD) has highlighted innovation as essential for improving healthcare quality, efficiency, and sustainability (OECD, 2023; WHO, 2023). Similarly, the United Nations Sustainable Development Goal 3 (SDG 3) calls for ensuring healthy lives and promoting well-being for all ages, an objective that requires innovative approaches to healthcare financing, service delivery, governance, and workforce development (United Nations, 2015). These global policy priorities reinforce the importance of cultivating entrepreneurial competencies capable of supporting long-term health system transformation.

Although entrepreneurship has gained increasing recognition within healthcare literature, the field remains

conceptually fragmented. Existing studies frequently examine isolated dimensions such as healthcare innovation, organizational leadership, digital transformation, intrapreneurship, implementation science, or social entrepreneurship without integrating these concepts into a coherent theoretical framework. Similarly, existing entrepreneurship theories—including Innovation Theory, Effectuation Theory, Entrepreneurial Orientation Theory, Dynamic Capability Theory, and the Resource-Based View—provide valuable insights into entrepreneurial behaviour but were largely developed outside healthcare contexts. Consequently, they do not comprehensively address the ethical, clinical, regulatory, interdisciplinary, and public accountability considerations that distinguish healthcare organizations from traditional commercial enterprises.

Furthermore, healthcare organizations increasingly operate within environments characterized by interconnected systems rather than isolated institutions. Hospitals, primary healthcare centres, insurance organizations, regulatory agencies, pharmaceutical companies, technology firms, academic institutions, and community organizations collectively influence health outcomes through complex networks of collaboration and governance. Addressing challenges within such systems requires professionals capable of integrating entrepreneurial thinking with systems thinking, evidence-based decision-making, collaborative leadership, and policy implementation. This multidimensional perspective extends beyond conventional entrepreneurship models and highlights the need for a healthcare-specific conceptual framework capable of explaining how entrepreneurial competencies interact to facilitate innovation and organizational transformation.

The BRISK³ Mind Model is proposed in response to this need. Rather than conceptualizing entrepreneurship solely as venture creation or commercial success, the model views entrepreneurship as a multidimensional capability that enables healthcare professionals and organizations to recognize opportunities, intelligently manage risk, drive innovation, provide strategic leadership, leverage knowledge resources, and cultivate entrepreneurial mindsets that create sustainable value within healthcare systems. The framework acknowledges that entrepreneurial success in healthcare is measured not only by organizational performance but also by improvements in patient outcomes, service quality, equity, workforce development, and health system resilience.

Positioning entrepreneurship within the broader context of healthcare management and public policy represents an important conceptual shift. It recognizes that entrepreneurial thinking is no longer confined to private enterprise but has become essential for strengthening health systems, improving organizational performance, and achieving national and global health objectives. Consequently, the development of an integrated framework such as the BRISK³ Mind Model provides an opportunity to advance both theoretical understanding and practical application of healthcare entrepreneurship while establishing a foundation for future empirical research.

3. STATEMENT OF THE PROBLEM

Healthcare systems worldwide are confronted with increasingly complex challenges that extend beyond the delivery of clinical services. Rising healthcare costs, ageing populations, workforce shortages, rapid technological advancements, recurrent public health emergencies, and widening health inequalities have intensified demands for healthcare organizations to become more innovative, adaptive, and sustainable (World Health Organization [WHO], 2023; Organisation for Economic Co-operation and Development [OECD], 2023). Although significant investments have been made in strengthening healthcare infrastructure, digital health, and health policy reforms, many healthcare organizations continue to struggle with translating innovation into sustainable improvements in organizational performance and patient outcomes (Agarwal et al., 2023).

One important explanation for this challenge is the limited emphasis placed on entrepreneurial capability within healthcare education and organizational development. Healthcare professionals are traditionally trained to acquire clinical competence, scientific knowledge, and technical expertise. However, considerably less attention has been devoted to developing competencies related to opportunity recognition, strategic innovation, risk management, organizational transformation, and value creation. As a result, many healthcare professionals possess excellent clinical skills but receive limited formal preparation for leading innovation, responding to uncertainty, or designing sustainable solutions to complex organizational and health system problems (Berwick, 2016).

Existing entrepreneurship literature offers valuable theoretical perspectives for understanding innovation and organizational change. Frameworks such as Schumpeter's Innovation Theory (Schumpeter, 1934), Effectuation Theory (Sarasvathy, 2001), the Resource-Based View (Barney, 1991), Dynamic Capability Theory (Teece et al., 1997), and Entrepreneurial Orientation Theory (Lumpkin & Dess, 1996) have significantly advanced entrepreneurship research. Nevertheless, these theories were developed largely within business and commercial contexts and do not comprehensively address the distinctive characteristics of healthcare systems, where entrepreneurial decisions must balance patient safety, ethical responsibility, evidence-based practice, regulatory compliance, interdisciplinary collaboration, financial sustainability, and public accountability.

Similarly, the healthcare management literature has generated extensive research on innovation, leadership, quality improvement, implementation science, organizational learning, and digital transformation. However, these domains are frequently investigated independently, resulting in fragmented knowledge that limits understanding of how entrepreneurial competencies collectively influence healthcare innovation and organizational performance (Nambisan et al., 2019). The absence of an integrated conceptual framework makes it difficult for researchers to explain entrepreneurial behaviour within healthcare organizations and for educators and policymakers to design comprehensive entrepreneurship development programmes for healthcare professionals.

Furthermore, the rapid evolution of healthcare systems has created new expectations for healthcare professionals. Physicians, nurses, pharmacists, public health practitioners, hospital administrators, and health policymakers are increasingly expected to function not only as clinicians and managers but also as innovators, collaborators, strategic leaders, and agents of organizational change. Despite these expanding responsibilities, there remains no widely accepted healthcare-specific entrepreneurial mindset framework that integrates business opportunity recognition, intelligent risk management, innovation capability, strategic leadership, knowledge utilization, and entrepreneurial thinking into a single conceptual model. This theoretical gap limits both scholarly advancement and practical application within healthcare entrepreneurship.

The COVID-19 pandemic further exposed this deficiency by demonstrating that healthcare organizations capable of adapting rapidly through innovation, collaboration, and strategic leadership were generally better positioned to maintain service delivery during periods of uncertainty (Keesara et al., 2020). These experiences reinforced the importance of entrepreneurial capabilities as strategic assets for healthcare resilience and long-term system transformation. Nevertheless, current literature provides limited guidance regarding the specific competencies that should be cultivated to strengthen entrepreneurial capacity among healthcare professionals and organizations.

Consequently, there is a need for a comprehensive conceptual framework that synthesizes established entrepreneurship theories with the realities of healthcare management and health system strengthening. Such a framework should not only explain entrepreneurial behaviour but also provide practical guidance

for healthcare professionals, educators, organizational leaders, researchers, and policymakers seeking to promote innovation and sustainable healthcare transformation.

To address this gap, this study proposes the BRISK³ Mind Model, a healthcare-specific conceptual framework comprising Business Opportunity Recognition, Risk Intelligence, Innovation Capability, Strategic Leadership, Knowledge Capital, and three foundational entrepreneurial mindsets (Growth Mindset, Systems Mindset, and Value-Creation Mindset). The model is designed to integrate entrepreneurial competencies into a unified theoretical structure that reflects the clinical, managerial, ethical, organizational, and policy realities of contemporary healthcare systems. By doing so, the study seeks to contribute to entrepreneurship theory while providing a practical framework for strengthening innovation, organizational resilience, and health system transformation.

4. AIM OF THE STUDY

The primary aim of this study is to develop and propose the BRISK³ Mind Model as a novel conceptual framework for healthcare entrepreneurship that integrates entrepreneurial thinking, innovation, strategic leadership, knowledge management, and health system transformation. Specifically, the study seeks to provide a healthcare-specific theoretical model that explains how entrepreneurial competencies can be cultivated and applied to strengthen healthcare organizations, improve service delivery, and promote sustainable health system development.

5. SPECIFIC OBJECTIVES

The study seeks to achieve the following objectives:

1. To examine the evolution of healthcare entrepreneurship and entrepreneurial mindset literature within healthcare management.
2. To critically evaluate existing entrepreneurship theories and conceptual frameworks relevant to healthcare innovation and organizational transformation.
3. To identify the conceptual and theoretical gaps in existing healthcare entrepreneurship literature that necessitate the development of a healthcare-specific entrepreneurial mindset framework.
4. To develop the BRISK³ Mind Model by integrating insights from entrepreneurship, healthcare management, organizational leadership, innovation science, knowledge management, and public policy.
5. To explain the conceptual relationships among the six dimensions of the BRISK³ Mind Model and their contribution to healthcare entrepreneurship and health system transformation.
6. To discuss the theoretical, managerial, educational, and policy implications of the BRISK³ Mind Model for healthcare professionals, healthcare organizations, and policymakers.
7. To propose directions for future empirical research aimed at validating and operationalizing the BRISK³ Mind Model across diverse healthcare settings.

6. RESEARCH QUESTIONS

The study addresses the following research questions:

1. What are the major conceptual developments in healthcare entrepreneurship and entrepreneurial mindset literature?
2. What limitations exist within current entrepreneurship theories when applied to healthcare systems?
3. What conceptual components are essential for a comprehensive healthcare entrepreneurship framework?
4. How can entrepreneurship theory, healthcare management, innovation, leadership, knowledge

management, and public policy be integrated into a unified conceptual model for healthcare entrepreneurship?
5. How does the proposed BRISK³ Mind Model explain entrepreneurial capability within contemporary healthcare organizations?
6. What practical and policy implications does the BRISK³ Mind Model offer for strengthening healthcare innovation, organizational resilience, and health system transformation?
7. What opportunities exist for future empirical validation and refinement of the BRISK³ Mind Model?

7. LITERATURE REVIEW

7.1 Healthcare Entrepreneurship: Evolution, Concepts, and Contemporary Perspectives

7.1.1 Evolution of Healthcare Entrepreneurship

Entrepreneurship has long been recognized as a driver of innovation, economic growth, and organizational transformation. Early economic theorists conceptualized entrepreneurs as individuals who create value by recognizing opportunities, introducing innovations, and reorganizing existing resources to generate societal and economic progress (Schumpeter, 1934). Traditionally, entrepreneurship was viewed primarily within the context of commercial enterprise, with emphasis placed on venture creation, profit generation, and market competition. However, contemporary scholarship has considerably broadened this perspective, recognizing entrepreneurship as a multidimensional capability applicable across public, private, and nonprofit sectors, including healthcare, education, and government (Kuratko et al., 2021).

Within healthcare, entrepreneurship has evolved from isolated physician-owned practices and private healthcare ventures to encompass organizational innovation, health technology development, digital health transformation, implementation science, social entrepreneurship, and health system strengthening (Agarwal et al., 2023). This evolution reflects growing recognition that healthcare systems require more than clinical excellence; they also require professionals capable of identifying unmet needs, designing innovative solutions, mobilizing resources, managing uncertainty, and leading organizational change. Consequently, healthcare entrepreneurship has become increasingly associated with creating sustainable value through improvements in healthcare quality, accessibility, efficiency, equity, and patient outcomes rather than financial performance alone.

The COVID-19 pandemic accelerated this transformation by exposing structural weaknesses within healthcare systems and demonstrating the importance of entrepreneurial leadership during periods of uncertainty. Healthcare organizations worldwide rapidly adopted telemedicine, artificial intelligence-assisted diagnostics, remote patient monitoring, digital prescribing systems, and cross-sector collaborations to maintain continuity of care (Keesara et al., 2020). These developments reinforced the view that entrepreneurship is no longer an optional managerial competency but an essential capability for enhancing healthcare resilience and organizational adaptability.

7.1.2 Defining Healthcare Entrepreneurship

Despite increasing scholarly attention, there remains no universally accepted definition of healthcare entrepreneurship. Existing definitions vary according to disciplinary perspectives, institutional contexts, and research objectives. Some scholars define healthcare entrepreneurship primarily as the commercialization of healthcare innovations and medical technologies (Phillips et al., 2024), whereas others emphasize organizational innovation, service redesign, and value creation within healthcare institutions (Agarwal et al., 2023).

A broader perspective conceptualizes healthcare entrepreneurship as the process through which healthcare

professionals and organizations identify opportunities, develop innovative solutions, mobilize available resources, and implement sustainable interventions that improve health outcomes and organizational performance while maintaining ethical standards and regulatory compliance. This perspective acknowledges that entrepreneurial activity occurs not only within private healthcare enterprises but also within public hospitals, academic institutions, community health programmes, governmental agencies, and international health organizations.

Unlike traditional entrepreneurship, healthcare entrepreneurship operates within highly regulated environments where innovation must coexist with evidence-based practice, patient safety, ethical responsibility, multidisciplinary collaboration, and public accountability. Consequently, entrepreneurial success in healthcare cannot be evaluated solely through financial indicators but must also incorporate improvements in healthcare quality, patient satisfaction, accessibility, equity, organizational learning, and population health.

7.1.3 Dimensions of Healthcare Entrepreneurship

Recent literature suggests that healthcare entrepreneurship comprises multiple interrelated dimensions rather than a single entrepreneurial attribute. First, **opportunity recognition** enables healthcare professionals to identify unmet clinical, organizational, technological, or policy needs requiring innovative solutions. Opportunity recognition has consistently been regarded as one of the defining characteristics of entrepreneurial behaviour because innovation begins with recognizing possibilities that others fail to observe (Shane & Venkataraman, 2000).

Second, **innovation capability** reflects the capacity to develop, implement, and scale new ideas that improve healthcare delivery. Innovation within healthcare extends beyond technological advancement to include organizational redesign, new care models, quality improvement initiatives, policy reforms, financing mechanisms, and workforce development strategies (OECD, 2023).

Third, **leadership and organizational influence** enable healthcare entrepreneurs to mobilize multidisciplinary teams, facilitate organizational learning, manage resistance to change, and sustain innovation over time. Healthcare innovation rarely occurs through isolated individual effort; rather, it depends upon collaborative leadership capable of aligning diverse stakeholders toward common organizational objectives.

Fourth, **knowledge integration** has emerged as an increasingly important determinant of entrepreneurial success within healthcare. Contemporary healthcare organizations generate vast quantities of clinical, operational, financial, and epidemiological data. Entrepreneurial organizations possess the capability to transform this knowledge into actionable innovations that improve healthcare delivery while supporting evidence-informed decision-making (Nonaka & Takeuchi, 1995).

Finally, healthcare entrepreneurship requires effective **risk management**. Unlike commercial sectors where entrepreneurial risk is primarily financial, healthcare organizations must simultaneously manage clinical, ethical, legal, organizational, technological, reputational, and policy-related risks. This broader conception of entrepreneurial risk underscores the importance of developing intelligent approaches to uncertainty rather than simply encouraging risk-taking behaviour.

7.1.4 Contemporary Trends in Healthcare Entrepreneurship

Healthcare entrepreneurship is currently being reshaped by several global trends. Digital transformation has enabled new models of healthcare delivery through artificial intelligence, machine learning, blockchain technologies, wearable devices, mobile health applications, robotics, and precision medicine (Topol, 2019). Simultaneously, demographic aging, increasing chronic disease prevalence, antimicrobial resistance,

climate change, and recurring infectious disease outbreaks continue to generate new healthcare challenges requiring innovative organizational responses.

Furthermore, international policy initiatives such as the Sustainable Development Goals (SDGs) and the Universal Health Coverage (UHC) agenda emphasize innovation, collaboration, and resilient health systems as essential components of sustainable healthcare development (United Nations, 2015; World Health Organization [WHO], 2023). These global priorities have expanded opportunities for entrepreneurial approaches that integrate public policy, healthcare management, digital innovation, and community engagement.

In parallel, entrepreneurship education has become increasingly incorporated into medical, nursing, pharmacy, and public health curricula worldwide. Universities and academic medical centres are establishing innovation hubs, entrepreneurship laboratories, and interdisciplinary incubators that encourage healthcare professionals to develop entrepreneurial competencies alongside clinical expertise (Phillips et al., 2024). These developments demonstrate growing recognition that healthcare entrepreneurship should be viewed as a professional competency rather than a specialised business activity.

7.1.5 Critical Analysis and Knowledge Gap

Although healthcare entrepreneurship has matured considerably as a field of inquiry, the literature remains conceptually fragmented. Existing studies frequently investigate opportunity recognition, innovation, leadership, digital transformation, implementation science, organizational learning, or healthcare management independently, with limited integration across these domains. Consequently, there remains no comprehensive conceptual framework that systematically explains how these entrepreneurial competencies interact to facilitate healthcare innovation and health system transformation.

Furthermore, many existing entrepreneurship theories were developed within commercial contexts and therefore provide limited guidance regarding the unique ethical, regulatory, multidisciplinary, and policy environments characteristic of healthcare organizations. While recent studies increasingly acknowledge the importance of entrepreneurial thinking within healthcare, few propose healthcare-specific theoretical frameworks capable of integrating entrepreneurial competencies into a coherent conceptual structure applicable across clinical practice, healthcare management, education, research, and public policy.

This conceptual fragmentation represents a significant gap in the literature and provides the rationale for developing the BRISK³ Mind Model**.** By integrating Business Opportunity Recognition, Risk Intelligence, Innovation Capability, Strategic Leadership, Knowledge Capital, and three foundational entrepreneurial mindsets, the proposed framework seeks to provide a more comprehensive explanation of healthcare entrepreneurship than is currently available in existing literature.

The next subsection therefore examines entrepreneurial mindset as the cognitive and behavioural foundation upon which healthcare entrepreneurship is built.

7.2 Entrepreneurial Mindset in Healthcare

7.2.1 Concept and Evolution of the Entrepreneurial Mindset

The concept of the entrepreneurial mindset has become increasingly prominent in entrepreneurship research as scholars have shifted attention from the characteristics of entrepreneurs to the cognitive processes that influence entrepreneurial behaviour. Earlier entrepreneurship studies largely focused on identifying stable personality traits such as risk-taking propensity, achievement motivation, and locus of control as determinants of entrepreneurial success. However, subsequent research demonstrated that these traits alone could not adequately explain why individuals recognize opportunities, innovate successfully, or

respond differently to uncertainty despite possessing similar personal characteristics (Ireland et al., 2003; McGrath & MacMillan, 2000).

Consequently, entrepreneurship scholars introduced the concept of the entrepreneurial mindset, which emphasizes the cognitive, behavioural, and strategic capabilities that enable individuals to identify opportunities, make informed decisions under uncertainty, mobilize resources, and create value within dynamic environments. Rather than viewing entrepreneurship as an innate talent possessed by a select group of individuals, the entrepreneurial mindset is increasingly regarded as a learnable and developable capability that can be cultivated through education, professional experience, organizational culture, and leadership development (Kuratko et al., 2021).

An entrepreneurial mindset therefore extends beyond starting businesses. It reflects a proactive way of thinking that encourages continuous learning, innovation, adaptability, opportunity recognition, resilience, calculated decision-making, and value creation. Individuals possessing strong entrepreneurial mindsets are more likely to perceive uncertainty as an opportunity for innovation rather than as an obstacle to organizational performance (Haynie et al., 2010). This perspective has contributed significantly to the growing incorporation of entrepreneurship education into universities, healthcare institutions, and public-sector organizations worldwide.

7.2.2 Entrepreneurial Mindset within Healthcare

Healthcare systems represent one of the most complex organizational environments in contemporary society. Healthcare professionals routinely operate under conditions characterized by uncertainty, resource limitations, rapidly evolving technologies, multidisciplinary collaboration, ethical responsibility, regulatory oversight, and increasing public expectations. These complexities require competencies extending beyond clinical expertise to include adaptive thinking, strategic decision-making, collaborative leadership, and innovation.

Traditionally, healthcare education has focused primarily on developing diagnostic competence, clinical reasoning, technical proficiency, and evidence-based practice. While these competencies remain indispensable, healthcare organizations increasingly require professionals capable of redesigning healthcare processes, identifying service gaps, improving organizational efficiency, and implementing innovative solutions that strengthen healthcare delivery (Berwick, 2016).

Recent literature suggests that entrepreneurial mindset development has become an essential component of healthcare leadership. Healthcare professionals possessing entrepreneurial mindsets demonstrate greater willingness to initiate organizational improvements, adopt innovative technologies, collaborate across professional boundaries, and respond effectively to changing healthcare environments (Phillips et al., 2024). Furthermore, entrepreneurial thinking facilitates the implementation of evidence-based innovations by encouraging healthcare professionals to translate scientific knowledge into practical organizational improvements rather than merely generating academic knowledge.

The COVID-19 pandemic vividly illustrated the importance of entrepreneurial mindsets within healthcare. Healthcare leaders who demonstrated adaptability, creativity, collaborative problem-solving, and strategic innovation were better positioned to sustain healthcare delivery despite unprecedented operational challenges (Keesara et al., 2020). These experiences reinforced the notion that entrepreneurial thinking constitutes an essential professional competency for contemporary healthcare practice.

7.2.3 Core Components of an Entrepreneurial Mindset

Although definitions vary across studies, several recurring dimensions consistently characterize entrepreneurial mindsets.

- **Opportunity Orientation**

  Entrepreneurially minded individuals actively identify unmet needs and emerging opportunities within complex environments. Rather than focusing exclusively on existing organizational constraints, they continuously explore possibilities for improvement, innovation, and value creation (Shane & Venkataraman, 2000).

- **Adaptive Thinking**

  Healthcare environments evolve rapidly due to technological advances, demographic changes, disease outbreaks, and policy reforms. Adaptive thinking enables healthcare professionals to modify strategies, acquire new knowledge, and respond effectively to changing organizational circumstances (Haynie et al., 2010).

- **Innovation Orientation**

  Innovation represents a defining characteristic of entrepreneurial thinking. Individuals possessing entrepreneurial mindsets continuously seek improved methods of delivering healthcare services, redesigning organizational processes, and enhancing patient outcomes through creative problem-solving.

- **Calculated Risk Intelligence**

  Contrary to popular assumptions, entrepreneurs do not simply embrace risk indiscriminately. Instead, successful entrepreneurs evaluate uncertainty systematically before making strategic decisions. Within healthcare, intelligent risk assessment is particularly important because entrepreneurial decisions may directly affect patient safety, organizational reputation, regulatory compliance, and healthcare quality. This distinction supports the present study's preference for the concept of **Risk Intelligence** rather than conventional risk-taking behaviour.

- **Learning Orientation**

  Entrepreneurial individuals demonstrate continuous commitment to learning, knowledge acquisition, reflection, and professional development. Learning orientation enables healthcare professionals to integrate emerging scientific evidence, technological innovation, and organizational experience into healthcare practice.

- **Value Creation Orientation**

  Entrepreneurship ultimately seeks to create value. Within healthcare, value extends beyond financial returns to include improvements in patient outcomes, healthcare accessibility, equity, organizational effectiveness, workforce satisfaction, and population health.

7.2.4 Entrepreneurial Mindset and Healthcare Innovation

A growing body of evidence indicates that entrepreneurial mindset significantly influences healthcare innovation and organizational performance. Healthcare professionals possessing entrepreneurial capabilities are more likely to introduce innovative clinical pathways, develop digital health solutions, improve organizational efficiency, and strengthen interdisciplinary collaboration (Agarwal et al., 2023). Entrepreneurial thinking also facilitates implementation science by enabling organizations to translate research findings into sustainable healthcare improvements.

Moreover, entrepreneurial mindsets contribute to organizational resilience by enabling healthcare institutions to anticipate emerging challenges, adapt to uncertainty, and maintain service continuity during crises. These capabilities have become increasingly important as healthcare organizations confront

complex challenges associated with aging populations, chronic diseases, climate change, digital transformation, workforce shortages, and financial constraints.

Healthcare organizations that encourage entrepreneurial cultures also tend to demonstrate greater organizational learning, employee engagement, innovation adoption, and continuous quality improvement. Consequently, entrepreneurial mindset should be viewed not merely as an individual characteristic but also as an organizational capability that influences institutional performance and health system transformation.

7.2.5 Critical Analysis and Knowledge Gap

Although entrepreneurial mindset has become an increasingly important construct within entrepreneurship literature, its application to healthcare remains relatively underdeveloped. Existing studies generally examine entrepreneurial mindset in relation to business creation, innovation, leadership, or organizational performance without adequately considering the distinctive ethical, regulatory, interdisciplinary, and patient-centred characteristics of healthcare systems. Furthermore, most available frameworks conceptualize entrepreneurial mindset as a broad psychological construct without identifying the specific competencies required for entrepreneurial effectiveness within healthcare organizations.

