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Measuring the Role of Female Auditor Behavior: Evidence in Indonesia

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ABSTRACT

Purpose: This research aims to further examine the factors that cause the underrepresentation of female auditors in Indonesian public accounting firms in their professional behavior.

Method: The data were collected through the implementation of experimental methods in between subjects with 2x2x2 factorial design, which involved a total of 104 participants, including partners, managers, senior staff, and junior staff, whose data were collected directly at the IAPI training in Semarang City. Data processing was then carried out using ANOVA and regression approaches.

Findings: The results show that female and male auditors exhibit equivalent levels of professional skepticism. This indicates that the professionalization and standardization of auditing create convergence in professional competencies, regardless of gender differences. However, female auditors exhibit slightly higher levels of audit communication behavior than male auditors. This is manifested in a more comprehensive disclosure of audit information and a preference for participatory communication. Female auditors exhibit higher levels of organizational culture behavior, as evidenced by a stronger awareness of the importance of organizational ethical values and a supportive work environment.

Implications: These findings suggest that public accounting firms should eliminate gender-based biases in professional recruitment and promotion, as the convergence of professional skepticism indicates that core auditing competencies are gender-neutral. Firms are encouraged to implement gender-diversity policies that move beyond representation, focusing instead on integrating the unique behavioral strengths into specialized auditor training and leadership development programs.

Novelty/Value: This study employs experimental design to integrate moral sensitivity theory and explain complex gender differences in auditing, providing practical implications for gender diversity policies and auditor training.

Keywords: female auditor, organizational culture, personalized audit communication, professional skepticism.

INTRODUCTION

As women's participation in the professional sector increases, the role of women in the auditing profession is becoming increasingly important. According to data from the Central Statistics Agency, the proportion of women working as professionals in Indonesia increased from 48.65 percent in 2022 to 49.53 percent in 2023. However, the representation of women in the auditing profession in particular is still limited. According to data reported by the Financial Profession Development Centre (local term: PPPK) of the Indonesian Ministry of Finance and analyzed by The Institute of Chartered Accountants in England and Wales (ICAEW) in February 2023, only around 15 percent (220 people) of the 1,464 registered public accountants were female auditors. This contrasts with the complex professional competency requirements of the auditing profession. According to Auditing Standard 570, these requirements include intellectual, interpersonal, and communication skills; personality; and organizational skills integrated with technical competencies, ethical values, and professional behavior (Indonesian Institute of Public Accountants, 2021a). Given the complexity of these competencies and the underrepresentation of women, it is important to understand the differences and similarities between female and male auditors in key professional behaviors such as professional skepticism, audit communication, and organizational culture, all of which contribute to audit quality. *Both public and private organizations in the modern era greatly value the services of auditors since the outcomes of their decisions can reveal an organization's transparency (Hwee & Nasution, 2024).*

Previous studies on female professionals in the auditing sector have been conducted by Baldo et al. (2019) who examined the comparative role of female professionals in Italy and Romania, with the results showing issues affecting the presence of female professionals, the level of representation, and roles (regarding presence among higher levels of professional activities and governance positions) of women in the National Chartered Association and their underrepresentation in Italy and Romania. On the other hand, Agrizzi et al. (2021) studied the division of organizational workspace according to gender that hinders the advancement of the profession. The results of Agrizzi et al.'s (2021) study managed to reveal the existence of limitations on organizational 'space' in the auditor's office, which hinders the advancement of auditor professionalism. In addition, Carrera & Mareque (2023) found that women are more conservative than men when assessing the impact of audit scope restrictions, with no gender differences in responding to material misstatements. Another study was also conducted by Nehme et al. (2024), who found that experienced auditors have a more tolerant view of dysfunctional audit behavior compared to inexperienced auditors. In terms of gender, inexperienced male auditors are more accepting of dysfunctional audit behavior than inexperienced female colleagues. In addition, Cheng & Wang (2023) found discrimination and negative reactions from clients, if there is a promotion of women to be partners in public accounting firms. These facts have led the researcher's interest in studying the behavior of female auditors in Indonesia.

The auditor's professional behavior in the fields includes: (a) intellectual, (b) interpersonal and communicative, (c) good personality, and (d) organizational competency integrated by public accountants with technical skills and values, ethics, and professional behavior to demonstrate professional skills (IAPI, 2021b). Intellectual behavioral skills according to Wechsler (1975) and Wechsler et.al (2008) can be defined as the ability to act globally, reason rationally, and deal with the environment effectively. While interpersonal and communication behavioral skills according to Spitzberg & Cupach, (2002) include the ability to initiate, negotiate, confirm, and modify everything related to human relations.

Behavioral skills in personality by Eysenck (1998) are based on the total amount of actualization of potential behavior of the organism, as determined by heredity and environment. This originates and develops through the functional interaction of four main sectors in which behavioral patterns including cognitive (intelligence), conative sector (character), affective sector (temperamental) and somatic sector (constitution) that are well organized. Behavioral skills in organizing according to Bratianu (2015) is defined as a conceptual construct that reflects the convergence of all areas of knowledge in an organization. Moreover, according to Bratianu (2015), all areas of explicit and tacit knowledge will change the paradigm of all areas of cognitive, emotional, and spiritual knowledge of individuals. The results of this integration process are carried out interactively and are carried out repeatedly by organizers (Bratianu, 2015; Sulistyawati et al., 2025).

A significant number of studies on organizational culture in the audit profession are normative in nature and fail to take into account the unique experiences of women in masculine cultures, such as public accounting firms (KAP) (Dambrin & Lambert, 2008; Haynes, 2017). However, the competitive and hierarchical audit culture often engenders pressures that affect female auditors differently, yet this has not been extensively explored empirically. Therefore, this study aims to answer the following research questions (RQ).

RQ: (1) Are there differences in the level of skepticism between female and male professional auditors? (2) Are there differences in communication behavior between female and male auditors? (3) Are there differences in organizational culture behavior between female and male auditors?

This is an area that has received little research attention thus far, and it is hoped that the results of this study will contribute to the identification of systemic bias in auditing practices, the enhancement of our understanding of behavioral variables, and the improvement of the quality and integrity of the public accounting profession as a whole, with particular emphasis on the experiences of female auditors. A significant number of PS studies place emphasizes on competence, ethics, and auditor pressure; however, they do not consider gender to be a determining factor in the emergence or decline of professional skepticism. Conversely, extant research suggests that female auditors demonstrate elevated levels of caution and skepticism. However, there has been a paucity of discourse regarding the factors that precipitate this phenomenon and the circumstances under which it manifests (Nelson, 2009; Nolder & Kadous, 2018). Moreover, audit literature extensively discusses the effectiveness of communication in audits, but does not sufficiently explore communication styles based on gender, especially in the context of personal communication. Female auditors have been shown to exhibit higher levels of empathy, social sensitivity, and interpersonal communication skills. However, a paucity of comprehensive studies has been conducted to establish a link between these characteristics and the effectiveness of personalized audit communication(Curtis & Payne, 2008; Tan & Libby, 1997).

Professional development is also needed to improve communication and cultural awareness among all auditors. The composition of the audit team should be considered to optimize audit quality by incorporating a variety of perspectives and professional approaches.

This study focused on the behavior of male and female auditors. An experimental method was applied to a sample of auditors working in Indonesian public accounting firms. This paper is structured as follows: Section 2 provides a literature review and develops hypotheses; Section 3 describes the research methodology; Section 4 presents the results and discusses their practical implications; and Section 5 concludes the research and suggests further research.

LITERATURE REVIEW

Theory of Moral Sensitivity

Rest (1986) developed the Theory of Moral Sensitivity as the main theoretical framework to explain differences in professional behavior among auditors based on gender. Moral Sensitivity Theory is the first component of the Four-Component Model of Moral Action, which identifies the following four stages in every moral action: (1) moral sensitivity, (2) moral judgement, (3) moral motivation, and (4) moral character. In this study, Moral Sensitivity Theory is employed to shed light on the complex behavioral patterns exhibited by female and male auditors through professional skepticism, professional audit communication, and organizational behavior.

Professional Skepticism

The theoretical study that is most pertinent to professional skepticism in female auditors is the theory of moral sensitivity. This theory posits that the ability to recognize ethical dilemmas plays an important role in making skeptical decisions. Female auditors frequently exhibit a heightened degree of moral awareness, which serves to augment professional skepticism. In this regard, moral sensitivity constitutes the inaugural stage of moral behavior, signifying the capacity to discern situations that encompass moral issues with the potential to exert consequences on other individuals. This constitutes the preliminary stage in which an individual identifies the existence of an ethical dilemma and acknowledges the

potential impact of their actions on others, including female auditors (Jordan, 2007; Mohammadnazar et al., 2019; Otrębski & Sudoł, 2022; Rest, 1986).

