Enhancing Auditor Judgment and Skepticism through Behavioral Insights: A Systematic Review

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Abstract- In the evolving landscape of financial reporting and accountability, the role of auditors in ensuring the integrity of financial statements remains critical. However, despite technological advancements and regulatory reforms, audit failures persist, often linked to lapses in auditor judgment and professional skepticism. This systematic review explores how behavioral insights—particularly cognitive biases—influence auditor decision-making and examines targeted interventions designed to enhance skepticism and audit quality. Drawing on literature from behavioral accounting, psychology, and organizational behavior, the review identifies key cognitive biases such as confirmation bias, anchoring, overconfidence, and the halo effect, which impair objective judgment during audit engagements. These biases can lead auditors to selectively seek evidence that supports clientpreferred positions or rely excessively on initial assessments. thereby undermining audit effectiveness. The review synthesizes empirical evidence from peer-reviewed studies published between 2000 and 2021, using the PRISMA method to ensure methodological rigor and transparency. It highlights behavioral interventions including structured decision aids, accountability mechanisms, mindfulness training, and debiasing prompts as promising strategies for mitigating judgment distortions. Notably. the incorporation of counterfactual reasoning tasks, professional skepticism training, and team-based review protocols show consistent efficacy in enhancing critical thinking and skepticism among auditors. Moreover, the review underscores the importance of audit firm culture and leadership in reinforcing skeptical behavior. Interventions are more effective when aligned with organizational norms that prioritize independence, ethical conduct, and reflective thinking. The findings advocate for a paradigm shift in audit training and practice-moving beyond technical competence to include behavioral competence as a core component of auditor development. This study offers actionable recommendations for audit firms, regulators, and educators, calling for the integration of behavioral science into audit methodology, professional standards, and continuing education programs. By bridging behavioral theory and audit practice, this review provides a foundational framework for improving auditor judgment and sustaining trust in financial reporting.

Indexed Terms- Auditor Judgment, Professional Skepticism, Cognitive Bias, Behavioral Insights, Audit Quality.

I. INTRODUCTION

In the contemporary financial landscape, the integrity of financial reporting is pivotal for maintaining public trust in organizations. This integrity is largely dependent on the quality of auditor judgment and the consistent application of professional skepticism, both of which are crucial for identifying material misstatements and ensuring compliance with accounting standards. The necessity of auditor judgment lies in the ability to make critical evaluations under uncertainty, while skepticism encourages a questioning attitude that challenges assumptions, particularly in complex financial environments influenced by rapid regulatory changes and technological advancements (Fabiianska et al., 2021; Kartika et al., 2021; Sulistyawati, 2021).

Despite the regulatory reforms aimed at enhancing audit reliability, audit failures continue to persist, frequently attributed to lapses in auditor judgment. High-profile financial scandals highlight the dire consequences of such failures, which include significant financial losses for stakeholders. reputational damage to firms, and a general decline in public confidence in the auditing profession (Betti & Sarens, 2020: Fabiianska et al., 2021). This persistent issue accentuates the need for a deeper exploration into the psychological and behavioral factors that influence auditor performance. Research indicates that cognitive biases-systematic deviations from rational judgment—can critically undermine audit quality, as biases such as confirmation bias, overconfidence, and the halo effect hinder auditors from objectively evaluating evidence and modifying preliminary conclusions based on new information (Kartika et al., 2021; Stevens et al., 2019).

A systematic review of these cognitive biases reveals that they often operate unconsciously, making them challenging to address through standard training or oversight mechanisms. Given the regulatory environment and the complexities of financial reporting, enhancing professional skepticism through targeted behavioral interventions appears essential for improving audit effectiveness (Appelbaum, Kogan & Vasarhelyi, 2017: Haapamäki & Sihvonen, 2019). By integrating insights from behavioral accounting and psychology, researchers advocate for practical recommendations that can assist audit practitioners, educators, and regulators in refining audit practices to mitigate the risks posed by inherent biases (Harding & Trotman, 2016; Yahya et al., 2021).

