From Ethical Concern to Accountable Audit Action: A Cross-Level Model of Ethical Culture, Time Pressure, and Documentation in External Auditing

Azam Dadashi[1], Khadijeh Khodabakhshi Parijan[2,*] and Akbar Zare[3]



[1] Department of Accounting, WT.C., Islamic Azad University, Tehran, Iran;
[2] Department of Accounting, WT.C., Islamic Azad University, Tehran, Iran;
[3] Department of Accounting, WT.C., Islamic Azad University, Tehran, Iran;

* Correspondence: parijan@iau.ac.ir

Citation: Dadashi, A., Khodabakhshi Parijan, K., & Zare, A. (2027). From Ethical Concern to Accountable Audit Action: A Cross-Level Model of Ethical Culture, Time Pressure, and Documentation in External Auditing. *Business, Marketing, and Finance Open*, 4(10), 1-22.

Received: 13 August 2026
Revised: 24 October 2026
Accepted: 01 November 2026
Initial Publication: 01 November 2026
Final Publication: 01 October 2027

Copyright: © 2027 by the authors. Published under the terms and conditions of Creative Commons Attribution-NonCommercial 4.0 International (CC BY-NC 4.0) License.

Abstract: This study aimed to examine whether audit documentation mediates the relationship between ethical concern and accountable audit action and whether perceived time pressure and engagement-team ethical culture condition this process across individual and team levels. A quantitative cross-sectional multilevel design was employed among 304 external auditors nested within 52 audit engagement teams in Tehran, Iran, during 2026. Participants were selected from active external audit engagements and completed validated measures of ethical culture, perceived time pressure, ethical concern, audit documentation, and accountable audit action. Ethical culture was aggregated to the engagement-team level after assessment of within-team agreement and intraclass correlations. Data were analyzed using confirmatory factor analysis, reliability and validity assessment, intraclass correlation analysis, and multilevel structural equation modeling. Indirect and conditional indirect effects were evaluated using 5,000 bootstrap resamples, and cross-level interaction effects were examined to determine whether ethical culture and time pressure altered the translation of ethical concern into documentation and accountable action. Ethical concern positively predicted audit documentation ($\beta = .42$, $p < .001$), while documentation strongly predicted accountable audit action ($\beta = .51$, $p < .001$). Ethical concern also retained a smaller direct effect on accountable action ($\beta = .16$, $p = .006$), supporting partial mediation. Time pressure negatively predicted documentation ($\beta = -.27$, $p < .001$) and accountable action ($\beta = -.18$, $p = .004$) and weakened the ethical concern–documentation relationship ($\beta = -.14$, $p = .011$). Ethical culture positively predicted documentation ($\beta = .29$, $p < .001$) and accountable action ($\beta = .24$, $p = .002$), strengthened the concern–documentation relationship ($\beta = .17$, $p = .008$), and buffered the adverse effect of time pressure ($\beta = .15$, $p = .012$). The indirect effect of ethical concern on accountable action through documentation was significant ($\beta = .214$, 95% CI [.154, .285]), and moderated mediation was supported for both time pressure and ethical culture. Accountable audit action emerges from a cross-level process in which ethical concern becomes behaviorally consequential primarily through documentation, while time pressure constrains and ethical culture strengthens this translation.

Keywords: ethical concern; ethical culture; time pressure; audit documentation; accountable audit action; external auditing; multilevel analysis

1. Introduction

External auditing occupies a distinctive position in corporate accountability because auditors are expected not merely to identify financial reporting risks but also to transform professional concerns into actions that can withstand subsequent review. The credibility of an audit therefore depends on more than technical competence, procedural compliance, or the detection of anomalies. It also depends on whether auditors recognize the ethical and professional significance of problematic evidence, communicate concerns, document the basis of their

judgments, and undertake appropriate actions despite pressures that may discourage further investigation. This distinction between recognizing a concern and acting upon it is important because audit failures do not necessarily originate from an inability to detect problematic circumstances. In many instances, auditors may recognize inconsistencies, questionable management explanations, insufficient evidence, or ethical tensions but fail to translate those concerns into sufficiently robust documentation or consequential professional action. Recent theoretical work has characterized this transition as a process of ethical enactment in which ethical recognition becomes meaningful only when it is transformed into conduct that is visible, reviewable, and capable of influencing the audit process [1]. Accordingly, understanding external audit quality requires greater attention to the mechanisms that connect ethical concern with accountable action rather than treating ethical awareness and ethical behavior as interchangeable outcomes.

