



## **A Bibliometric Review of Risk-Taking Propensity Research Trends Patterns and Future Directions**

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### **ABSTRACT**

Risk-taking propensity is a central construct in understanding human behavior under uncertainty and has attracted sustained scholarly attention across disciplines such as psychology, management, entrepreneurship, health, and decision sciences. Despite the growing volume and interdisciplinary nature of this literature, a comprehensive overview of its intellectual structure, thematic evolution, and future research directions remains limited. This study aims to address this gap by conducting a bibliometric review of risk-taking propensity research using publications indexed in the Scopus database. Bibliographic data were analyzed using VOSviewer to map publication trends, influential authors, institutions, and countries, as well as to identify key research themes through co-authorship, citation, and keyword co-occurrence analyses. The findings reveal that the literature is strongly rooted in psychological and behavioral research, with high risk behavior emerging as a dominant core theme. Evolving emphasis on decision-making, risk perception, and cognitive processes. More recent research increasingly links risk-taking propensity to entrepreneurship, innovation, and strategic management, reflecting a shift toward applied and organizational contexts. This study provides a systematic and visualized synthesis of the risk-taking propensity research landscape, offering theoretical insights, practical implications, and guidance for future interdisciplinary inquiry.

**Keywords:** *Bibliometric analysis; Decision making; Entrepreneurship; High risk behavior; Risk perception; Risk-taking propensity*

### **INTRODUCTION**

Risk-taking propensity has long been recognized as a fundamental construct in understanding human behavior across multiple disciplines, including psychology, economics, management, finance, and entrepreneurship. At its core, risk-taking propensity refers to an individual's tendency to engage in behaviors that involve uncertainty and potential negative outcomes in pursuit of perceived rewards [1], [2]. This construct plays a critical role in shaping strategic decisions, innovation behavior, financial choices, and entrepreneurial actions, making it a central variable in both individual-level and organizational-level research. As global environments become increasingly volatile and uncertain, interest in how individuals and organizations perceive and respond to risk has intensified [3]–[5].

From a theoretical standpoint, risk-taking propensity has evolved from early rational-choice models toward more nuanced behavioral and psychological perspectives. Classical economic theories assumed that decision-makers are rational actors who evaluate risk objectively [6]. However, subsequent behavioral research demonstrated that risk preferences are influenced by cognitive biases, emotions, experience, and contextual factors [7], [8]. These insights broadened the conceptualization of risk-taking propensity, positioning it not merely as a stable personality trait but also as a dynamic construct shaped by situational and cultural contexts.

In management and entrepreneurship research, risk-taking propensity has been widely associated with strategic orientation, firm performance, and innovation outcomes. Entrepreneurial orientation theory, for example, explicitly positions risk-taking as a core dimension alongside

innovativeness and proactiveness [9]–[11]. Empirical studies consistently suggest that individuals with higher risk-taking propensity are more likely to initiate ventures, pursue innovation, and engage in strategic renewal, particularly under conditions of environmental uncertainty [12]. Consequently, risk-taking propensity has become a pivotal variable in explaining entrepreneurial behavior and competitive advantage. Beyond entrepreneurship, the relevance of risk-taking propensity extends to finance, organizational behavior, and public policy. In finance, individual risk preferences influence investment decisions, portfolio choices, and responses to market volatility [13]. In organizational contexts, managerial risk-taking affects strategic investment, mergers and acquisitions, and corporate governance practices [14], [15]. Moreover, public sector and policy research increasingly examines risk-taking behavior in leadership, crisis management, and innovation in governance, particularly in response to global challenges such as financial crises, pandemics, and climate change.

In recent years, technological advancements and digital transformation have further reshaped the landscape of risk-taking research. The rise of digital platforms, fintech, artificial intelligence, and algorithmic decision-making introduces new forms of risk and uncertainty, prompting scholars to revisit traditional assumptions about risk behavior [16]. Additionally, cross-cultural studies reveal that risk-taking propensity varies significantly across institutional, social, and cultural environments, highlighting the importance of contextualizing findings within broader socio-economic systems [8]. Given the expanding scope and interdisciplinary nature of risk-taking propensity research, the volume of scientific publications has grown substantially over the past decades. Studies now span diverse domains, methodologies, and theoretical frameworks, resulting in a fragmented body of knowledge. While narrative reviews and meta-analyses have contributed valuable insights, they often focus on specific contexts or theoretical perspectives, leaving limited understanding of the overall intellectual structure, thematic evolution, and collaborative patterns within the field. This growing complexity underscores the need for systematic, data-driven approaches to synthesize and map the development of risk-taking propensity research.