Another limitation concerns the fragmented treatment of entrepreneurial competencies. Opportunity recognition, innovation, leadership, learning, and risk management are frequently investigated independently despite their interconnected influence on healthcare entrepreneurship. This fragmentation limits the development of comprehensive educational programmes and organizational strategies capable of cultivating entrepreneurial capability among healthcare professionals.

The present study addresses these limitations by proposing the BRISK³ Mind Model, which reconceptualizes entrepreneurial mindset as the dynamic interaction of Business Opportunity Recognition, Risk Intelligence, Innovation Capability, Strategic Leadership, Knowledge Capital, and three foundational entrepreneurial mindsets comprising Growth Mindset, Systems Mindset, and Value-Creation Mindset. Unlike existing frameworks, the BRISK³ Mind Model explicitly integrates cognitive, behavioural, organizational, and strategic dimensions within a healthcare-specific conceptual framework. This integrated perspective provides a stronger theoretical basis for understanding healthcare entrepreneurship while offering practical guidance for healthcare education, organizational development, leadership training, and health policy implementation.

7.3 Business Opportunity Recognition in Healthcare

7.3.1 Concept of Business Opportunity Recognition

Business opportunity recognition is widely regarded as the cornerstone of entrepreneurship and one of the most distinguishing characteristics separating entrepreneurial individuals from non-entrepreneurs. Entrepreneurship begins not with the creation of an organization but with the identification of opportunities capable of generating value through innovative products, services, processes, or organizational improvements (Shane & Venkataraman, 2000). Opportunity recognition refers to the cognitive process through which individuals discover, evaluate, and exploit situations that can be transformed into valuable outcomes. These opportunities may emerge from technological advancements, unmet societal needs, institutional inefficiencies, demographic changes, policy reforms, or shifts in consumer behaviour.

Entrepreneurship scholars have long debated whether opportunities are objectively discovered or socially created. The discovery perspective argues that entrepreneurial opportunities exist independently within the external environment and are identified by individuals possessing superior knowledge, experience, or information (Kirzner, 1973). Conversely, the creation perspective suggests that opportunities do not

pre-exist but emerge through entrepreneurial action, experimentation, and innovation under conditions of uncertainty (Alvarez & Barney, 2007). Although these perspectives differ philosophically, both acknowledge that opportunity recognition represents a fundamental entrepreneurial capability requiring cognitive flexibility, environmental awareness, and strategic judgement.

Contemporary entrepreneurship research increasingly views opportunity recognition as a dynamic process influenced by prior knowledge, professional expertise, social networks, creativity, organizational learning, and environmental scanning. Rather than occurring as isolated moments of inspiration, entrepreneurial opportunities often emerge through continuous interaction between individuals and their organizational environments. This broader understanding is particularly relevant to healthcare, where opportunities frequently arise from evolving patient needs, technological developments, policy reforms, scientific discoveries, and changing healthcare delivery models.

7.3.2 Business Opportunity Recognition in Healthcare

Within healthcare systems, opportunity recognition extends beyond identifying profitable business ventures. Healthcare professionals encounter numerous opportunities to improve service delivery, redesign clinical processes, strengthen health system governance, reduce healthcare disparities, optimize resource utilization, and enhance patient outcomes. Consequently, opportunity recognition in healthcare should be conceptualized as the ability to identify unmet healthcare needs and transform them into innovative solutions that create clinical, organizational, economic, and societal value.

Healthcare opportunities originate from multiple sources. Advances in digital technologies have created opportunities for telemedicine, artificial intelligence-assisted diagnostics, remote patient monitoring, electronic health records, wearable health devices, and precision medicine. Demographic transitions, including population aging and increasing prevalence of chronic diseases, generate opportunities for integrated care models, preventive healthcare programmes, home-based healthcare services, and personalized medicine. Similarly, emerging public health threats, climate change, antimicrobial resistance, and health workforce shortages continue to create demand for innovative healthcare policies, organizational reforms, and collaborative service delivery models (World Health Organization [WHO], 2023).

Opportunity recognition is also central to public health entrepreneurship. Public health professionals increasingly identify opportunities to improve vaccination programmes, disease surveillance systems, maternal and child health services, health promotion campaigns, and community-based interventions through innovative policy design and multisectoral collaboration. These examples illustrate that healthcare entrepreneurship encompasses both commercial innovation and public value creation.

7.3.3 Determinants of Opportunity Recognition in Healthcare

The literature identifies several factors that influence healthcare professionals' ability to recognize entrepreneurial opportunities.

- **Professional knowledge and clinical experience** provide insight into inefficiencies, service gaps, and unmet patient needs that may not be apparent to individuals outside healthcare organizations. Extensive interaction with patients enables clinicians to identify practical problems requiring innovative solutions.
- **Environmental scanning** also plays a critical role. Healthcare professionals who continuously monitor technological developments, regulatory reforms, demographic trends, epidemiological transitions, and policy changes are more likely to identify emerging opportunities before they become widely recognized.

- **Interdisciplinary collaboration** enhances opportunity recognition by combining diverse expertise from medicine, nursing, pharmacy, engineering, management, economics, information technology, and public health. Such collaboration facilitates the generation of innovative ideas capable of addressing complex healthcare challenges.

In addition, **organizational culture** significantly influences opportunity recognition. Healthcare organizations that encourage creativity, continuous learning, knowledge sharing, and experimentation create environments where entrepreneurial opportunities are more likely to be identified and developed. Conversely, highly bureaucratic organizations characterized by rigid hierarchies and resistance to change may suppress entrepreneurial thinking despite the existence of significant innovation opportunities.

7.3.4 Opportunity Recognition and Healthcare Innovation

Opportunity recognition represents the initial stage of the healthcare innovation process. Without identifying meaningful opportunities, innovation efforts risk becoming technology-driven rather than problem-driven. Effective healthcare innovation therefore begins with understanding unmet patient needs, organizational inefficiencies, workforce challenges, policy deficiencies, or gaps in healthcare accessibility.

Research demonstrates that healthcare organizations capable of systematically identifying opportunities tend to exhibit greater innovation performance, stronger organizational adaptability, and improved service quality. Opportunity-oriented organizations continuously evaluate emerging technologies, monitor patient experiences, engage healthcare workers in quality improvement, and collaborate with external stakeholders to develop innovative healthcare solutions (Agarwal et al., 2023). Such organizations are better positioned to respond proactively to rapidly changing healthcare environments.

Furthermore, opportunity recognition contributes directly to healthcare sustainability. By identifying opportunities for preventive healthcare, digital transformation, integrated care, resource optimization, and policy innovation, healthcare organizations can improve both organizational performance and population health outcomes while reducing unnecessary healthcare expenditures.

7.3.5 Critical Analysis and Knowledge Gap

Although opportunity recognition occupies a central position within entrepreneurship theory, existing literature has largely examined it within commercial and technological contexts. Relatively limited attention has been devoted to understanding opportunity recognition as a multidimensional capability within healthcare organizations, where entrepreneurial decisions must simultaneously satisfy clinical, ethical, organizational, financial, regulatory, and policy requirements.

Furthermore, many existing studies conceptualize opportunity recognition as an isolated entrepreneurial competence without adequately examining its interaction with leadership, innovation capability, knowledge utilization, and strategic decision-making. This fragmented perspective provides only a partial explanation of entrepreneurial behaviour within healthcare systems.

Another limitation concerns the predominant emphasis on commercial opportunity identification. Healthcare entrepreneurship literature increasingly acknowledges social value creation and health system improvement; however, existing conceptual frameworks rarely integrate opportunity recognition with broader objectives such as organizational resilience, healthcare equity, evidence-based practice, and health policy implementation.

The BRISK³ Mind Model addresses these limitations by positioning Business Opportunity Recognition as the foundational component of healthcare entrepreneurship while explicitly linking it to Risk Intelligence, Innovation Capability, Strategic Leadership, Knowledge Capital, and three entrepreneurial mindsets.

Within the proposed framework, opportunity recognition is not viewed merely as identifying commercial possibilities but as recognizing opportunities capable of generating sustainable value for patients, healthcare organizations, communities, and health systems. This broader conceptualization extends existing entrepreneurship literature by situating opportunity recognition within the realities of healthcare management and public policy.

7.4 Risk Intelligence in Healthcare Entrepreneurship

7.4.1 Conceptualising Risk Intelligence

Risk has traditionally occupied a central position within entrepreneurship literature because entrepreneurial action inherently involves decision-making under conditions of uncertainty. Early entrepreneurship scholars frequently portrayed entrepreneurs as individuals willing to assume higher levels of risk than non-entrepreneurs. However, subsequent research has challenged this assumption, demonstrating that successful entrepreneurs are not necessarily greater risk takers but are better at evaluating, managing, and responding to uncertainty through informed judgement and strategic decision-making (Sarasvathy, 2001; Kahneman, 2011).

This shift has contributed to the emergence of the concept of Risk Intelligence, which extends beyond conventional notions of risk-taking. Risk Intelligence refers to an individual's or organization's capacity to accurately perceive uncertainty, evaluate potential consequences, integrate available evidence, and make informed decisions that maximize opportunities while minimizing avoidable adverse outcomes. Rather than encouraging excessive risk-taking, Risk Intelligence emphasizes balanced judgement, evidence-informed decision-making, adaptive thinking, and strategic responsiveness to changing environments.

Within entrepreneurship, Risk Intelligence is increasingly viewed as a cognitive capability that combines analytical reasoning, experience, situational awareness, emotional regulation, and strategic foresight. Individuals with high Risk Intelligence recognize that uncertainty cannot always be eliminated; instead, it should be understood, monitored, and managed through systematic evaluation and continuous learning.

7.4.2 Risk Intelligence in Healthcare

Healthcare represents one of the most risk-sensitive sectors globally. Every clinical, administrative, financial, technological, and policy decision carries potential consequences for patient safety, healthcare quality, organizational reputation, legal compliance, and public trust. Consequently, entrepreneurial decision-making within healthcare requires considerably greater sophistication than entrepreneurial decision-making in many commercial environments.

Healthcare professionals routinely encounter diverse categories of risk, including clinical risk, financial risk, operational risk, technological risk, ethical risk, legal risk, cybersecurity risk, reputational risk, and public health risk. Introducing innovative healthcare technologies, redesigning healthcare processes, implementing new policies, or establishing novel healthcare services inevitably involves uncertainty regarding effectiveness, acceptance, cost, safety, and long-term sustainability.

For example, the introduction of artificial intelligence-assisted diagnostic systems offers opportunities for improving diagnostic accuracy and efficiency while simultaneously introducing concerns regarding algorithmic bias, data privacy, clinical accountability, and regulatory oversight. Similarly, telemedicine expands healthcare accessibility but presents challenges relating to cybersecurity, patient confidentiality, digital inequality, reimbursement, and professional regulation. These examples illustrate that entrepreneurial innovation within healthcare must balance opportunity with responsible risk management.

Unlike traditional entrepreneurship literature, where financial risk frequently dominates discussion, healthcare entrepreneurship requires a multidimensional understanding of risk that incorporates ethical responsibility, patient welfare, regulatory compliance, and evidence-based practice. Consequently, healthcare entrepreneurs must possess the ability to evaluate uncertainty from multiple perspectives before implementing innovative interventions.

7.4.3 Dimensions of Healthcare Risk Intelligence

Drawing upon entrepreneurship, healthcare management, implementation science, and organizational decision-making literature, Risk Intelligence within healthcare may be conceptualized as comprising several interconnected dimensions.

- **Risk Awareness** refers to the ability to identify emerging threats, vulnerabilities, and uncertainties affecting healthcare organizations before they escalate into major organizational challenges.
- **Risk Assessment** involves systematic evaluation of the probability, magnitude, and potential consequences of identified risks using available evidence and professional judgement.
- **Evidence-Informed Decision-Making** enables healthcare professionals to integrate scientific evidence, organizational data, professional expertise, and stakeholder perspectives when evaluating alternative courses of action.
- **Adaptive Decision-Making** reflects the capacity to modify decisions in response to changing organizational conditions, technological developments, policy reforms, or emerging scientific evidence.
- **Risk Communication** involves effectively communicating uncertainty, potential consequences, and mitigation strategies to patients, healthcare workers, organizational leaders, policymakers, and other stakeholders.

Collectively, these dimensions suggest that Risk Intelligence is not merely an individual characteristic but also an organizational capability that strengthens healthcare resilience, innovation, and governance.

7.4.4 Risk Intelligence and Healthcare Innovation

Innovation and risk are inseparable. Every innovative healthcare intervention introduces some degree of uncertainty concerning clinical effectiveness, financial viability, organizational acceptance, implementation feasibility, or policy implications. Consequently, organizations seeking to strengthen innovation must simultaneously strengthen their capacity for intelligent risk management.

Healthcare organizations possessing high Risk Intelligence are more likely to implement innovation responsibly by conducting pilot evaluations, monitoring implementation outcomes, engaging multidisciplinary stakeholders, and continuously refining organizational strategies based on emerging evidence. Such organizations view uncertainty not as a barrier to innovation but as a manageable aspect of organizational learning.

Furthermore, Risk Intelligence enhances organizational resilience by enabling healthcare institutions to anticipate crises, prepare contingency strategies, and recover more effectively from unexpected disruptions. Experiences during the COVID-19 pandemic demonstrated that healthcare organizations capable of balancing innovation with evidence-informed risk management adapted more successfully to rapidly changing healthcare environments than organizations relying solely on traditional administrative approaches (Keesara et al., 2020).

7.4.5 Critical Analysis and Knowledge Gap

Despite increasing scholarly interest in entrepreneurial decision-making, Risk Intelligence remains

relatively underdeveloped within healthcare entrepreneurship literature. Existing research frequently examines risk management, patient safety, clinical governance, or organizational resilience as independent concepts, with limited integration into entrepreneurship theory. Similarly, entrepreneurship research often conceptualizes risk primarily in financial or commercial terms without adequately considering the ethical, clinical, regulatory, and policy complexities characteristic of healthcare organizations.

Another limitation concerns the widespread use of risk-taking propensity as a measure of entrepreneurial behaviour. Although willingness to assume risk has historically been associated with entrepreneurship, this perspective inadequately reflects the realities of healthcare practice, where irresponsible risk-taking may compromise patient safety and organizational integrity. Healthcare entrepreneurship therefore requires a conceptual shift from encouraging greater risk-taking toward cultivating greater Risk Intelligence.

The present study argues that Risk Intelligence should be regarded as a foundational competency for healthcare entrepreneurship. Within the BRISK³ Mind Model, Risk Intelligence represents the capacity to evaluate uncertainty systematically, integrate evidence into entrepreneurial decision-making, anticipate organizational consequences, and implement innovation responsibly. By reconceptualizing entrepreneurial risk in this manner, the BRISK³ Mind Model extends existing entrepreneurship literature while providing a healthcare-specific perspective better aligned with contemporary principles of patient safety, evidence-based practice, organizational governance, and health system resilience.

7.5 Innovation Capability in Healthcare Entrepreneurship

7.5.1 Understanding Innovation Capability

Innovation has long been recognised as the defining characteristic of entrepreneurship and organizational competitiveness. Schumpeter (1934) described innovation as the introduction of new combinations of resources that generate economic and societal value through new products, processes, markets, organizational structures, or sources of supply. Contemporary scholarship has expanded this definition to include incremental improvements, service innovations, technological advancements, organizational redesign, business model innovation, and policy innovation (Teece, 2018).

Although innovation and entrepreneurship are closely related, they are conceptually distinct. Entrepreneurship concerns identifying and exploiting opportunities, whereas innovation refers to the successful development, implementation, and diffusion of novel ideas that create value. Consequently, organizations may recognize opportunities without successfully implementing innovation, while innovative organizations require entrepreneurial thinking to identify opportunities worthy of investment.

This distinction has contributed to the emergence of Innovation Capability, which refers to an organization's or individual's ability to consistently generate, adopt, implement, and sustain innovations that improve organizational performance and create long-term value. Unlike isolated innovative activities, Innovation Capability reflects an enduring organizational competence embedded within leadership, organizational culture, knowledge systems, resource management, and strategic decision-making (Lawson & Samson, 2001).

Innovation Capability therefore extends beyond creativity. It encompasses the structures, processes, competencies, and organizational environment necessary for transforming ideas into sustainable outcomes.

7.5.2 Innovation Capability within Healthcare

Healthcare is one of the world's most innovation-intensive sectors. Scientific discoveries, digital technologies, biotechnology, genomics, robotics, artificial intelligence, precision medicine, and telehealth continue to transform healthcare delivery at unprecedented speed. However, healthcare innovation extends

beyond technological advancement. It also includes improvements in clinical practice, organizational management, health financing, workforce development, policy implementation, patient engagement, and public health interventions.

Healthcare Innovation Capability may therefore be defined as the ability of healthcare professionals and organizations to systematically develop, implement, evaluate, and sustain evidence-informed innovations that improve patient outcomes, organizational performance, and health system effectiveness while maintaining safety, ethical integrity, and regulatory compliance.

Unlike many commercial industries, healthcare innovation must satisfy multiple stakeholders simultaneously. Successful innovations must demonstrate clinical effectiveness, cost-effectiveness, ethical acceptability, patient safety, regulatory approval, professional acceptance, and long-term sustainability. These multiple expectations make Innovation Capability considerably more complex within healthcare than in most other sectors.

Furthermore, healthcare innovation increasingly depends upon interdisciplinary collaboration involving clinicians, administrators, engineers, economists, policymakers, public health practitioners, information technology specialists, and patients themselves. Consequently, Innovation Capability should be viewed as a collaborative organizational competence rather than merely an individual attribute.

7.5.3 Dimensions of Healthcare Innovation Capability

The literature identifies several interrelated dimensions that collectively determine Innovation Capability within healthcare organizations.

- **Creativity and Idea Generation**

  Innovation begins with the generation of novel ideas that address clinical, organizational, technological, or policy-related challenges. Healthcare organizations that encourage creativity provide environments where employees are empowered to identify problems, propose solutions, and experiment with new approaches.

- **Evidence-Based Innovation**

  Unlike many sectors where market acceptance may determine innovation success, healthcare innovations must be supported by scientific evidence demonstrating effectiveness, safety, and quality. Evidence-based innovation ensures that entrepreneurial initiatives contribute positively to patient care rather than introducing unnecessary risk.

- **Implementation Capability**

  The successful implementation of innovation depends upon organizational readiness, leadership commitment, stakeholder engagement, resource availability, workforce competence, and effective change management. Numerous promising healthcare innovations fail because organizations lack implementation capability rather than innovative ideas.

- **Continuous Improvement**

  Innovation should not be viewed as isolated projects but as continuous organizational learning processes. Healthcare organizations possessing strong Innovation Capability continuously evaluate outcomes, refine interventions, integrate feedback, and adapt innovations in response to emerging evidence and changing environmental conditions.

- **Innovation Sustainability**

  Long-term organizational transformation requires innovations that remain effective beyond their initial implementation. Sustainable innovation depends upon institutional support, policy alignment, financial viability, workforce acceptance, and organizational learning.

7.5.4 Innovation Capability and Health System Transformation

Innovation Capability plays a pivotal role in strengthening health systems by improving healthcare accessibility, quality, efficiency, equity, and resilience. Organizations possessing high Innovation Capability demonstrate greater adaptability to changing healthcare demands, more effective integration of emerging technologies, stronger quality improvement programmes, and improved organizational performance.

Recent global healthcare challenges have highlighted the importance of Innovation Capability for organizational resilience. During the COVID-19 pandemic, healthcare organizations rapidly introduced telemedicine platforms, digital patient monitoring systems, virtual multidisciplinary meetings, innovative supply chain management strategies, and artificial intelligence-assisted diagnostic tools (Keesara et al., 2020). These experiences demonstrated that Innovation Capability represents a strategic organizational asset essential for sustaining healthcare delivery during periods of disruption.

Innovation Capability also contributes directly to achieving the Sustainable Development Goals (SDGs) and Universal Health Coverage (UHC) by enabling healthcare organizations to develop scalable, equitable, and cost-effective solutions capable of improving population health outcomes while reducing inequalities (World Health Organization [WHO], 2023).

7.5.5 Critical Analysis and Knowledge Gap

Despite the growing emphasis on healthcare innovation, existing literature frequently conceptualizes innovation as an isolated organizational outcome rather than as an integrated entrepreneurial capability. Many studies evaluate innovation performance, technology adoption, or implementation effectiveness independently without adequately examining the entrepreneurial competencies required to sustain innovation over time.

Furthermore, healthcare innovation literature remains fragmented across multiple disciplines, including implementation science, quality improvement, organizational behaviour, digital health, health policy, and strategic management. This fragmentation has limited the development of unified conceptual frameworks capable of explaining how innovation interacts with opportunity recognition, risk management, leadership, and organizational knowledge.

Another limitation concerns the predominant focus on technological innovation. While digital health technologies have transformed healthcare delivery, organizational innovation, policy innovation, workforce innovation, and managerial innovation remain comparatively underrepresented despite their equally important contributions to health system performance.

The BRISK³ Mind **Model** addresses these limitations by positioning Innovation Capability as one of five interconnected entrepreneurial competencies. Within the proposed framework, Innovation Capability does not operate independently but interacts dynamically with Healthcare Opportunity Intelligence**,** Healthcare Risk Intelligence**,** Strategic Leadership**,** Knowledge Capital**,** and three foundational entrepreneurial mindsets. This integrated perspective explains not only how innovations emerge but also how they are successfully implemented, sustained, and translated into meaningful health system transformation.

7.6 Strategic Leadership in Healthcare Entrepreneurship

7.6.1 Understanding Strategic Leadership

Leadership has long been recognised as one of the most influential determinants of organizational success. Traditional leadership theories focused primarily on interpersonal influence, supervision, motivation, and organizational control. However, increasing environmental complexity, technological advancement, globalization, and organizational uncertainty have shifted scholarly attention toward Strategic Leadership, which emphasizes long-term vision, organizational adaptability, innovation, and sustainable competitive advantage (Boal & Hooijberg, 2001).

Strategic Leadership refers to the capacity of leaders to anticipate future challenges, formulate strategic direction, mobilize organizational resources, foster innovation, manage complexity, and position organizations for sustained success. Unlike operational leadership, which focuses on day-to-day management activities, Strategic Leadership integrates strategic thinking, systems thinking, evidence-informed decision-making, and organizational learning to guide long-term organizational transformation (Ireland & Hitt, 2005).

Within entrepreneurship literature, Strategic Leadership has become increasingly associated with entrepreneurial success because leaders determine how opportunities are identified, resources allocated, innovations implemented, risks managed, and organizational cultures developed. Consequently, entrepreneurial organizations require leaders who can simultaneously maintain operational effectiveness while encouraging innovation and organizational renewal.

7.6.2 Strategic Leadership within Healthcare

Healthcare organizations operate within environments characterised by clinical uncertainty, technological disruption, workforce shortages, financial constraints, policy reforms, demographic transitions, and increasing public expectations. These challenges require leadership approaches extending beyond traditional administrative management toward strategic, adaptive, and innovation-oriented leadership.

Healthcare Strategic Leadership may therefore be defined as the ability of healthcare leaders to develop long-term strategic vision, foster innovation, mobilize multidisciplinary teams, promote organizational learning, and implement evidence-informed decisions that improve patient outcomes, organizational performance, and health system sustainability.

Healthcare leaders are increasingly expected to perform multiple interconnected roles. They must simultaneously ensure patient safety, improve quality of care, manage organizational finances, support workforce development, implement healthcare innovations, maintain regulatory compliance, strengthen community engagement, and respond effectively to emerging public health challenges. These responsibilities require leaders capable of balancing competing organizational priorities while sustaining continuous organizational improvement.

The COVID-19 pandemic further demonstrated the critical importance of Strategic Leadership. Healthcare organizations possessing visionary and adaptive leaders responded more effectively by reorganizing clinical services, expanding digital healthcare delivery, strengthening interorganizational collaboration, and rapidly implementing innovative service delivery models (Keesara et al., 2020). These experiences highlighted Strategic Leadership as a central determinant of healthcare resilience.

7.6.3 Dimensions of Strategic Leadership in Healthcare

The literature identifies several core dimensions that characterize Strategic Leadership within healthcare organizations.

- **Strategic Vision**

  Strategic leaders articulate clear organizational direction by anticipating future healthcare challenges and aligning organizational resources toward long-term objectives. Vision provides healthcare organizations with purpose and facilitates coordinated action during periods of uncertainty.