Moreover, it has been established that professional skepticism is inherently connected to audit quality. Studies demonstrate that auditors who cultivate higher levels of skepticism are more likely to yield accurate opinions, thus enhancing audit quality (Kartika et al., 2021; Setiyawati et al., 2020; Ciołek, 2017). However, there is a pressing need for ongoing research to identify effective interventions and approaches that can foster a culture of skepticism within audit teams, leading to improved judgment and decision-making processes during audits (Balios, et al., 2020). Existing literature advocates for the inclusion of psychological training and regulatory adjustments that emphasize critical thinking and a healthy questioning mindset, which are vital for better audit outcomes in an increasingly interconnected global market (Fabiianska et al., 2021; Harding & Trotman, 2016).

In conclusion, the integration of cognitive science into auditing practice is not merely an academic exercise but a necessary evolution in the face of continuous industry challenges. The proposed systematic review aims to elucidate the cognitive biases affecting auditor judgment and provide a framework for behavioral innovations that could bolster the overall effectiveness of the audit process, ultimately reinforcing the trust that the public places in financial reporting (Buchheit, et al., 2020).

2.1. Methodology

The methodology for this systematic review on enhancing auditor judgment and skepticism through behavioral insights was anchored in the PRISMA framework. The review began with an extensive identification process that sourced 118 articles from peer-reviewed journals, academic databases such as Scopus, Web of Science, and Google Scholar, as well as grey literature. The search strategy was formulated using combinations of keywords and Boolean operators including "auditor judgment," "professional skepticism," "behavioral insights," "audit decisionmaking," "cognitive biases," "fraud detection," "data visualization in auditing," and "audit automation." Reference lists from key articles were also scanned to identify additional relevant studies.

To ensure relevance and reduce bias, duplicate entries were removed, and the remaining 80 unique studies underwent a screening process where titles and abstracts were examined for alignment with the research focus. Studies not centered on behavioral or cognitive factors influencing auditors' professional skepticism and decision-making were excluded. Articles focusing solely on technical audit procedures, financial regulation compliance without behavioral context, or non-auditing professions were also eliminated during this phase.

Following the initial screening, 60 full-text articles were assessed for eligibility. The inclusion criteria were carefully applied, favoring articles that presented empirical or conceptual findings related to behavioral audit models, decision-making frameworks, and psychological factors affecting skepticism. Studies had to be published in English between 2009 and 2024 and must have either directly addressed or implied behavioral dimensions in auditing. The eligibility assessment was guided by thematic coherence, methodological rigor, and the applicability of insights to the auditing domain.

After the eligibility check, 50 articles were selected for comprehensive full-text analysis. Each article was analyzed using a structured thematic coding process, focusing on variables such as cognitive heuristics, behavioral red flags, professional judgment contexts, audit risk awareness, and decision-support tools. Insights were categorized under major themes emerging from the literature, including the role of behavioral nudges, biases in audit evaluations, technology-enhanced skepticism, and psychological modeling in judgment formation. Articles that applied artificial intelligence, machine learning, or data visualization to simulate or enhance human audit judgment were also retained due to their relevance to behavioral augmentation.

Ultimately, 40 high-quality articles met the full inclusion criteria and formed the basis of the final synthesis. The selected studies represented multidisciplinary contributions from accounting, behavioral science, cognitive psychology, and information systems. They were evaluated not only for their theoretical contributions but also for their potential to inform practical improvements in auditor skepticism and judgment. Cross-validation of key insights was performed to reduce confirmation bias, and triangulation was used to align findings with established auditing standards and behavioral theories.

The PRISMA flowchart adapted for this review was informed by methodological guidance in previous works such as Achumie et al. (2022) on occupational exposure risk modeling, Adekunle et al. (2021) on predictive audit models, Adiloglu and Güngör (2019) on audit digitalization, and Antunes et al. (2022) on cybersecurity auditing. These frameworks provided a foundational structure for the inclusion and exclusion decisions and validated the rigor of the review process. By using the PRISMA framework in conjunction with behavioral science perspectives, this methodology ensures a transparent, replicable, and evidence-based approach to identifying how behavioral insights can improve audit quality and professional judgment.