Professional skepticism according to Hurtt (2010) is an individual characteristic that comes from various dimensions. As an individual characteristic, professional skepticism can be a relatively stable and enduring trait of an individual, and also a temporary condition caused by situational variables. While Nelson (2009) indicates professional skepticism more as the auditor's consideration and decision that reflects a higher assessment of the risk that an assertion is inappropriate, based on information useful to the auditor. A different thing about professional skepticism is conveyed by O'Malley (2000) who defines it as a concept that is often discussed in professional standards, but with little precision. One perspective introduced in SAS No. 1 is what the panel on audit effectiveness characterized as a neutral view of skepticism.

Professional skepticism plays an essential role in auditing and accounting due to many factors. First, by implementing a professional skepticism attitude, auditors can improve the quality of their audits and ensure that they provide reliable and accurate assurance to clients and other stakeholders. Second, skeptical professionals contribute to the credibility of financial statements, foster trust in the financial reporting process, and the integrity of the financial markets as a whole. Third, by detecting potential errors or fraud early in the audit process, auditors can reduce the risk of litigation and protect their reputation and professional standing. Professional skepticism is a professional attitude required for professional judgment by auditors(Ciołek, 2017; Dimitrova & Sorova, 2016; Nelson, 2009; Saifudin et al., 2025; Saifudin & Januarti, 2023).

Professional skepticism according to Dimitrova & Sorova (2016) has three elements, i.e. attributes, actions, and mindsets that are integrated into the audit process. Each of these elements is simultaneously oriented towards improving audit quality (Ciołek, 2017; Dimitrova & Sorova, 2016; Saifudin et al., 2025; Sulistyawati et al., 2024; Yulianti et al., 2024).

Audit Communication

Audit communication referring to Bogdanowicz & Calgary (1992) is a process of exploring, examining, monitoring, and evaluating communication processes in organizations. In organizational settings, discourse serves to maintain existing policies, procedures, and operations or to facilitate changes. Members of the organization, at all levels, have preferences for when, from whom, and in what media they receive information and provide feedback. Meanwhile, Vagner (2022), more specifically positions personalized audit communication as a knowledge transfer tool in the realm of evidence collection by exploring the willingness of auditors to rely on and take into account their judgments and decisions. By understanding the role of emotion and intuition in decision-making, organizations can develop strategies to reduce the effects of cognitive bias and increase the objectivity of their risk assessments. For example, adopting pre-mortem analysis techniques, of which potential future failures are imagined and analyzed, can help challenge the feeling of overconfidence and groupthink (Klein et al., 2007; Sidorenko, 2023).

The theoretical study that is most relevant to personalized audit communication is social role theory. This theory posits that discrepancies in behavior between men and women are predominantly attributable to social expectations concerning their respective roles. Women are more associated with communicative, cooperative, and empathetic roles, which reflect their tendency to build more personal and open audit communication (Van Lange et al., 2012). Audit communication plays a significant role in auditing, because with a more intense and better audit communication composition, auditors can professionally increase relevance and restore client trust. Furthermore, effective communication with auditors is at least a two-way process that requires feedback and follow-up. To get feedback and follow-up, auditors and auditees can share views, questions, or suggestions through surveys, interviews, or meetings (Bogdanowicz & Calgary, 1992; Handoko & Widuri, 2017; Tourish & Hergie, 2004; Vagner, 2022).

Organizational Culture

The theoretical study that is most relevant to the subject of organizational culture is that of organizational role theory. This theory elucidates the manner in which organizational roles and social expectations influence individual behavior. Female auditors frequently encounter role conflict within masculine organizational cultures, which influences their adaptation to and critique of the prevailing work environment (Dambrin & Lambert, 2008; Haynes, 2017; Katz & Kahn, 1970). Key (1999) and Ampofo et al (2004) described organizational ethical culture as beliefs about the ethics of the organization, which are shared by its members and can be conceptualized logically on a continuum bounded at one end by unethical firms and at the other end by highly ethical firms. Other views of organizational ethical culture also emphasize the position of organizational ethical culture as part of organizational culture, which represents a multidimensional interaction between various formal and informal behavioral control systems that are capable of promoting ethical or unethical behavior (Trevino et.al, 1998; Zhang et.al, 2009).

Organizational culture according to Thomya & Saenchaiyathon (2015) is the methods accepted by members in the organization, used to carry out and to be shared to new members who will create pleasant ways to operate in the organization. This can help the organization adapt to the external environment so that the organization can survive. Meanwhile, there is another opinion that emphasizes that organizational culture is a pattern of a set of basic assumptions accepted by a group after it has been proven that these assumptions are able to solve adaptation problems (out) and integration tools (in) and these assumptions have been proven valid (valid) and therefore passed on to new group members as a way of viewing and analyzing these problems (Schein, 2010; Schein & Schein, 2017). Moreover, Robbins & Judge (2024) stated that organizational culture as a system of shared meanings adopted by members which distinguishes the organization from other organizations. Robbins & Judge (2024) also stated that a system of shared meaning is formed by its citizens, which also differentiates it from other organizations.

Auditing in organizational culture is about identifying gaps between the desired organizational culture and corporate vision, and the actual workplace culture. By uncovering inconsistencies, auditing in organizational culture helps organizations strategize to align their actual and ideal cultures (Tsai, 2011; Yullyan, 2020). In its implementation, auditing with an organizational culture approach follows some steps, such as: first, making a case for audit culture; second, getting support from the board and audit committee; third, determining exactly what the auditor wants to assess; fourth, taking a risk-based approach; fifth, being strategic about resources; sixth, the auditor adjusts and approaches the organization; seventh, being flexible; and eighth, the auditor prepares a report (Yullyan, 2020).

Hypothesis Development

Skeptical behavior as the first independent variable in this study views the auditor's professional skepticism as consisting of two components, i.e. the skeptical mindset or thought pattern and the skeptical attitude or attitude. Based on the theory of moral sensitivity, professional skepticism in the conception of the skeptical mindset can be seen from the reflection in a certain way of thinking in the form of the ability of the mindset to capture ideas, or in the auditor is processing information that enters the auditor's mind, reflected in open, objective, and critical thinking towards audit evidence and related matters. Mindset drives cognitive processes, and the mindset component captures critical thinking, which is an important element of professional skepticism and is required by the standards. Including the mindset component reflects the idea that skepticism involves critical analysis of evidence, and not just doubt.

Attitude includes affective and cognitive components to predict intentions and behaviors, and attitudes acknowledge the influence of social factors on evaluative judgments. By including the attitude component, it broadens the definition of evaluation by including auditors' feelings, as well as their beliefs, about risks, and this eventually increases the predictive power of "skepticism" for evidence collection by auditors. In simple idea, mindset and attitude-based behavior are the integration of mindset as a set of ideas or ways of thinking simultaneously with the way a person behaves by carrying themselves out in actualizing their professional activities. Mindset refers to a person's mental state, while attitudes can be seen outwardly through body language and expressions (Nolder & Kadous, 2018;

Poli & Valerio, 2019). Given that female auditors are confronted with circumstances necessitating their capacity to discern ethical dilemmas, which are of pivotal significance in formulating skeptical decisions, it is incumbent upon them to evince a heightened degree of moral awareness, thereby augmenting professional skepticism(Janssen et al., 2020; Nolder & Kadous, 2018; Rest, 1986). In general, male auditors have higher professional skepticism behavior compared to that of female auditors (Idawati, 2019; Janssen et al., 2020). However, Amondarain et al. (2023) and He & Rivai (2024), in their studies, found that the role of female auditors is more evident in their professionalism than that of men. Diya (2023) research found that female auditors may be more skeptical in their professional lives than their male counterparts due to their lower tendency towards overconfidence and risk-taking.
H1: Female auditors have higher levels of professional skepticism than male auditors.