Despite the extensive and rapidly growing literature on risk-taking propensity, there is a lack of comprehensive bibliometric analyses that systematically examine the evolution, structure, and emerging directions of this research domain. Existing reviews tend to be selective, theory-driven, or context-specific, which limits their ability to capture macro-level trends, influential contributors, and knowledge clusters across disciplines. As a result, scholars and practitioners face difficulties in identifying dominant themes, methodological trajectories, and underexplored research gaps that could inform future studies. Without a holistic bibliometric perspective, the cumulative development of risk-taking propensity research remains fragmented and insufficiently integrated. In response to these gaps, this study aims to conduct a comprehensive bibliometric review of risk-taking propensity research using publications indexed in the Scopus database.

## METHOD

This study employed a bibliometric research design to systematically analyze the intellectual structure, research trends, and thematic evolution of risk-taking propensity studies. Bibliographic data were retrieved from the Scopus database, selected for its comprehensive coverage of high-quality, peer-reviewed journals across multidisciplinary fields. The search strategy used relevant keywords such as “risk-taking propensity,” “risk propensity,” and related terms, applied to article titles, abstracts, and keywords, with no restriction on disciplinary scope. Only journal articles and review papers published in English were included to ensure consistency and academic rigor. The retrieved records were exported in compatible formats and analyzed using VOSviewer software, which enables visualization of bibliometric networks. Specifically, co-authorship analysis was conducted to examine collaboration patterns among authors and countries, citation analyses were used to identify influential publications and intellectual foundations, and keyword co-occurrence analysis was applied to uncover dominant research themes and emerging topics.