- **Systems Thinking**

  Healthcare organizations function as complex adaptive systems involving interactions among patients, healthcare professionals, technology, policy, finance, and community stakeholders. Systems thinking enables leaders to understand these interdependencies and make decisions that optimise overall organizational performance rather than isolated departmental outcomes.

- **Innovation Leadership**

  Strategic leaders establish organizational environments that encourage creativity, experimentation, interdisciplinary collaboration, and continuous improvement. Innovation leadership promotes psychological safety, enabling healthcare professionals to propose and implement new ideas without fear of unnecessary organizational resistance.

- **Change Management**

  Healthcare innovation inevitably requires organizational change. Strategic leaders facilitate change by communicating organizational vision, engaging stakeholders, managing resistance, developing workforce capability, and monitoring implementation outcomes. Effective change management therefore represents an essential component of healthcare entrepreneurship.

- **Ethical and Values-Based Leadership**

  Healthcare organizations operate under strong ethical obligations related to patient welfare, professional accountability, equity, and social justice. Strategic leaders must therefore integrate ethical principles into organizational decision-making while balancing innovation with patient safety, regulatory compliance, and public trust.

7.6.4 Strategic Leadership and Healthcare Entrepreneurship

Entrepreneurship cannot flourish without leadership capable of transforming opportunities into sustainable organizational outcomes. Strategic Leadership influences every stage of the entrepreneurial process by shaping organizational culture, allocating resources, encouraging innovation, developing human capital, and fostering organizational resilience.

Research consistently demonstrates that healthcare organizations led by strategically oriented leaders exhibit greater innovation performance, stronger organizational learning, improved employee engagement, higher implementation success, and better patient outcomes. Strategic leaders also enhance interdisciplinary collaboration, facilitate evidence-based practice, and strengthen organizational adaptability during periods of rapid environmental change.

Moreover, Strategic Leadership promotes entrepreneurial behaviour among healthcare professionals by empowering employees to identify opportunities, participate in decision-making, and contribute innovative ideas. Such empowerment encourages the development of entrepreneurial cultures in which innovation becomes an organizational norm rather than an occasional activity.

7.6.5 Critical Analysis and Knowledge Gap

Although Strategic Leadership has received substantial scholarly attention, existing literature often examines leadership independently from entrepreneurship, innovation, organizational learning, or healthcare management. This disciplinary separation has limited understanding of how leadership integrates entrepreneurial competencies within healthcare organizations.

Another limitation concerns the predominance of transformational and transactional leadership theories within healthcare research. While these theories provide valuable insights into motivation and organizational performance, they do not fully explain how healthcare leaders systematically identify opportunities, manage uncertainty, integrate organizational knowledge, and sustain innovation over extended periods.

Furthermore, leadership research frequently focuses on individual leader characteristics while giving comparatively limited attention to leadership as a strategic organizational capability supporting healthcare entrepreneurship and health system transformation. Consequently, existing frameworks provide only partial explanations of leadership's role within entrepreneurial healthcare organizations.

The BRISK³ Mind Model addresses these limitations by conceptualizing Strategic Leadership **as** an integrative capability connecting Healthcare Opportunity Intelligence (HOI)**,** Healthcare Risk Intelligence (HRI)**,** Healthcare Innovation Capability (HIC), and Knowledge Capital. Within the proposed framework, Strategic Leadership serves as the coordinating mechanism through which entrepreneurial competencies are translated into organizational innovation, healthcare improvement, and long-term health system transformation. This integrated conceptualization extends existing leadership literature while providing a healthcare-specific perspective on entrepreneurial leadership.

7.7 Knowledge Capital in Healthcare Entrepreneurship

7.7.1 Concept of Knowledge Capital

The emergence of the knowledge economy has fundamentally transformed the determinants of organizational success. Contemporary organizations increasingly derive competitive advantage not solely from financial resources, physical infrastructure, or technological assets but from their ability to generate, acquire, integrate, and apply knowledge effectively (Drucker, 1993). Consequently, knowledge has become one of the most valuable strategic assets underpinning innovation, organizational learning, and sustainable development.

Knowledge Capital refers to the collective intellectual resources that enable individuals and organizations to create value through the effective acquisition, generation, sharing, application, and preservation of knowledge. Unlike information, which represents raw facts or data, knowledge encompasses experience, expertise, professional judgement, contextual understanding, and evidence that guide effective decision-making (Nonaka & Takeuchi, 1995).

Within entrepreneurship literature, knowledge is widely recognised as a prerequisite for opportunity recognition, innovation, and strategic decision-making. Entrepreneurs rely on prior knowledge to identify emerging opportunities, evaluate market conditions, mobilize resources, and implement innovative solutions (Shane, 2000). However, contemporary scholarship increasingly recognises that entrepreneurial success depends not merely on possessing knowledge but on transforming knowledge into organizational capability through continuous learning, collaboration, and knowledge integration.

7.7.2 Knowledge Capital within Healthcare

Healthcare is one of the most knowledge-intensive sectors globally. Clinical decision-making, public

health practice, healthcare management, medical education, pharmaceutical development, and health policy formulation all depend upon the effective generation and application of scientific knowledge. Every interaction between healthcare professionals, patients, researchers, educators, policymakers, and administrators contributes to the continuous creation and exchange of knowledge.

Healthcare Knowledge Capital may therefore be defined as the collective clinical, managerial, scientific, technological, organizational, and experiential knowledge that healthcare professionals and institutions utilize to improve healthcare delivery, foster innovation, strengthen organizational performance, and enhance population health outcomes.

Unlike many industries, healthcare organizations generate enormous quantities of explicit and tacit knowledge. Explicit knowledge includes clinical guidelines, research evidence, electronic health records, policy documents, quality improvement reports, and organizational protocols. Tacit knowledge consists of clinical judgement, professional experience, interpersonal skills, leadership competence, and contextual understanding developed through years of practice. Both forms of knowledge are indispensable for healthcare entrepreneurship because innovative solutions frequently emerge through the interaction of scientific evidence and practical experience.

Furthermore, healthcare organizations increasingly depend upon interdisciplinary knowledge integration. Effective healthcare innovation requires collaboration among physicians, nurses, pharmacists, laboratory scientists, public health professionals, health economists, engineers, information technology specialists, managers, and policymakers. Such interdisciplinary knowledge exchange enhances creativity, improves problem-solving, and facilitates the development of comprehensive healthcare solutions.

7.7.3 Dimensions of Healthcare Knowledge Capital

The literature identifies several interrelated dimensions that contribute to Knowledge Capital within healthcare organizations.

- **Knowledge Acquisition**

  Healthcare professionals continuously acquire knowledge through formal education, professional development, clinical experience, research, conferences, mentorship, and continuing medical education. Organizations that invest in knowledge acquisition strengthen workforce competence and organizational adaptability.

- **Knowledge Creation**

  Healthcare organizations contribute to scientific advancement through clinical research, quality improvement initiatives, implementation studies, policy analysis, and organizational innovation. Knowledge creation enables institutions to generate context-specific evidence capable of improving healthcare practice.

- **Knowledge Sharing**

  Knowledge sharing involves the systematic exchange of expertise among healthcare professionals, departments, institutions, and external stakeholders. Multidisciplinary teamwork, communities of practice, mentoring programmes, collaborative research, and digital knowledge platforms facilitate organizational learning and reduce duplication of effort.

- **Knowledge Application**

  Knowledge produces organizational value only when translated into practice. Healthcare organizations possessing strong Knowledge Capital successfully integrate scientific evidence into

clinical decision-making, healthcare management, policy implementation, and organizational innovation. This process aligns closely with evidence-based healthcare and implementation science.

- **Knowledge Preservation**

  Healthcare organizations face continual workforce turnover, retirement, migration, and organizational restructuring. Effective knowledge preservation ensures that valuable institutional experience is retained through documentation, mentorship, succession planning, digital repositories, and organizational memory systems.

7.7.4 Knowledge Capital as a Driver of Healthcare Entrepreneurship

Knowledge Capital provides the intellectual foundation upon which healthcare entrepreneurship is built. Opportunity recognition depends upon knowledge of healthcare systems, patient needs, technological developments, and policy environments. Risk Intelligence requires access to reliable evidence and informed professional judgement. Innovation Capability depends upon scientific knowledge, interdisciplinary collaboration, and continuous organizational learning. Strategic Leadership similarly relies upon knowledge to formulate evidence-informed organizational strategies.

Organizations possessing strong Knowledge Capital demonstrate greater capacity for innovation because they learn continuously from clinical practice, research, organizational experience, and stakeholder engagement. Such organizations are better positioned to adapt to environmental change, implement healthcare innovations, improve patient outcomes, and strengthen organizational resilience.

The increasing adoption of electronic health records, artificial intelligence, big data analytics, and digital knowledge management systems has further elevated the strategic importance of Knowledge Capital. These technologies enable healthcare organizations to transform vast quantities of data into actionable knowledge supporting evidence-informed decision-making and continuous organizational improvement.

7.7.5 Critical Analysis and Knowledge Gap

Despite widespread recognition of knowledge management within healthcare, existing literature frequently conceptualizes knowledge as an organizational resource rather than as an entrepreneurial capability. Studies often examine knowledge acquisition, knowledge sharing, organizational learning, or evidence-based practice independently without integrating these processes into broader entrepreneurship frameworks.

Another limitation concerns the separation between knowledge management research and healthcare entrepreneurship literature. Although both fields emphasize innovation and organizational performance, relatively few studies explicitly examine how Knowledge Capital facilitates opportunity recognition, intelligent risk management, entrepreneurial leadership, and sustainable healthcare innovation. Consequently, healthcare entrepreneurship frameworks frequently underestimate the strategic importance of knowledge as the foundation of entrepreneurial capability.

Furthermore, many existing models concentrate on information technology or organizational learning while giving comparatively limited attention to the interaction between tacit knowledge, interdisciplinary collaboration, strategic leadership, and entrepreneurial decision-making. This fragmented perspective limits understanding of how healthcare organizations transform intellectual resources into sustainable innovation.

The BRISK³ Mind Model addresses these limitations by conceptualizing Knowledge Capital as a core entrepreneurial capability that connects Healthcare Opportunity Intelligence (HOI), Healthcare Risk

Intelligence (HRI), Healthcare Innovation Capability (HIC), and Healthcare Strategic Leadership Capability (HSLC). Within the proposed framework, Knowledge Capital is not merely a repository of information but the dynamic intellectual engine that supports opportunity identification, evidence-informed innovation, strategic decision-making, and continuous organizational learning. By integrating Knowledge Capital into healthcare entrepreneurship theory, the BRISK³ Mind Model extends existing knowledge management and entrepreneurship literature while providing a more comprehensive explanation of health system transformation.

7.8 Existing Entrepreneurship Models and Their Applicability to Healthcare

7.8.1 Overview of Major Entrepreneurship Models

Entrepreneurship has evolved into one of the most extensively studied fields in management and organizational research, leading to the development of numerous conceptual models explaining entrepreneurial behaviour, innovation, opportunity recognition, organizational performance, and value creation. These models have substantially advanced entrepreneurship scholarship by providing theoretical explanations for how entrepreneurs identify opportunities, mobilize resources, manage uncertainty, and generate economic value. However, most were developed within commercial contexts and therefore require careful evaluation before being applied to healthcare organizations.

Among the most influential entrepreneurship models are Schumpeter's Theory of Innovation, Kirzner's Opportunity Discovery Theory, Sarasvathy's Effectuation Theory, the Resource-Based View (RBV), Dynamic Capabilities Theory, Entrepreneurial Orientation (EO), and the Business Model Innovation Framework. Each contributes important insights into entrepreneurial behaviour but also exhibits limitations when applied to healthcare systems.

7.8.2 Schumpeter's Innovation Theory

Schumpeter (1934) conceptualized entrepreneurship as the introduction of innovative combinations capable of transforming markets through "creative destruction." According to this perspective, entrepreneurs stimulate economic development by introducing new products, services, production methods, organizational structures, and markets.

Schumpeter's theory remains highly influential because it established innovation as the central mechanism of entrepreneurship. Within healthcare, the theory helps explain technological advances such as artificial intelligence, telemedicine, robotic surgery, digital health platforms, precision medicine, and biotechnology innovations that continually reshape healthcare delivery.

However, Schumpeter's framework primarily emphasizes economic development and market competition. It provides comparatively limited guidance regarding ethical decision-making, patient-centred care, healthcare regulation, multidisciplinary collaboration, or evidence-based practice. Consequently, while valuable for explaining innovation, it does not adequately capture the complexity of entrepreneurial decision-making within healthcare systems.

7.8.3 Kirzner's Opportunity Discovery Theory

Kirzner (1973) argued that entrepreneurship originates from entrepreneurial alertness, whereby individuals recognize opportunities overlooked by others. According to this perspective, opportunities already exist within the external environment and are discovered through superior observation, information, and market awareness.

This theory contributes significantly to healthcare entrepreneurship because healthcare professionals frequently identify unmet clinical needs, service delivery gaps, emerging health challenges, and

opportunities for organizational improvement through direct interaction with patients and healthcare systems.

Nevertheless, Opportunity Discovery Theory assumes that opportunities exist independently of entrepreneurial action. Contemporary healthcare innovation often involves creating entirely new service models, digital technologies, and organizational arrangements rather than merely discovering existing opportunities. Consequently, Kirzner's theory explains only one dimension of healthcare entrepreneurship.

7.8.4 Effectuation Theory

Sarasvathy (2001) challenged traditional entrepreneurial planning by proposing Effectuation Theory, which argues that entrepreneurs begin with available resources and progressively create opportunities through experimentation, stakeholder collaboration, and adaptive learning rather than pursuing predetermined objectives.

Effectuation has become increasingly relevant within healthcare because healthcare organizations frequently operate under resource constraints, uncertain policy environments, and rapidly changing clinical conditions. During the COVID-19 pandemic, many healthcare institutions adopted effectual decision-making by adapting available resources, establishing new collaborations, and continuously modifying organizational strategies as evidence evolved.

Despite its relevance, Effectuation Theory focuses primarily on entrepreneurial decision-making processes without explicitly incorporating knowledge management, strategic leadership, healthcare governance, or evidence-based innovation. Consequently, it provides only a partial explanation of healthcare entrepreneurship.

7.8.5 Resource-Based View and Dynamic Capabilities

The Resource-Based View (Barney, 1991) argues that organizations achieve sustained competitive advantage by possessing valuable, rare, inimitable, and non-substitutable resources. Building upon this perspective, Dynamic Capabilities Theory emphasizes an organization's ability to integrate, reconfigure, and renew resources in response to environmental change (Teece et al., 1997).

Both theories have considerable relevance to healthcare organizations. Human capital, clinical expertise, organizational reputation, technological infrastructure, and institutional knowledge represent strategic resources capable of enhancing healthcare innovation and organizational performance.

However, these theories concentrate predominantly on organizational resources and capabilities while paying relatively limited attention to entrepreneurial cognition, opportunity intelligence, strategic risk evaluation, and healthcare-specific innovation processes. Furthermore, they provide limited guidance regarding ethical responsibility, patient safety, and health policy implementation.

7.8.6 Entrepreneurial Orientation Framework

Entrepreneurial Orientation (EO) conceptualizes entrepreneurship as comprising organizational characteristics such as innovativeness, proactiveness, risk-taking, competitive aggressiveness, and autonomy (Lumpkin & Dess, 1996). EO has become one of the most widely applied frameworks for measuring organizational entrepreneurship.

Within healthcare, Entrepreneurial Orientation explains why some healthcare organizations demonstrate greater innovation, organizational adaptability, and strategic responsiveness than others. Healthcare institutions exhibiting strong entrepreneurial orientation are generally more proactive in adopting digital technologies, redesigning healthcare services, and responding to changing patient needs.

Nevertheless, EO was developed primarily for commercial organizations operating in competitive markets. Healthcare organizations pursue broader objectives including patient safety, equity, public accountability, ethical practice, and population health. Moreover, EO emphasises risk-taking, whereas healthcare organizations require Risk Intelligence, making direct application problematic.

7.8.7 Comparative Evaluation of Existing Models

Collectively, existing entrepreneurship theories provide valuable explanations of individual entrepreneurial competencies. Schumpeter explains innovation, Kirzner explains opportunity recognition, Sarasvathy explains adaptive decision-making, RBV explains strategic resources, Dynamic Capabilities explains organizational adaptability, and EO explains entrepreneurial organizational behaviour.

However, none of these models integrate opportunity recognition, intelligent risk management, innovation capability, strategic leadership, and knowledge capital within a single healthcare-specific framework. Similarly, existing theories devote limited attention to multidisciplinary collaboration, evidence-based healthcare, ethical accountability, health policy implementation, organizational learning, and health system transformation.

Consequently, healthcare entrepreneurship remains theoretically fragmented, with researchers frequently drawing upon isolated theories that explain only selected dimensions of entrepreneurial behaviour.

7.8.8 Critical Synthesis

The critical evaluation presented above demonstrates that existing entrepreneurship theories remain highly valuable but individually insufficient for explaining entrepreneurial behaviour within contemporary healthcare systems. Most frameworks originated within commercial settings and therefore emphasize economic value creation, competitive advantage, or venture development while giving comparatively limited attention to patient-centred care, public health objectives, organizational governance, evidence-based practice, and health policy.

Furthermore, existing theories typically examine entrepreneurial competencies independently rather than recognising their interdependence. Healthcare entrepreneurship, however, requires simultaneous opportunity recognition, intelligent risk evaluation, innovation implementation, strategic leadership, and knowledge integration. These competencies continuously interact within highly regulated environments characterised by ethical responsibility, multidisciplinary collaboration, technological disruption, and public accountability.

The present study therefore argues that no existing entrepreneurship model fully captures the multidimensional nature of healthcare entrepreneurship. This limitation provides the theoretical justification for proposing the BRISK³ Mind Model, which integrates Healthcare Opportunity Intelligence (HOI), Healthcare Risk Intelligence (HRI), Healthcare Innovation Capability (HIC), Healthcare Strategic Leadership Capability (HSLC), Healthcare Knowledge Capital (HKC), and three foundational entrepreneurial mindsets within a unified conceptual framework specifically designed for healthcare organizations.

7.9 Knowledge Gap and Rationale for the BRISK³ Mind Model

7.9.1 Existing Knowledge Gaps in Healthcare Entrepreneurship

The preceding review demonstrates that entrepreneurship has evolved considerably over the past century, producing numerous theories explaining opportunity recognition, innovation, organizational capability, strategic management, and entrepreneurial behaviour. These theoretical developments have substantially advanced entrepreneurship scholarship and have increasingly influenced healthcare management, public

health, and health policy research. Nevertheless, despite this progress, significant conceptual and theoretical gaps remain within healthcare entrepreneurship literature.

The first major gap concerns the absence of an integrated healthcare-specific entrepreneurship framework. Existing theories—including Schumpeter's Innovation Theory (Schumpeter, 1934), Kirzner's Opportunity Discovery Theory (Kirzner, 1973), Effectuation Theory (Sarasvathy, 2001), the Resource-Based View (Barney, 1991), Dynamic Capabilities Theory (Teece et al., 1997), and Entrepreneurial Orientation (Lumpkin & Dess, 1996)—were developed primarily within commercial and industrial contexts. Although these theories provide valuable insights into entrepreneurial processes, they were not designed to explain the unique organizational, ethical, clinical, regulatory, and policy environments characterising healthcare systems.

Consequently, healthcare entrepreneurship researchers frequently adapt business-oriented theories to healthcare settings without sufficiently accounting for healthcare's distinctive characteristics. Healthcare organizations operate under complex regulatory frameworks, prioritize patient safety over profitability, rely upon multidisciplinary collaboration, implement evidence-based practice, and pursue social as well as economic value. These contextual differences suggest that entrepreneurship within healthcare requires theoretical perspectives extending beyond traditional business models.

A second limitation concerns the fragmented treatment of entrepreneurial competencies. Existing literature commonly investigates opportunity recognition, innovation, leadership, knowledge management, organizational learning, or risk management as independent constructs. While these studies contribute important insights, they rarely explain how these competencies interact dynamically to facilitate sustainable healthcare entrepreneurship. Consequently, existing research offers only partial explanations of entrepreneurial behaviour within healthcare organizations.

A third gap relates to the conceptualisation of entrepreneurial risk. Traditional entrepreneurship literature frequently associates entrepreneurial success with willingness to assume greater levels of risk. Within healthcare, however, entrepreneurial behaviour must be balanced with patient safety, ethical responsibility, regulatory compliance, and evidence-based decision-making. Accordingly, healthcare entrepreneurship requires a shift from risk-taking to Risk Intelligence, emphasising informed judgement rather than indiscriminate acceptance of uncertainty.

Similarly, healthcare entrepreneurship literature has devoted comparatively limited attention to the strategic role of Knowledge Capital. Although knowledge management, organizational learning, and evidence-based practice are well-established fields, they have rarely been conceptualized as central entrepreneurial capabilities that enable opportunity recognition, innovation, strategic leadership, and organizational resilience. This omission is particularly important given that healthcare organizations increasingly function within knowledge-intensive environments characterised by rapid scientific advancement and digital transformation.

Another notable gap concerns the limited integration of healthcare entrepreneurship with health systems thinking. Existing entrepreneurship models generally focus on individuals or organizations, whereas healthcare innovation frequently occurs across interconnected systems involving governments, healthcare providers, academic institutions, private organizations, professional associations, communities, and international agencies. The absence of systems-oriented entrepreneurship frameworks limits understanding of how entrepreneurial competencies contribute to broader health system transformation.

Finally, there is a significant gap regarding entrepreneurship education for healthcare professionals. Current educational programmes increasingly encourage innovation and leadership but often lack

comprehensive conceptual frameworks that integrate entrepreneurial thinking with clinical practice, healthcare management, public health, and policy implementation. Consequently, healthcare professionals may acquire isolated entrepreneurial skills without understanding how these competencies collectively contribute to organizational transformation.

7.9.2 Rationale for the BRISK³ Mind Model

The limitations identified above collectively demonstrate the need for a comprehensive conceptual framework specifically designed for healthcare entrepreneurship. The present study proposes the BRISK³ Mind Model to address these theoretical and practical deficiencies.

Unlike existing entrepreneurship models that emphasise isolated entrepreneurial competencies, the BRISK³ Mind Model conceptualises healthcare entrepreneurship as an integrated capability emerging from the dynamic interaction of five healthcare-specific entrepreneurial capabilities:

- Healthcare Opportunity Intelligence (HOI)
- Healthcare Risk Intelligence (HRI)
- Healthcare Innovation Capability (HIC)
- Healthcare Strategic Leadership Capability (HSLC)
- Healthcare Knowledge Capital (HKC)

These capabilities are further strengthened by three foundational entrepreneurial mindsets:

- Growth Mindset
- Systems Mindset
- Value-Creation Mindset

Together, these eight interdependent components provide a holistic explanation of how healthcare professionals identify opportunities, evaluate uncertainty, generate innovation, mobilise organizational resources, apply knowledge, and lead sustainable health system transformation.

Unlike traditional entrepreneurship theories, the BRISK³ Mind Model explicitly incorporates healthcare's distinctive characteristics, including evidence-based practice, patient-centred care, multidisciplinary collaboration, ethical accountability, organizational learning, digital transformation, and public policy implementation. Consequently, the framework extends entrepreneurship theory while simultaneously strengthening healthcare management, implementation science, and health policy scholarship.

The model also contributes to entrepreneurship education by providing a structured framework through which healthcare professionals, administrators, researchers, educators, and policymakers can cultivate entrepreneurial competencies necessary for addressing increasingly complex healthcare challenges.

7.9.3 Expected Contributions of the BRISK³ Mind Model

The proposed BRISK³ Mind Model is expected to make several important contributions.

- **Theoretical Contribution**

  The framework extends entrepreneurship theory by integrating entrepreneurial cognition, strategic leadership, knowledge management, innovation science, and healthcare management within a unified healthcare-specific conceptual model.

- **Methodological Contribution**

  The model establishes clearly defined constructs—including Healthcare Opportunity Intelligence, Healthcare Risk Intelligence, Healthcare Innovation Capability, Healthcare Strategic Leadership

Capability, and Healthcare Knowledge Capital—that future researchers can operationalise, measure, and empirically validate using quantitative, qualitative, or mixed-methods approaches.

- **Practical Contribution**

  Healthcare organizations may utilize the framework to strengthen innovation capacity, leadership development, organizational learning, workforce capability, and strategic decision-making while improving healthcare quality and organizational performance.