Personalized audit communication occurs when feelings, emotions, and representations of the senders of the messages are mediated by technology that is incorporated into communication, which addresses the needs of the recipient of the current situation (Biocca et.al, 2003; Daft et.al, 1987; Vagner, 2022). The actualization of personalized communication occurs when feelings and emotions can be personalized in various dimensions (including audit) with a psychological approach called CBT (Harnas et al., 2021; Rimondini, 2011). Even McMain et.al (2015) and Huibers et.al (2021) encouraged to expand studies on CBT by using CBT-based individual personalization to obtain optimal results for clients. This can also be done as psychotherapy for depression in individuals (Cuijpers et al., 2013; Hofmann et.al, 2013; Huibers et al., 2021).

CBT technically focuses on the thoughts and behaviors of individuals, where negative thoughts will cause individuals who need treatment to have negative feelings and behaviors, and vice versa (Nakao et.al, 2021). With a CBT-based communication approach, auditors can remain professionally independent without being under pressure from clients. In addition, auditors are able to convey results and findings professionally, and for this, they need good communication skills (Baldacchino et al., 2022). Reigstad (2020) argued that men and women have their own communication styles and influences on their respective organizational environments, in this case women have the advantage of a more flexible communication style and are able to influence their organizational environment and culture. The differences in behavior between men and women are largely attributable to social expectations regarding their respective roles. Women are more frequently associated with qualities such as communication, cooperation, and empathy, which are indicative of their propensity to engage in more personal and open communication (Van Lange et al., 2012). A study by Abdelfattah et al., (2021) found that female audit partners were more likely to disclose Key Audit Matters (KAMs) with greater detail than their male counterparts.
H2: Female auditors have higher personalized audit communication behavior than male auditors.

As suggested by the theory of moral sensitivity, moral sensitivity encompasses the ability to recognize how one's actions can affect the well-being of others. In an organizational context, this means having a heightened awareness of the importance of ethical values and professional norms in facilitating the optimal performance and psychological well-being of organizational members, as well as fostering a supportive work culture. Cultural ethical moral is defined as a certain dimension of ethical culture that has a very significant effect on the intention to engage in certain action strategies (Shafer & Simmons, 2011). A study by Shafer & Simmons (2011) confirms that a culture characterized by strong ethical norms and incentives for ethical behavior significantly reduces the likelihood of being engaged in unethical behavior in cases of high moral intensity. On the contrary, in cases of low moral intensity, the intention to engage in questionable behavior is significantly higher when respondents feel that their institutional leaders are unethical and reward unethical behavior. On the other hand, Indriasih & Sulistyowati (2021) obtained the results showing that ethical orientation and moral intensity influence the auditor's ethical decisions, with the implication that ethical orientation and moral intensity of auditors in carrying out their functions will consider ethical aspects to improve their integrity.

Bayley (2012) perception supported by Graham (2013) positions ethics as a philosophy that examines the principles of what is right and wrong or good and bad, while morals refer to beliefs held by society about what is right and wrong or good and bad. Accordingly, ethics and compliance are relevant to audit risk mitigation. Shafer, et.al (2001), who examined the influence of personal values

on auditors' ethical decision making, obtained findings from survey results to assess their value preferences and reactions to ethical dilemmas involving client pressure for aggressive financial reporting. The results of Shafer, et.al (2001) showed that personal value preferences do not affect auditors' perceptions of the moral intensity of ethical dilemmas. Kung & Huang (2013) strengthen the results of research by Shafer, et.al (2001) stating that value preferences alone are not adequate to be a predictor of ethical beliefs. Conversely, personal values have an indirect influence on ethical beliefs through moral philosophy. Another finding from Kung & Huang (2013) states that idealistic auditors are more likely to disapprove of client actions that violate moral norms, while non-idealistic auditors are relatively more permissive. In a relevant context, Faisal (2007) study shows that moral reasoning does not affect auditors' decisions under the pressure of social pressure. Different results and contexts that are still relevant to morals are shown in Arrami & QingXiang (2021). Furthermore, Arrami & QingXiang (2021) shows that there is an impact of the auditor's perceived moral intensity on his moral judgments which is fully mediated by the accessibility of moral identity and moderated by the centrality of moral identity. The auditor's perception of moral intensity seems to trigger access to moral identity which in turn has an impact on moral judgments based on how central moral identity is to the individual.

The role of social organizations and expectations in shaping individual behavior is a significant area of study. In this professional context, female auditors frequently encounter role conflict within a masculine organizational culture, which influences their adaptation to or critique of the prevailing work environment (Dambrin & Lambert, 2008; Haynes, 2017; Katz & Kahn, 1970). Rahman et al. (2024) found that audit assignments from firms with a higher proportion of female auditors were associated with higher audit quality and lower costs. The strongest association was found at the staff level, particularly among senior auditors. This suggests that female auditors contribute positively to organizational dynamics that support audit quality.

H3: Female auditors have higher organizational culture behavior than male auditors.

RESEARCH METHOD

Research Design

This study employs an exploratory quantitative research design to examine the role of female auditors in professional behavior, with a focus on professional skepticism, audit communication, and organizational culture within public accounting firms in Indonesia. The study employs a 2x2x2 between-subjects experimental design, with each of the three independent variables manipulated at two levels.

Population and Sample

The research population consists of auditors working in Indonesian public accounting firms in the following positions: partner, manager, senior staff, and junior staff. Random sampling was used to select the sample, which was then collected using an experimental method. The experimental method was chosen because it is well-suited to research that considers the cognitive and behavioral aspects of human behavior (Bower & Clapper, 1993). This method focuses on modifying one aspect of a situation and comparing the results with those of an unmodified situation (Neuman, 2014). The sample was obtained from 55 public accounting firms in Indonesia and consisted of 104 auditors, 32 of whom were women and the rest men.

Variables and Measurements

The following are the research variables and measurements used. In Table 1, the variable of this study includes professionalism skepticism, professional audit communication, and organizational behavior as the proxy of mindset and attitude-based, cognitive behavioral therapy, and ethical-compliant behavior, respectively. These variables were tested in the experimental design.

Table 1. Variables and Measurements

Variable	Research Proxy	Measurement	Source
Professional Skepticism	Mindset and attitude-based	1. Auditors with cognitive processing and evaluative judgment 2. Auditors without cognitive processing and evaluative judgment	(Nolder & Kadous, 2018; Ranzilla et al., 2011)
Professional Audit Communication	Cognitive behavioral therapy (CBT)	1. Auditors with a positive mindset 2. Auditors without a positive mindset	(Diener et al., 2009, 2010)
Organizational Behavior	Ethical and compliant behavior (Indonesian Public Accountant Code of Ethics)	1. Auditors behave ethically and comply 2. Auditors do not behave ethically and do not comply	(Institut Akuntan Publik Indonesia (IAPI), 2021a)

Source: processed data, 2025

Data Collection

Data were collected through an experiment conducted during a seminar organized by the Indonesian Institute of Accountants (IAI) in Central Java. The research participants were auditors from public accounting firms in Indonesia who attended the seminar.

The study employed a 2x2x2 between-subjects factorial experimental design lasting 40 minutes. Participants were randomly assigned to eight treatment groups, each manipulating one of three variables: professional skepticism, personalized audit communication, and organizational culture. Each group received an instrument module containing audit case scenarios with variable manipulations according to the experimental design.

The experiment consisted of two stages. During the first stage, which lasted 20 minutes, participants assessed audit risks and formulated risk mitigation measures for the cases presented. They answered questions related to the audit risk mitigation components in the instrument module. The second stage (also 20 minutes) involved a recall test to identify the specific information used for audit decision-making. The experimental design is outlined in simple terms in Table 2.

The module 1 instrument for cells 1 and 3 has appropriate and complete information, but is not extensive. In other words, the information is directly centered on the company's condition, so that participants who received this module did not experience confusion in mitigating audit risk (see Table 2). The module 2 instrument for cells 2 and 4 has appropriate and complete information with a large number of images and is too extensive, so that participants who received this module began to experience confusion and low positive thinking in mitigating audit risk.

The module 3 instrument for cells 5 and 7 has appropriate information but is incomplete and not extensive. In other words, the information is directly centered on the company's condition so that participants who receive this module experience little confusion in mitigating audit risk. The module 4 instrument for cells 6 and 8 has inappropriate, incomplete and extensive information, so that participants who received this module experience confusion, low positive thinking and low ethical behavior and low compliance with the organization in mitigating audit risk.

The manipulation checking process was carried out in several stages. In the first stage, manipulation checking was carried out by observing at how the participants understood audit risk mitigation from their experience as auditors. Participants were given 5 question components with available answer choices. Participants who answered 4 out of 5 questions correctly would be declared to have passed. The next stage of manipulation checking was the stage of checking the variables, i.e. professional skepticism, personnel audit communication and organizational culture by being asked to answer the questions that have been provided.