## RESULT AND DISCUSSION

### Co-Authorship Analysis

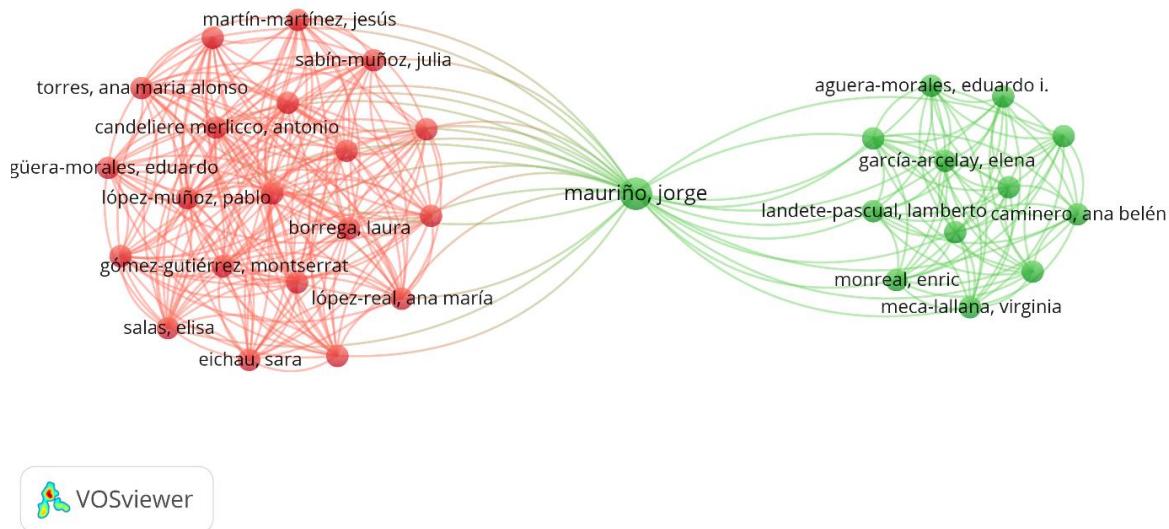


Figure 1. Author Visualization

Source: Data Analysis

Figure 1 reveals a clearly clustered collaboration structure within risk-taking propensity research, indicating the presence of two dominant author groups connected through a key bridging scholar. The red cluster on the left represents a dense and highly interconnected group of researchers—such as Jesús Martín-Martínez, Julia Sabín-Muñoz, Laura Borrega, and Pablo López-Muñoz—suggesting strong internal collaboration, likely within the same research community, institution, or national context. In contrast, the green cluster on the right, which includes authors such as Eduardo I. Agüera-Morales, Elena García-Arcelay, Ana Belén Caminero, and Enric Monreal, also demonstrates intensive intra-cluster collaboration but remains relatively distinct from the red cluster. Notably, Jorge Mauriño occupies a central bridging position between the two clusters, indicating his pivotal role in facilitating knowledge exchange and collaborative integration across otherwise separate research groups. This structure suggests that while risk-taking propensity research benefits from strong localized collaboration networks, cross-cluster interaction is still limited and often dependent on a small number of connecting authors.

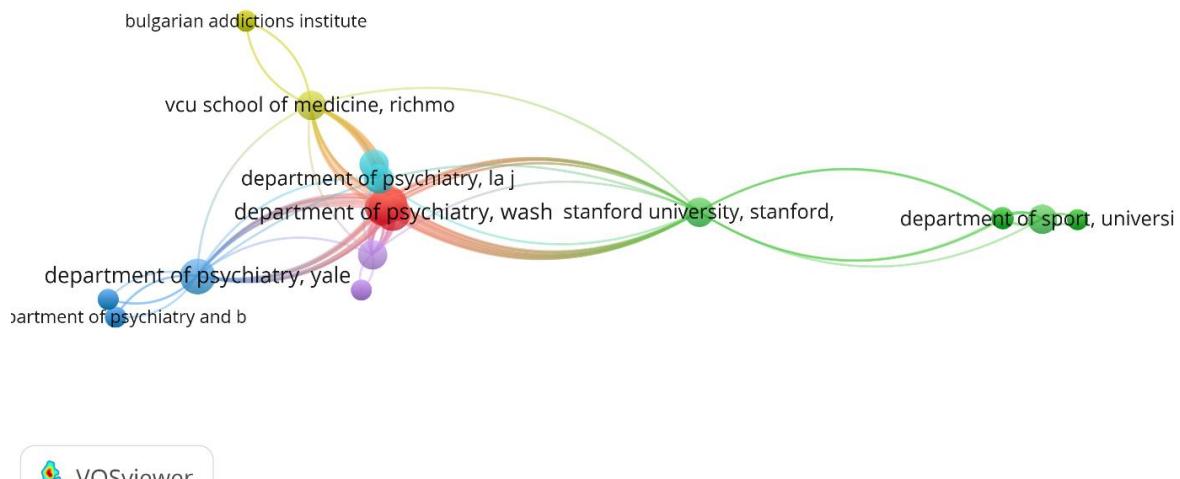


Figure 2. Affiliation Visualization

Source: Data Analysis

Figure 2 illustrates a concentration of risk-taking propensity research within medical and psychiatric institutions, highlighting the field's strong grounding in clinical and behavioral sciences. Central nodes such as the Department of Psychiatry at Stanford University and the Department of Psychiatry, Washington University function as key hubs, indicating their prominent role in producing and disseminating influential research. These institutions maintain active collaborative ties with other major centers, including Yale's Department of Psychiatry, the VCU School of Medicine, and the Bulgarian Addictions Institute, reflecting a well-established international research network focused on psychological and addiction-related dimensions of risk-taking behavior. Notably, a distinct linkage to a Department of Sport suggests an emerging interdisciplinary extension of risk-taking propensity research into sports science and performance-related contexts.