- **Educational Contribution**

  Medical schools, schools of public health, business schools, and healthcare leadership programmes may adopt the BRISK³ framework to support entrepreneurship education and interdisciplinary professional development.

- **Policy Contribution**

  The framework offers policymakers a conceptual basis for developing entrepreneurship-oriented health policies that promote healthcare innovation, digital transformation, workforce development, and resilient health systems aligned with Universal Health Coverage and the Sustainable Development Goals.

7.9.4 Transition to the Proposed Framework

Having critically examined the evolution of healthcare entrepreneurship, entrepreneurial mindset, Business Opportunity Recognition, Risk Intelligence, Innovation Capability, Strategic Leadership, Knowledge Capital, and existing entrepreneurship theories, the literature review demonstrates a clear theoretical need for an integrated healthcare entrepreneurship framework.

The following section therefore presents the **theoretical foundations** underpinning the BRISK³ Mind Model before introducing the conceptual framework itself. These theories collectively explain the mechanisms through which entrepreneurial thinking, organizational capability, innovation, leadership, and knowledge interact to facilitate sustainable healthcare entrepreneurship and health system transformation.

Table 1

Comparative Analysis of Existing Entrepreneurship Models and the BRISK³ Mind Model

Theory/Model	Core Focus	Strengths	Limitations in Healthcare	Gap Addressed by BRISK³
Schumpeter's Innovation Theory (Schumpeter, 1934)	Innovation through creative destruction	Explains the role of innovation in economic development and organizational growth.	Focuses largely on economic innovation; pays limited attention to patient safety, healthcare governance, ethical responsibility, and evidence-based healthcare.	BRISK³ integrates innovation with healthcare leadership, risk intelligence, knowledge capital, and evidence-based decision-making.
Kirzner's Opportunity Discovery	Entrepreneurial alertness and	Highlights the importance of identifying unmet	Assumes opportunities already exist; does not adequately explain	Introduces **Healthcare Opportunity**

Theory/Model	Core Focus	Strengths	Limitations in Healthcare	Gap Addressed by BRISK³
Theory (Kirzner, 1973)	opportunity recognition	needs and market opportunities.	opportunity creation within complex healthcare systems.	**Intelligence (HOI)** to explain both opportunity discovery and opportunity creation in healthcare.
Effectuation Theory (Sarasvathy, 2001)	Decision-making under uncertainty using available resources	Explains entrepreneurial adaptability in uncertain environments.	Does not sufficiently address organizational leadership, knowledge management, or healthcare governance.	Integrates adaptive entrepreneurship with strategic leadership, innovation capability, and healthcare-specific decision-making.
Resource-Based View (RBV) (Barney, 1991)	Strategic organizational resources	Explains how valuable resources generate competitive advantage.	Focuses on organizational resources rather than entrepreneurial cognition or healthcare innovation processes.	Positions **Knowledge Capital (HKC)** as a strategic entrepreneurial capability driving innovation and organizational transformation.
Dynamic Capabilities Theory (Teece et al., 1997)	Organizational adaptability and resource reconfiguration	Explains organizational responsiveness to environmental change.	Gives limited attention to healthcare entrepreneurship, multidisciplinary collaboration, and patient-centred innovation.	Integrates dynamic capabilities with innovation, leadership, opportunity intelligence, and health system transformation.
Entrepreneurial Orientation (EO) (Lumpkin & Dess, 1996)	Innovativeness, proactiveness, autonomy, competitive aggressiveness, and risk-taking	Widely applied framework for entrepreneurial behaviour.	Emphasises risk-taking, which may conflict with patient safety and ethical healthcare practice.	Replaces conventional risk-taking with **Healthcare Risk Intelligence (HRI)**, promoting informed and evidence-based risk management.
Knowledge Management Models (Nonaka	Knowledge creation and organizational learning	Explains organizational learning and innovation.	Rarely linked explicitly to entrepreneurship or	Develops **Healthcare Knowledge Capital (HKC)** as an entrepreneurial capability supporting

Theory/Model	Core Focus	Strengths	Limitations in Healthcare	Gap Addressed by BRISK³
& Takeuchi, 1995)			healthcare transformation.	innovation and leadership.
Strategic Leadership Models (Ireland & Hitt, 2005)	Long-term organizational direction and competitiveness	Demonstrates leadership's role in organizational success.	Does not explicitly integrate entrepreneurial thinking with healthcare innovation and policy implementation.	Introduces **Healthcare Strategic Leadership Capability (HSLC)** as a central entrepreneurial competency within healthcare systems.
BRISK³ Mind Model (Proposed)	Integrated healthcare entrepreneurship	Combines opportunity intelligence, risk intelligence, innovation capability, strategic leadership, knowledge capital, and three entrepreneurial mindsets into one comprehensive framework.	None identified at the conceptual stage; requires empirical validation in future research.	Provides the first integrated conceptual framework specifically designed for healthcare entrepreneurship, innovation, and health system transformation.

Source: Developed by the author from Schumpeter (1934), Kirzner (1973), Barney (1991), Lumpkin and Dess (1996), Nonaka and Takeuchi (1995), Sarasvathy (2001), Ireland and Hitt (2005), Teece et al. (1997), and the present study.

8. Theoretical Foundation of the BRISK³ Mind Model

8.1 Overview of the Theoretical Foundation

The development of any conceptual framework requires a robust theoretical foundation that explains the relationships among its constituent constructs and provides logical justification for its proposed mechanisms. A theoretically grounded framework not only strengthens conceptual coherence but also facilitates future empirical validation by linking new constructs to established bodies of knowledge (Grant & Osanloo, 2014).

The BRISK³ Mind Model is an interdisciplinary framework that integrates concepts from entrepreneurship, strategic management, organizational behaviour, knowledge management, innovation science, leadership studies, cognitive psychology, and healthcare management. Rather than relying on a single theoretical perspective, the model adopts a **multi-theoretical approach**, recognising that healthcare entrepreneurship is a complex phenomenon influenced by cognitive, organizational, environmental, and institutional factors.

This approach aligns with recommendations in organizational and management research, which suggest that complex organizational phenomena are better explained through complementary theoretical perspectives than through reliance on a single theory (Edmondson & McManus, 2007). Healthcare

organizations operate within dynamic environments characterised by technological advancement, policy reforms, demographic changes, resource constraints, and increasing societal expectations. Consequently, understanding healthcare entrepreneurship requires integrating theories that explain opportunity recognition, organizational adaptation, innovation, leadership, learning, and strategic decision-making.

The BRISK³ Mind Model is primarily underpinned by **six complementary theories**:

1. **Schumpeter's Innovation Theory**
2. **Kirzner's Opportunity Discovery Theory**
3. **Dynamic Capabilities Theory**
4. **Knowledge-Based View of the Firm**
5. **Effectuation Theory**
6. **Strategic Leadership Theory**

Collectively, these theories explain how healthcare professionals identify opportunities, evaluate uncertainty, mobilise organizational knowledge, foster innovation, provide strategic leadership, and transform healthcare systems through entrepreneurial action. Each theory contributes distinct explanatory mechanisms while addressing different dimensions of the BRISK³ framework.

Importantly, no single theory sufficiently explains the multidimensional nature of healthcare entrepreneurship. Schumpeter's Innovation Theory emphasises innovation but provides limited insight into knowledge integration. Kirzner's Opportunity Discovery Theory explains entrepreneurial alertness but does not adequately address leadership or organizational learning. Dynamic Capabilities Theory focuses on organizational adaptability but pays comparatively limited attention to entrepreneurial cognition. Similarly, the Knowledge-Based View highlights knowledge as a strategic resource without fully explaining opportunity recognition or innovation implementation.

The BRISK³ Mind Model therefore integrates these complementary perspectives into a unified conceptual framework capable of explaining healthcare entrepreneurship more comprehensively than any individual theory.

Figure 2 (presented later in this paper) illustrates how these theoretical perspectives collectively underpin the five entrepreneurial capabilities and three foundational mindsets comprising the BRISK³ Mind Model.

8.2 Schumpeter's Innovation Theory

Schumpeter's Innovation Theory remains one of the most influential and enduring theoretical foundations of entrepreneurship. In *The Theory of Economic Development*, Schumpeter (1934) argued that entrepreneurship is fundamentally driven by innovation, which he described as the introduction of "new combinations" capable of disrupting existing markets and generating economic development. According to Schumpeter, entrepreneurs are not merely business owners but agents of change who transform industries by introducing new products, production methods, organizational structures, markets, or sources of supply. This process of continuous innovation leads to what he famously termed **creative destruction**, whereby outdated technologies, business models, and practices are replaced by more efficient and innovative alternatives.

The theory significantly shifted entrepreneurship scholarship from viewing entrepreneurs primarily as risk bearers or capital providers toward recognising them as innovators responsible for societal and economic transformation. Innovation, therefore, became the defining characteristic of entrepreneurial activity rather than merely one of several entrepreneurial traits. Contemporary entrepreneurship literature continues to acknowledge Schumpeter's contribution by positioning innovation as a primary determinant of organizational competitiveness, long-term sustainability, and economic growth (Drucker, 1985; Teece,

2018).

Within healthcare, Schumpeter's Innovation Theory provides an important lens for understanding the transformation of healthcare delivery. Advances such as telemedicine, electronic health records, artificial intelligence-assisted diagnostics, precision medicine, robotic surgery, genomic technologies, mobile health applications, and digital public health surveillance exemplify Schumpeterian innovation because they fundamentally alter how healthcare services are delivered and managed. Beyond technological advancement, healthcare innovation also encompasses new organizational models, financing mechanisms, quality improvement initiatives, integrated care pathways, and public health interventions that improve efficiency, accessibility, equity, and patient outcomes.

The theory is particularly relevant to the BRISK³ Mind Model because it provides the conceptual basis for **Healthcare Innovation Capability (HIC)**. The model recognises innovation as a central entrepreneurial competency required for transforming healthcare organizations and health systems. Healthcare professionals continuously encounter opportunities to improve clinical services, redesign organizational processes, strengthen health policies, and introduce technologies that enhance healthcare delivery. Innovation Capability enables these opportunities to be translated into sustainable organizational improvements through evidence-based implementation and continuous learning.

However, despite its enduring relevance, Schumpeter's Innovation Theory exhibits several limitations when applied to contemporary healthcare entrepreneurship. First, the theory was primarily developed to explain economic development and industrial competition rather than healthcare systems. Consequently, it gives limited consideration to the ethical, regulatory, and patient-centred dimensions that characterise healthcare innovation. Healthcare innovations must satisfy rigorous standards relating to patient safety, clinical effectiveness, equity, professional accountability, and regulatory compliance—considerations that are largely absent from Schumpeter's original framework.

Second, Schumpeter largely conceptualised innovation as an individual entrepreneurial activity driven by exceptional innovators. Contemporary healthcare innovation, by contrast, increasingly emerges through interdisciplinary collaboration involving clinicians, managers, policymakers, researchers, engineers, data scientists, patients, and community stakeholders. Innovation within healthcare therefore reflects collective organizational capability rather than individual entrepreneurial effort alone.

Third, the theory focuses predominantly on innovation while giving comparatively limited attention to other entrepreneurial competencies required for successful implementation. Healthcare innovation requires effective leadership, intelligent risk management, organizational learning, knowledge integration, stakeholder engagement, and adaptive decision-making. Innovation alone is insufficient to achieve sustainable health system transformation if these complementary capabilities are absent.

Finally, Schumpeter's framework does not explicitly address the role of organizational knowledge in stimulating innovation. Modern healthcare organizations depend upon evidence-based practice, clinical research, implementation science, quality improvement, and digital knowledge systems to generate and sustain innovation. These knowledge-intensive processes extend beyond the original scope of Schumpeter's theory.

The BRISK³ Mind Model builds upon Schumpeter's pioneering contribution while extending it to address the realities of twenty-first-century healthcare systems. Rather than viewing innovation as an isolated entrepreneurial activity, the model conceptualises innovation as one component of an integrated system comprising **Healthcare Opportunity Intelligence (HOI), Healthcare Risk Intelligence (HRI), Healthcare Innovation Capability (HIC), Healthcare Strategic Leadership Capability (HSLC), and**

Healthcare Knowledge Capital (HKC). Within this framework, innovation is strengthened by evidence-informed decision-making, strategic leadership, organizational learning, and multidisciplinary collaboration, thereby providing a more comprehensive explanation of healthcare entrepreneurship than Schumpeter's original model.

Accordingly, Schumpeter's Innovation Theory serves as one of the principal theoretical pillars underpinning the BRISK³ Mind Model. It explains why innovation remains central to entrepreneurial behaviour while simultaneously highlighting the need for a broader conceptual framework capable of integrating the multiple competencies required for sustainable healthcare entrepreneurship and health system transformation.

8.3 Kirzner's Opportunity Discovery Theory

Kirzner's Opportunity Discovery Theory is one of the most influential theories in entrepreneurship literature, emphasizing the entrepreneur's ability to identify opportunities that remain unnoticed by others. Developed by Israel Kirzner in *Competition and Entrepreneurship*, the theory argues that entrepreneurship is fundamentally driven by **entrepreneurial alertness**, a cognitive ability that enables individuals to recognize market disequilibria and exploit previously overlooked opportunities (Kirzner, 1973). Unlike Schumpeter, who viewed entrepreneurs primarily as innovators introducing disruptive change, Kirzner conceptualized entrepreneurs as individuals who discover and capitalize on opportunities that already exist within imperfect markets.

According to Kirzner (1973), markets are rarely in equilibrium because information is imperfectly distributed among economic actors. This information asymmetry creates opportunities for alert entrepreneurs to recognize unmet needs, inefficiencies, or resource misallocations before others do. Entrepreneurial success therefore depends less on creating entirely new opportunities and more on identifying existing opportunities through superior observation, knowledge, experience, and judgement. Entrepreneurial alertness consequently became one of the most widely studied cognitive dimensions of entrepreneurship.

The theory has considerable relevance to healthcare entrepreneurship because healthcare professionals operate within complex systems characterized by evolving patient needs, technological advancements, policy reforms, demographic transitions, and persistent service delivery gaps. Physicians, nurses, public health practitioners, healthcare managers, and policymakers frequently encounter unmet clinical needs, inefficiencies in healthcare delivery, gaps in health policy implementation, and opportunities for service improvement during routine professional practice. These observations provide fertile ground for entrepreneurial action.

For example, increasing demand for telemedicine, home-based healthcare, digital patient monitoring, mobile health applications, integrated chronic disease management, artificial intelligence-assisted diagnostics, and community-based preventive healthcare emerged largely because healthcare professionals recognized deficiencies in existing service delivery models. In this context, entrepreneurial opportunity recognition becomes an essential competency for improving healthcare quality, accessibility, efficiency, and equity.

Kirzner's theory provides a strong conceptual foundation for the **Healthcare Opportunity Intelligence (HOI)** component of the BRISK³ Mind Model. However, the present study extends Kirzner's concept of entrepreneurial alertness by proposing that opportunity recognition within healthcare is not merely a passive cognitive process but an **integrated capability involving systematic environmental scanning, evidence appraisal, stakeholder engagement, strategic foresight, and systems thinking**. Healthcare

Opportunity Intelligence therefore encompasses not only the ability to identify opportunities but also the ability to evaluate their clinical relevance, organizational feasibility, policy implications, ethical acceptability, and potential impact on health outcomes.

Despite its enduring significance, Kirzner's Opportunity Discovery Theory has several limitations when applied to contemporary healthcare entrepreneurship. First, the theory assumes that entrepreneurial opportunities pre-exist within the external environment and simply await discovery by alert individuals. Contemporary entrepreneurship research increasingly recognizes that many opportunities are actively **created** through innovation, collaboration, technological advancement, and organizational learning rather than merely discovered (Alvarez & Barney, 2007). Within healthcare, entirely new service models such as virtual hospitals, precision medicine programmes, artificial intelligence-enabled diagnostics, and integrated digital health ecosystems illustrate opportunity creation rather than simple opportunity discovery.

Second, Kirzner primarily conceptualized entrepreneurship at the individual level, focusing on the entrepreneur's cognitive abilities. Healthcare innovation, however, is predominantly collaborative, involving multidisciplinary teams comprising clinicians, administrators, researchers, policymakers, engineers, information technology specialists, and community stakeholders. Opportunity recognition within healthcare therefore often emerges through collective organizational intelligence rather than individual entrepreneurial alertness alone.

Third, the theory pays limited attention to organizational capabilities required for transforming identified opportunities into sustainable healthcare innovations. Recognizing an opportunity does not automatically lead to successful implementation. Healthcare organizations must also possess strategic leadership, innovation capability, knowledge integration, organizational learning, financial resources, and intelligent risk management to translate opportunities into measurable improvements in healthcare delivery.

Furthermore, Kirzner's theory provides little guidance regarding ethical responsibility, patient safety, regulatory compliance, and evidence-based decision-making, all of which are fundamental considerations within healthcare entrepreneurship. Healthcare opportunities cannot be pursued solely because they are economically attractive; they must also satisfy clinical effectiveness, ethical standards, public accountability, and regulatory requirements.

The BRISK³ Mind Model addresses these limitations by expanding Kirzner's concept of entrepreneurial alertness into the broader construct of **Healthcare Opportunity Intelligence (HOI)**. Rather than focusing exclusively on opportunity discovery, HOI integrates opportunity identification, opportunity creation, environmental scanning, evidence-based evaluation, systems thinking, stakeholder collaboration, and strategic decision-making. Moreover, HOI operates synergistically with **Healthcare Risk Intelligence (HRI), Healthcare Innovation Capability (HIC), Healthcare Strategic Leadership Capability (HSLC), and Healthcare Knowledge Capital (HKC)** to facilitate sustainable healthcare entrepreneurship and health system transformation.

Accordingly, Kirzner's Opportunity Discovery Theory provides an important theoretical foundation for the BRISK³ Mind Model by emphasizing the importance of opportunity recognition. However, the proposed framework extends the theory by recognizing that opportunities within healthcare are both discovered and created through interdisciplinary collaboration, organizational learning, evidence-informed innovation, and strategic leadership. This extension enables the BRISK³ Mind Model to provide a more comprehensive explanation of entrepreneurial behaviour within contemporary healthcare systems.

8.4 Dynamic Capabilities Theory

Dynamic Capabilities Theory has emerged as one of the most influential perspectives in strategic

management for explaining how organizations achieve sustained competitiveness in rapidly changing environments. Developed by Teece, Pisano, and Shuen (1997), the theory extends the Resource-Based View by arguing that long-term organizational success depends not merely on possessing valuable resources but on an organization's ability to integrate, build, and reconfigure internal and external competencies in response to changing environmental conditions. Dynamic capabilities therefore represent higher-order organizational processes that enable continuous adaptation, innovation, and strategic renewal.

Unlike traditional resource-based perspectives, which emphasize the possession of strategic assets, Dynamic Capabilities Theory focuses on organizational agility. Teece et al. (1997) proposed that successful organizations continuously sense environmental changes, seize emerging opportunities, and transform organizational resources to maintain competitiveness. Later refinements of the theory identified these three processes—**sensing, seizing, and transforming**—as the core mechanisms through which organizations adapt to uncertainty and sustain long-term performance (Teece, 2007).

The theory is particularly relevant to healthcare because healthcare systems operate within highly dynamic environments characterised by technological advancement, demographic transitions, changing disease patterns, regulatory reforms, financial constraints, workforce shortages, digital transformation, and increasing public expectations. Healthcare organizations must therefore continually adapt their clinical services, organizational structures, technologies, and management strategies to remain effective and sustainable.

Examples of dynamic capabilities within healthcare include the adoption of electronic health records, telemedicine platforms, artificial intelligence-assisted diagnostics, precision medicine, integrated care pathways, digital public health surveillance, and innovative workforce models. During the COVID-19 pandemic, healthcare organizations demonstrated dynamic capabilities by rapidly reorganizing clinical services, expanding virtual care, reallocating resources, implementing infection prevention strategies, and collaborating across institutional boundaries to sustain healthcare delivery (Keesara et al., 2020). These experiences illustrate how organizational adaptability has become an essential determinant of healthcare resilience.

Dynamic Capabilities Theory provides a strong theoretical foundation for several components of the **BRISK³ Mind Model**, particularly **Healthcare Innovation Capability (HIC)**. Within the proposed framework, innovation is not viewed as a one-time organizational achievement but as an ongoing capability requiring continuous adaptation, organizational learning, and strategic renewal. Healthcare organizations possessing strong innovation capability are better able to respond to emerging health challenges, technological disruptions, policy reforms, and evolving patient expectations.

The theory also supports **Healthcare Opportunity Intelligence (HOI)** by explaining how organizations systematically scan the external environment to identify emerging healthcare needs and technological opportunities. Similarly, **Healthcare Risk Intelligence (HRI)** aligns with the theory's emphasis on evaluating uncertainty before organizational transformation occurs. Strategic Leadership Capability enables organizational leaders to coordinate adaptive responses, while Healthcare Knowledge Capital provides the evidence and organizational learning necessary to support continuous adaptation. Consequently, Dynamic Capabilities Theory reinforces the integrated nature of the BRISK³ framework by demonstrating that entrepreneurial competencies function collectively rather than independently.

Despite its considerable relevance, Dynamic Capabilities Theory exhibits several limitations when applied to healthcare entrepreneurship. First, the theory was developed primarily to explain competitive advantage in private-sector organizations. Although many healthcare organizations operate within competitive environments, their primary objectives often extend beyond financial performance to include patient

safety, health equity, quality of care, public accountability, and population health improvement. Consequently, organizational success within healthcare cannot be evaluated solely through competitive advantage.

Second, Dynamic Capabilities Theory places strong emphasis on organizational capabilities while giving comparatively limited attention to the cognitive processes through which individuals recognize entrepreneurial opportunities. Opportunity recognition, entrepreneurial mindset, creativity, and professional judgement remain largely outside the theory's primary explanatory focus. Healthcare entrepreneurship, however, begins with individuals and multidisciplinary teams identifying unmet healthcare needs before organizational adaptation occurs.

Third, the theory provides relatively limited consideration of ethical decision-making, regulatory compliance, and evidence-based clinical practice, all of which are fundamental to healthcare innovation. Unlike commercial organizations, healthcare institutions must ensure that organizational transformation remains consistent with professional standards, legal requirements, and patient welfare. These ethical and regulatory dimensions require broader conceptual integration than Dynamic Capabilities Theory alone provides.

Furthermore, although the theory emphasizes learning and adaptation, it does not explicitly conceptualize organizational knowledge as an entrepreneurial capability. Knowledge generation, evidence synthesis, interdisciplinary collaboration, and implementation science have become increasingly important drivers of healthcare innovation, yet these elements receive only indirect attention within the dynamic capabilities framework.

The **BRISK³ Mind Model** extends Dynamic Capabilities Theory by integrating organizational adaptability with entrepreneurial cognition, strategic leadership, intelligent risk evaluation, and knowledge-based innovation. Rather than focusing exclusively on organizational transformation, the model explains how **Healthcare Opportunity Intelligence (HOI), Healthcare Risk Intelligence (HRI), Healthcare Innovation Capability (HIC), Healthcare Strategic Leadership Capability (HSLC), and Healthcare Knowledge Capital (HKC)** interact to produce sustainable healthcare entrepreneurship. This broader perspective recognises that successful adaptation depends not only on organizational flexibility but also on leadership, knowledge, evidence-informed decision-making, and multidisciplinary collaboration.

Accordingly, Dynamic Capabilities Theory serves as a central theoretical pillar of the BRISK³ Mind Model by explaining the adaptive processes through which healthcare organizations respond to changing environments. At the same time, the BRISK³ framework extends the theory by embedding organizational adaptability within a comprehensive model of healthcare entrepreneurship that integrates opportunity recognition, innovation, leadership, knowledge, and intelligent risk management.

8.5 Knowledge-Based View of the Firm

The Knowledge-Based View (KBV) of the firm has emerged as one of the most influential extensions of the Resource-Based View, emphasizing knowledge as the most strategically important organizational resource. While the Resource-Based View argues that organizations achieve sustained competitive advantage through valuable, rare, inimitable, and non-substitutable resources (Barney, 1991), the Knowledge-Based View proposes that **knowledge is the primary resource from which all other strategic capabilities originate** (Grant, 1996). This perspective recognizes that organizational success depends not only on possessing knowledge but also on effectively creating, integrating, sharing, and applying it to solve problems and generate innovation.