Figure 1: PRISMA Flow chart of the study methodology

2.2. Theoretical Framework

Professional skepticism is a fundamental attribute that auditors must possess to ensure the integrity and effectiveness of the auditing process. Defined by the International Auditing and Assurance Standards Board (IAASB), it is characterized by a questioning mindset and a critical evaluation of audit evidence (Chang & Luo, 2019). The presence of skepticism among auditors plays a pivotal role in identifying potential misstatements due to error or fraud, thereby reinforcing public confidence in the financial reporting ecosystem. Research indicates that a higher level of professional skepticism correlates with improved audit quality, emphasizing its importance in the context of complex financial environments marked by aggressive earnings management and increasing regulatory expectations (Kartika et al., 2021; Sulistyawati, 2021). Figure 2 shows the Conceptual Framework as presented by Hikmayah & Aswar, 2019.



Figure 2: Conceptual Framework (Hikmayah & Aswar, 2019).

Moreover, the complexity of auditing tasks has triggered scholarly interest in the cognitive and behavioral factors influencing auditors' judgments. Just as the auditing field grapples with the demands of rigorous professional standards, studies reveal persistent gaps in the application of professional skepticism, often stemming from cognitive biases such as confirmation bias and anchoring (Dagilienė & Kloviené, 2019). Auditors, under pressure or when faced with familiar circumstances, may unconsciously favor information that confirms initial hypotheses, leading to flawed judgments and a compromised audit quality (Henrizi et al., 2021: Maradona, 2020). The dual-process theory of cognition, which distinguishes between fast, intuitive thinking (System 1) and slower, analytical thinking (System 2), is particularly relevant. In time-sensitive audit environments, auditors often resort to System 1 thinking, which can diminish the level of skepticism required (Harding & Trotman, 2016; Henrizi et al., 2021).

Behavioral science has emerged as a valuable lens through which to understand the decision-making processes of auditors, highlighting how cognitive biases and mental shortcuts can distort judgment. The concept of bounded rationality further underscores this point, suggesting that even skilled auditors may not operate with complete information and are frequently pressed to make satisfactory rather than optimal decisions (DiGabriele, 2016: Maradona, 2020). Thus, recognizing the limitations imposed by time constraints, cognitive overload, and emotional influences can help firms design effective interventions that promote professional skepticism among auditors (Egbuhuzor, et al., 2021, Ogunnowo, et al., 2021). Implementing structured audit processes that encourage the seeking of disconfirming evidence and fostering environments where dissenting opinions are welcomed can bolster the skeptical mindset essential for high-quality audits.

Training programs aiming to enhance professional skepticism must shift focus from traditional technical competencies to incorporating behavioral awareness and cognitive self-reflection. Auditors should be equipped with tools that enhance their analytical thinking skills and help mitigate cognitive biases, which are critical in navigating complex auditing tasks and evaluations (Glover & Prawitt, 2014). Ensuring that auditors recognize their cognitive vulnerabilities can create a more resilient audit environment, ultimately preserving the integrity of the auditing process and fostering trust among stakeholders.

In summary, the interplay between professional skepticism and behavioral science offers a nuanced understanding of the factors shaping auditor judgment and decision-making. The need for skepticism is paramount in the audit profession, demanding intentional cultivation through organizational practices and supportive environments. If adequately supported, auditors can enhance the quality of their work, meeting both regulatory standards and public expectations (Gepp, et al., 2018).

2.3. Cognitive Biases Affecting Auditor Judgment

The influence of cognitive biases on auditors' judgment and decision-making processes is a critical area of study within the field of auditing, particularly as it relates to the integrity and quality of audit outcomes. Cognitive biases, including confirmation bias, anchoring bias, overconfidence bias, halo effect, and availability bias, significantly impair the auditors' ability to maintain professional skepticism and evaluate evidence objectively (Chukwuma-Eke, Ogunsola & Isibor, 2021, Paul, et al., 2021).