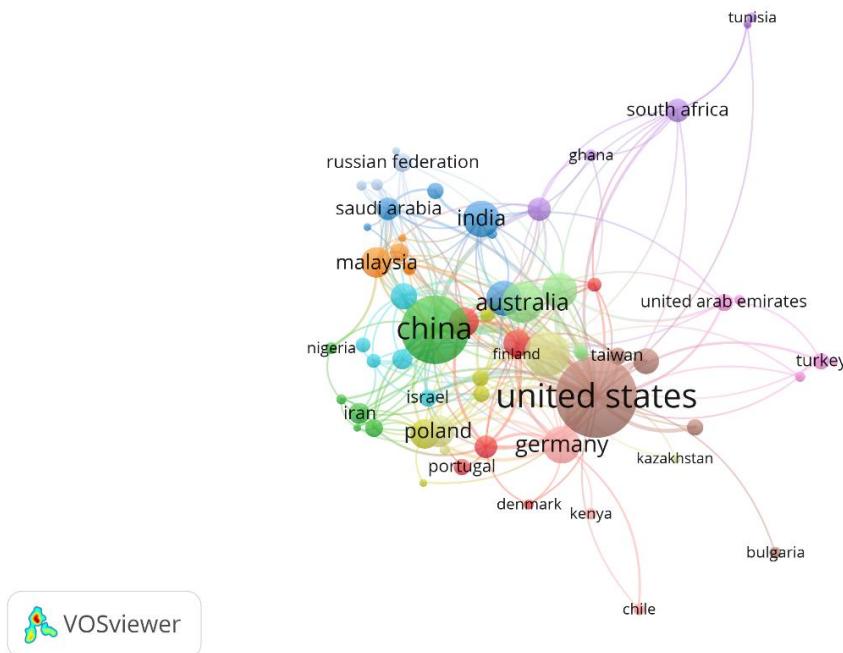


Figure 3. Country Visualization

Source: Data Analysis

Figure 3 demonstrates a highly globalized research landscape in the field of risk-taking propensity, with the United States occupying a dominant and central position. The large node size and extensive linkages indicate that the United States serves as the primary hub of international collaboration, maintaining strong research ties with countries across Europe, Asia, the Middle East, and Africa. Notably, countries such as China, Australia, Germany, and India emerge as key secondary contributors, forming dense collaborative clusters that reflect both regional cooperation and cross-continental partnerships. European countries—including Germany, Poland, Finland, Portugal, and Denmark—are closely interconnected, suggesting a cohesive European research network, while Asian countries such as China, Malaysia, Taiwan, and Saudi Arabia demonstrate growing scholarly engagement in the field. Additionally, the presence of countries from the Global South, such as South Africa, Ghana, Nigeria, Kenya, and Tunisia, highlights the increasing geographical diversification of risk-taking propensity research.

### Citation Analysis

Table 1. Most Cited Article

Citations	Author and Year	Title
185	[17]	The health belief model predicts vaccination intentions against COVID-19: A survey experiment approach
185	[18]	Relationship between entrepreneurship education and entrepreneurial goal intentions: psychological traits as mediators
132	[19]	Adoption of climate-smart agriculture among smallholder farmers: Does farmer entrepreneurship matter?
108	[20]	What Changes After Women Enter Top Management Teams? A Gender-Based Model Of Strategic Renewal
93	[21]	The motivational potency of nostalgia: The future is called yesterday
85	[22]	Leveraging genome-wide data to investigate differences between opioid use vs. opioid dependence in 41,176 individuals from the Psychiatric Genomics Consortium

Citations	Author and Year	Title
78	[23]	Traits and entrepreneurial intention: Testing the mediating role of entrepreneurial attitude and self-efficacy
77	[24]	Personality Traits and Social Entrepreneurial Intention: The Mediating Effect of Perceived Desirability and Perceived Feasibility
73	[25]	The antecedents of sustainability-oriented entrepreneurial intentions: An exploratory study of Angolan higher education students
72	[26]	Identifying robust correlates of risk preference: A systematic approach using specification curve analysis.

Source: Scopus, 2025

Table 1 presents the most cited articles within the dataset, highlighting the intellectual foundations and dominant thematic orientations of research related to risk-taking propensity and adjacent behavioral constructs. The most highly cited works, such as Zampetakis and Melas (185 citations) on vaccination intentions and Ndofirepi (185 citations) on entrepreneurship education and goal intentions, indicate a strong emphasis on behavioral decision-making under uncertainty, particularly in health and entrepreneurial contexts. Several influential articles focus on entrepreneurial intention and personality traits (including studies by Kangogo et al., Anwar et al., Tan et al., and Lopes et al.) underscoring the centrality of psychological traits, attitudes, and self-efficacy in shaping risk-related entrepreneurial behavior. High-impact contributions from organizational and strategic management perspectives, such as Post et al.'s gender-based model of strategic renewal, further demonstrate the relevance of risk-taking propensity in leadership and strategic change. Additionally, the presence of interdisciplinary studies, including Sedikides and Wildschut's work on nostalgia and Polimanti et al.'s large-scale genomic analysis of opioid use and dependence, reflects the broad conceptual reach of risk-related research across psychology, health, genetics, and social sciences. Finally, Frey et al.'s highly cited study on robust correlates of risk preference signals growing methodological rigor and interest in improving the measurement and validity of risk-related constructs.