Ethical concern may be understood as an auditor's recognition that a particular circumstance has implications for professional integrity, audit quality, stakeholder protection, or compliance with professional obligations. However, the existence of such concern does not ensure that it will be expressed or incorporated into the formal audit process. Audit work is socially embedded, hierarchically organized, deadline-driven, and extensively documented. Auditors frequently operate within teams in which judgments are reviewed by more senior personnel, engagement budgets constrain the time available for additional procedures, and organizational expectations influence whether questioning, disagreement, and escalation are perceived as legitimate professional behaviors. Consequently, an auditor's movement from concern to action is likely to depend on both individual judgment and the broader team environment. Research on audit-team voice demonstrates that staff auditors may remain silent even when they possess relevant concerns, particularly when they anticipate unfavorable reactions from superiors or perceive interpersonal costs associated with raising an issue [2]. Similarly, evidence concerning peer advice and anticipated leadership feedback shows that expectations about how concerns will be received can materially influence auditors' willingness to speak up [3]. These findings indicate that the behavioral consequences of ethical concern cannot be adequately explained without considering the social and cultural context of the audit team.

Audit-firm and engagement-team culture are therefore central to understanding whether professional concerns become actionable. Audit culture encompasses shared assumptions, norms, values, expectations, leadership practices, incentive structures, and informal signals concerning what types of behavior are supported or discouraged within the organization. A strong ethical culture may communicate that professional skepticism, consultation, escalation of questionable matters, and careful documentation are valued even when these practices generate additional cost or delay. Conversely, a culture emphasizing commercial objectives, client accommodation, engagement efficiency, or avoidance of interpersonal conflict may reduce the likelihood that auditors will pursue concerns to their logical professional conclusion. A comprehensive review of audit-firm culture research has demonstrated that cultural characteristics influence auditor judgment, professional behavior, audit quality, and responses to organizational pressures, while also highlighting the need for greater attention to the mechanisms through which culture affects individual auditors within specific engagement settings [4]. This suggests that ethical culture should not be conceptualized merely as an individual attitude. Rather, it may operate as a contextual characteristic shared within audit teams and capable of shaping the relationship between individual ethical judgments and behavioral responses.

The relevance of ethical culture becomes particularly evident when considering psychological safety. Psychological safety concerns the extent to which individuals perceive that they can express questions, concerns,

disagreements, or mistakes without unacceptable interpersonal consequences. Across organizational settings, psychological safety has been associated with speaking up, learning behavior, information exchange, and constructive challenge, particularly where uncertainty and hierarchical relationships make interpersonal risk salient [5]. External auditing is especially dependent on such conditions because junior and mid-level auditors often encounter evidence before engagement leaders do, yet may lack equivalent authority to determine how problematic matters will be addressed. When team members believe that questioning management assumptions, challenging prior judgments, or reporting contradictory evidence will be interpreted negatively, ethically significant information may remain unexpressed or insufficiently escalated. Emerging audit research further indicates that communication structures can alter these dynamics. For example, AI-enabled anonymous communication mechanisms may increase psychological safety and facilitate speaking up by reducing the interpersonal exposure associated with challenging more senior audit-team members [6]. Such evidence reinforces the proposition that accountable audit behavior reflects not only the ethical sensitivity of individual auditors but also the degree to which the surrounding team environment enables concern to be expressed and acted upon.

Ethical issues in auditing also frequently require consultation rather than isolated individual judgment. Audit partners may confront ambiguous situations in which technical compliance, reputational considerations, client relationships, ethical principles, and engagement risk are simultaneously relevant. Research on partners' peer consultations has shown that discussions ostensibly involving ethical matters may become framed primarily in terms of risk, thereby potentially altering how an ethical problem is understood and resolved [7]. This finding is important because it demonstrates that recognition alone does not determine the eventual response to a concern. The organizational interpretation of the concern, the language through which it is discussed, and the perceived consequences of escalation can shape subsequent behavior. Similarly, research examining audit partners' roles in resolving material misstatements emphasizes that audit outcomes emerge through complex interactions among evidence, client negotiation, partner judgment, and the resolution process rather than through mechanically applied professional rules [8]. These studies collectively suggest that ethical and professional concerns become consequential through organizational processes that transform recognition into discussion, evidence development, documentation, escalation, and final action.