Confirmation bias is notoriously pervasive in the audit profession. Auditors, when predisposed to certain beliefs about a client, may unconsciously seek or interpret evidence that confirms their expectations while disregarding evidence that contradicts them. This behavior has been documented in various studies indicating that cognitive biases, such as confirmation bias, play a substantial role in audit judgment failures, ultimately leading to weak fraud detection and inadequate risk assessments (Honigsberg, 2020). For instance, Chang and Luo emphasize the risk associated with visualization techniques in audits that can unintentionally trigger cognitive biases, including confirmation bias (Chang & Luo, 2019: Lois, et al., 2020). Addressing this requires not only training but also embedding systems that encourage auditors to actively seek disconfirming evidence.

Anchoring bias, another critical cognitive distortion, arises when auditors overly rely on initial information, such as past audit findings or preliminary client assertions, without adequately adjusting their evaluations in light of new evidence. Research indicates that anchoring effects persist even when auditors are aware of the need for skepticism, as their decisions remain unduly influenced by initial anchors (Chang & Luo, 2019; Henrizi et al., 2021). The study conducted by Henrizi et al. provides empirical evidence supporting the notion that anchoring can detrimentally affect audit judgments in practical settings (Henrizi et al., 2021: Lowe, et al., 2017). This underlines the urgency for structural processes in audit practices that encourage a reassessment of initial evaluations. Hamshari, Ali & Algam, 2021, presented in figure 3 a figure of Enhancing Auditor Professional Skepticism shown in figure 3.



Figure 3: Enhancing Auditor Professional Skepticism (Hamshari, Ali & Alqam, 2021).

Overconfidence bias is linked to auditors' overestimation of their skills and knowledge, often resulting in premature audit conclusions or an insufficient level of documentation and testing (Eissa, 2020). Empirical investigations have shown that overconfidence among auditors can lead to a significant reduction in the overall quality of audits performed Júnior & Sena, 2022). As Eissa outlines, recognizing overconfidence levels in leadership, such as that of the CEO, can critically impact auditor judgment and risk assessments (Eissa, 2020: Mamahit

& Urumsah, 2018). This highlights the urgent need for auditors to cultivate metacognitive awareness of their cognitive limitations to minimize potential biases in their work (Akhigbe, et al., 2021, Odio, et al., 2021).

The halo effect, which occurs when auditors allow an overall favorable impression of a client to unduly influence their evaluations of specific assertions, undermines their objectivity (Chang & Luo, 2019; Eissa, 2020). This bias can cause auditors to overlook potential red flags in high-risk areas, especially when clients maintain strong reputational standing. Researchers have pointed out that the biases affecting auditor judgment often interact and can be amplified by organizational culture and interpersonal dynamics within audit teams, further complicating the maintenance of professional skepticism (Eissa, 2020: Perdana, Rob & Rohde, 2018).

Moreover, availability bias manifests when auditors make decisions based on information that is most readily available, potentially ignoring unique or emerging risks (Chang & Luo, 2019). This selective focus can distort risk evaluations and impact audit procedures adversely. In their comprehensive analysis, researchers delineate how availability bias can lead auditors to prioritize familiar risks at the cost of comprehensive risk assessments, providing yet another layer of complexity to the auditing process (Chang & Luo, 2019: Rahman, 2020).

Mitigating the adverse effects of these cognitive biases on audits necessitates a multifaceted approach, including training that incorporates behavioral insights and structured decision-making frameworks. Implementing techniques such as checklists that prompt auditors to document alternative hypotheses can counteract biases effectively (Chang & Luo, 2019: Sow & Gehrke, 2019). Additionally, fostering an audit culture that prioritizes diverse perspectives and regular debriefing can serve to challenge prevailing biases, thus enhancing the quality of the audit outcomes.

In conclusion, cognitive biases such as confirmation bias, anchoring bias, overconfidence bias, halo effect, and availability bias present substantial challenges to the accuracy and reliability of audits. Recognizing and addressing these cognitive distortions is crucial for maintaining the integrity of the audit profession and ensuring public trust in financial reporting (Sun, 2019).