The origins of the Knowledge-Based View can be traced to the work of Nonaka and Takeuchi (1995), who

argued that organizational knowledge is created through continuous interaction between tacit and explicit knowledge. Tacit knowledge refers to personal experience, intuition, professional judgement, and practical expertise that are difficult to codify, whereas explicit knowledge consists of documented information such as policies, clinical guidelines, research findings, protocols, and organizational procedures. According to the theory, sustainable organizational performance depends upon effectively converting individual knowledge into collective organizational knowledge through continuous learning and collaboration.

Grant (1996) further argued that organizations exist primarily because they provide efficient mechanisms for integrating specialized knowledge possessed by different individuals. Rather than viewing organizations as collections of physical assets, the Knowledge-Based View conceptualizes organizations as systems that coordinate dispersed expertise to create value. Competitive advantage therefore arises from an organization's ability to combine diverse knowledge sources more effectively than competitors.

The Knowledge-Based View is particularly relevant to healthcare because healthcare organizations operate within one of the world's most knowledge-intensive environments. Clinical decision-making, public health interventions, healthcare management, pharmaceutical development, health policy formulation, and quality improvement all rely upon the generation, interpretation, dissemination, and application of scientific evidence. Every healthcare interaction involves the exchange of knowledge among clinicians, patients, researchers, educators, administrators, policymakers, and technology specialists. Consequently, organizational performance depends fundamentally on how effectively healthcare institutions manage knowledge.

Examples of knowledge-intensive healthcare activities include evidence-based clinical practice, multidisciplinary case conferences, continuing professional development, clinical research, implementation science, quality improvement programmes, health information systems, and digital knowledge repositories. Advances in artificial intelligence, machine learning, electronic health records, and big data analytics have further increased the strategic importance of knowledge by enabling healthcare organizations to transform vast quantities of information into evidence-informed decision-making and organizational innovation.

The Knowledge-Based View provides the principal theoretical foundation for **Healthcare Knowledge Capital (HKC)** within the BRISK³ Mind Model. The proposed framework conceptualizes knowledge not merely as an organizational resource but as a dynamic entrepreneurial capability that supports opportunity recognition, intelligent risk evaluation, innovation, strategic leadership, and continuous organizational learning. Healthcare Knowledge Capital therefore extends traditional knowledge management by positioning knowledge as the intellectual engine that drives healthcare entrepreneurship and health system transformation.

Furthermore, the Knowledge-Based View complements the other components of the BRISK³ framework. **Healthcare Opportunity Intelligence (HOI)** depends upon knowledge of patient needs, technological developments, policy environments, and emerging health challenges. **Healthcare Risk Intelligence (HRI)** requires access to scientific evidence, organizational data, and professional expertise to evaluate uncertainty accurately. **Healthcare Innovation Capability (HIC)** depends upon interdisciplinary knowledge integration and organizational learning, while **Healthcare Strategic Leadership Capability (HSLC)** relies upon evidence-informed decision-making to guide organizational transformation. Collectively, these relationships demonstrate that Knowledge Capital functions as the connective element linking all entrepreneurial capabilities within the BRISK³ model.

Despite its substantial contribution, the Knowledge-Based View exhibits several limitations when applied to healthcare entrepreneurship. First, the theory primarily explains how organizations manage and utilize

knowledge but provides comparatively limited insight into how entrepreneurial opportunities are identified or created. Knowledge alone does not automatically generate innovation unless individuals possess the cognitive abilities and leadership competencies necessary to recognize opportunities and implement change.

Second, the Knowledge-Based View focuses predominantly on organizational learning while giving limited attention to environmental uncertainty and entrepreneurial risk. Healthcare organizations frequently operate in unpredictable environments characterized by policy reforms, emerging diseases, technological disruption, and financial constraints. Managing these challenges requires not only knowledge but also intelligent risk assessment and adaptive decision-making.

Third, the theory does not explicitly incorporate strategic leadership as a mechanism through which organizational knowledge is translated into innovation and organizational transformation. Healthcare leaders play a critical role in creating cultures that encourage learning, knowledge sharing, interdisciplinary collaboration, and evidence-based innovation. Without effective leadership, organizational knowledge may remain fragmented and underutilized.

Finally, although the Knowledge-Based View recognizes the importance of knowledge integration, it provides limited guidance regarding the interaction between knowledge, innovation, entrepreneurial mindset, and health system transformation. These multidimensional relationships require broader conceptual integration than the theory alone offers.

The **BRISK³ Mind Model** addresses these limitations by positioning **Healthcare Knowledge Capital (HKC)** as one of five interconnected entrepreneurial capabilities rather than an isolated organizational resource. Within the proposed framework, knowledge continuously interacts with **Healthcare Opportunity Intelligence (HOI), Healthcare Risk Intelligence (HRI), Healthcare Innovation Capability (HIC), and Healthcare Strategic Leadership Capability (HSLC)** to facilitate evidence-informed entrepreneurship, organizational resilience, and sustainable health system transformation. This integrated perspective extends the Knowledge-Based View beyond organizational learning to explain how knowledge becomes a catalyst for entrepreneurial action within healthcare systems.

Accordingly, the Knowledge-Based View serves as a foundational theory underpinning the BRISK³ Mind Model by emphasizing the strategic value of knowledge. However, the proposed framework advances the theory by integrating knowledge management with opportunity intelligence, innovation capability, strategic leadership, and intelligent risk management, thereby providing a more comprehensive explanation of healthcare entrepreneurship.

8.6 Effectuation Theory

Effectuation Theory represents one of the most influential contemporary perspectives in entrepreneurship research, offering an alternative explanation to traditional models of entrepreneurial planning and decision-making. Developed by Saras D. Sarasvathy (2001), the theory challenges the conventional assumption that entrepreneurs begin with predetermined goals and systematically acquire the resources necessary to achieve them. Instead, Effectuation Theory proposes that entrepreneurs start with the resources already available to them—including their knowledge, skills, networks, and experiences—and progressively create opportunities through experimentation, stakeholder collaboration, and adaptive learning.

Sarasvathy (2001) argued that entrepreneurial success is not always the result of extensive prediction and long-term planning. Rather, successful entrepreneurs frequently operate in uncertain environments where

future outcomes cannot be accurately forecast. Under such conditions, decision-making is guided by a set of effectual principles rather than predictive planning. These principles include the **bird-in-hand principle**, which emphasizes beginning with existing means; the **affordable loss principle**, which encourages limiting potential losses rather than maximizing expected returns; the **crazy quilt principle**, which highlights partnerships and stakeholder collaboration; the **lemonade principle**, which encourages leveraging unexpected events as opportunities; and the **pilot-in-the-plane principle**, which emphasizes actively shaping the future rather than attempting to predict it (Sarasvathy, 2008).

The theory has become increasingly relevant in healthcare because healthcare systems are characterised by complexity, uncertainty, and continuous change. Healthcare professionals frequently make decisions in environments shaped by emerging diseases, evolving scientific evidence, technological innovations, policy reforms, workforce shortages, financial constraints, and changing patient expectations. The COVID-19 pandemic vividly demonstrated that healthcare organizations often cannot rely solely on predictive planning. Instead, they must rapidly adapt to uncertain circumstances by utilizing available resources, forming strategic partnerships, and continuously revising organizational strategies as new information becomes available.

Examples of effectual decision-making within healthcare include the rapid implementation of telemedicine services during the pandemic, the reorganization of hospital workflows to manage surges in patient demand, the development of emergency vaccination programmes, and collaborative partnerships among governments, healthcare institutions, academic researchers, and private-sector organizations. In each of these situations, healthcare leaders did not possess complete information regarding future conditions but nevertheless implemented adaptive strategies based on available resources and evolving evidence.

Effectuation Theory provides an important theoretical foundation for **Healthcare Risk Intelligence (HRI)** within the BRISK³ Mind Model. Traditional entrepreneurship literature frequently associates entrepreneurial behaviour with a willingness to assume greater risks. The BRISK³ Mind Model adopts a different perspective by emphasizing **risk intelligence**, which refers to the ability to recognize, evaluate, communicate, and manage uncertainty through informed judgement, evidence-based reasoning, and strategic decision-making. Rather than encouraging indiscriminate risk-taking, Healthcare Risk Intelligence promotes calculated and ethically responsible decisions that balance innovation with patient safety, organizational sustainability, and regulatory compliance.

The theory also complements the other entrepreneurial capabilities proposed within the BRISK³ framework. **Healthcare Opportunity Intelligence (HOI)** enables healthcare professionals to identify emerging opportunities within uncertain environments. **Healthcare Innovation Capability (HIC)** facilitates the development and implementation of adaptive solutions in response to evolving healthcare challenges. **Healthcare Strategic Leadership Capability (HSLC)** supports organizational coordination during periods of uncertainty, while **Healthcare Knowledge Capital (HKC)** provides the evidence and expertise necessary to guide adaptive decision-making. Collectively, these capabilities enable healthcare organizations to navigate uncertainty while maintaining high standards of quality, safety, and organizational performance.

Despite its significant contribution, Effectuation Theory exhibits several limitations when applied to healthcare entrepreneurship. First, the theory primarily focuses on individual entrepreneurial decision-making and gives comparatively limited attention to organizational systems, institutional governance, and public policy environments. Healthcare innovation frequently occurs within large organizations and public institutions where decision-making is influenced by complex regulatory frameworks, multidisciplinary teams, professional standards, and political considerations.

Second, although Effectuation Theory emphasizes adaptability, it provides relatively limited guidance regarding the generation and management of organizational knowledge. Contemporary healthcare entrepreneurship depends heavily upon evidence-based medicine, implementation science, health informatics, quality improvement, and continuous organizational learning. These knowledge-intensive processes extend beyond the primary focus of the effectuation framework.

Third, the theory does not explicitly incorporate strategic leadership as a mechanism through which adaptive decisions are coordinated across complex healthcare systems. Organizational adaptation requires leaders capable of mobilizing resources, aligning stakeholders, communicating strategic priorities, and fostering cultures that support innovation and learning.

Furthermore, while Effectuation Theory recognizes uncertainty as an inherent feature of entrepreneurship, it does not fully address the ethical and regulatory responsibilities unique to healthcare. Decisions involving patient care, public health interventions, and healthcare policy require careful consideration of clinical effectiveness, patient safety, legal accountability, and social equity. These dimensions require broader conceptual integration than the theory alone provides.

The **BRISK³ Mind Model** extends Effectuation Theory by embedding adaptive decision-making within a comprehensive framework of healthcare entrepreneurship. Rather than viewing uncertainty solely as an entrepreneurial challenge, the model conceptualizes uncertainty as a strategic condition that can be managed through the interaction of **Healthcare Opportunity Intelligence (HOI), Healthcare Risk Intelligence (HRI), Healthcare Innovation Capability (HIC), Healthcare Strategic Leadership Capability (HSLC), and Healthcare Knowledge Capital (HKC)**. This integrated approach recognizes that effective healthcare entrepreneurship requires more than adaptive decision-making; it also depends on evidence-informed leadership, interdisciplinary collaboration, continuous learning, and responsible innovation.

Accordingly, Effectuation Theory serves as an important theoretical pillar of the BRISK³ Mind Model by explaining entrepreneurial decision-making under uncertainty. However, the proposed framework advances the theory by integrating adaptive decision-making with knowledge management, strategic leadership, innovation capability, and intelligent risk management, thereby providing a more comprehensive explanation of entrepreneurship within complex healthcare systems.

8.7 Strategic Leadership Theory

Strategic Leadership Theory explains how organizational leaders influence long-term organizational success by anticipating environmental change, establishing strategic direction, mobilizing resources, developing organizational capabilities, and fostering innovation. Unlike traditional leadership theories that primarily emphasize interpersonal influence or leader–follower relationships, Strategic Leadership Theory focuses on the capacity of leaders to guide organizations through uncertainty while ensuring sustainable performance and organizational renewal (Ireland & Hitt, 2005). Strategic leaders therefore create conditions that enable organizations to adapt, innovate, and maintain competitiveness within increasingly dynamic environments.

The theory has evolved from strategic management literature, recognizing that organizational success depends not only on the availability of resources but also on leadership capable of aligning organizational vision, strategy, people, and systems. According to Ireland and Hitt (2005), strategic leadership involves anticipating future opportunities, maintaining organizational flexibility, empowering employees, promoting ethical practices, developing human capital, and balancing short-term operational demands with long-term organizational objectives. These responsibilities extend beyond administrative management by

emphasizing transformational leadership capable of positioning organizations for sustained success.

Strategic Leadership Theory has become increasingly relevant to healthcare because healthcare organizations operate within environments characterized by technological disruption, demographic transitions, epidemiological changes, financial pressures, regulatory reforms, workforce shortages, and increasing public expectations. Healthcare leaders must therefore manage organizational complexity while simultaneously promoting innovation, ensuring patient safety, strengthening organizational resilience, and implementing evidence-based reforms. Effective leadership has become indispensable for navigating these interconnected challenges.

The COVID-19 pandemic highlighted the importance of strategic leadership within healthcare systems worldwide. Healthcare leaders were required to coordinate multidisciplinary teams, allocate scarce resources, communicate effectively with stakeholders, implement rapidly evolving clinical guidelines, adopt digital health technologies, and maintain continuity of essential healthcare services despite unprecedented uncertainty. These experiences demonstrated that healthcare leadership extends beyond operational management to include strategic vision, organizational adaptability, crisis management, and collaborative decision-making.

Strategic Leadership Theory provides the principal theoretical foundation for **Healthcare Strategic Leadership Capability (HSLC)** within the BRISK³ Mind Model. The present study conceptualizes HSLC as the ability of healthcare professionals to provide visionary leadership that stimulates innovation, facilitates organizational learning, mobilizes interdisciplinary collaboration, supports evidence-informed decision-making, and guides sustainable health system transformation. Rather than limiting leadership to formal managerial positions, the BRISK³ framework recognizes that strategic leadership can be demonstrated by clinicians, public health professionals, administrators, researchers, educators, policymakers, and entrepreneurs working across diverse healthcare settings.

Within the BRISK³ Mind Model, Healthcare Strategic Leadership Capability functions as the coordinating capability that integrates the remaining entrepreneurial competencies. **Healthcare Opportunity Intelligence (HOI)** enables leaders to recognize emerging healthcare opportunities and anticipate future challenges. **Healthcare Risk Intelligence (HRI)** supports responsible decision-making under conditions of uncertainty. **Healthcare Innovation Capability (HIC)** provides mechanisms for designing and implementing innovative solutions, while **Healthcare Knowledge Capital (HKC)** supplies the scientific evidence, organizational learning, and professional expertise required to guide strategic decisions. Strategic leadership therefore acts as the integrative mechanism through which entrepreneurial capabilities are translated into organizational performance and health system transformation.

Despite its considerable contribution, Strategic Leadership Theory presents several limitations when applied to healthcare entrepreneurship. First, the theory was primarily developed within the broader strategic management literature and therefore focuses predominantly on organizational performance and competitive advantage. Although these objectives are important, healthcare organizations pursue broader goals including patient safety, quality of care, equity, population health improvement, and public accountability. Consequently, healthcare leadership requires balancing strategic performance with ethical and social responsibilities that extend beyond traditional organizational objectives.

Second, Strategic Leadership Theory places strong emphasis on leadership behaviours but gives comparatively limited attention to entrepreneurial opportunity recognition. Effective healthcare leaders must not only formulate organizational strategies but also identify emerging opportunities for innovation, service redesign, technological advancement, and health policy reform. These entrepreneurial dimensions require integration with opportunity recognition theories.

Third, although the theory acknowledges organizational learning and innovation, it does not explicitly conceptualize knowledge as an entrepreneurial capability. Evidence-based practice, implementation science, digital health, clinical research, and knowledge translation have become fundamental drivers of healthcare innovation. Strategic leadership alone cannot achieve organizational transformation without mechanisms for acquiring, integrating, and applying knowledge effectively.

Furthermore, Strategic Leadership Theory provides limited explanation of how leaders should evaluate uncertainty and entrepreneurial risk within healthcare settings. Decisions involving healthcare innovation frequently involve clinical uncertainty, financial constraints, technological disruption, regulatory oversight, and ethical considerations. These complex decisions require leaders to possess not only strategic vision but also intelligent risk assessment and evidence-informed judgement.

The **BRISK³ Mind Model** addresses these limitations by embedding Strategic Leadership within a broader framework of healthcare entrepreneurship. Rather than viewing leadership as an isolated organizational function, the model conceptualizes **Healthcare Strategic Leadership Capability (HSLC)** as one of five interdependent entrepreneurial capabilities operating alongside **Healthcare Opportunity Intelligence (HOI), Healthcare Risk Intelligence (HRI), Healthcare Innovation Capability (HIC), and Healthcare Knowledge Capital (HKC)**. Through this integration, leadership becomes the mechanism through which opportunities are identified, risks are managed, innovations are implemented, and organizational knowledge is transformed into sustainable improvements in healthcare delivery.

Accordingly, Strategic Leadership Theory provides a critical theoretical foundation for the BRISK³ Mind Model by explaining how leadership enables organizational adaptation and long-term transformation. However, the proposed framework extends the theory by integrating strategic leadership with entrepreneurial cognition, intelligent risk management, innovation capability, and knowledge capital, thereby offering a more comprehensive explanation of healthcare entrepreneurship and health system transformation.

8.8 Theoretical Integration

8.8.1 Integrating Complementary Theories for Healthcare Entrepreneurship

The preceding sections demonstrate that no single entrepreneurship or management theory sufficiently explains the complexity of healthcare entrepreneurship. Each theory contributes important insights into entrepreneurial behaviour, organizational performance, innovation, leadership, knowledge management, or decision-making. However, each also exhibits conceptual limitations when applied independently to healthcare organizations. Consequently, a comprehensive explanation of healthcare entrepreneurship requires the integration of multiple complementary theoretical perspectives.

The BRISK³ Mind Model adopts a **multi-theoretical foundation**, recognising that healthcare entrepreneurship is inherently multidimensional. Healthcare professionals simultaneously identify opportunities, evaluate uncertainty, mobilise organizational knowledge, generate innovation, exercise strategic leadership, and navigate complex regulatory, ethical, and institutional environments. These activities occur interactively rather than independently. Therefore, understanding healthcare entrepreneurship requires a framework that synthesizes diverse theoretical perspectives into a unified conceptual explanation.

The integration of Schumpeter's Innovation Theory, Kirzner's Opportunity Discovery Theory, Dynamic Capabilities Theory, the Knowledge-Based View of the Firm, Effectuation Theory, and Strategic Leadership Theory provides a robust theoretical foundation for explaining the entrepreneurial processes underlying healthcare innovation and health system transformation. Rather than competing with one

another, these theories complement each other by explaining different dimensions of entrepreneurial behaviour.

8.8.2 Theoretical Contributions of Individual Theories

Schumpeter's Innovation Theory provides the foundation for understanding **Healthcare Innovation Capability (HIC)** by explaining how innovation stimulates organizational transformation and long-term development. The theory establishes innovation as a central entrepreneurial activity but provides comparatively limited guidance regarding leadership, knowledge integration, and healthcare governance.

Kirzner's Opportunity Discovery Theory contributes to the concept of entrepreneurial alertness, which informs **Healthcare Opportunity Intelligence (HOI)**. Within the BRISK³ framework, this concept is extended beyond opportunity discovery to encompass opportunity creation, environmental scanning, evidence appraisal, stakeholder engagement, and systems thinking.

Dynamic Capabilities Theory explains how healthcare organizations continuously adapt to changing internal and external environments. This theory strengthens the BRISK³ framework by demonstrating that entrepreneurial capabilities must remain dynamic rather than static. Organizational resilience therefore depends upon continuous adaptation, innovation, learning, and strategic renewal.

The Knowledge-Based View establishes knowledge as the most strategically valuable organizational resource. The BRISK³ Mind Model extends this perspective by conceptualizing **Healthcare Knowledge Capital (HKC)** as an entrepreneurial capability that supports opportunity recognition, innovation, intelligent risk management, and strategic leadership through evidence generation, knowledge integration, and organizational learning.

Effectuation Theory contributes an explanation of entrepreneurial decision-making under uncertainty. The BRISK³ framework extends this perspective by replacing traditional entrepreneurial risk-taking with **Healthcare Risk Intelligence (HRI)**, emphasizing informed judgement, evidence-based evaluation, ethical responsibility, and strategic decision-making.

Finally, Strategic Leadership Theory explains how organizational leaders coordinate resources, guide organizational adaptation, and promote long-term sustainability. Within the BRISK³ framework, this theory underpins **Healthcare Strategic Leadership Capability (HSLC)**, which integrates the remaining entrepreneurial capabilities into coherent organizational action.

Collectively, these six theories provide complementary explanations that support the multidimensional structure of the BRISK³ Mind Model.

8.8.3 Synergistic Relationships Among BRISK³ Constructs

Unlike existing entrepreneurship theories that primarily examine entrepreneurial competencies independently, the BRISK³ Mind Model conceptualizes entrepreneurial capability as an interconnected system. Each capability strengthens and reinforces the others through continuous interaction.

Healthcare Opportunity Intelligence enables healthcare professionals to recognize emerging healthcare needs, technological developments, organizational inefficiencies, and policy opportunities.

These identified opportunities subsequently require **Healthcare Risk Intelligence** to determine their feasibility, ethical acceptability, financial implications, regulatory compliance, and potential clinical consequences.

Following appropriate risk evaluation, **Healthcare Innovation Capability** facilitates the development and implementation of creative solutions that improve healthcare delivery, organizational performance, and

patient outcomes.

Successful innovation depends upon **Healthcare Strategic Leadership Capability**, which aligns organizational vision, mobilizes multidisciplinary teams, secures stakeholder commitment, manages organizational change, and ensures effective implementation.

Throughout this process, **Healthcare Knowledge Capital** continuously supports every entrepreneurial capability by providing scientific evidence, professional expertise, organizational learning, implementation knowledge, and information necessary for informed decision-making.

These entrepreneurial capabilities do not function sequentially but interact continuously through reciprocal relationships. Improvements in one capability reinforce the effectiveness of the remaining capabilities, producing organizational learning, innovation, resilience, and sustainable healthcare transformation.

8.8.4 Theoretical Advancement of the BRISK³ Mind Model

The principal theoretical contribution of the BRISK³ Mind Model lies in its integration of previously independent theoretical perspectives into a unified healthcare-specific entrepreneurship framework.

First, the model advances entrepreneurship theory by shifting emphasis from isolated entrepreneurial traits toward **integrated entrepreneurial capabilities** operating within complex healthcare systems.

Second, the framework extends opportunity recognition theory by introducing **Healthcare Opportunity Intelligence**, which incorporates environmental scanning, systems thinking, evidence appraisal, stakeholder engagement, and opportunity creation.

Third, the model advances entrepreneurship research by replacing conventional entrepreneurial risk-taking with **Healthcare Risk Intelligence**, recognizing that healthcare innovation requires calculated, evidence-informed, and ethically responsible decision-making rather than indiscriminate acceptance of uncertainty.

Fourth, the framework extends the Knowledge-Based View by conceptualizing **Healthcare Knowledge Capital** as an entrepreneurial capability rather than merely an organizational resource.

Finally, the BRISK³ Mind Model integrates innovation, leadership, knowledge, opportunity recognition, and intelligent risk management into a single theoretical system capable of explaining healthcare entrepreneurship more comprehensively than existing entrepreneurship models.

8.8.5 Proposed Integrated Theoretical Framework

Based on the theoretical synthesis presented above, the present study proposes that healthcare entrepreneurship emerges through the continuous interaction of five entrepreneurial capabilities supported by three foundational entrepreneurial mindsets.

The five entrepreneurial capabilities are:

- **Healthcare Opportunity Intelligence (HOI)**
- **Healthcare Risk Intelligence (HRI)**
- **Healthcare Innovation Capability (HIC)**
- **Healthcare Strategic Leadership Capability (HSLC)**
- **Healthcare Knowledge Capital (HKC)**

These capabilities are strengthened by three mutually reinforcing entrepreneurial mindsets:

- **Growth Mindset**
- **Systems Mindset**

- **Value-Creation Mindset**

Collectively, these eight components constitute the **BRISK³ Mind Model**, providing a comprehensive conceptual explanation of how healthcare professionals identify opportunities, evaluate uncertainty, generate innovation, mobilize knowledge, exercise strategic leadership, and contribute to sustainable health system transformation.

The proposed framework therefore represents an integration of established entrepreneurship and management theories while introducing new healthcare-specific entrepreneurial constructs that extend existing scholarship.