#### Keyword Co-Occurrence Analysis

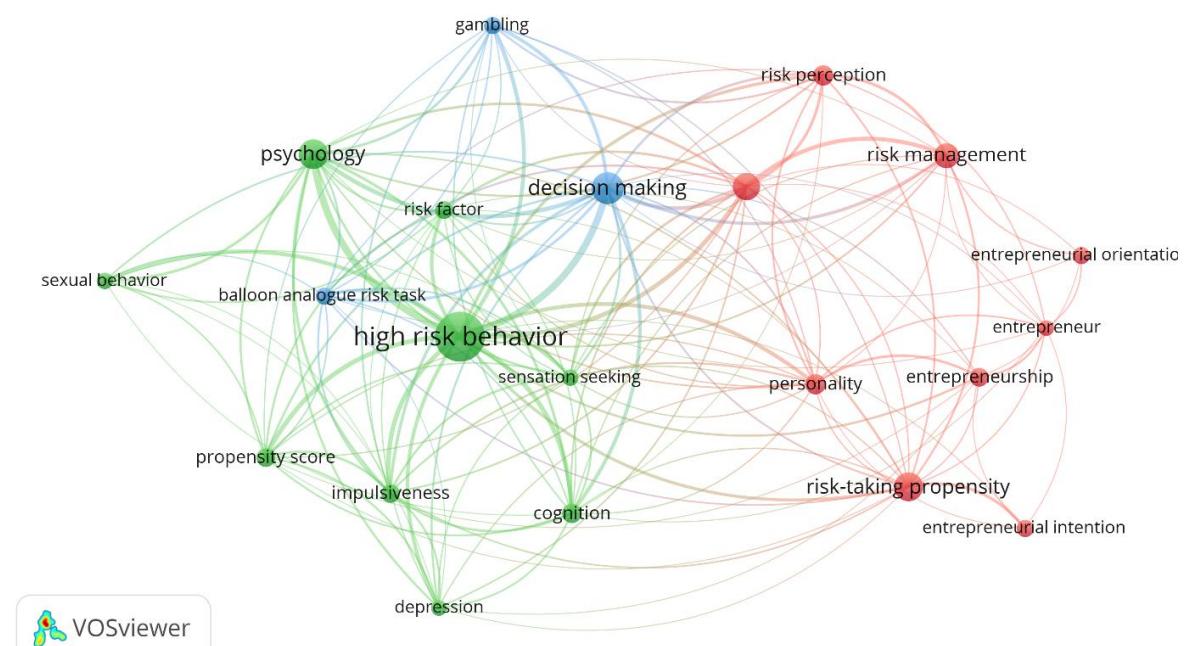


Figure 4. Network Visualization

Source: Data Analysis

Figure 4 above reveals a well-structured intellectual landscape of risk-taking propensity research, characterized by several interconnected thematic clusters. At the center of the network, "high risk behavior" emerges as a dominant and highly connected keyword, indicating its foundational role in linking diverse research streams. Its strong connections with terms such as impulsiveness, sensation seeking, cognition, and propensity score suggest that much of the literature conceptualizes risk-taking as a multifaceted behavioral outcome influenced by psychological traits and cognitive processes. This central positioning reflects the longstanding focus on understanding individual differences in risk-related behaviors. The green cluster, largely anchored in psychology, represents the behavioral and clinical orientation of the field. Keywords such as impulsiveness, depression, sexual behavior, and balloon analogue risk task highlight the extensive use of experimental and psychometric approaches to measure risk behavior in both normative and pathological contexts. The inclusion of gambling and risk factor further indicates strong ties to addiction studies and mental health research, reinforcing the dominance of psychological frameworks in explaining risk-taking propensity, particularly in high-risk and health-related domains.