2.4. Behavioral Interventions to Enhance Professional Skepticism

Enhancing professional skepticism among auditors is an essential goal in the context of increasing complexities in financial transactions and the persistent issues surrounding audit failures. Research indicates that while technical skills and ethical standards are fundamental, they are insufficient to combat the subconscious biases and heuristics that can distort auditors' judgments (Sun & Vasarhelyi, 2018: Yuara, Ibrahim & Diantimala, 2019). The integration of behavioral interventions, grounded in behavioral science principles, has emerged as an effective approach to cultivate this skepticism and improve the overall quality of audits (Colquhoun et al., 2016: Tiwari & Debnath, 2017). Specifically, these interventions aim to disrupt ingrained cognitive patterns by promoting reflective and evidence-based decision-making. The theoretical research model presented by Yang, Brink & Wier, 2018, is shown in figure 4.



Figure 4: Theoretical research model (Yang, Brink & Wier, 2018).

One prominent behavioral intervention includes the use of structured decision aids and checklists, which have gained traction as effective tools in the auditing process. These structured frameworks guide auditors to systematically evaluate information, challenge initial assumptions, and consider alternative explanations (Adiloğlu & Güngör, 2019: Ivers et al., 2014). For instance, research demonstrates that auditors who employ decision aids exhibit significantly enhanced skepticism and are more adept at identifying inconsistencies in evidence compared to those who rely on unstructured decision-making processes (AlKetbi et al., 2014). The framework provided by these tools encourages auditors to engage in critical thinking, thereby mitigating biases like confirmation bias and availability heuristics. Moreover, when decision aids are integrated within audit software, they foster a disciplined process that transitions abstract professional skepticism into tangible, actionable behaviors (Aliyu, et al., 2020: Ramasubramanian et al., 2011).

Complementarily, mindfulness and debiasing training represent another strategic behavioral intervention aimed at enhancing professional skepticism in audit practices. Mindfulness cultivates the ability to maintain awareness and reflection during auditing tasks, counteracting reliance on cognitive shortcuts that may lead to biased outputs (Cooke et al., 2018: Diamantopoulou, Tsohou & Karyda, 2020). Training programs focused on debiasing techniques, which educate auditors on common judgment errors and promote practices such as counterfactual thinking, have proven effective in improving the depth and accuracy of audit judgments (Elwyn, 2006). Evidence suggests that these interventions not only increase auditors' proclivity to challenge client assertions but also alleviate stress-related impairments in their judgment capabilities (Cooke et al., 2018: Drivas, et al., 2020).

Accountability pressure further serves as a vital behavioral mechanism to boost diligent and skeptical inquiry among auditors. The psychological principle of "accountability to an audience" indicates that when auditors recognize that their decisions will undergo scrutiny by peers or superiors, they are more likely to engage more thoroughly with the evidence at hand. This accountability can be reinforced through peer reviews, second partner sign-offs, or requirements for detailed documentation, ultimately promoting a more meticulous approach to audit tasks (Islam, Farah & Stafford, 2018: McDonald et al., 2011). It is critical to note that the effectiveness of these accountability structures relies on the perceived competence of the reviewers; lack of perceived credibility can lead to defensive reasoning and reduced compliance with critical thinking processes (Joshi, Elluri & Nagar, 2020: Tejedor-Sojo et al., 2014).

Team-based consultation mechanisms also contribute significantly to reinforcing skepticism within audit teams. The collaborative dynamics of team interactions can either foster or inhibit skeptical behavior among auditors. Structured team protocols, such as brainstorming sessions and regular feedback loops, encourage collaborative reflection and critical dialogue (Adekunle, et al., 2021, Oyedokun, 2019). Research underlines that open communication and respectful dissent within teams enhance the quality of judgments while preventing undue conformity or groupthink that can undermine skepticism (Kahyaoğlu & Çalıyurt, 2018: Szymczak et al., 2014). Psychologically safe environments that embrace diverse viewpoints allow for a more engaged and reflective audit process, thereby nurturing a culture of critical inquiry.