Table 2

Theoretical Foundations of the BRISK³ Mind Model

Supporting Theory	Principal Contribution	BRISK³ Construct(s) Supported
Schumpeter's Innovation Theory	Innovation as the engine of entrepreneurship	Healthcare Innovation Capability (HIC)
Kirzner's Opportunity Discovery Theory	Entrepreneurial alertness and opportunity recognition	Healthcare Opportunity Intelligence (HOI)
Dynamic Capabilities Theory	Organizational adaptability and continuous renewal	HIC, HOI, HSLC
Knowledge-Based View of the Firm	Knowledge creation, integration, and organizational learning	Healthcare Knowledge Capital (HKC)
Effectuation Theory	Entrepreneurial decision-making under uncertainty	Healthcare Risk Intelligence (HRI)
Strategic Leadership Theory	Vision, organizational transformation, and strategic coordination	Healthcare Strategic Leadership Capability (HSLC)

Source: Developed by the author based on Schumpeter (1934), Kirzner (1973), Barney (1991), Grant (1996), Teece et al. (1997), Sarasvathy (2001), and Ireland and Hitt (2005).

8.9 Theoretical Justification for the BRISK³ Mind Model

8.9.1 The Need for a Healthcare-Specific Entrepreneurship Framework

The preceding theoretical review demonstrates that entrepreneurship scholarship has produced several influential theories explaining innovation, opportunity recognition, organizational adaptability, knowledge management, strategic leadership, and entrepreneurial decision-making. Collectively, these theories have significantly advanced understanding of entrepreneurial behaviour across business, management, economics, and organizational studies. However, despite their substantial contributions, none provides a comprehensive explanation of entrepreneurship within contemporary healthcare systems.

Healthcare organizations differ fundamentally from conventional commercial enterprises. While private businesses primarily pursue competitive advantage and financial performance, healthcare organizations must simultaneously balance patient safety, clinical effectiveness, ethical responsibility, regulatory compliance, social equity, organizational sustainability, and public accountability. Consequently, entrepreneurial behaviour within healthcare involves significantly greater complexity than existing entrepreneurship theories were originally designed to explain.

Most established entrepreneurship theories emphasize isolated entrepreneurial competencies. Schumpeter's Innovation Theory focuses primarily on innovation; Kirzner's Opportunity Discovery Theory emphasizes entrepreneurial alertness; Dynamic Capabilities Theory explains organizational adaptability; the Knowledge-Based View highlights knowledge integration; Effectuation Theory examines entrepreneurial decision-making under uncertainty; and Strategic Leadership Theory focuses on organizational direction and transformation. Although each theory contributes valuable insights, none sufficiently explains how these entrepreneurial capabilities interact within healthcare organizations to produce sustainable innovation and health system transformation.

This fragmentation has resulted in healthcare entrepreneurship research drawing selectively from multiple theories without an integrated conceptual framework capable of explaining the multidimensional nature of entrepreneurial activity within healthcare settings.

8.9.2 Addressing Conceptual Fragmentation

The BRISK³ Mind Model responds directly to this theoretical fragmentation by integrating complementary perspectives into a unified healthcare-specific entrepreneurship framework. Rather than treating opportunity recognition, risk management, innovation, leadership, and knowledge management as independent competencies, the model conceptualizes them as interdependent entrepreneurial capabilities that continuously reinforce one another.

This integrated perspective reflects the realities of contemporary healthcare systems, where entrepreneurial success rarely depends upon a single competency. Successful healthcare innovation requires recognizing opportunities, evaluating uncertainty, mobilizing organizational knowledge, exercising strategic leadership, and implementing evidence-based innovations simultaneously. The interaction among these capabilities determines whether entrepreneurial initiatives generate sustainable improvements in healthcare delivery.

By conceptualizing entrepreneurship as a dynamic system rather than a collection of isolated traits, the BRISK³ Mind Model provides a more comprehensive explanation of healthcare entrepreneurship than existing theoretical perspectives.

8.9.3 Advancing Entrepreneurship Theory

The BRISK³ Mind Model contributes to entrepreneurship scholarship in several important ways.

First, it advances entrepreneurial cognition by introducing **Healthcare Opportunity Intelligence (HOI)** as a multidimensional construct that extends traditional entrepreneurial alertness. Unlike existing opportunity recognition theories, HOI incorporates opportunity discovery, opportunity creation, environmental scanning, evidence appraisal, systems thinking, stakeholder engagement, and strategic foresight.

Second, the framework reconceptualizes entrepreneurial risk. Traditional entrepreneurship literature frequently portrays successful entrepreneurs as individuals willing to assume substantial risks. The BRISK³ Mind Model argues that healthcare entrepreneurship requires **Healthcare Risk Intelligence (HRI)** rather than indiscriminate risk-taking. This construct emphasizes evidence-informed judgement, ethical reasoning, regulatory awareness, and responsible decision-making under conditions of uncertainty.

Third, the model extends innovation theory by conceptualizing **Healthcare Innovation Capability (HIC)** as an organizational capability that encompasses the generation, implementation, evaluation, and continuous improvement of innovative healthcare solutions. Innovation is therefore viewed as an ongoing organizational process rather than an isolated entrepreneurial event.

Fourth, the model advances Strategic Leadership Theory by introducing **Healthcare Strategic Leadership**

Capability (HSLC) as an entrepreneurial capability through which healthcare leaders align vision, innovation, organizational learning, stakeholder collaboration, and strategic transformation.

Finally, the BRISK³ Mind Model extends the Knowledge-Based View by conceptualizing **Healthcare Knowledge Capital (HKC)** as an entrepreneurial capability that enables healthcare organizations to generate, integrate, preserve, disseminate, and apply knowledge in support of innovation and organizational performance.

Collectively, these theoretical extensions position the BRISK³ Mind Model as a significant contribution to contemporary entrepreneurship scholarship.

8.9.4 Contribution to Healthcare Management and Health Systems Research

Beyond entrepreneurship theory, the BRISK³ Mind Model contributes to healthcare management by providing a conceptual explanation of how entrepreneurial capabilities influence organizational performance and health system transformation.

Healthcare organizations increasingly operate in environments characterized by technological disruption, demographic change, financial constraints, evolving disease patterns, workforce shortages, and growing public expectations. Addressing these challenges requires healthcare professionals who can think entrepreneurially while maintaining high standards of clinical quality, ethical practice, and organizational accountability.

The BRISK³ framework provides a conceptual roadmap for developing these competencies across healthcare organizations. By integrating opportunity intelligence, intelligent risk management, innovation capability, strategic leadership, and knowledge capital, the model supports organizational resilience, continuous improvement, digital transformation, implementation science, quality improvement, and evidence-based healthcare management.

The framework also aligns with global healthcare priorities, including Universal Health Coverage, health system strengthening, sustainable development, digital health transformation, and resilient healthcare systems.

8.9.5 Implications for Research and Practice

The theoretical contribution of the BRISK³ Mind Model extends beyond conceptual development by establishing a foundation for future empirical research.

The five entrepreneurial capabilities proposed within the framework represent measurable constructs that can be operationalized and validated using quantitative, qualitative, or mixed-methods research designs. Future studies may examine the relationships among Healthcare Opportunity Intelligence, Healthcare Risk Intelligence, Healthcare Innovation Capability, Healthcare Strategic Leadership Capability, Healthcare Knowledge Capital, and organizational outcomes such as innovation performance, employee engagement, organizational resilience, quality improvement, patient satisfaction, healthcare efficiency, and health system performance.

From a practical perspective, healthcare organizations may utilize the BRISK³ framework to guide leadership development, entrepreneurship education, organizational capacity building, innovation strategy, workforce training, and policy implementation. Medical schools, schools of public health, nursing programmes, healthcare management institutions, and executive leadership programmes may also adopt the framework to strengthen entrepreneurial competencies among future healthcare leaders.

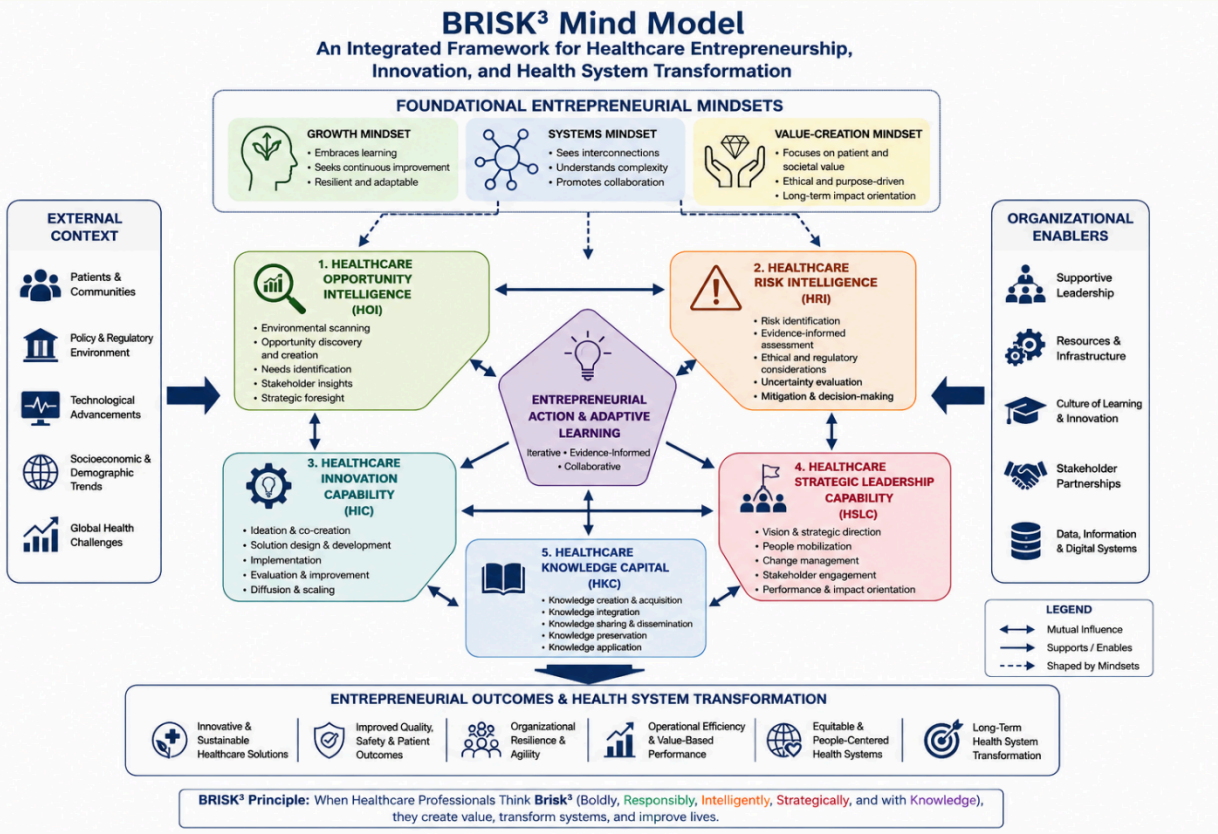
8.9.6 Transition to the Proposed Conceptual Framework

The theoretical analyses presented throughout this chapter demonstrate that the BRISK³ Mind Model is firmly grounded in established entrepreneurship and management theories while introducing several original healthcare-specific constructs that address important gaps in existing scholarship.

The following section presents the proposed **BRISK³ Mind Model** as an integrated conceptual framework illustrating the relationships among its five entrepreneurial capabilities and three foundational entrepreneurial mindsets. The model synthesizes the theoretical arguments developed throughout this paper into a coherent framework intended to advance entrepreneurship research, healthcare management scholarship, and health system transformation.

Figure Placement

Figure 1. The BRISK³ Mind Model: An Integrated Framework for Healthcare Entrepreneurship, Innovation, and Health System Transformation



9. Methodology

9.1 Research Design

This study adopted a **conceptual research design** to develop the BRISK³ Mind Model, a theoretical framework for healthcare entrepreneurship, innovation, and health system transformation. Conceptual research seeks to generate new theoretical insights by critically analysing existing knowledge, integrating complementary theories, and proposing novel conceptual relationships rather than collecting primary empirical data (Jaakkola, 2020).

Unlike empirical studies that rely on surveys, interviews, or experiments, conceptual studies aim to advance knowledge by identifying theoretical gaps, synthesising existing evidence, and developing new frameworks capable of guiding future research and professional practice. The present study therefore focuses on theory building rather than theory testing.

The conceptual design was considered appropriate because existing entrepreneurship models do not adequately explain the multidimensional nature of healthcare entrepreneurship. Specifically, there is limited integration of opportunity recognition, intelligent risk management, innovation capability, strategic leadership, and organizational knowledge within a single healthcare-specific framework. The BRISK³ Mind Model was developed to address this theoretical gap.

9.2 Methodological Approach

The study employed an **integrative conceptual synthesis** approach. This approach involved systematically reviewing influential entrepreneurship, strategic management, organizational learning, innovation, and healthcare management literature to identify recurring concepts relevant to entrepreneurial behaviour within healthcare organizations.

Rather than relying on a single theoretical perspective, the study synthesised complementary theories to construct a comprehensive conceptual framework. Six major theories formed the theoretical foundation of the model:

- Schumpeter's Innovation Theory
- Kirzner's Opportunity Discovery Theory
- Dynamic Capabilities Theory
- Knowledge-Based View of the Firm
- Effectuation Theory
- Strategic Leadership Theory

Each theory was critically examined to identify its principal contribution, conceptual strengths, and limitations within healthcare contexts. Areas of overlap were identified and integrated into the proposed framework, while theoretical gaps informed the development of the model's original constructs.

9.3 Literature Identification and Selection

The conceptual development of the BRISK³ Mind Model was informed by an extensive review of peer-reviewed literature in entrepreneurship, healthcare management, innovation, organizational behaviour, strategic management, leadership, public health, implementation science, and health systems research.

Priority was given to publications appearing in reputable, internationally indexed journals, including but not limited to:

- *Academy of Management Review*
- *Strategic Management Journal*
- *Journal of Business Venturing*
- *Entrepreneurship Theory and Practice*
- *Journal of Management*
- *Health Policy*
- *Policy Studies Journal*
- *Journal of Public Policy*
- *BMC Health Services Research*
- *The Lancet*
- *BMJ*
- *New England Journal of Medicine*

Seminal books and foundational theoretical publications were also included where necessary to ensure

accurate representation of established theories.

The literature selection process prioritised publications that addressed one or more of the following themes:

- Entrepreneurship theory
- Healthcare entrepreneurship
- Innovation management
- Strategic leadership
- Organizational learning
- Knowledge management
- Health system strengthening
- Organizational resilience
- Healthcare innovation
- Decision-making under uncertainty

9.4 Model Development Process

The development of the BRISK³ Mind Model occurred in four sequential stages.

- **Stage One:** Identification of theoretical gaps through a critical review of existing entrepreneurship theories and healthcare management literature.
- **Stage Two:** Extraction and synthesis of recurring entrepreneurial constructs from the selected theories.
- **Stage Three:** Development of five healthcare-specific entrepreneurial capabilities—Healthcare Opportunity Intelligence (HOI), Healthcare Risk Intelligence (HRI), Healthcare Innovation Capability (HIC), Healthcare Strategic Leadership Capability (HSLC), and Healthcare Knowledge Capital (HKC)—supported by three foundational entrepreneurial mindsets.
- **Stage Four:** Integration of these constructs into a unified conceptual framework capable of explaining healthcare entrepreneurship, organizational innovation, and health system transformation.

This iterative development process ensured that each construct was theoretically grounded while collectively forming a coherent and internally consistent framework.

9.5 Ensuring Conceptual Rigour

To enhance the scholarly rigour of the proposed framework, the study adhered to established principles for conceptual research. These included grounding each construct in recognised theoretical perspectives, critically evaluating existing literature rather than merely describing it, identifying clear gaps in current knowledge, and demonstrating how the proposed framework advances existing scholarship.

The model was also evaluated for conceptual coherence, internal consistency, theoretical plausibility, and relevance to healthcare systems. Particular attention was paid to ensuring that the proposed constructs were clearly defined, theoretically justified, and logically connected.

Although the BRISK³ Mind Model has not yet undergone empirical validation, the framework was deliberately designed to facilitate future quantitative, qualitative, and mixed-methods studies. Each construct is capable of operationalisation through measurable indicators, providing opportunities for scale development, hypothesis testing, structural equation modelling, and implementation research.

9.6 Methodological Contribution

The methodological contribution of this study lies in demonstrating how systematic theory integration can

generate novel conceptual frameworks for healthcare entrepreneurship. By combining complementary entrepreneurship and management theories within a healthcare context, the study moves beyond isolated theoretical explanations to develop an integrated model capable of guiding future research, leadership development, organizational innovation, and health policy.

The methodology therefore provides a transparent and replicable approach to conceptual model development while laying the foundation for subsequent empirical validation of the BRISK³ Mind Model.

10. Research Propositions

Unlike empirical studies, conceptual studies generally advance **research propositions** rather than statistical hypotheses because their primary objective is to extend theory, establish conceptual relationships, and provide a foundation for future empirical investigation (Jaakkola, 2020). Consistent with this approach, the BRISK³ Mind Model proposes a series of theoretically derived propositions that explain how entrepreneurial mindsets and healthcare-specific entrepreneurial capabilities interact to influence healthcare entrepreneurship, organizational innovation, and health system transformation. These propositions provide a roadmap for future quantitative, qualitative, and mixed-methods studies designed to validate, refine, and extend the proposed framework.

- **Proposition 1 (P1): Growth Mindset and Entrepreneurial Capability Development**

  A Growth Mindset positively influences the development of Healthcare Opportunity Intelligence, Healthcare Risk Intelligence, Healthcare Innovation Capability, Healthcare Strategic Leadership Capability, and Healthcare Knowledge Capital by promoting continuous learning, resilience, adaptability, and openness to change.

- **Proposition 2 (P2): Systems Mindset and Entrepreneurial Capability Development**

  A Systems Mindset positively influences Healthcare Opportunity Intelligence and Healthcare Strategic Leadership Capability by enabling healthcare professionals to recognize interrelationships among organizational processes, stakeholders, and health system components.

- **Proposition 3 (P3): Value-Creation Mindset and Innovation**

  A Value-Creation Mindset positively influences Healthcare Innovation Capability by encouraging the development of sustainable solutions that improve patient outcomes, organizational performance, and societal well-being.

- **Proposition 4 (P4): Healthcare Opportunity Intelligence and Innovation**

  Healthcare Opportunity Intelligence positively influences Healthcare Innovation Capability by enabling healthcare professionals to identify, evaluate, and exploit opportunities for improving healthcare services, technologies, policies, and organizational processes.

- **Proposition 5 (P5): Healthcare Opportunity Intelligence and Risk Intelligence**

  Healthcare Opportunity Intelligence positively influences Healthcare Risk Intelligence by improving the ability of healthcare professionals to recognize and evaluate the uncertainties associated with entrepreneurial opportunities.

- **Proposition 6 (P6): Healthcare Risk Intelligence and Innovation**

  Healthcare Risk Intelligence positively influences Healthcare Innovation Capability by facilitating evidence-informed, ethically responsible, and strategically balanced entrepreneurial decision-making.

- **Proposition 7 (P7): Healthcare Knowledge Capital and Innovation**

  Healthcare Knowledge Capital positively influences Healthcare Innovation Capability through the acquisition, integration, dissemination, and application of scientific, clinical, organizational, and experiential knowledge.

- **Proposition 8 (P8): Healthcare Strategic Leadership Capability and Innovation Implementation**

  Healthcare Strategic Leadership Capability positively influences the successful implementation and sustainability of healthcare innovations by facilitating organizational alignment, stakeholder engagement, interdisciplinary collaboration, and strategic change management.

- **Proposition 9 (P9): Entrepreneurial Capabilities and Healthcare Entrepreneurship**

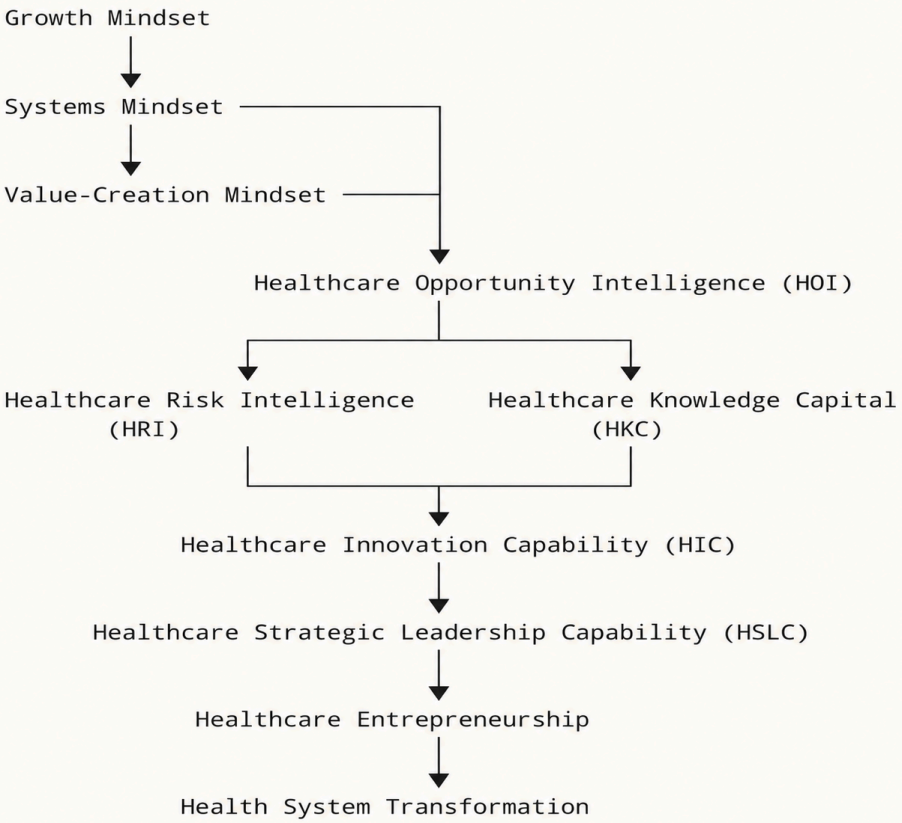
  The synergistic interaction among Healthcare Opportunity Intelligence, Healthcare Risk Intelligence, Healthcare Innovation Capability, Healthcare Strategic Leadership Capability, and Healthcare Knowledge Capital positively strengthens healthcare entrepreneurship.

- **Proposition 10 (P10): Healthcare Entrepreneurship and Health System Transformation**

  Healthcare entrepreneurship positively contributes to health system transformation by enhancing organizational resilience, improving healthcare quality, strengthening evidence-informed decision-making, accelerating innovation, increasing patient-centred value creation, and promoting sustainable health system performance.

Figure 3

Proposed Relationships Among the Constructs of the BRISK³ Mind Model



Source: Developed by the author (2026).

11. Development of the BRISK³ Mind Model

11.1 Overview of the BRISK³ Mind Model

The BRISK³ Mind Model is proposed as a novel conceptual framework designed to explain healthcare entrepreneurship through the integration of entrepreneurial cognition, organizational capabilities, strategic leadership, and knowledge management. Building upon the theoretical foundations discussed in the preceding sections, the model synthesizes established entrepreneurship and management theories into a healthcare-specific framework that addresses the complexity of modern health systems.

The model was developed in response to the observation that existing entrepreneurship theories provide valuable but fragmented explanations of entrepreneurial behaviour. While previous frameworks emphasize innovation, opportunity recognition, organizational adaptation, leadership, knowledge, or decision-making individually, none adequately explains how these competencies interact within healthcare organizations. The BRISK³ Mind Model addresses this limitation by conceptualizing healthcare entrepreneurship as a dynamic system of mutually reinforcing capabilities.

The acronym **BRISK³** represents a multidimensional entrepreneurial architecture. Rather than referring merely to the letters contained within the word "BRISK," the model conceptualizes entrepreneurship through **five core entrepreneurial capabilities** supported by **three foundational entrepreneurial mindsets**. Together, these components provide a comprehensive explanation of how healthcare professionals and organizations identify opportunities, respond to uncertainty, generate innovation, mobilize organizational knowledge, exercise strategic leadership, and contribute to sustainable health system transformation.