Among these processes, audit documentation is particularly important. Documentation is not simply an administrative record created after judgment has occurred; it is a central accountability mechanism through which the auditor's reasoning, evidence, procedures, consultations, and conclusions become reviewable by others. In external auditing, a concern that remains purely cognitive or informal may have limited institutional consequences, whereas a documented concern becomes part of the audit trail and can trigger review, additional procedures, consultation, escalation, or reconsideration of an earlier conclusion. Documentation therefore constitutes a plausible mechanism linking ethical recognition with accountable audit action. The broader development of ethics-based auditing supports this emphasis on reviewability. Work on ethics-based auditing of automated decision-making systems argues that auditing can provide structured intervention points through which ethical principles are translated into evaluative processes and organizational accountability [9]. Related work emphasizes that ethics-based auditing requires systematic procedures, evidentiary standards, defined scope, and transparent records if ethical evaluation is to generate meaningful accountability rather than symbolic assurance [10]. Although this literature addresses automated decision-making rather than conventional financial statement auditing, its conceptual logic is highly relevant: ethical concerns become institutionally meaningful when they are translated into processes and records capable of supporting scrutiny, justification, and intervention.

This principle has become increasingly important as auditing itself is influenced by technological change. The emergence of artificial intelligence ethics auditing illustrates a broader transformation in how auditing is conceptualized as a mechanism of accountability, particularly where complex systems require structured evaluation of ethical, social, and governance risks [11]. Such developments underscore the importance of traceability and reviewable evidence in contemporary accountability systems. However, external financial auditing has long relied on comparable principles. Professional actions must be supported by sufficient evidence and documented reasoning, particularly when an auditor departs from an expected procedure, challenges a management assertion, consults a specialist, expands testing, or escalates a disputed matter. Documentation can therefore be conceptualized as the point at which ethical concern acquires organizational visibility. This does not imply that documentation itself constitutes adequate ethical action; rather, documentation may increase the probability that a concern will become reviewable and that responsibility for addressing it cannot easily be displaced or forgotten. In this sense, documentation may mediate the transition from individual concern to accountable audit action.

Nevertheless, the conversion of concern into documentation and action occurs under substantial resource constraints. Time pressure is one of the most persistent conditions affecting audit work. Auditors must complete complex procedures within engagement budgets and reporting deadlines while responding to client requests, supervisory review, staffing limitations, and unexpected audit findings. Evidence from the United Kingdom indicates that both time-budget pressure and time-deadline pressure can influence audit behavior, potentially encouraging premature completion, underreporting of time, reduced testing, and other responses that threaten audit quality [12]. These pressures are particularly relevant to ethical enactment because responding appropriately to a concern often requires precisely those activities that consume additional time: obtaining further evidence, extending procedures, consulting with colleagues, documenting contradictory information, challenging management explanations, and escalating unresolved matters. Thus, even when auditors recognize that an issue deserves further attention, severe time pressure may reduce their ability or willingness to transform that recognition into a complete documentary record and substantive action.

The literature on reduced audit quality acts further illustrates the behavioral risks created when organizational demands and engagement constraints conflict with professional responsibilities. Reduced audit quality behavior encompasses actions through which auditors compromise the nature, extent, documentation, or execution of procedures in ways that may impair audit effectiveness. A recent organizational model emphasizes that such behavior arises from an interaction of individual characteristics, task conditions, organizational factors, and environmental pressures rather than from isolated deficiencies in professional ethics [13]. Consistent with this perspective, research examining audit-quality-threatening behavior has demonstrated that situational and dispositional factors jointly contribute to auditors' behavioral choices, emphasizing that ethically problematic outcomes may emerge even among individuals who understand relevant professional expectations [14]. These findings support a contextual interpretation of ethical behavior in auditing. Auditors do not make ethical choices in a vacuum; they make them under conditions that can either facilitate or constrain the enactment of professional values.