In contrast, the red cluster reflects a managerial and entrepreneurial perspective on risk-taking propensity. Core terms such as risk-taking propensity, entrepreneurship, entrepreneurial orientation, entrepreneurial intention, and risk management emphasize how risk-related traits influence opportunity recognition, strategic decision-making, and venture creation. This cluster underscores the shift of risk-taking research toward organizational and economic outcomes, where individual propensity for risk is framed as a strategic asset that shapes innovation, leadership, and firm-level performance. Bridging these two dominant perspectives is the blue cluster, centered on decision making and risk perception, which functions as a conceptual integrator across disciplines. These keywords connect psychological mechanisms with managerial and entrepreneurial outcomes, suggesting that perception and cognitive evaluation of risk are critical mediating processes.

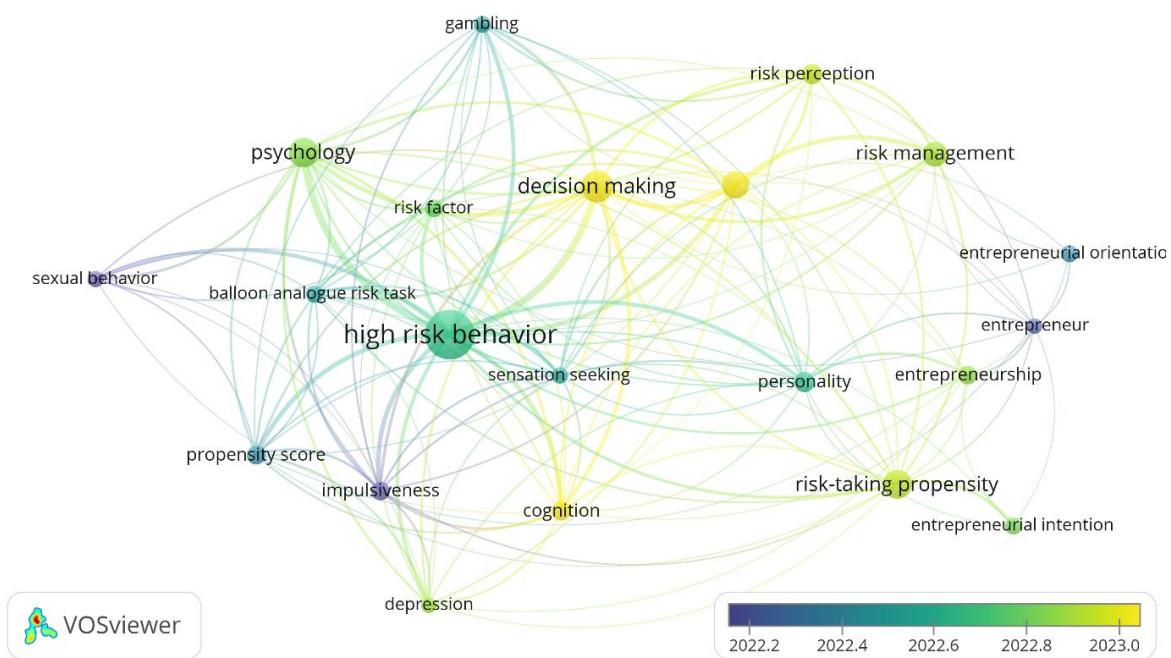


Figure 5. Overlay Visualization

Source: Data Analysis

Figure 5 illustrates the temporal evolution of research themes in risk-taking propensity, with node colors indicating the average publication year from earlier (blue) to more recent studies (yellow). The visualization shows that earlier research streams were predominantly concentrated on psychological and clinical themes, such as impulsiveness, propensity score, balloon analogue risk

task, sexual behavior, and gambling. These topics, represented by cooler colors, reflect the foundational phase of the literature, which focused on measuring individual risk behavior and identifying psychological risk factors using experimental and psychometric approaches. More recent research, indicated by greener to yellow nodes, demonstrates a clear shift toward cognitive and decision-oriented perspectives. Keywords such as decision making, cognition, risk perception, and risk management appear more prominent in the later period, suggesting growing scholarly interest in understanding how individuals evaluate and process risk rather than merely measuring risk outcomes. This trend indicates an increasing emphasis on cognitive mechanisms and evaluative processes that mediate the relationship between individual traits and observable risk-taking behavior. The most recent thematic developments are evident in the entrepreneurship-related cluster, where keywords such as risk-taking propensity, entrepreneurship, entrepreneurial orientation, and entrepreneurial intention are shown in warmer colors. This pattern signals a contemporary research agenda that positions risk-taking propensity as a strategic and economic construct relevant to innovation, venture creation, and organizational decision-making.