Table 2. Experiment Matrix

Factor and level		PAC (B)		OC (C)		(Mean)	Descriptions
		Auditor with high positive thinking concepts (B1)	Auditor with low positive thinking concepts (B2)	Auditor with high ethics and high compliance (C1)	Auditor with low ethics and low compliance (C2)		
PS (A)	Auditor with cognitive processing and high evaluative value (A1)	Cell 1 (A1B1) Cell 2 (A1B2)		Cell 3 (A1C1) Cell 4 (A1C2)		Mean A1	SE CBA1 (CB1-CB2 to A1)
	Auditor with cognitive processing and low evaluative value (A2)	Cell 5 (A2B1) Cell 6 (A2B2)		Cell 7 (A2C1) Cell 8 (A2C2)		Mean A2	SE CBA2 (CB1-CB2 to A2)
	(Mean)	Mean B1	Mean B2			Mean ABC	ME B (B1-B2)
				Mean C1	Mean C2		ME C (C1-C2)
	descriptions	SE AB1	SE AB2	SE AC1	SE AC2	ME A (A1-A2)	

Source: author illustrations, 2025

Data Analysis Techniques

This study used IBM SPSS Statistics version 26. The analysis began with descriptive statistics to characterise the respondents, as well as validity and reliability tests to assess the consistency and suitability of the measurement instruments. Next, normality tests were performed using ANOVA analysis with a significance value of >0.05, as well as homogeneity tests. Hypothesis testing using independent sample t-tests aimed to compare two unpaired samples of data. All hypothesis testing used a significance level of 0.05.

Research Ethics

This research was conducted in accordance with principles of research ethics that protect participants' opinions. Prior to the experiment, each participant was given a full explanation of the research's purpose and procedures, after which they were asked to sign an informed consent form to confirm their voluntary participation. The identities and personal data of all participants were kept confidential, and the data were used only for the purposes of this research. The results were reported in aggregate form.

RESULTS AND DISCUSSION

Results

The randomised participant data is displayed in Table 3 according to demographic categories. Based on gender, the majority of respondents were male (69.2%), with 72 participants, while 32 participants (30.8%) were female. Group 1 comprised 17 males and 10 females; group 2, 21 males and 7 females; group 3, 16 males and 8 females; and group 4, 18 males and 7 females.

Furthermore, the majority of respondents were over 50 years old (45 people, or 43.3%), followed by 25 people (24%) aged 40–50, 19 people aged 30–40, and 15 people (14.4%) under 30. The age

distribution was fairly even across each experimental group (groups 1–4), indicating that randomisation had successfully balanced the age characteristics between the treatment groups.

Table 3. Demographic Randomization of Participants Based on Experimental Groups

Criteria	Group 1	Group 2	Group 3	Group 4	amount	Percentage
gender						
• Male	17	21	16	18	72	69,2%
• Female	10	7	8	7	32	30,8%
age						
• <30 years old	2	4	4	5	15	14,4%
• 30-<40 y. o.	5	7	3	4	19	18,3%
• 40-<50 y. o.	10	2	6	7	25	24%
• >50 y. o.	10	15	11	9	45	43,3%
Working period (years)						
• <5	3	5	3	6	17	16,4%
• 5-<10	7	8	7	4	26	25%
• 10-<15	4	3	1	4	12	11,5%
• 15-<20	4	1	1	3	9	8,7%
• 20-<25	5	1	4	5	15	14,4%
• >25	4	10	8	3	25	24%
Educations						
• Diploma	0	0	0	0	0	0
• Bachelor	12	14	14	11	51	49%
• Master	14	13	7	13	47	45%
• PhD	1	1	3	1	6	6%
Positions						
• Partner	16	14	14	15	59	57%
• Manajer	4	2	3	3	12	11,5%
• Staf Senior	4	10	4	3	21	20%
• Staf Yunior	3	2	3	4	12	11,5%
Office						
• Central Office	18	15	7	12	52	50%
• Branch Office	9	13	17	13	52	50%

Sources: data processing, 2025

Based on length of service, respondents' work experience was fairly evenly distributed. The largest group was respondents with 5–10 years of experience (25%), followed by those with over 25 years of experience (24%). This demonstrates that the research sample included auditors with a range of experience, offering diverse perspectives on the assessment of audit risk.

Based on educational level, none of the participants had a diploma. The majority had bachelor's degrees (49%) or master's degrees (45%), while a small number had PhDs (6%). This indicates that the participants had strong academic backgrounds.

Based on their position, most participants were partners, totalling 59 people (57%), which is the highest position in the KAP structure. Twenty-one people (20%) were in senior staff positions, while 12 people (11.5%) were in manager and junior staff positions.

A balanced distribution of auditors working at the head office and branch offices demonstrates good representation of various audit work contexts, based on office location. Auditors at the head office may be exposed to a different organizational culture and audit practices than those at branch offices.

The results of the data homogeneity test from each category and level of independent variables, i.e. professional skepticism (with a proxy of cognitive processing and evaluative judgment), personalized audit communication (with a proxy of CBT through positive thinking) and organizational culture (with a proxy of ethical behavior and obedience to the organization), which are actualized in the form of professional skepticism parameter instruments (PPS), instrument 1 and instrument 2, have a significance value (p) > 0.05. Therefore, based on this, it can be concluded that the groups have the same variance. Table 4 shows the results of the data homogeneity test.

Table 4. Test of Data Homogeneity

Category/Level	N	Levene Test	
		F	Sig
Measurement of Professional Skepticism	104	1,120	0,345
Instrument 1	104	2,396	0,073
Instrument 2	104	1,499	0,219

Source: processed data, 2025

The results of the independent sample t-test are shown in Table 5. It can be concluded that there are statistically significant differences between the two groups being compared for all variables (all p-values < 0.05).

Table 5. Hypotheses Test of Independent Sample t-Test

		Levene's Test for Equality of Variances		Independent Samples Test t-test for Equality of Means		
Category/ Level		F	Sig.	t	df	Sig. (2-tailed)
Measurement of *Professional Skepticism*	Equal variances assumed	7.851	.006	-5.961	102	.000
	Equal variances not assumed			-5.859	87.628	.000
Instrument 1	Equal variances assumed	.350	.556	-22.252	102	.000
	Equal variances not assumed			-22.416	101.989	.000
Instrument 2	Equal variances assumed	4.542	.035	3.080	102	.003
	Equal variances not assumed			3.013	82.429	.003

Source: Processed data, 2025

An in-depth research exploration of participants' gender in the comparison *of mean* PPS (score) between men and women in two treatment conditions for the *professional skepticism variable* can be seen in Figure 1.

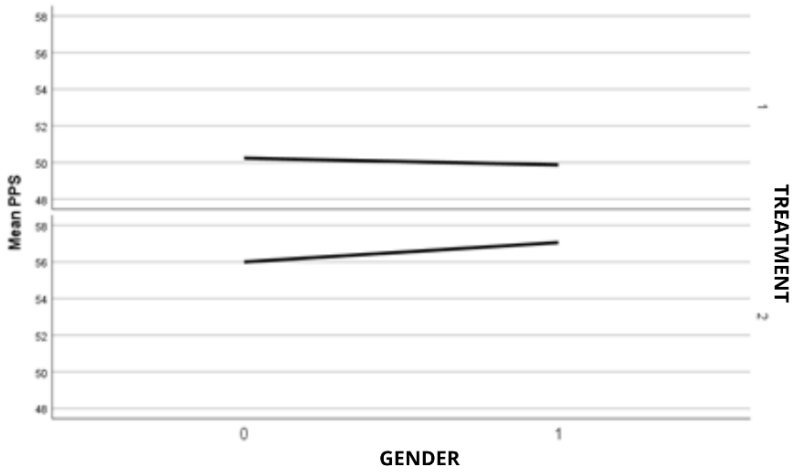

Figure 1. Treatment Conditions Participant gender for PPS
Source: processed data, 2025

Based on Figure 1, there is a comparison of *Mean* PPS (score) between men and women in two treatment conditions. In the first treatment (before), it can be seen that the scores for women (0) and men (1) are around 50, with a relatively flat line indicating no significant difference between the two genders. While in the second treatment (after), there is an increase in scores where the line shows an upward trend from women to men, with an initial value of around 56 for women and increasing to around 57 for men. This indicates that after being given treatment, there was an increase in scores in both genders, with men showing slightly higher scores than those of women.