The benefits of these behavioral interventions are supported by growing empirical evidence from recent studies. For instance, a controlled experiment highlighted that auditors utilizing structured decision aids showed not only increased levels of skepticism but also a greater capacity to detect inconsistencies in audits compared to their counterparts (Larkin et al., 2021). Similarly, studies on debiasing training have demonstrated that participants were better equipped to update their judgments when faced with contradictory information (Agbede, et al., 2021, Oyegbade, et al., 2021). Furthermore, institutionalized accountability requirements have been shown to enhance thorough documentation and a deeper examination of high-risk accounts (Landis-Lewis et al., 2015). Real-world implementations of these interventions in reputable auditing firms have demonstrated improvements in audit quality metrics, further emphasizing their practical significance (Lankton, Price & Karim, 2020: Makarov et al., 2021).

Despite their potential, the implementation of behavioral interventions faces challenges. Resistance from auditors concerning new practices or perceived additional burdens highlights the need for considerate integration into existing workflows and continuous support from leadership (Lewallen, 2020; Soleymani et al., 2019). A thoughtful approach that encompasses practitioner feedback, pilot testing, and ongoing training can ensure the successful adoption of these interventions in audit practices.

In conclusion, behavioral interventions represent a pivotal strategy for enhancing professional skepticism

among auditors and improving the credibility of financial reporting. By employing structured decision aids, mindfulness training, and accountability mechanisms, organizations can foster critical thinking that translates into actionable behaviors, ultimately fortifying the integrity of the auditing profession (Agho, et al., 2021, Otokiti, et al., 2021). As audit demands from regulators and stakeholders continue to escalate, adopting insights from behavioral science is essential for meeting these challenges head-on (Sabillón, et al., 2017).

2.5. Organizational and Cultural Considerations

Enhancing auditor judgment and professional skepticism through behavioral insights is a complex process influenced significantly by the organizational and cultural contexts in which auditors operate. Research indicates that auditor behavior is deeply shaped by the internal environment created by audit firms, including leadership style, structures, values, and everyday practices (Kartika et al., 2021; Gissel, 2018; Noviyanti & Winata, 2015). It is essential to acknowledge that fostering a culture of professional skepticism extends beyond individual competence and awareness; it necessitates collective organizational commitment to ethical decision-making and accountability (Kusumawati & Syamsuddin, 2018; Gissel, 2018; Glover & Prawitt, 2014).

The tone at the top, established by senior executives and partners, plays a pivotal role in shaping auditor behavior. When firm leaders prioritize integrity and communicate the importance of skepticism, they create an environment where these values are viewed as essential rather than merely desirable (Noviyanti & Winata, 2015: Sardi, et al., 2020). A study highlights the influence of leadership on auditors' attitudes, demonstrating that when leaders back critical inquiry and discourage blind acceptance of client assertions, auditors are more engaged in exercising skepticism (Harding & Trotman, 2016). Conversely, if leaders implicitly express that commercial objectives take precedence over ethical practices, a culture of complacency emerges, undermining professional skepticism. This dynamic emphasizes the importance of ethical leadership in reinforcing the values that preserve the quality of the audit work (Adewoyin, 2021, Tula, et al., 2004).

Moreover, the mechanisms by which auditors are trained and socialized into their roles are critical to shaping their skeptical mindset. Effective training programs that integrate behavioral science principles, such as awareness of cognitive biases, significantly enhance auditors' judgment capabilities compared to traditional training focused solely on technical skills (Setiyawati et al., 2020; Hurtt et al., 2013: Glover & Prawitt, 2014). Socialization processes, including mentorship relationships, serve to reinforce these behaviors in real-time, encouraging junior auditors to ask questions and challenge assumptions, thereby embedding skepticism as an organizational norm rather than an abstract concept (Stevens et al., 2019: Sulistyowati, Handayani & Suryanto, 2020).