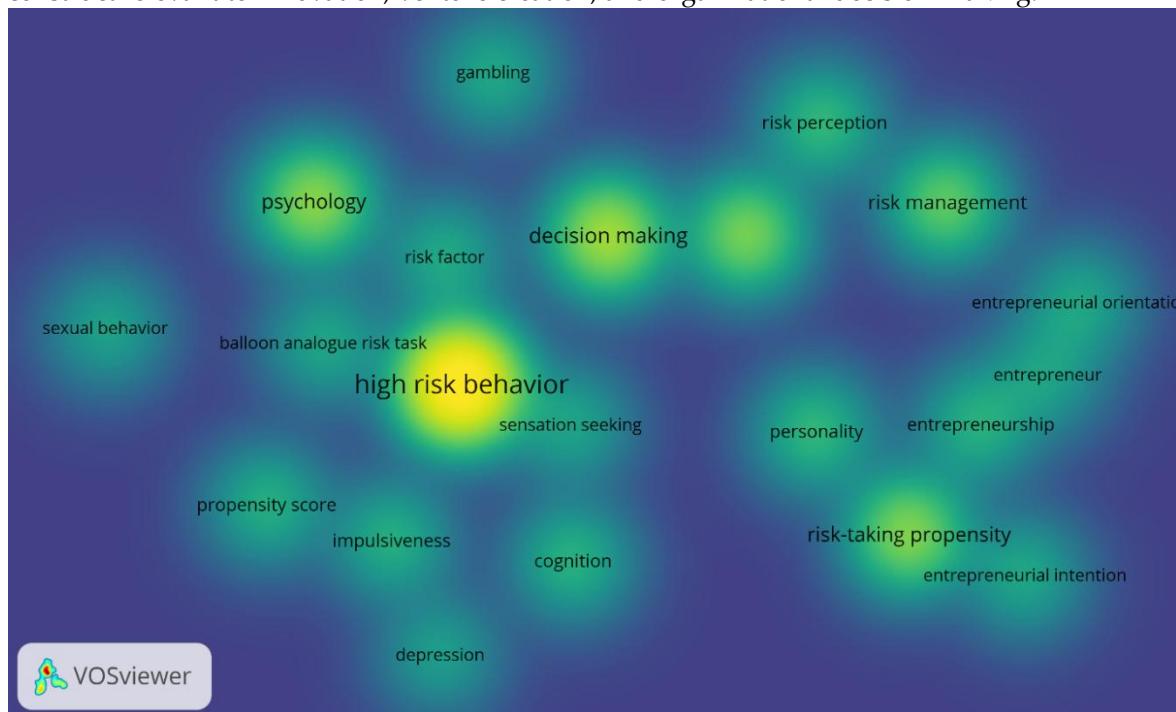


Figure 6. Density Visualization  
Source: Data Analysis

Figure 6 highlights the core concentration areas of research within the risk-taking propensity literature by showing regions of higher keyword frequency and co-occurrence intensity. The brightest and most prominent hotspot is centered on "high risk behavior," indicating that this concept represents the most intensively studied and conceptually central theme in the field. Closely surrounding this core are keywords such as sensation seeking, decision making, psychology, and risk factor, which together reflect the strong behavioral and psychological foundations of risk-taking research. This dense clustering suggests that much of the literature has historically focused on understanding risky behaviors through cognitive, emotional, and personality-based explanations. A secondary but clearly visible density cluster appears around "risk-taking propensity" and its close associations with entrepreneurship, entrepreneurial intention, personality, and risk management. Although slightly less dense than the behavioral core, this area indicates a growing and consolidating research stream that links individual risk propensity to entrepreneurial and strategic outcomes. The presence of additional moderate-density zones around cognition and risk perception further suggests increasing scholarly attention to integrative frameworks that connect psychological mechanisms with managerial decision-making.