The criteria regarding participant gender in the comparison *of the mean of* instrument 1 (score) between men and women in the two treatment conditions for the PAC and OC variables is described in Figure 2.

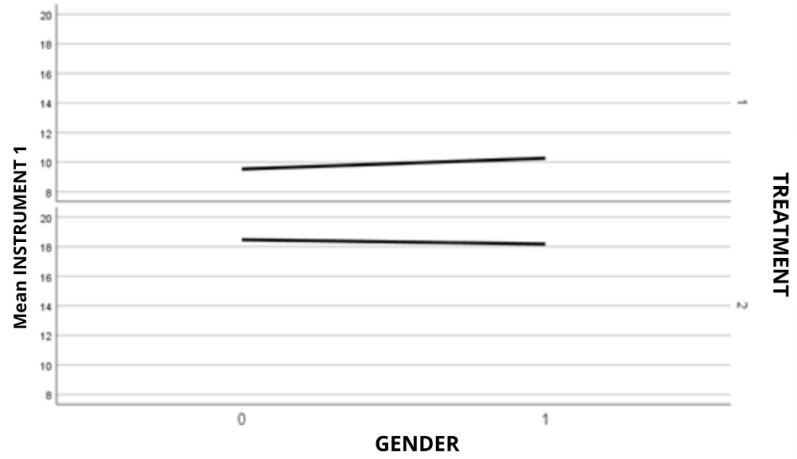

Figure 2. Treatment Condition Participant Gender for Instrument 1
Source: processed data, 2025

Based on Figure 2, there are two different patterns for instrument 1 between before and after treatment. In the first treatment (before), it can be seen that the *Mean value* of Instrument 1 for women (0) starts from around 9.5 and experiences a slight increase for men (1) to reach around 10.5. Meanwhile, in the second treatment (after), the *Mean value* of Instrument 1 shows a different pattern where the value for women starts higher at around 18.5 and experiences a slight decrease for men to around 18. This shows that after being given treatment, there was a significant increase in the *Mean value* of Instrument 1 for both genders, with women showing a slightly higher increase than men in the post-treatment condition.

The criteria regarding participant gender in the comparison *of the mean of* instrument 2 (score) between men and women in the two treatment conditions for the PAC and OC variables is illustrated in Figure 3.

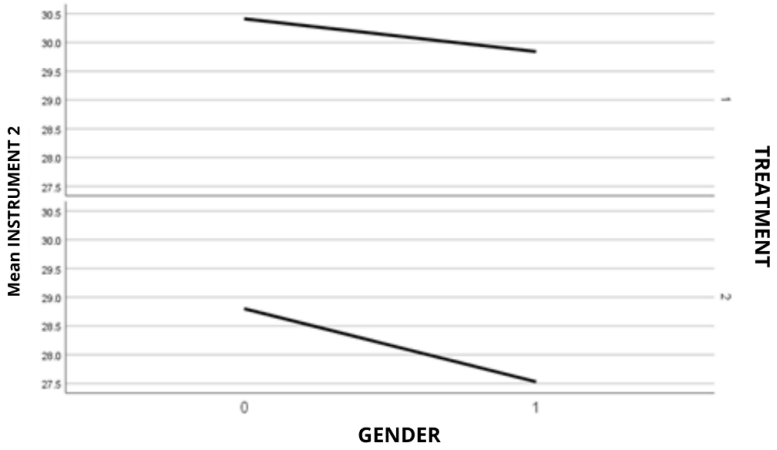

Figure 3. Treatment Condition of Participants' Gender for Instrument 2
Source: processed data, 2025

Based on Figure 3, there is a difference in the average score of instrument 2 between female respondents (0) and male respondents (1) in two different treatment conditions. In the first treatment (before), female respondents had an average score of around 30.5 which then decreased in male respondents to around 29.8. A similar trend was also seen in the second treatment (after), where female respondents showed an average score of around 28.8 which then decreased in male respondents to around 27.5. What is interesting to note is that both figures show a consistent pattern of decline from female to male, but the average score in the second treatment (after) was overall lower than the first treatment (before). This indicates that the treatment given has a different impact on the two gender groups, with a tendency for female respondents to show higher scores than male respondents at both stages of treatment.

A difference test was conducted on three variables: professional skepticism, audit communication behavior and organizational culture. Two treatments were given. Testing the professional skepticism and audit communication behavior variables showed that, in the first treatment (before), there was no significant difference between female and male auditors. After the second treatment, however, there was an increase in scores for each gender. Meanwhile, testing of the organizational culture variable showed that, in the first treatment, female auditors had higher scores than male auditors. After the second treatment, there was a decrease in scores for both genders, showing a similar trend.

Discussion

Professional Skepticism

The findings show that female auditors are just as skeptical as their male counterparts. These results suggest that, in professional auditing practice, gender is not the sole factor determining the level of skepticism among auditors. Professional skepticism is instead more influenced by professional factors such as work experience, continuing education, technical competence, and the culture of the organization in which the auditor works. While moral psychology literature generally shows gender differences in moral sensitivity, these do not automatically translate into differences in professional skepticism among auditors due to professionalization mechanisms that create equality in professional decision-making. Christina & Tjaraka (2018) state that women and men have equal roles and positions in professional skepticism.

In the context of auditing, women's higher sensitivity to norms means that they tend to adhere more strictly to the professional skepticism standards set out in auditing standards. On the other hand, through intensive training and rigorous professional socialization, male auditors develop a sensitivity to professional norms that is equivalent to that of women. Thus, although the psychological paths taken may differ, the end result in terms of the level of professional skepticism applied in audit practice is equivalent between the two genders.

Effective professionalization can overcome natural gender differences in moral sensitivity and establish a consistent framework for professional behavior. In the highly standardized auditing profession, professional norms and role expectations provide a consistent framework, regardless of the demographic characteristics of individual auditors. The professional skepticism of female and male auditors is equal, which provides important empirical evidence of the effectiveness of professional standardization in creating equality of competency.

Audit Communication

The findings show that female auditors exhibit slightly higher levels of audit communication behavior than their male counterparts. These results are supported by moral sensitivity theory (Rest, 1986), which suggests that women are more morally sensitive than men. This higher moral sensitivity manifests itself in more comprehensive and detailed communication. Research by Abdelfattah et al. (2021) found that female audit partners disclose more Key Audit Matters (KAMs) with greater detail than their male counterparts. Female auditors tend to be more conservative in their decision-making and pay greater attention to the details of formal communication, such as risk discussions or clarification of audit facts. These are important elements in auditors' communication with clients and other stakeholders. Empirical evidence supports this, showing that gender diversity — particularly an increase in the proportion of

women in audit teams — brings different perspectives that enrich the audit process. This can increase internal communication within the audit team, as well as communication with the audit committee or clients on complex topics during the audit procedure (Khavis et al., 2025).

Moral sensitivity, as explained in the theory of moral sensitivity, includes awareness of moral issues in the workplace, has a positive impact on ethical decision-making and professional responsibility (Schmocker et al., 2023). Reigstad's opinion (2020), stating that men and women have their own communication styles and influences on their respective organizational environments, in this case women have the advantage of a more flexible communication style and are able to influence the environment and culture of their organization.

Organizational Culture Behavior

The findings show that female auditors exhibit stronger organizational cultural behavior than their male counterparts. They tend to report stronger perceptions of positive developments and benefits from greater female involvement in audit organizations. This includes higher perceptions of team functioning and more inclusive work environments than their male counterparts(Amondarain et al., 2025). This phenomenon can be explained by moral sensitivity theory, which suggests that auditors with high levels of moral sensitivity are more aware of the ethical and social implications of organizational behavior, and can better recognize the influence of organizational norms and practices on professional outcomes. Female auditors are often associated with traits such as empathy, a collaborative approach, and an awareness of interpersonal dynamics. These traits support the development of a strong ethical culture that prioritizes mutual welfare.

The theory of moral sensitivity emphasizes that individuals with high moral sensitivity recognize ethical issues and actively promote organizational values through their daily interactions, communication, and adherence to professional standards. This is consistent with findings showing that women in audit environments are more aware of organizational norms and cultural values, and are more likely to reinforce and reproduce that culture through their professional behavior. This includes team interactions, mentoring, and cross-functional collaboration.

The findings above support the opinion of Ebirim et al. (2024) , which states that women have gender inclusivity in accounting and auditing practices compared to men, and also confirms the research of Ferina & Pratama (2023) that women are more able to avoid (mitigate) audit risks and have a commitment to behave ethically than men in top positions in an organization.