The model recognizes that entrepreneurship within healthcare extends beyond business creation or commercialization. Healthcare entrepreneurship encompasses the identification and implementation of innovative solutions that improve clinical practice, healthcare management, public health, policy implementation, organizational performance, patient outcomes, and population health. Consequently, the BRISK³ Mind Model positions entrepreneurship as a strategic capability applicable across hospitals, primary healthcare systems, public health agencies, academic medical centres, healthcare technology companies, non-governmental organizations, and health policy institutions.

11.2 Components of the BRISK³ Mind Model

The BRISK³ Mind Model consists of **eight interconnected components** organised into two complementary domains.

The first domain comprises **five entrepreneurial capabilities**, which represent the operational competencies required for effective healthcare entrepreneurship:

- **Healthcare Opportunity Intelligence (HOI):** The capability to identify, create, evaluate, and prioritize opportunities for healthcare improvement through environmental scanning, systems thinking, stakeholder engagement, and evidence-informed analysis.
- **Healthcare Risk Intelligence (HRI):** The capability to recognize, assess, communicate, and manage uncertainty using evidence-based judgement, ethical reasoning, regulatory awareness, and strategic decision-making.
- **Healthcare Innovation Capability (HIC):** The organizational and individual capacity to develop, implement, evaluate, and continuously improve innovative healthcare products, services, processes, technologies, and policies.
- **Healthcare Strategic Leadership Capability (HSLC):** The ability to provide visionary leadership that mobilizes people, aligns organizational strategy, promotes collaboration, facilitates

organizational learning, and drives sustainable healthcare transformation.

- **Healthcare Knowledge Capital (HKC):** The capability to generate, integrate, preserve, disseminate, and apply scientific, clinical, organizational, and experiential knowledge to support evidence-informed entrepreneurship and continuous organizational improvement.

The second domain comprises **three foundational entrepreneurial mindsets** that shape the development and application of the five capabilities:

- **Growth Mindset**, which encourages continuous learning, resilience, adaptability, and professional development.
- **Systems Mindset**, which enables healthcare professionals to understand the interconnected nature of health systems and appreciate the relationships among patients, organizations, communities, policies, and broader societal determinants of health.
- **Value-Creation Mindset**, which focuses entrepreneurial effort on generating sustainable value for patients, healthcare organizations, communities, and society rather than merely pursuing financial returns.

Together, these eight components provide a comprehensive conceptual explanation of healthcare entrepreneurship within complex organizational environments.

11.3 Architecture of the BRISK³ Mind Model

The BRISK³ Mind Model proposes that entrepreneurial behaviour develops through a hierarchical yet interactive structure.

At the foundation of the model are the three entrepreneurial mindsets. These mindsets influence how healthcare professionals perceive opportunities, interpret uncertainty, acquire knowledge, develop innovative solutions, and exercise leadership. Because mindsets shape cognitive orientation and behavioural tendencies, they function as enabling conditions for entrepreneurial capability development.

The five entrepreneurial capabilities occupy the second level of the framework. Unlike traditional linear models of entrepreneurship, the BRISK³ framework assumes that these capabilities interact continuously through reciprocal relationships. Improvements in one capability strengthen the effectiveness of the remaining capabilities, creating a reinforcing cycle of organizational learning, innovation, and strategic adaptation.

At the highest level of the framework are the expected organizational and system-level outcomes. The model proposes that the interaction among the five capabilities contributes to enhanced healthcare innovation, organizational resilience, improved service delivery, evidence-informed decision-making, stronger leadership, improved patient outcomes, sustainable organizational performance, and long-term health system transformation.

Accordingly, entrepreneurship is conceptualized not as an isolated event but as a continuous organizational process supported by mutually reinforcing entrepreneurial capabilities.

11.4 Operational Logic of the Model

The operational logic of the BRISK³ Mind Model can be understood as a continuous entrepreneurial cycle.

Healthcare professionals first identify emerging opportunities through Healthcare Opportunity Intelligence. These opportunities may arise from unmet patient needs, technological developments, policy reforms, organizational inefficiencies, changing disease patterns, or broader societal challenges.

Following opportunity identification, Healthcare Risk Intelligence evaluates the feasibility, ethical

implications, regulatory considerations, organizational readiness, and potential consequences associated with pursuing identified opportunities. This stage ensures that innovation remains responsible, evidence-informed, and aligned with healthcare standards.

Healthcare Innovation Capability subsequently transforms evaluated opportunities into practical solutions through product innovation, service redesign, technological implementation, process improvement, organizational innovation, or policy development.

Healthcare Strategic Leadership Capability coordinates the implementation process by aligning stakeholders, mobilizing organizational resources, facilitating collaboration, managing change, and sustaining organizational commitment.

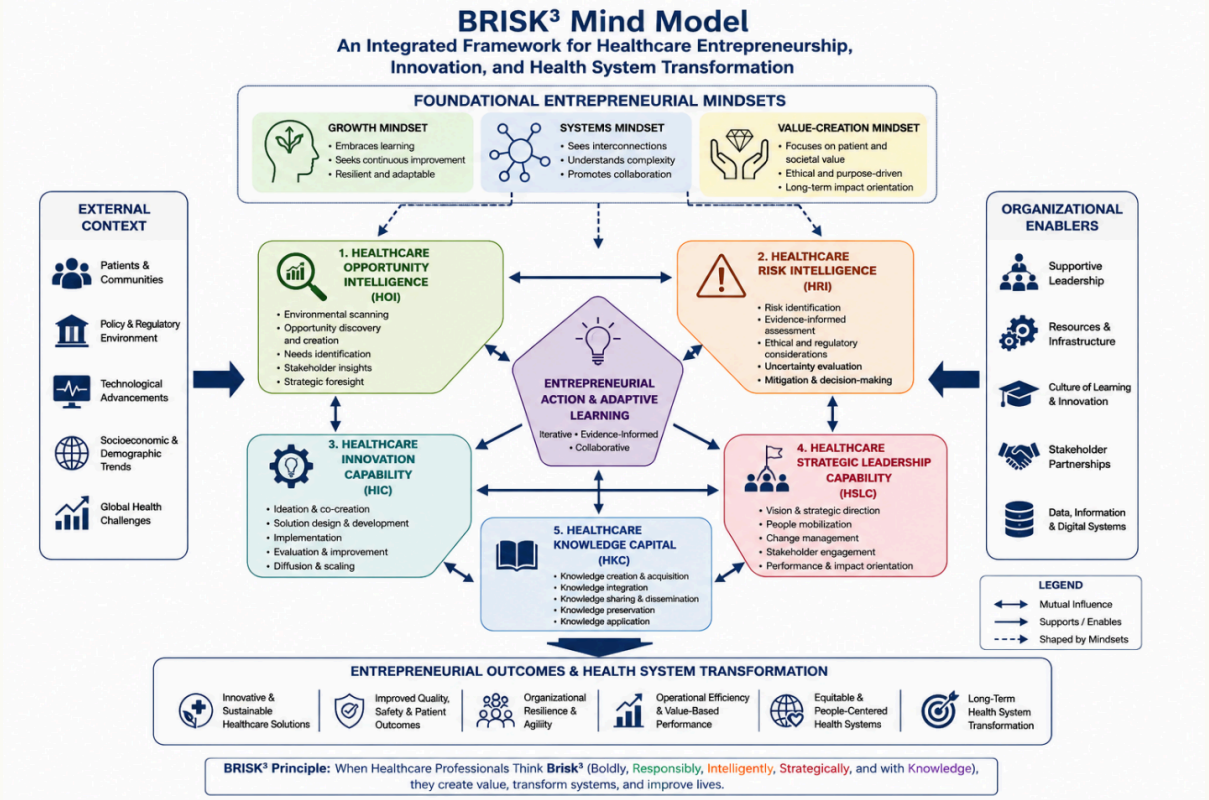
Throughout every stage, Healthcare Knowledge Capital continuously supplies scientific evidence, organizational learning, professional expertise, implementation knowledge, and performance feedback that strengthen decision-making and continuous improvement.

Because healthcare environments continuously evolve, the entrepreneurial cycle repeats as organizations encounter new opportunities, challenges, technologies, and societal expectations. The BRISK³ Mind Model therefore conceptualizes entrepreneurship as a process of continuous organizational adaptation rather than a one-time entrepreneurial event.

11.5 Conceptual Representation of the BRISK³ Mind Model

Figure 2 presents the conceptual architecture of the BRISK³ Mind Model. The framework illustrates how the three entrepreneurial mindsets provide the cognitive foundation upon which the five entrepreneurial capabilities develop. These capabilities interact dynamically to produce healthcare innovation, organizational resilience, improved patient outcomes, sustainable organizational performance, and health system transformation.

Figure 2. The BRISK³ Mind Model: An Integrated Framework for Healthcare Entrepreneurship, Innovation, and Health System Transformation



12. Discussion

12.1 Overview

The present study developed the **BRISK³ Mind Model** as an integrated conceptual framework for understanding healthcare entrepreneurship, innovation, and health system transformation. By synthesizing six complementary theoretical perspectives—Schumpeter's Innovation Theory, Kirzner's Opportunity Discovery Theory, Dynamic Capabilities Theory, the Knowledge-Based View of the Firm, Effectuation Theory, and Strategic Leadership Theory—the study addresses an important gap in entrepreneurship and healthcare management literature. Existing theories explain entrepreneurial behaviour from specific perspectives, yet none comprehensively captures the multidimensional competencies required for entrepreneurship within complex healthcare systems.

The BRISK³ Mind Model advances the literature by proposing that healthcare entrepreneurship is not driven by a single entrepreneurial attribute but by the interaction of **Healthcare Opportunity Intelligence (HOI), Healthcare Risk Intelligence (HRI), Healthcare Innovation Capability (HIC), Healthcare Strategic Leadership Capability (HSLC), and Healthcare Knowledge Capital (HKC)**, all operating within three foundational entrepreneurial mindsets. This integrated perspective offers a broader explanation of entrepreneurial behaviour than traditional models centred primarily on innovation, opportunity recognition, or leadership alone.

12.2 Comparison with Existing Entrepreneurship Models

Most entrepreneurship theories emphasize one dominant dimension of entrepreneurial activity. Schumpeter's Innovation Theory identifies innovation as the principal driver of economic development, whereas Kirzner's Opportunity Discovery Theory focuses on entrepreneurial alertness and opportunity recognition (Kirzner, 1973; Schumpeter, 1934). Dynamic Capabilities Theory explains organizational adaptation (Teece et al., 1997), while Effectuation Theory emphasizes entrepreneurial decision-making under uncertainty (Sarasvathy, 2001). Similarly, Strategic Leadership Theory highlights the role of leadership in organizational transformation (Ireland & Hitt, 2005), and the Knowledge-Based View emphasizes knowledge integration as a source of competitive advantage (Grant, 1996).

Although these theories have significantly advanced entrepreneurship scholarship, they were developed largely within business and management contexts and do not fully reflect the realities of healthcare organizations. Healthcare systems operate within highly regulated environments where entrepreneurial initiatives must balance innovation with patient safety, ethical responsibility, evidence-based practice, equity, and public accountability. Consequently, healthcare entrepreneurship requires a broader combination of competencies than those emphasized by existing theories.

The BRISK³ Mind Model extends these theories by integrating their complementary strengths into a unified healthcare-specific framework. Rather than viewing opportunity recognition, innovation, leadership, knowledge, and risk management as independent constructs, the model conceptualizes them as mutually reinforcing entrepreneurial capabilities that collectively influence organizational performance and health system transformation.

12.3 Advancing Healthcare Entrepreneurship Theory

One of the principal contributions of this study is the reconceptualization of entrepreneurship within healthcare. Traditional entrepreneurship literature frequently associates entrepreneurship with business creation, commercialization, or financial value generation. In contrast, the BRISK³ Mind Model defines healthcare entrepreneurship more broadly as the systematic identification and implementation of innovative solutions that improve healthcare delivery, organizational performance, patient outcomes, and

population health.

This perspective reflects the distinctive characteristics of healthcare organizations, where entrepreneurial activities frequently involve service redesign, digital health implementation, quality improvement, policy innovation, workforce transformation, and public health interventions rather than commercial enterprise alone. Consequently, entrepreneurship becomes relevant not only to private healthcare organizations but also to public hospitals, primary healthcare systems, ministries of health, non-governmental organizations, academic institutions, and international health agencies.

The model therefore contributes to the growing field of healthcare entrepreneurship by providing a conceptual framework that is both theoretically grounded and contextually relevant to modern healthcare systems.

12.4 Original Contributions of the BRISK³ Mind Model

The BRISK³ Mind Model introduces several original conceptual contributions to entrepreneurship and healthcare management scholarship.

First, the study introduces **Healthcare Opportunity Intelligence (HOI)** as an extension of entrepreneurial opportunity recognition. Unlike existing opportunity recognition theories that emphasize entrepreneurial alertness, HOI incorporates environmental scanning, systems thinking, evidence appraisal, stakeholder engagement, strategic foresight, and opportunity creation.

Second, the model introduces **Healthcare Risk Intelligence (HRI)** as an alternative to conventional entrepreneurial risk-taking. Rather than encouraging entrepreneurs to accept greater uncertainty, the model proposes that successful healthcare entrepreneurship depends upon intelligent, evidence-informed, ethically responsible, and strategically balanced risk management.

Third, the framework conceptualizes **Healthcare Knowledge Capital (HKC)** as an entrepreneurial capability rather than simply an organizational resource. This perspective extends the Knowledge-Based View by recognizing knowledge generation, integration, dissemination, and application as active entrepreneurial processes that stimulate innovation and organizational learning.

Fourth, the study extends Strategic Leadership Theory by proposing **Healthcare Strategic Leadership Capability (HSLC)** as the coordinating mechanism through which entrepreneurial capabilities are translated into sustainable organizational transformation.

Finally, the BRISK³ Mind Model integrates these constructs into a coherent theoretical system that has not previously been proposed within healthcare entrepreneurship literature.

12.5 Contribution to Healthcare Management

Beyond theoretical advancement, the BRISK³ Mind Model provides a practical conceptual framework for healthcare management. Contemporary healthcare organizations operate within increasingly complex environments characterized by digital transformation, demographic transitions, workforce shortages, financial constraints, climate-related health threats, emerging infectious diseases, and rapidly evolving patient expectations.

The model suggests that healthcare organizations capable of strengthening opportunity intelligence, risk intelligence, innovation capability, strategic leadership, and knowledge capital are better positioned to respond to these challenges. Consequently, the framework provides a valuable foundation for organizational capacity building, leadership development, innovation management, and strategic planning.

Furthermore, the framework supports global initiatives promoting resilient health systems, Universal

Health Coverage, digital health transformation, implementation science, and sustainable healthcare improvement.

12.6 Contribution to Entrepreneurship Education

The BRISK³ Mind Model also has implications for entrepreneurship education within the health professions. Entrepreneurship training in medicine, nursing, pharmacy, dentistry, public health, and allied health disciplines has traditionally focused on innovation and business development. The proposed framework broadens this perspective by emphasizing the integration of opportunity recognition, intelligent risk management, strategic leadership, organizational learning, and value creation.

Medical schools, schools of public health, business schools, and healthcare leadership programmes may therefore utilize the BRISK³ framework to design curricula that prepare future healthcare professionals for leadership roles within increasingly dynamic healthcare systems.

Such educational programmes may strengthen graduates' ability to recognize emerging healthcare opportunities, evaluate complex decisions, implement evidence-based innovations, manage organizational change, and contribute to health system transformation.

12.7 Positioning the BRISK³ Mind Model within Contemporary Scholarship

The BRISK³ Mind Model contributes to an emerging body of scholarship emphasizing interdisciplinary approaches to healthcare innovation and entrepreneurship. Rather than replacing existing entrepreneurship theories, the framework complements them by integrating their most relevant contributions within a healthcare-specific conceptual model.

This integrative perspective aligns with growing recognition that complex healthcare challenges—including antimicrobial resistance, climate change, ageing populations, digital transformation, health inequities, and pandemic preparedness—require multidisciplinary, systems-oriented, and entrepreneurial approaches.

Accordingly, the BRISK³ Mind Model offers a timely theoretical contribution capable of supporting future research, organizational innovation, leadership development, healthcare education, and health policy reform.

13. Practical Implications

13.1 Overview

The BRISK³ Mind Model has important practical implications for healthcare organizations, healthcare professionals, educators, entrepreneurs, policymakers, and researchers. By conceptualizing healthcare entrepreneurship as the interaction of five entrepreneurial capabilities supported by three foundational mindsets, the framework provides a structured approach to developing entrepreneurial competence within healthcare systems.

Unlike traditional entrepreneurship models that emphasize business creation or financial performance, the BRISK³ Mind Model is applicable across diverse healthcare settings, including hospitals, primary healthcare centres, public health agencies, academic institutions, healthcare technology companies, non-governmental organizations, and ministries of health. The framework therefore offers practical guidance for strengthening organizational innovation, leadership capacity, evidence-informed decision-making, and health system resilience.

13.2 Implications for Healthcare Organizations

Healthcare organizations operate in increasingly complex environments characterized by technological

disruption, changing disease patterns, workforce shortages, financial constraints, and rising patient expectations. These challenges require organizations to move beyond conventional administrative management towards more entrepreneurial approaches to healthcare delivery.

The BRISK³ Mind Model provides healthcare organizations with a framework for assessing and strengthening entrepreneurial capability. Organizations may use the model to identify strengths and weaknesses in opportunity recognition, innovation processes, leadership development, knowledge management, and risk management. Such assessments can inform strategic planning, organizational development initiatives, and quality improvement programmes.

The framework may also support organizational transformation by encouraging interdisciplinary collaboration, continuous learning, and evidence-based innovation. Healthcare organizations that intentionally develop the five entrepreneurial capabilities may become more adaptable, resilient, and responsive to changing healthcare needs.

13.3 Implications for Healthcare Leaders

Healthcare leadership increasingly requires competencies that extend beyond operational management. Leaders must anticipate future challenges, inspire innovation, manage organizational change, and coordinate multidisciplinary teams while maintaining high standards of patient care and organizational accountability.

The BRISK³ Mind Model provides healthcare leaders with a structured leadership framework centred on opportunity intelligence, intelligent risk management, innovation capability, knowledge capital, and strategic leadership. Rather than viewing leadership solely as administrative oversight, the framework encourages leaders to cultivate entrepreneurial thinking throughout their organizations.

Healthcare executives, hospital administrators, clinical directors, department heads, and public health managers may utilize the model to strengthen strategic decision-making, improve organizational adaptability, and foster cultures that encourage innovation and continuous improvement.

13.4 Implications for Healthcare Entrepreneurship Education

Healthcare entrepreneurship education remains underdeveloped in many medical, nursing, pharmacy, public health, and allied health programmes. Existing curricula frequently emphasize clinical competence while providing limited opportunities for developing entrepreneurial capabilities.

The BRISK³ Mind Model offers a comprehensive educational framework that may guide curriculum development across undergraduate, postgraduate, and executive education programmes. Rather than teaching entrepreneurship exclusively as business creation, educational institutions can incorporate opportunity recognition, strategic leadership, innovation management, evidence-informed decision-making, systems thinking, and knowledge management into healthcare training.

Simulation exercises, case-based learning, interdisciplinary innovation projects, leadership development programmes, and design-thinking workshops may all be aligned with the BRISK³ framework to strengthen entrepreneurial competence among future healthcare professionals.

13.5 Implications for Healthcare Entrepreneurs and Innovators

Healthcare entrepreneurs frequently operate within environments characterized by regulatory complexity, scientific uncertainty, financial risk, and rapidly evolving technologies. Success therefore depends upon more than creativity or business acumen alone.

The BRISK³ Mind Model provides entrepreneurs with a structured framework for evaluating healthcare

opportunities, managing uncertainty, generating innovative solutions, mobilizing knowledge, and leading organizational growth. The framework encourages entrepreneurs to balance innovation with ethical responsibility, patient safety, regulatory compliance, and evidence-based practice.

Similarly, healthcare innovators developing digital health technologies, medical devices, pharmaceutical innovations, artificial intelligence applications, or service delivery models may utilize the framework to guide innovation from opportunity identification through implementation and evaluation.

13.6 Implications for Human Resource Development

The BRISK³ Mind Model has significant implications for workforce development within healthcare organizations. Human resource departments may integrate the framework into recruitment, competency assessment, leadership succession planning, staff appraisal, and professional development programmes.

The five entrepreneurial capabilities may serve as competency domains for evaluating leadership potential, identifying training needs, and designing continuous professional development initiatives. Such competency-based approaches may strengthen organizational capacity for innovation while preparing future healthcare leaders for increasingly complex healthcare environments.

Furthermore, professional regulatory bodies may consider incorporating entrepreneurial competencies into continuing professional education standards, thereby promoting lifelong learning and organizational adaptability.

13.7 Implications for Healthcare Quality Improvement

Quality improvement initiatives frequently focus on performance measurement, process redesign, and patient safety. While these approaches remain essential, sustainable quality improvement also requires entrepreneurial thinking capable of identifying new opportunities, implementing innovative solutions, and adapting organizational practices.

The BRISK³ Mind Model complements established quality improvement methodologies by integrating innovation capability, strategic leadership, knowledge capital, and opportunity intelligence into organizational improvement efforts. Healthcare organizations may therefore utilize the framework alongside existing quality improvement models to strengthen organizational learning and long-term performance.

13.8 Implications for Global Health and Health System Strengthening

Healthcare systems worldwide face shared challenges, including ageing populations, climate change, antimicrobial resistance, emerging infectious diseases, health inequities, workforce shortages, and increasing demand for healthcare services. Addressing these challenges requires innovative leadership and entrepreneurial thinking across all levels of healthcare delivery.

The BRISK³ Mind Model provides an adaptable framework that can support health system strengthening in both high-income and low- and middle-income countries. Its emphasis on innovation, leadership, knowledge management, and systems thinking aligns with international priorities such as Universal Health Coverage, the Sustainable Development Goals, and the World Health Organization's vision for resilient health systems.

Consequently, the framework has the potential to inform leadership development, organizational reform, and innovation initiatives across diverse national healthcare contexts.

13.9 Practical Value of the BRISK³ Mind Model

The practical significance of the BRISK³ Mind Model lies in its ability to translate entrepreneurship theory

into actionable guidance for healthcare practice. Rather than functioning solely as a theoretical construct, the model provides a structured roadmap for developing entrepreneurial capability at the individual, organizational, and health system levels.

By integrating opportunity intelligence, intelligent risk management, innovation capability, strategic leadership, and knowledge capital within three foundational entrepreneurial mindsets, the framework offers healthcare organizations a practical approach to fostering innovation, improving organizational resilience, enhancing leadership effectiveness, and supporting sustainable health system transformation.

Ultimately, the BRISK³ Mind Model bridges the gap between entrepreneurship theory and healthcare practice by providing a comprehensive framework capable of guiding leadership development, organizational innovation, workforce capacity building, and evidence-informed healthcare transformation.

14. Policy Implications

14.1 Overview

The BRISK³ Mind Model has significant policy implications for healthcare governance, workforce development, innovation ecosystems, and health system strengthening. As healthcare systems worldwide confront increasing complexity arising from demographic transitions, emerging diseases, technological advancements, climate change, and financial constraints, policymakers require frameworks that encourage innovation while maintaining accountability, equity, and quality of care. The BRISK³ Mind Model offers a theoretically grounded approach for embedding entrepreneurial thinking into health policy and governance without compromising the core values of healthcare.

By emphasizing opportunity intelligence, intelligent risk management, innovation capability, strategic leadership, and knowledge capital, the framework provides policymakers with a comprehensive lens through which healthcare reforms can be designed, implemented, and evaluated. It therefore supports the transition from reactive policy responses to proactive, adaptive, and innovation-oriented health systems.

14.2 Implications for National Health Policy

National governments increasingly recognize that sustainable healthcare systems depend upon continuous innovation and adaptive leadership. However, many health policies continue to emphasize regulatory compliance and service delivery while giving comparatively limited attention to developing entrepreneurial capacity among healthcare professionals and institutions.

The BRISK³ Mind Model provides a conceptual foundation for integrating entrepreneurship into national health strategies. Ministries of Health and other government agencies may incorporate the framework into national workforce development plans, innovation strategies, and health sector reform initiatives. Policies that promote entrepreneurial competencies alongside clinical excellence may strengthen organizational resilience, improve service delivery, and accelerate the adoption of evidence-based innovations.

In addition, the framework encourages governments to view healthcare professionals not only as service providers but also as innovators, problem-solvers, and agents of system transformation.