Professional skepticism can also be nurtured through team dynamics and peer influences within audit firms. Teams develop informal rules about evidence requirements and the level of scrutiny applied to client explanations, which can either enhance or inhibit skepticism. For example, in teams where performance metrics emphasize efficiency over thoroughness, auditors may feel pressured to minimize their critical questioning (Yasa et al., 2021). In contrast, teams that cultivate an atmosphere valuing open discussion and rigorous evaluation are more likely to promote a skeptical culture (AlKetbi, et al., 2014: Kim et al., 2018). Therefore, it is crucial for audit firms to establish clear expectations concerning evidence evaluation and actively promote accountability among team members (Hurtt et al., 2013: McDonald, Charles & Gafni, 2011).

Incorporating behavioral interventions into the culture and processes of audit firms is a vital step in operationalizing improved judgment and skepticism. By embedding structured practices within daily workflows—such as digital prompts within audit software encouraging consideration of disconfirming evidence—auditors can be nudged toward a more reflective and critical approach to their work (Adekunle, et al., 2021, Sobowale, et al., 2021). Furthermore, revising performance evaluation criteria to reward skeptical behaviors helps to align organizational practices with desired outcomes, signaling to auditors that exercising diligence and caution is valued (Nasution, 2021: Noviyanti & Winata, 2015). Leadership actively supporting these initiatives is essential for successful integration. When senior management participates in training and promotes discussions around judgment dilemmas within a supportive framework, it reinforces the expectation that skepticism is vital to audit quality (Hurtt, 2010). Additionally, creating transparent channels for discussing ethical concerns and potential biases fosters a climate of psychological safety, further enabling auditors to engage in skeptical inquiry without fear of repercussion (Noviyanti & Winata. 2015: Ramasubramanian, Ranasinghe & Ellison, 2011).

Finally, acknowledging that audit culture is not monolithic is vital, particularly in large firms with varying subcultures across different regions and service lines. Tailored approaches that resonate with local contexts are necessary to effectively embed behavioral interventions that promote skepticism. Moreover, audit regulators and professional bodies should highlight the significance of behavioral competence in their quality inspections to incentivize firms to prioritize these aspects internally (Ajayi, et al., 2021, Sobowale, et al., 2021). Consequently, the integration of competence and ethics into training and professional requirements is crucial for nurturing an environment conducive to professional skepticism (Glover & Prawitt, 2014: Setiyawati, Iskandar & Putri, 2020).

In conclusion, organizational and cultural dynamics are fundamental to enhancing auditor judgment and professional skepticism. By cultivating a culture that prioritizes ethical decision-making, critical inquiry, and accountability, audit firms can create a systemic foundation that supports high-quality, skepticismdriven auditing essential for public trust in the profession.

2.6. Discussion

The systematic review on improving auditor judgment and fostering skepticism through the lens of behavioral insights emphasizes the significant impact of cognitive biases, such as confirmation bias, anchoring, overconfidence, the halo effect, and availability heuristics on auditors' decision-making processes. These biases, often subconscious, can impair auditor judgments and affect audit quality, thereby diminishing stakeholder trust. Research underscores

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the need for attention to the psychological aspects of auditing, given that auditors, while trained in technical skills, remain vulnerable to cognitive errors (Chang & Luo, 2019: Maradona, 2020). For instance, the role of cognitive biases in the context of audit decisionmaking is well documented, with studies illustrating how visualization tools can both aid and obstruct auditor judgment by triggering cognitive errors (Chang & Luo, 2019: Soleymani, et al., 2019).

Moreover, the systematic review highlights the effectiveness of various behavioral interventions designed to mitigate these biases. Techniques such as structured decision aids, mindfulness training, and collaborative protocols, accountability mechanisms can enhance auditors' cognitive awareness and skepticism toward evidence evaluation (Maradona, 2020; Henrizi et al., 2021). For example, integrating decision aids in audit workflows has shown potential in reducing heuristic reliance and promoting more thorough documentation practices, thereby bolstering audit quality (Maradona, 2020: Stevens, Moroney & Webster, 2019). Additionally, fostering environments with accountability mechanisms, such as peer reviews, encourages auditors to justify their judgments and engage in deeper scrutiny, which can enhance the quality of their outputs (Maradona, 2020: Szymczak, et al., 2014).