Practical Implications

The results of the study demonstrate the importance of incorporating the development of moral sensitivity into the auditor training curriculum. While professional skepticism is equally evident in female and male auditors, differences in audit communication and organizational behavior suggest that developing ethical awareness could enhance communication skills and foster a positive organizational culture.

Policy Implications are to support the Indonesian Institute of Certified Public Accountants (IICPA or in local term IAPI) to continue to improve the role and function of the institution in providing professional training for auditors. Then, the need to improve the role and function of KAP, especially in the professional activities of auditors in understanding the client's business, integrating collaboration between audit teams to discuss audit assessment results in order to improve professional skepticism, personalized audit communication, and organizational culture, and IICPA should provide a greater role for women in its internal organization.

These findings highlight the need for more comprehensive audit quality metrics that focus not only on identifying material misstatements, but also on communication and organizational culture. Future research could explore ways of measuring and evaluating the quality of audit communication and the effectiveness of organizational culture in supporting audit quality. It could also examine how these factors interact with auditor and client characteristics to influence audit outcomes.

This finding highlights the gender imbalance in the profession, with the proportion of male auditors (69.2%) being much higher than that of female auditors (30.8%). While this reflects the demographic reality of the auditing profession in Indonesia, it may reduce the statistical power to detect more subtle effects of gender moderation.

CONCLUSION

This study provides empirical answers to three key research questions. It seeks to identify differences between female and male auditors with regard to professional skepticism, professional audit communication, and organizational behavior. The test results indicate that female and male auditors demonstrate an equal level of professional skepticism. Similarly, there are no significant differences in professional audit communication between female and male auditors. However, female auditors exhibit higher levels of organizational behavior than male auditors. These findings suggest that, while professional skepticism is equally present in both genders, where the professionalization and standardization of auditing create convergence in professional competence, female auditors demonstrate a slight advantage in audit communication and organizational culture behavior. This is manifested through the more comprehensive disclosure of audit information, a preference for participatory communication, and a stronger awareness of the importance of an ethical and supportive organizational culture.

Women's higher moral sensitivity creates a deeper awareness of their fiduciary responsibility to stakeholders and the interpersonal impact of their professional actions. However, this study found that these differences are marginal and can be moderated by professional factors such as work experience, continuing education, and organizational culture. Therefore, professional development programs should focus on enhancing the moral sensitivity of all auditors through effective ethics training, creating an organizational culture that supports open communication and professional skepticism, and providing quality mentoring. At the same time, the unique contributions of gender diversity in enriching perspectives and improving the overall quality of audits should be recognized.

This study has several limitations that could be addressed in future research. Firstly, the variables used, particularly professional skepticism, audit communication, and organizational culture, are still measured using limited proxies, meaning they do not fully reflect the complexity of auditor behavior in diverse audit practices. Secondly, the study uses a single perspective on auditor characteristics and does not consider differences in individual and organizational backgrounds in greater depth. Factors such as the auditor's level of education, length of service, position or job level, age, and the type of public accounting firm (head office or branch) have not been explicitly analyzed, despite these differences in characteristics potentially influencing professional skepticism, audit communication patterns, and the internalization of organizational culture. Therefore, future research could develop professional skepticism, personalized audit communication, and organizational culture variables using different, broader proxy, and incorporate additional perspectives for comparison.

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Authors' Contribution

Conceptualization: SF, IJ, and JML. Methodology: SF. Investigation: SF and IJ. Analysis: IJ. Original draft preparation: JML. Review and editing: IJ and JML. Visualization: SF. Project administration: SF, IJ, and JML.

Conflict of Interest

The authors declare no competing interests.

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Availability of Data and Materials

The data supporting the findings of this study are available from the corresponding author upon reasonable request.

REFERENCES

Abdelfattah, T., Elmahgoub, M., & Elamer, A. A. (2021). Female Audit Partners and Extended Audit Reporting: UK Evidence. *Journal of Business Ethics, 174*(1), 177–197. https://doi.org/10.1007/s10551-020-04607-0.

Agrizzi, D., Soobaroyen, T., & Alsalloom, A. (2021). Spatiality and accounting: The case of female segregation in audit firms. *Accounting, Organizations and Society, 93*, 101238. https://doi.org/10.1016/j.aos.2021.101238.

Amondarain, J., Aldazabal, M. E., & Espinosa-Pike, M. (2023). Gender differences in the auditing stereotype and their influence on the intention to enter the profession. *Journal of Behavioral and Experimental Finance, 37*(100784), 1–10. https://doi.org/10.1016/j.jbef.2022.100784.

Amondarain, J., Barrainkua, I., & Espinosa-Pike, M. (2025). Gender diversity advantages in audit firms: differences in perceived evolution and advantages among female and male professionals. *Sustainable Futures, 10*(July), 1–10. https://doi.org/10.1016/j.sftr.2025.101121.

Ampofo, A., Mujtaba, B., Cavico, F., & Tindall, L. (2004). Organizational Ethical Culture: A Significant Determinant of Ethical Behavior. *Journal of Business and Economics Research, 2*(9), 13–24. https://nsuworks.nova.edu/hcbe_facarticles/501.

Arrami, N., & QingXiang, Y. (2021). The role of moral identity in auditor's ethical decision making. *International Journal of Research in Business and Social Science, 10*(2), 157–169. https://doi.org/10.20525/ijrbs.v10i2.1051.

Baldacchino, P. J., Vassallo, J., Tabone, N., Ellul, L., & Grima, S. (2022). Communication barriers between external auditors and client/management: A Maltese perspective. *European Research Studies Journal, 25*(3), 441–469. https://doi.org/10.35808/ersj/3041.

Baldo, M. Del, Tiron-Tudor, A., & Faragalla, W. A. (2019). Women's role in the accounting profession: A comparative study between Italy and Romania. *Administrative Sciences, 9*(1), 1–23. https://doi.org/10.3390/admsci9010002.

Bayley, B. K. (2012). Organizational Ethics Training: A Proactive Perspective. Journal for Quality and Participation, 35(2), 15–19. http://rube.asq.org/quality-participation/2012/07/career-development/organizational-ethics-training.pdf.

Biocca, F., Harms, C., & Burgoon, J. K. (2003). Toward a More Robust Theory and Measure of Social Presence: Review and Suggested Criteria. *Presence: Teleoperators and Virtual Environments, 12*(5), 456–480. https://doi.org/10.1162/105474603322761270.

Bogdanowicz, M. S., & Calgary, A. (1992). The Communication Audit: Information Flow and the Organization. *Discourse and Writing/Rédactologie, 10*(1), 10-Jan. https://doi.org/10.31468/cjsdwr.325.

Bower, G. H., & Clapper, J. P. (1993). Experimental methods in cognitive science. *In The Foundations of Cognitive Science (Issue January, pp. 245–300)*. https://doi.org/10.7551/mitpress/3072.003.0009.

Bratianu, C. (2015). Organizational Knowledge Dynamics: Managing Knowledge Creation, Acquisition, Sharing, and Transformation. *In IGI Global (Issue 1)*. https://doi.org/10.4018/978-1-4666-8318-1.

Carrera, N., & Mareque, M. (2023). Does gender affect qualifying decisions? Evidence from public sector audits. *Journal of Business Research, 154*(September 2022), 113358. https://doi.org/10.1016/j.jbusres.2022.113358.

Cheng, H., & Wang, J. (2023). What's in store for females after breaking the glass ceiling? Evidence from the Chinese audit market. *Frontiers in Psychology, 14*(November), 1–12. https://doi.org/10.3389/fpsyg.2023.1321391.

Christina, L. S., & Tjaraka, H. (2018). Factors that influence auditor's professional skepticism - evidence from audit firms in Surabaya. *The 1st International Conference on Islamic Economics, Business, and Philanthropy (ICIEBP 2017)*, Iciebp 2017, 326–330. https://doi.org/10.5220/0007081703260330.

Ciołek, M. (2017). Professional skepticism in auditing and its characteristics. *Prace Naukowe Uniwersytetu Ekonomicznego We Wrocławiu, 474*, 33–40. https://doi.org/10.15611/pn.2017.474.03.

Cuijpers, P., Berking, M., Andersson, G., Quigley, L., Kleiboer, A., & Dobson, K. S. (2013). A meta-analysis of cognitive-behavioral therapy for adult depression, alone and in comparison with other treatments. *Canadian Journal of Psychiatry, 58*(7), 376–385. https://doi.org/10.1177/070674371305800702.