Recent empirical evidence directly connects time pressure, ethical culture, and audit quality. Samagaio and colleagues demonstrate that time pressure and ethical culture are meaningfully related to audit-quality outcomes and that organizational ethical conditions are relevant to understanding auditors' responses to performance demands [15]. This relationship suggests that the adverse consequences of time pressure may not be uniform across

audit settings. In teams with a strong ethical culture, auditors may receive clearer signals that adequate evidence, consultation, documentation, and professional skepticism should not be sacrificed for efficiency. Supervisors may be more willing to approve additional work, and team members may perceive fewer negative consequences for raising concerns that threaten engagement deadlines. In weaker ethical cultures, by contrast, time pressure may be interpreted as an implicit instruction to avoid expanding procedures or documenting issues that could delay completion. Ethical culture may therefore function not only as a direct predictor of accountable conduct but also as a cross-level contextual resource that determines how strongly individual ethical concern translates into documented and reviewable behavior.

The interaction between culture and time pressure also helps explain why formal ethical standards alone may be insufficient. External auditing is governed by detailed professional requirements, yet implementation inevitably depends on human judgment within organizational contexts. When deadlines are demanding, auditors may face a practical conflict between the formal expectation to pursue sufficient evidence and the informal expectation to complete the engagement within budget. If the team culture consistently prioritizes ethical conduct and audit quality, auditors may interpret additional investigation as legitimate even when it imposes costs. If the culture prioritizes efficiency and client satisfaction, the same auditor may interpret additional investigation as excessive or professionally risky. Consequently, ethical culture can shape the meaning assigned to time pressure and influence whether pressure results in adaptive prioritization or dysfunctional audit behavior. This perspective is consistent with evidence that expected leadership reactions affect auditors' willingness to voice concerns [3] and that silence within audit teams is partly determined by social expectations regarding the consequences of speaking up [2].

The concept of accountable audit action provides a useful outcome for integrating these streams of research. Accountable action refers to professional behavior that responds substantively to a recognized concern and can be justified through evidence and review. It can include extending testing, collecting corroborating evidence, challenging management explanations, consulting senior personnel or specialists, escalating disputed matters, requesting adjustments, reconsidering the reliability of evidence, or refusing to close an unresolved issue solely because of time constraints. This concept is broader than speaking up because voice alone may not lead to procedural change, and it is more behaviorally specific than ethical intention. It also aligns with emerging theorization emphasizing the transition from ethical recognition to reviewable action in external auditing [1]. Such a perspective redirects attention from whether auditors possess ethical values to whether organizational conditions allow those values to become visible in the audit record and consequential in the audit process.

Despite the relevance of these literatures, important gaps remain. Research on audit culture has established that organizational context matters but has called for more precise examination of how cultural effects operate across levels of analysis [4]. Research on voice and psychological safety has explained why auditors may or may not raise concerns, yet speaking up does not necessarily demonstrate that the concern has been translated into a documented and consequential audit response [5, 6]. Studies of time pressure and reduced audit quality have identified conditions associated with dysfunctional audit behavior but have generally focused more on whether quality-reducing behaviors occur than on the process through which ethically relevant concerns survive or fail under pressure [12, 13]. Research on ethics consultation and material-misstatement resolution provides evidence about complex professional decision processes at senior levels but leaves room for a more explicit model of how individual ethical concern becomes formalized through documentation and ultimately converted into accountable action across hierarchical team contexts [7, 8]. Finally, the growing literature on ethics-based auditing highlights

the importance of transparent, reviewable accountability processes, but these insights have not been sufficiently integrated into behavioral models of conventional external auditing [9-11].

A cross-level model can address these limitations by recognizing that auditors' ethical concerns arise at the individual level while important enabling and constraining conditions are embedded in the engagement team. From this perspective, ethical concern represents the initial recognition of professional significance; documentation represents the mechanism that converts an internal judgment into a visible organizational record; and accountable audit action represents the substantive response generated from that concern. Perceived time pressure operates as an individual-level situational constraint that can weaken the transformation of concern into documentation and potentially weaken the movement from documentation into action. Ethical culture, in contrast, operates at the engagement-team level by communicating shared expectations regarding integrity, professional skepticism, consultation, openness, and the legitimacy of raising concerns. A strong ethical culture may therefore directly promote documentation and accountable action while simultaneously strengthening the relationship between concern and documentation and buffering the detrimental influence of time pressure. Such a model integrates insights from audit culture, psychological safety, voice, audit quality, time-pressure, ethics consultation, and accountability research into a single explanatory framework.