## Discussion

### Practical Implication

The findings of this bibliometric review offer several important practical implications for researchers, educators, practitioners, and policymakers concerned with risk-related decision-making. First, the dominance of behavioral and psychological themes (such as high-risk behavior, impulsiveness, sensation seeking, and decision-making) suggests that interventions aimed at managing risk-taking propensity should prioritize cognitive and psychological mechanisms. For practitioners in health, finance, and organizational settings, this implies that risk management strategies should move beyond purely structural or regulatory controls and incorporate behavioral training, decision-support systems, and cognitive bias mitigation techniques. In health and public policy contexts, insights from risk perception and decision-making research can inform more effective communication strategies, particularly in areas such as vaccination uptake, addiction prevention, and public compliance under uncertainty.

Second, the growing prominence of entrepreneurship-related themes highlights the relevance of risk-taking propensity in venture creation, innovation, and strategic renewal. For entrepreneurship educators and business incubators, the results underscore the importance of integrating psychological trait development (such as calibrated risk tolerance, self-efficacy, and opportunity evaluation) into entrepreneurship curricula and training programs. Policymakers seeking to stimulate entrepreneurial ecosystems may also benefit from these insights by designing support mechanisms that reduce unnecessary environmental uncertainty while allowing productive risk-taking to flourish. Moreover, organizational leaders can use these findings to better understand how individual risk preferences shape strategic decisions, enabling more informed talent management and leadership development practices.

### Theoretical Contributions

From a theoretical perspective, this study contributes to the literature by providing a systematic, macro-level mapping of risk-taking propensity research, thereby clarifying the intellectual structure and thematic evolution of the field. The bibliometric evidence demonstrates that risk-taking propensity research has transitioned from a predominantly clinical and behavioral focus toward a more integrated framework that incorporates decision science, management, and entrepreneurship. This progression supports the view that risk-taking propensity should be conceptualized not merely as a static personality trait but as a context-sensitive and cognitively mediated construct. The identification of decision-making and risk perception as central bridging themes offers an important theoretical insight, suggesting that these constructs function as key mechanisms linking individual traits to observable outcomes. This finding aligns with and extends behavioral decision theory by highlighting the mediating role of cognitive evaluation processes in risk-related behavior. Furthermore, the emergence of entrepreneurship-oriented clusters indicates an ongoing theoretical shift toward viewing risk-taking propensity as a strategic resource within entrepreneurial orientation and innovation frameworks. By synthesizing these diverse strands, this study advances a more integrative understanding of risk-taking propensity that spans micro-level psychological processes and macro-level organizational phenomena.

### Limitation of the Study

Despite its contributions, this study is subject to several limitations that should be acknowledged. First, the analysis relied exclusively on the Scopus database, which, although comprehensive, may exclude relevant publications indexed in other databases such as Web of Science, PubMed, or Google Scholar. Consequently, some influential works particularly those published in regional journals or non-English outlets, may not be fully captured. Future studies could address this limitation by integrating multiple databases to enhance coverage and robustness. Second, bibliometric analysis is inherently limited to quantitative patterns of publication and citation, and therefore does not assess the substantive quality, methodological rigor, or theoretical depth of individual studies. While citation counts and co-occurrence networks provide valuable indicators of influence and thematic prominence, they cannot fully capture nuanced theoretical

contributions or empirical validity. Complementary approaches, such as systematic literature reviews or meta-analyses, would be beneficial in deepening interpretive insights.

## CONCLUSION

This bibliometric review provides a comprehensive overview of the evolution, structure, and emerging directions of risk-taking propensity research by systematically mapping the scientific literature indexed in the Scopus database. The findings reveal that the field is anchored in strong psychological and behavioral foundations, with high risk behavior serving as a central theme, while progressively expanding toward cognitive, managerial, and entrepreneurial perspectives. The analysis highlights the growing integration of decision-making and risk perception as key bridging mechanisms that connect individual traits with organizational and societal outcomes. Moreover, the increasing prominence of entrepreneurship-related research underscores the relevance of risk-taking propensity as a strategic resource in innovation and venture creation. By identifying influential contributors, dominant thematic clusters, and evolving research trends, this study contributes a structured and holistic understanding of the field and offers a valuable reference point for future interdisciplinary research aimed at advancing theory, practice, and policy related to risk-taking behavior.

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