Curtis, M. B., & Payne, E. A. (2008). An examination of contextual factors and individual characteristics affecting technology implementation decisions in auditing. *International Journal of Accounting Information Systems, 9*(2), 104–121. https://doi.org/10.1016/j.accinf.2007.10.002.

Daft, R. L., Lengel, R. H., & Trevino, L. K. (1987). Message equivocality, media selection, and manager performance: Implications for information systems. *MIS Quarterly: Management Information Systems, 11*(3), 355–366. https://doi.org/10.2307/248682.

Dambrin, C., & Lambert, C. (2008). Mothering or auditing? the case of two Big Four in France. *Accounting, Auditing and Accountability Journal, 21*(4), 474–506. https://doi.org/10.1108/09513570810872897.

Diener, E., Wirtz, D., Biswar-Diener, R., Tov, W., Kim-Prieto, C., Choi, D., & Oishi, S. (2009). New measures of well-being. *Social Indicators Research Series, 39*, 101–102. https://doi.org/10.1007/978-90-481-2354-4.

Diener, E., Wirtz, D., Tov, W., Kim-Prieto, C., Choi, D. won, Oishi, S., & Biswas-Diener, R. (2010). New well-being measures: Short scales to assess flourishing and positive and negative feelings. *Social Indicators Research, 97*(2), 143–156. https://doi.org/10.1007/s11205-009-9493-y.

Dimitrova, J., & Sorova, A. (2016). The Role of professional skepticism in financial statement audit and its appropriate application. *Journal of Economics, 1*(2), 1–17. https://js.ugd.edu.mk/index.php/JE/article/view/1596.

Diya, L. (2023). The Impact of Auditor Characteristics on Professional Skepticism: The Case of Lebanon. The EUrASEANs: Journal on Global Socio-Economic Dynamics, 1(1(38)), 18–28. https://doi.org/10.35678/2539-5645.1(38).2023.18-28.

Ebirim, G. U., Asuzu, O. F., Ndubuisi, N. L., Adelekan, O. A., Ibeh, C. V., & Unigwe, I. F. (2024). Women in accounting and auditing: a Review of progress, challenges, and the path forward. *Finance & Accounting Research Journal, 6*(2), 98–111. https://doi.org/10.51594/farj.v6i2.782.

Eysenck, H. J. (1998). Dimensions of Personality. *In Rev Reprod (Issue October)*. Transaction Publishers.

Ferina, I., & Pratama, D. (2023). the Effect of auditor characteristics and gender diversity on fraud detection. *JRAK: Jurnal Riset Akuntansi Kontemporer, 15*(2), 259–271. https://doi.org/10.23969/jrak.v15i2.8225.

Graham, J. (2013). The Role of corporate culture in business ethics. *Conference: Management Challenges in the 21st Century*, 388–396. https://doi.org/10.48047/intjecse/v14i6.384.

Handoko, B. L., & Widuri, R. (2017). The impact of auditor communication and due professional care on client responses to inquiries for successful audit process. *Proceedings of 2016 International Conference on Information Management and Technology, ICIMTech 2016*, November, 296–300. https://doi.org/10.1109/ICIMTech.2016.7930348.

Harnas, S. J., Knoop, H., Bennebroek Evertsz, F., Booij, S. H., Dekker, J., van Laarhoven, H. W. M., van der Lee, M., Meijer, E., Sharpe, L., Sprangers, M. A. G., van Straten, A., Zweegman, S., & Braamse, A. M. J. (2021). Personalized versus standard cognitive behavioral therapy for fear of cancer recurrence, depressive symptoms or cancer-related fatigue in cancer survivors: study protocol of a randomized controlled trial (MATCH-study). *Trials, 22*(1), 1–16. https://doi.org/10.1186/s13063-021-05657-z.

Haynes, K. (2017). Accounting as gendering and gendered: A review of 25 years of critical accounting research on gender. *Critical Perspectives on Accounting, 43*, 110–124. https://doi.org/10.1016/j.cpa.2016.06.004.

He, L. J., & Rivai, F. A. (2024). The effect of gender diversity on the disclosure of key audit matters: examination of dual-signature environment. *Managerial Auditing Journal, 39*(4), 396–418. https://doi.org/10.1108/MAJ-09-2022-3695.

Hofmann, S. G., Asmundson, G. J. G., & Beck, A. T. (2013). The Science of Cognitive Therapy. *Behavior Therapy, 44*(2), 199–212. https://doi.org/10.1016/j.beth.2009.01.007.

Huibers, M. J. H., Lorenzo-Luaces, L., Cuijpers, P., & Kazantzis, N. (2021). On the road to personalized psychotherapy: a research agenda based on cognitive behavior therapy for depression. *Frontiers in Psychiatry, 11*(January), 1–14. https://doi.org/10.3389/fpsyt.2020.607508.

Hurtt, R. K. (2010). Development of a scale to measure professional skepticism. *Auditing: A Journal of Practise and Theory, 29*(1), 149–171. https://doi.org/10.2308/aud.2010.29.1.149.

Hwee, T. S., & Nasution, S. A. (2024). Sustaining Government Internal Auditor Performance: A Mixed Method Study. *Journal of Accounting and Strategic Finance, 7*(1), 133–157. https://doi.org/10.33005/jasf.v7i1.498.

Idawati, W. (2019). The Auditor's ability to detect fraud: gender, professional skepticism, and time budget pressure. *5th Annual International Conference on Accounting Research (AICAR 2018)*, 73(Aicar 2018), 14–16. https://doi.org/10.2991/aicar-18.2019.4.

Indriasih, D., & Sulistyowati, W. A. (2021). The Role of ethical orientation and moral intensity in improving ethical decision of an auditor. *Jurnal ASET (Akuntansi Riset), 13*(2), 185–196. https://doi.org/10.17509/jaset.v13i2.

Institut Akuntan Publik Indonesia (IAPI). (2021a). *Kode Etik Profesi Akuntan Publik 2021*.

Institut Akuntan Publik Indonesia (IAPI). (2021b). *Standar kompetensi profesi akuntan publik 2021*. 1–84. https://iapi.or.id/standar-kompetensi-profesi-akuntan-publik-2021/.

Janssen, S., Hardies, K., & Vanstraelen, A. (2020). Auditors' professional skepticism: Traits, behavioral intentions, and actions in the field. In Foundation for auditing research (Vol. 12, Issue 05). https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3717615.

Jordan, J. (2007). Taking the first step toward a moral action: A review of moral sensitivity measurement across domains. *Journal of Genetic Psychology, 168*(3), 323–359. https://doi.org/10.3200/GNTP.168.3.323-360.

Katz, D., & Kahn, R. L. (1970). *The Social psychology of organizations*. Wiley Eastern Private Limited.

Key, S. (1999). Organizational Ethical Culture: Real or Imagined? *Journal of Business Ethics, 20*, 217–225. https://doi.org/10.1023/A:1006047421834.

Khavis, J. A., Sheneman, A. G., & Szerwo, B. (2025). Does gender composition of audit team matter? An examination of audit quality and audit cost. *Review of Accounting Studies, November*, 1–38. https://doi.org/10.1007/s11142-025-09924-1.

Klein, G. a., Phillips, J. K., Rall, E. L., & Peluso, D. a. (2007). A Data-frame theory of sensemaking. In Expertise out of context (Issue January, pp. 113–155). https://www.researchgate.net/publication/303171216_A_data-frame_theory_of_sensemaking

Kung, F.-H., & Huang, C. L. (2013). Auditors' moral philosophies and ethical beliefs. *Management Decision, 51*(3), 479–500. https://doi.org/10.1108/00251741311309616.

McMain, S., Newman, M. G., Segal, Z. V., & DeRubeis, R. J. (2015). Cognitive behavioral therapy: Current status and future research directions. *Psychotherapy Research, 25*(3), 321–329. https://doi.org/10.1080/10503307.2014.1002440.

Mohammadnazar, H., Ghanbari, H., & Siponen, M. (2019). Moral sensitivity in information security dilemmas. *European Conference on Information Systems*, 0–10. https://aisel.aisnet.org/cgi/viewcontent.cgi?article=1043&context=ecis2019_rip.