14.3 Implications for Health Workforce Policy

Healthcare workforce policies traditionally focus on staffing levels, professional regulation, remuneration, and continuing education. While these remain essential, future workforce policies should also prioritize entrepreneurial capability development.

The BRISK³ Mind Model suggests that entrepreneurial competencies—including opportunity recognition, innovation management, strategic leadership, intelligent risk assessment, and knowledge

integration—should become core components of health workforce development. Governments and professional councils may therefore incorporate these competencies into competency frameworks, licensing standards, leadership programmes, and continuing professional development requirements.

Embedding entrepreneurial capabilities within workforce policy could enhance workforce adaptability, improve organizational performance, and prepare healthcare professionals to respond effectively to emerging health challenges.

14.4 Implications for Healthcare Innovation Policy

Innovation has become a strategic priority within health systems worldwide. Governments increasingly invest in digital health, artificial intelligence, precision medicine, telemedicine, implementation science, and health technology assessment. However, technological investment alone is insufficient without healthcare professionals capable of recognizing opportunities, evaluating risks, leading organizational change, and applying knowledge effectively.

The BRISK³ Mind Model provides policymakers with a broader understanding of healthcare innovation by emphasizing the human and organizational capabilities necessary for successful implementation. Innovation policies should therefore extend beyond technology acquisition to include leadership development, interdisciplinary collaboration, organizational learning, and evidence-informed decision-making.

Such an approach may improve the sustainability and scalability of healthcare innovations while reducing implementation failure.

14.5 Implications for Public Health Policy

Public health challenges such as infectious disease outbreaks, non-communicable diseases, antimicrobial resistance, climate-related health threats, and health inequities require entrepreneurial approaches that encourage creativity, collaboration, and systems thinking.

The BRISK³ Mind Model aligns with contemporary public health priorities by promoting opportunity intelligence for early problem identification, risk intelligence for informed policy decisions, innovation capability for intervention development, strategic leadership for multisectoral coordination, and knowledge capital for evidence-based policymaking.

Public health agencies may therefore apply the framework to strengthen preparedness planning, programme implementation, community engagement, and policy evaluation.

14.6 Implications for Higher Education and Professional Regulation

Higher education institutions and professional regulatory bodies play an essential role in preparing future healthcare professionals. The BRISK³ Mind Model provides a foundation for revising educational standards and competency frameworks to include entrepreneurship alongside clinical expertise.

Accreditation agencies, universities, and professional councils may utilize the framework when developing curricula, leadership programmes, competency standards, and professional development requirements. Integrating entrepreneurial capability into healthcare education may produce graduates better equipped to lead organizational change, implement innovation, and contribute to health system transformation.

Such reforms would also strengthen collaboration between health sciences, business, engineering, public administration, and information technology, fostering interdisciplinary approaches to healthcare innovation.

14.7 Implications for Global Health Policy

Global health organizations increasingly emphasize resilient health systems, innovation, and sustainable development. International initiatives such as the Sustainable Development Goals (SDGs), Universal Health Coverage (UHC), and the World Health Organization's health system strengthening agenda all require capable leaders and organizations that can adapt to changing circumstances while maintaining equitable access to quality healthcare.

The BRISK³ Mind Model complements these global priorities by providing a framework that promotes innovation, organizational learning, strategic leadership, and evidence-informed policymaking. International development agencies, multilateral organizations, and donor institutions may apply the framework when designing capacity-building programmes, leadership initiatives, and health system strengthening interventions, particularly in low- and middle-income countries.

14.8 Policy Recommendations

Based on the BRISK³ Mind Model, several policy recommendations emerge:

1. **Integrate entrepreneurial competencies into national health workforce policies** to complement clinical and managerial skills.
2. **Develop national healthcare innovation strategies** that combine technological advancement with leadership development, knowledge management, and organizational learning.
3. **Revise healthcare education and accreditation standards** to incorporate entrepreneurship, innovation, and strategic leadership into undergraduate and postgraduate training.
4. **Strengthen evidence-informed policymaking** by promoting Healthcare Knowledge Capital through investment in research, implementation science, and knowledge translation.
5. **Support interdisciplinary collaboration** among healthcare professionals, policymakers, researchers, entrepreneurs, and technology developers to facilitate sustainable innovation.
6. **Promote adaptive governance structures** that encourage intelligent risk management, continuous learning, and organizational flexibility within healthcare systems.

14.9 Concluding Remarks

The BRISK³ Mind Model extends beyond organizational practice by offering a strategic framework for healthcare policy and governance. Its emphasis on entrepreneurial capability development provides policymakers with an integrated approach to strengthening healthcare systems, improving workforce preparedness, fostering innovation, and promoting evidence-informed decision-making.

By aligning entrepreneurship with public health values, organizational learning, and strategic leadership, the framework contributes to policy discussions on how healthcare systems can become more adaptive, resilient, and responsive to future challenges. As governments continue to pursue health system reforms, the BRISK³ Mind Model offers a practical and theoretically grounded foundation for designing policies that support sustainable healthcare transformation.

15. Strengths

The BRISK³ Mind Model possesses several conceptual, theoretical, and practical strengths that distinguish it from existing entrepreneurship frameworks and enhance its relevance to healthcare management and health systems research.

15.1 Integration of Multiple Theoretical Perspectives

One of the principal strengths of the BRISK³ Mind Model is its integration of six complementary theories into a unified conceptual framework. Rather than relying on a single theoretical perspective, the model

synthesizes Schumpeter's Innovation Theory, Kirzner's Opportunity Discovery Theory, Dynamic Capabilities Theory, the Knowledge-Based View of the Firm, Effectuation Theory, and Strategic Leadership Theory. This multi-theoretical foundation provides a more comprehensive explanation of healthcare entrepreneurship than models derived from a single theoretical tradition.

The integration of these theories enhances the model's conceptual robustness by recognizing that entrepreneurial behaviour within healthcare organizations involves multiple interacting processes, including opportunity recognition, innovation, leadership, knowledge management, organizational adaptation, and decision-making under uncertainty.

15.2 Healthcare-Specific Conceptualization

A major strength of the BRISK³ Mind Model is its explicit focus on healthcare. Most entrepreneurship theories were originally developed within business or commercial contexts and therefore do not fully address the ethical, regulatory, clinical, and organizational complexities of healthcare systems.

The BRISK³ Mind Model responds to this gap by introducing healthcare-specific entrepreneurial constructs that reflect the realities of healthcare organizations. In doing so, it extends entrepreneurship theory beyond traditional commercial settings and provides a framework that is directly applicable to hospitals, primary healthcare systems, public health agencies, healthcare technology organizations, academic institutions, and health policy environments.

15.3 Introduction of Novel Entrepreneurial Constructs

The framework contributes several original constructs that extend existing entrepreneurship scholarship. Healthcare Opportunity Intelligence, Healthcare Risk Intelligence, Healthcare Innovation Capability, Healthcare Strategic Leadership Capability, and Healthcare Knowledge Capital collectively represent a new conceptualization of entrepreneurial capability within healthcare.

Particularly noteworthy is the replacement of conventional entrepreneurial risk-taking with **Healthcare Risk Intelligence**, which emphasizes evidence-informed judgement, ethical responsibility, regulatory awareness, and balanced decision-making. This reconceptualization aligns entrepreneurship more closely with the realities of healthcare practice, where innovation must be pursued without compromising patient safety or professional standards.

15.4 Holistic and Systems-Oriented Perspective

Another important strength of the model is its systems orientation. Rather than treating entrepreneurial competencies as isolated characteristics, the BRISK³ Mind Model conceptualizes entrepreneurship as an interconnected system of mutually reinforcing capabilities supported by foundational entrepreneurial mindsets.

This holistic perspective reflects the complexity of healthcare organizations, where leadership, innovation, knowledge, opportunity recognition, and risk management continuously influence one another. Such a systems-oriented approach provides a richer understanding of entrepreneurial behaviour than linear or trait-based models.

15.5 Strong Practical Relevance

The BRISK³ Mind Model possesses considerable practical value because it provides a framework that can be applied across multiple domains of healthcare practice. Healthcare organizations may utilize the model to guide leadership development, organizational innovation, workforce training, strategic planning, quality improvement, and organizational change.

Similarly, universities, professional regulatory bodies, policymakers, and healthcare entrepreneurs may apply the framework when designing educational programmes, competency standards, innovation initiatives, and health system reforms. This broad applicability enhances the model's translational value beyond academic research.

15.6 Foundation for Empirical Research

Although conceptual in nature, the BRISK³ Mind Model has been designed to facilitate empirical investigation. Each of the five entrepreneurial capabilities is clearly defined and capable of operationalization through measurable indicators. This provides opportunities for future researchers to develop psychometric instruments, validate the constructs, examine causal relationships, and test the model across different healthcare contexts.

The framework therefore serves not only as a theoretical contribution but also as a platform for future quantitative, qualitative, and mixed-methods research.

15.7 Interdisciplinary Applicability

Healthcare entrepreneurship intersects with medicine, nursing, pharmacy, dentistry, public health, health administration, management, economics, engineering, digital health, and public policy. The BRISK³ Mind Model reflects this interdisciplinary reality by integrating concepts from entrepreneurship, strategic management, organizational behaviour, leadership studies, knowledge management, and health systems research.

This interdisciplinary foundation increases the framework's relevance to a wide range of academic disciplines and professional settings while encouraging collaboration among researchers and practitioners from diverse backgrounds.

15.8 Contribution to Health System Transformation

Perhaps the greatest strength of the BRISK³ Mind Model is its emphasis on **health system transformation** rather than entrepreneurship as an end in itself. The framework positions entrepreneurial capability as a means of improving healthcare quality, organizational resilience, patient outcomes, workforce performance, innovation capacity, and long-term system sustainability.

By linking entrepreneurship directly to health system strengthening, the model aligns with contemporary global health priorities, including Universal Health Coverage, the Sustainable Development Goals, digital health transformation, implementation science, and resilient healthcare systems.

Consequently, the BRISK³ Mind Model contributes not only to entrepreneurship theory but also to broader discussions concerning the future of healthcare delivery, organizational innovation, and sustainable health system development.

16. Limitations

Although the BRISK³ Mind Model offers a comprehensive conceptual framework for understanding healthcare entrepreneurship, innovation, and health system transformation, several limitations should be acknowledged.

16.1 Conceptual Nature of the Study

The primary limitation of this study is its conceptual design. The BRISK³ Mind Model was developed through the integration of established theories and a synthesis of existing literature rather than through the collection and analysis of primary empirical data. Consequently, the proposed relationships among the model's constructs remain theoretical and require empirical validation before definitive conclusions can be

drawn regarding their predictive power or practical effectiveness.

Future studies should therefore test the model using quantitative, qualitative, and mixed-methods approaches to determine the strength, direction, and consistency of the proposed relationships across different healthcare settings.

16.2 Absence of Psychometric Validation

Although the five entrepreneurial capabilities are conceptually defined, validated measurement instruments have not yet been developed for the newly proposed constructs, including Healthcare Opportunity Intelligence, Healthcare Risk Intelligence, Healthcare Innovation Capability, Healthcare Strategic Leadership Capability, and Healthcare Knowledge Capital.

The absence of standardized measurement scales limits the immediate application of the model in empirical research. Future investigations should focus on scale development and psychometric evaluation, including assessments of construct validity, reliability, convergent validity, discriminant validity, and predictive validity.

16.3 Context-Specific Focus

The BRISK³ Mind Model was specifically designed for healthcare organizations and health systems. While many of its underlying entrepreneurial principles may be applicable to other sectors, the framework incorporates healthcare-specific considerations such as patient safety, ethical responsibility, evidence-based practice, regulatory compliance, and public accountability.

Consequently, caution should be exercised when applying the model outside healthcare contexts without appropriate adaptation and validation. Future research may explore whether modified versions of the framework can be applied to sectors such as education, social services, humanitarian organizations, or public administration.

16.4 Dynamic Nature of Healthcare Systems

Healthcare systems evolve continuously in response to technological innovations, demographic changes, emerging diseases, policy reforms, and shifting societal expectations. Although the BRISK³ Mind Model was developed to reflect contemporary healthcare challenges, future developments may introduce additional entrepreneurial competencies not currently represented within the framework.

Accordingly, the model should be viewed as an evolving conceptual framework that may require periodic refinement as healthcare systems and entrepreneurship scholarship continue to develop.

16.5 Potential Contextual Variability

The effectiveness of the entrepreneurial capabilities proposed within the BRISK³ Mind Model may vary across countries, healthcare systems, organizational structures, and cultural environments. Factors such as governance arrangements, resource availability, workforce capacity, organizational culture, regulatory frameworks, and economic conditions may influence how the proposed capabilities operate in practice.

Consequently, the framework should be interpreted with sensitivity to contextual differences. Comparative studies across diverse healthcare settings would provide valuable insights into the model's applicability and generalizability.

16.6 Limited Consideration of External Environmental Factors

The BRISK³ Mind Model primarily focuses on entrepreneurial capabilities at the individual and organizational levels. Although the framework acknowledges the influence of policy and governance, it

does not explicitly incorporate broader macro-environmental factors such as political instability, economic crises, geopolitical events, technological disruption, climate change, or global market dynamics.

These external factors may significantly influence entrepreneurial behaviour and organizational performance within healthcare systems. Future extensions of the model could integrate these contextual influences to provide a more comprehensive explanation of healthcare entrepreneurship.

16.7 Complexity of Entrepreneurial Behaviour

Entrepreneurship is a multifaceted phenomenon influenced by psychological characteristics, organizational culture, institutional environments, social networks, financial resources, and external opportunities. While the BRISK³ Mind Model integrates several important dimensions, it does not claim to capture every determinant of entrepreneurial behaviour.

Instead, the framework should be regarded as a parsimonious yet comprehensive representation of core entrepreneurial capabilities relevant to healthcare organizations. Additional variables may emerge through future empirical research that further refine or extend the proposed model.

16.8 Scope for Theoretical Refinement

Finally, the BRISK³ Mind Model represents an initial theoretical proposition rather than a definitive explanation of healthcare entrepreneurship. As empirical evidence accumulates, some constructs may require refinement, additional relationships may be identified, and new dimensions may emerge. Such refinement is a natural part of theory development and should be viewed as an opportunity to strengthen the framework rather than as a limitation of its conceptual foundation.

The continued evolution of the BRISK³ Mind Model through empirical testing, interdisciplinary collaboration, and scholarly debate will enhance its contribution to entrepreneurship research, healthcare management, and health system transformation.

Concluding Remarks

Despite these limitations, the BRISK³ Mind Model provides a theoretically grounded and integrative framework that addresses an important gap in healthcare entrepreneurship literature. The limitations identified above do not diminish the value of the model; rather, they define the scope of its current contribution and establish a clear agenda for future research. Recognizing these boundaries enhances the transparency, credibility, and scholarly rigour of the present study while encouraging continued investigation into the model's applicability and refinement.

17. Future Research

The BRISK³ Mind Model provides a foundation for advancing healthcare entrepreneurship research by introducing a theoretically integrated framework that can be refined, validated, and extended through future studies. Given the conceptual nature of the present study, several avenues for future research are proposed.

17.1 Empirical Validation of the BRISK³ Mind Model

The foremost priority for future research is the empirical validation of the BRISK³ Mind Model. The relationships proposed among Healthcare Opportunity Intelligence (HOI), Healthcare Risk Intelligence (HRI), Healthcare Innovation Capability (HIC), Healthcare Strategic Leadership Capability (HSLC), Healthcare Knowledge Capital (HKC), the three entrepreneurial mindsets, and organizational outcomes require systematic testing across diverse healthcare settings.

Researchers may employ quantitative approaches such as structural equation modelling (SEM),

confirmatory factor analysis (CFA), partial least squares structural equation modelling (PLS-SEM), or multilevel modelling to evaluate the proposed relationships and assess the explanatory power of the framework. Qualitative methods, including case studies, grounded theory, and phenomenological research, may also provide deeper insights into how the proposed entrepreneurial capabilities operate in practice.

17.2 Development and Validation of Measurement Instruments

An important area for future investigation involves the development of reliable and valid measurement instruments for the newly proposed constructs. In particular, standardized scales should be developed for:

- Healthcare Opportunity Intelligence (HOI)
- Healthcare Risk Intelligence (HRI)
- Healthcare Innovation Capability (HIC)
- Healthcare Strategic Leadership Capability (HSLC)
- Healthcare Knowledge Capital (HKC)

Future studies should evaluate the psychometric properties of these instruments, including content validity, construct validity, convergent validity, discriminant validity, criterion validity, and internal consistency reliability. The availability of validated instruments would facilitate comparative studies and strengthen the empirical foundation of the BRISK³ Mind Model.

17.3 Cross-Country and Cross-Cultural Validation

Healthcare systems vary considerably in governance structures, financing mechanisms, organizational cultures, resource availability, and policy environments. Consequently, future studies should investigate whether the BRISK³ Mind Model demonstrates consistent applicability across different countries and healthcare systems.

Comparative research involving high-income, middle-income, and low-income countries would provide valuable evidence regarding the model's generalizability and contextual adaptability. Such studies may also identify contextual factors that influence the effectiveness of the proposed entrepreneurial capabilities.

17.4 Longitudinal Research

Entrepreneurial capability develops over time through learning, professional experience, organizational adaptation, and leadership development. Longitudinal research designs would therefore provide important insights into how the entrepreneurial capabilities proposed within the BRISK³ Mind Model evolve throughout healthcare professionals' careers and organizational life cycles.

Longitudinal studies may also examine whether improvements in entrepreneurial capability contribute to sustained organizational innovation, improved patient outcomes, workforce performance, and long-term health system resilience.

17.5 Application Across Healthcare Disciplines

Although the present study conceptualizes the BRISK³ Mind Model for healthcare broadly, future studies should examine its applicability within specific professional groups and organizational settings.

Potential research contexts include:

- Medicine
- Nursing
- Pharmacy
- Dentistry
- Public Health

- Allied Health Professions
- Hospital Administration
- Digital Health
- Primary Healthcare
- Community Health
- Health Technology Start-ups
- Global Health Organizations

Comparative analyses across these settings may reveal discipline-specific entrepreneurial competencies while strengthening the model's practical relevance.

17.6 Integration with Emerging Healthcare Technologies

Rapid advances in artificial intelligence, machine learning, precision medicine, digital health, robotics, genomics, telemedicine, wearable technologies, and big data analytics continue to reshape healthcare delivery. Future research should examine how these technological developments interact with the entrepreneurial capabilities proposed within the BRISK³ Mind Model.

For example, researchers may investigate whether Healthcare Opportunity Intelligence enhances the adoption of artificial intelligence in clinical practice or whether Healthcare Knowledge Capital facilitates digital transformation within healthcare organizations.

17.7 Evaluation of Educational and Leadership Interventions

The BRISK³ Mind Model provides a potential framework for entrepreneurship education and leadership development within healthcare. Future intervention studies should examine whether educational programmes based on the model improve entrepreneurial competence among healthcare professionals.

Experimental and quasi-experimental designs may compare traditional leadership training with programmes explicitly structured around the BRISK³ framework to evaluate their effects on innovation behaviour, strategic decision-making, leadership effectiveness, and organizational performance.

17.8 Policy and Organizational Evaluation

Future studies should also investigate how the BRISK³ Mind Model can inform healthcare policy and organizational reform. Researchers may examine whether healthcare organizations that intentionally develop the five entrepreneurial capabilities demonstrate improved innovation performance, organizational resilience, quality improvement, employee engagement, patient satisfaction, and health system outcomes.

Similarly, policy researchers may explore how national healthcare strategies incorporating entrepreneurial capability development influence workforce performance, organizational adaptability, and healthcare innovation.

17.9 Theoretical Extension of the BRISK³ Mind Model

Although the present framework integrates six complementary theories, future theoretical research may extend the BRISK³ Mind Model by incorporating additional perspectives from behavioural economics, institutional theory, implementation science, complexity science, organizational psychology, digital innovation, and sustainability research.

Such theoretical refinement may identify additional entrepreneurial capabilities, mediating variables, moderating influences, or contextual factors that further strengthen the explanatory power of the model.

17.10 Towards the Establishment of Healthcare Entrepreneurship as a Distinct Field

Finally, future scholarship should explore the broader implications of the BRISK³ Mind Model for establishing healthcare entrepreneurship as a distinct interdisciplinary field of research. By integrating entrepreneurship, healthcare management, public health, strategic leadership, innovation studies, and health policy, the framework provides a platform for developing new theories, educational programmes, research networks, and professional practices dedicated to entrepreneurial health system transformation.

Continued empirical testing, theoretical refinement, and interdisciplinary collaboration will determine the long-term contribution of the BRISK³ Mind Model to this emerging field.

Concluding Remarks

The future research agenda presented above underscores that the BRISK³ Mind Model is intended not as a final theory but as a foundation for ongoing scholarly inquiry. Through empirical validation, theoretical refinement, cross-contextual application, and interdisciplinary collaboration, future studies can strengthen the evidence base for the model and expand its contribution to healthcare entrepreneurship, innovation, leadership, and health system transformation. Such efforts will not only enhance the scientific credibility of the framework but also support the development of more adaptive, innovative, and resilient healthcare systems worldwide.

18. Conclusion

The increasing complexity of contemporary healthcare systems demands innovative approaches that extend beyond conventional models of healthcare management and leadership. Persistent challenges—including rising healthcare costs, workforce shortages, demographic transitions, rapid technological change, emerging infectious diseases, widening health inequities, and growing public expectations—require healthcare professionals and organizations to develop entrepreneurial capabilities that promote innovation, adaptability, and sustainable transformation. While entrepreneurship has been extensively examined within business and management disciplines, its application to healthcare remains conceptually fragmented and insufficiently integrated.

This study addressed this gap by developing the **BRISK³ Mind Model**, a novel conceptual framework that explains healthcare entrepreneurship through the interaction of **Healthcare Opportunity Intelligence (HOI), Healthcare Risk Intelligence (HRI), Healthcare Innovation Capability (HIC), Healthcare Strategic Leadership Capability (HSLC), and Healthcare Knowledge Capital (HKC)**, supported by three foundational entrepreneurial mindsets: the **Growth Mindset, Systems Mindset, and Value-Creation Mindset**. Grounded in six complementary theoretical perspectives—Schumpeter's Innovation Theory, Kirzner's Opportunity Discovery Theory, Dynamic Capabilities Theory, the Knowledge-Based View of the Firm, Effectuation Theory, and Strategic Leadership Theory—the framework integrates previously disconnected concepts into a coherent model specifically designed for healthcare organizations.

The BRISK³ Mind Model advances entrepreneurship scholarship by moving beyond single-dimension explanations of entrepreneurial behaviour. Rather than viewing entrepreneurship solely through the lens of innovation, opportunity recognition, leadership, or risk-taking, the model conceptualizes entrepreneurship as a dynamic system of interdependent capabilities that collectively influence organizational resilience, innovation performance, evidence-informed decision-making, and health system transformation. In doing so, the framework introduces several original healthcare-specific constructs that extend existing entrepreneurship theory and provide a stronger conceptual foundation for understanding entrepreneurial behaviour in healthcare settings.

Beyond its theoretical contribution, the BRISK³ Mind Model offers practical relevance for healthcare organizations, educational institutions, policymakers, and professional bodies. The framework provides a structured approach for strengthening entrepreneurial competencies, guiding leadership development, informing curriculum design, supporting organizational innovation, and promoting evidence-informed healthcare reform. Its emphasis on value creation, systems thinking, strategic leadership, and knowledge integration aligns with contemporary global priorities, including Universal Health Coverage, digital health transformation, resilient health systems, and the Sustainable Development Goals.

The study also establishes a comprehensive research agenda by identifying opportunities for empirical validation, psychometric scale development, cross-cultural comparisons, longitudinal investigations, intervention studies, and policy evaluation. These future studies will be essential for refining the BRISK³ Mind Model, testing its theoretical propositions, and determining its applicability across diverse healthcare contexts.

In conclusion, the BRISK³ Mind Model represents a significant step toward establishing **healthcare entrepreneurship** as a distinct field of interdisciplinary scholarship. By integrating entrepreneurship, healthcare management, public health, strategic leadership, innovation studies, and knowledge management into a unified conceptual framework, the model provides both a theoretical platform for future research and a practical roadmap for strengthening healthcare organizations and systems. As healthcare continues to evolve in response to global challenges, entrepreneurial capability will become increasingly important in shaping resilient, innovative, and patient-centred health systems. The BRISK³ Mind Model offers a foundation upon which this future can be built.

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