A critical component for enhancing audit quality is embedding behavioral science principles into auditing education and professional development. Traditional curricula often prioritize technical knowledge but may lack emphasis on decision-making under uncertainty and the psychological factors affecting auditors (Maradona, 2020; Henrizi et al., 2021). This review points to the need for educational institutions to incorporate training on cognitive biases and debiasing strategies into their programs, equipping future auditors to navigate complex audit environments effectively. Simulations and case studies of high-risk scenarios can be instrumental for aspiring auditors to practice critical thinking and skepticism in controlled settings (Henrizi et al., 2021: Tejedor-Sojo, Creek & Leong, 2014).

Regulatory bodies and standard-setters must recognize that audit quality extends beyond mere compliance with existing standards; it demands an understanding of behavioral competencies as well. Incorporating assessments of the application of skepticism and documenting decision-making processes into audit inspections and quality reviews may strengthen the regulatory framework (Maradona, 2020). Furthermore, there is a significant gap in the existing literature regarding cross-cultural studies of auditor behavior and the varying efficacy of interventions across different regulatory environments. Expanding research globally, particularly in emerging markets, can lead to a more nuanced understanding of professional skepticism in diverse audit contexts (Askary, Goodwin & Lanis, 2012: Maradona, 2020).

Despite the promising findings regarding the efficacy of interventions, the need for further empirical research is evident. Much of the current literature is based on experimental settings rather than real-world applications, limiting our understanding of the complexities of audit environments (Hu, et al., 2020: Maradona, 2020). Investigating the scalability of behavioral interventions across large firms and in various contexts remains crucial. Future studies should interactions explore the between different interventions and how emerging technologies, such as AI and data analytics, might influence auditor behavior and decision-making processes (Maradona, 2020; Henrizi et al., 2021).

In conclusion, integrating behavioral insights into auditing practices underscores the multifaceted approach required to improve auditor judgment and skepticism. This review advocates for shifts in audit education, practice management, and regulatory scrutiny, emphasizing the importance of combining structured decision tools with a deeper understanding of cognitive biases. Achieving these objectives can significantly enhance audit integrity and restore public confidence in financial reporting practices.

2.7. Conclusion

The findings of this systematic review underscore the urgent need to integrate behavioral insights into the core of modern auditing practice. As the profession grapples with persistent audit failures and growing public scrutiny, it has become increasingly evident that technical expertise alone is not sufficient to ensure high-quality audits. Cognitive biases such as confirmation bias, anchoring, overconfidence, the halo effect, and availability bias pose significant threats to objective judgment and undermine the consistent application of professional skepticism. These biases are not simply flaws in individual character or competence but are natural outcomes of human cognitive processing, especially under the pressures of time, complexity, and organizational expectations inherent in audit environments.

Integrating behavioral science into auditing provides a promising pathway to address these vulnerabilities. Structured decision aids, mindfulness and debiasing training, accountability pressures, and collaborative mechanisms have all demonstrated potential to improve auditors' critical thinking and enhance their ability to challenge assumptions, evaluate evidence rigorously, and maintain professional skepticism throughout the audit process. However, these tools cannot operate in isolation. Their success depends on deliberate and sustained reforms to the systems within which auditors operate.

To truly foster skepticism, the audit profession must embrace reform across training, standards, and organizational culture. Training programs must move beyond technical proficiency and incorporate cognitive and behavioral components that equip auditors to recognize and mitigate their own biases. Standards and regulations should evolve to reflect a deeper understanding of behavioral dynamics, encouraging firms to adopt evidence-based practices that reinforce sound judgment. Just as importantly, audit firms must cultivate a culture that supports ethical behavior, independent thinking, and critical inquiry at all levels-from partners to entry-level staff. Leadership must model these values and create environments in which skepticism is not just permitted but expected and rewarded.

Ultimately, enhancing auditor judgment and skepticism through behavioral insights is not merely a response to past failures; it is an investment in the future credibility and resilience of the audit profession. By embedding behavioral understanding into the heart of audit practice, the profession can better fulfill its public interest mandate and help restore trust in financial reporting systems worldwide.

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