Nakao, M., Shirotsuki, K., & Sugaya, N. (2021). Cognitive–behavioral therapy for management of mental health and stress-related disorders: Recent advances in techniques and technologies. *BioPsychoSocial Medicine, 15*(1), 1–4. https://doi.org/10.1186/s13030-021-00219-w

Nehme, R., Kozah, Alc. E., & Khalil, S. (2024). Dysfunctional audit behavior: exploring the impact of longitudinal work experience and gender. *Journal of Accounting and Organizational Change*, 1832–5912, 1–26. https://doi.org/10.1108/JAOC-11-2023-0196.

Nelson, M. W. (2009). A Model and Literature Review of Professional Skepticism in Auditing. *Auditing: A Journal of Practise and Theory, 28*(2), 1–34. https://doi.org/10.2308/aud.2009.28.2.1.

Neuman, W. L. (2014). *Social Research Methods: Qualitative and Quantitative Approaches.* Pearson Education Limited.

Nolder, C. J., & Kadous, K. (2018). Grounding the professional skepticism construct in mindset and attitude theory: A way forward. *Accounting, Organizations and Society, 67*(March), 1–14. https://doi.org/10.1016/j.aos.2018.03.010.

O'Malley. (2000). Panel on Audit Effectiveness *"Panel on Audit Effectiveness report and recommendations: August 31, 2000."* In Association Sections, Divisions, Boards, Teams. https://egrove.olemiss.edu/aicpa_assoc/270.

Otrębski, W., & Sudoł, A. (2022). Development and validation of the Moral Sensitivity Inventory for people with intellectual disabilities. *Journal of Intellectual Disabilities, 26*(1), 121–136. https://doi.org/10.1177/1744629520962622.

Poli, R., & Valerio, M. (2019). Anticipation, agency and complexity. *In Anticipation science (Vol. 4)*. Springer Nature.

Ranzilla, S., Chevalier, R., Herrmann, G., Glover, S., & Prawitt, D. F. (2011). Elevating professional judgment in auditing and accounting. *The KPMG Professional Judgment Framework, January 2011*, 1–61. https://www.researchgate.net/publication/258340692_Elevating_Professional_Judgment_in_Auditing_and_Accounting_The_KPMG_Professional_Judgment_Framework

Reigstad, A. (2020). *Gender differences in communication styles and their influence on workplace communication and the practice of public relations in the United States (Issue February)* [University of Leicester]. https://doi.org/10.13140/RG.2.2.30156.28803.

Rest, J. R. (1986). *Moral Development: Advances in Research and Theory*. Praeger.

Rimondini, M. (2011). Background Theories and Main Systems of Analysis of Communication in Cognitive-Behavioral Therapy. *In M. Rimondini (Ed.), Communication in Cognitive Behavioral Therapy (1st ed., pp. 249–263)*. Springer New York Dordrecht Heidelberg London. https://doi.org/10.1007/978-1-4419-6807-4_11

Robbins, S. P., & Judge, T. A. (2024). *Organizational behavior (19th ed.)*. Pearson Education Limited. https://doi.org/10.1007/978-3-031-55669-2_5

Saifudin, S., & Januarti, I. (2023). Semiotics of audit quality: a meta-analysis perspective. *Journal of Accounting and Investment, 24*(3), 861–876. https://doi.org/10.18196/jai.v24i3.19390

Saifudin, S., Januarti, I., & Purwanto, A. (2025). The Role of Artificial Intelligence in the Audit Process and How to Fraud Detections: A Literature Outlook. *Journal of Ecohumanism, 4*(1), 4185–4203. https://doi.org/10.62754/joe.v4i1.6301

Schein, E. H. (2010). *Organizational culture and leadership*. Jossey-Bass A Wiley Imprint. https://doi.org/10.1108/978-1-78714-120-620171005

Schein, E. H., & Schein, P. (2017). *Organizational culture and leadership*. John Wiley & Sons, Inc. https://doi.org/10.4324/9781351017510-1 5

Schmocker, D., Tanner, C., Katsarov, J., & Christen, M. (2023). Moral sensitivity in business: A revised measure. *Current Psychology, 42*(12), 10277–10291. https://doi.org/10.1007/s12144-021-01926-x

Shafer, W. E., Morris, R. E., & Ketchand, A. A. (2001). Effects of personal values on auditors' ethical decisions. *Accounting, Auditing & Accountability Journal, 14*(3), 254–277. https://doi.org/10.1108/EUM0000000005517

Shafer, W. E., & Simmons, R. S. (2011). Effects of organizational ethical culture on the ethical decisions of tax practitioners in mainland China. *Accounting, Auditing & Accountability Journal, 24*(5), 647–668. http://dx.doi.org/10.1108/09513571111139139

Sidorenko, A. (2023). *Risk-academy's guide to auditing risk management (Issue April).* Risk Academy.

Spitzberg, B. H., & Cupach, W. R. (2002). Interpersonal skills. *In Handbook of interpersonal communication (3rd ed., pp. 564–611)*. Sage Publications, Inc. https://doi.org/10.1007/978-81-322-2241-5_5.

Sulistyawati, A. I., Kusumo, W. K., Wahdic, N., Saifudin, S., & Dwianto, A. (2025). Green accounting practices, financial health, the audit and its impact on the value of the company. International *Journal of Innovative Research and Scientific Studies, 8*(3), 3380–3390. https://doi.org/10.53894/ijirss.v8i3.7246.

Sulistyawati, A. I., Yulianti, Y., Saifudin, S., A'yun, A. Q., Nugroho, A. H. D., & Dwianto, A. (2024). Determinant factors of auditor's ability to detect fraud: auditor professional skepticism as moderation. *Journal of Ecohumanism, 3*(3), 1067–1083. https://doi.org/10.62754/joe.v3i3.3482.

Tan, H.-T., & Libby, R. (1997). Tacit Managerial versus Technical Knowledge as Determinants of Audit Expertise in the Field. *Journal of Accounting Research, 35*(1), 97. https://doi.org/10.2307/2491469

Thomya, W., & Saenchaiyathon, K. (2015). The Effects of organizational culture and ERM on organizational performance: A Conceptual framework. *International Business Management, 9*(2), 158–163. https://web.actuaries.ie/sites/default/files/erm-resources/187_The%20Effects%20of%20Organizational%20Culture%20and%20ERM%20on%20ORganizational%20Performance%20A%20Conceptual%20Framework.pdf

Tourish, D., & Hergie, O. (2004). Communication audits: building world class communication systems. In *S. M. Oliver (Ed.), Handbook of corporate communication and public relations: pure and applied (Issue April, pp. 131–144)*. Taylor & Francis (Routledge). https://core.ac.uk/download/pdf/196255896.pdf

Trevino, L. K., Butterfield, K. D., & Mccabe, D. L. (1998). The Ethical Context in Organizations: Influences on Employee Attitudes and Behaviors. *Business Ethics Quarterly, 8*(3), 447–476. https://doi.org/10.2307/3857431

Tsai, Y. (2011). Relationship between organizational culture, leadership behavior and job satisfaction. *BMC Health Services Research, 11*(1), 98. https://doi.org/10.1186/1472-6963-11-98

Vagner, B. (2022). The effect of personalized audit communication and evidence inconsistency on auditor judgments and decision-making. *Managerial Auditing Journal*. https://doi.org/10.1108/MAJ-09-2020-2857

Van Lange, P. A. M., Kruglanski, A. w., & Higgins, E. T. (2012). *Handbook of Theories of Social Psychology (Vol. 2)*. Sage Publications, Inc.

Wechsler, D. (1975). Intelligence defined and undefined: A relativistic appraisal. *American Psychologist, 30*(2), 135–139. https://doi.org/10.1037/h0076868.

Wechsler, D., Coalson, D., & Raiford, S. (2008). *WAIS-IV: Wechsler Adult Intelligence Scale: Technical and Interpretive Manual*. Pearson.

Yulianti, Y., Saifudin, S., & Sari, R. N. (2024). Moderation testing of dysfunctional audit behavior: internal auditor factors on audit quality. *Journal of Accounting and Investment, 25*(3), 971–989. https://doi.org/10.18196/jai.v25i3.21944.

Yullyan, K. (2020). Auditing The Organization Culture. *2020 IIA Indonesia National Conference*, 1–11. https://natcon.iia-indonesia.org/2020/materi/day-2/15.30%20Cc%205%202%20Materi%20-%20Kiagus%20Yullyan.pdf

Zhang, J., Chiu, R., & Wei, L. (2009). On whistleblowing judgment and intention: The roles of positive mood and organizational ethical culture. *Journal of Managerial Psychology, 24*(7), 627–649. https://doi.org/10.1007/s10551-008-9831-z.