This integration also carries practical significance. If ethical recognition alone is insufficient, ethics training that focuses primarily on identifying dilemmas may have limited effect unless firms simultaneously create structures through which concerns can be documented, reviewed, and acted upon. Similarly, efforts to improve audit quality by emphasizing documentation requirements may fail if engagement teams treat documentation as an administrative burden rather than as a mechanism for professional accountability. Reducing excessive time pressure may be necessary but may not be sufficient if team cultures discourage challenge and escalation. Conversely, strengthening ethical culture may help protect audit quality under unavoidable periods of high workload by signaling that professional concerns deserve attention despite efficiency costs. Examining these factors simultaneously therefore offers a more realistic account of how accountable auditing occurs under the competing demands of professional responsibility, hierarchical teamwork, documentation requirements, and engagement deadlines.

Accordingly, the aim of this study was to develop and empirically test a cross-level model examining whether audit documentation mediates the relationship between ethical concern and accountable audit action, whether perceived time pressure weakens this process, and whether engagement-team ethical culture directly strengthens and cross-level moderates the translation of ethical concern into documented and accountable action among external auditors.

2. Methods and Materials

This study employed a quantitative, cross-sectional, multilevel correlational design to examine the mechanisms through which ethical concern is translated into accountable audit action in external auditing and to determine how organizational ethical culture and perceived time pressure influence this process. The multilevel design was selected because external auditors perform their professional duties within engagement teams and audit firms whose shared ethical norms, supervisory expectations, and documentation practices may systematically shape individual auditors' judgments and behavioral responses. Accordingly, individual auditors constituted the first level of analysis, whereas audit engagement teams constituted the second level. The target population consisted of external auditors working in audit firms and professional auditing organizations located in Tehran, Iran, during

2026. Eligible participants were required to be actively involved in external financial statement auditing, have at least one year of professional audit experience, and have participated in at least one audit engagement during the preceding twelve months. Individuals whose duties were exclusively administrative, internal audit personnel, accounting staff who did not participate directly in external audit engagements, and trainees with less than one year of audit experience were excluded from the study. To obtain sufficient variation in organizational ethical climate and engagement conditions, participants were recruited from audit firms of different sizes and from engagement teams serving clients in different industries.

A multistage purposive and cluster-based sampling procedure was used. Audit firms operating in Tehran were initially approached and invited to participate, after which engagement teams within cooperating firms were identified. Auditors who met the eligibility criteria within the selected teams were invited to complete the study instruments. A total of 347 questionnaires were distributed. Of these, 321 were returned, representing a response rate of 92.51%. After screening the data, 17 questionnaires were excluded because of substantial missing data, patterned responding, or failure to satisfy the eligibility criteria. The final analytical sample therefore consisted of exactly 304 external auditors nested within 52 audit engagement teams. The number of auditors per engagement team ranged from 4 to 9, providing an adequate cluster structure for multilevel estimation. Participation was voluntary, and respondents were informed that their individual answers would not be disclosed to their employers, supervisors, clients, or other members of their audit teams. To minimize social desirability and evaluation apprehension, questionnaires were completed anonymously using identification codes that enabled assignment to the relevant engagement team without revealing the identity of individual participants. Before participation, all respondents received an explanation of the study objectives, confidentiality procedures, voluntary nature of participation, and their right to discontinue participation at any stage without consequence. Informed consent was obtained before data collection. No personally identifying client information, audit working papers, confidential financial information, or firm-sensitive audit evidence was collected.

Data were collected using a structured questionnaire composed of demographic and professional information and multi-item measures of ethical culture, perceived time pressure, ethical concern, audit documentation, and accountable audit action. The demographic and professional section recorded participants' age, gender, educational level, professional experience, organizational tenure, professional position, approximate number of audit engagements completed during the preceding year, and engagement-team membership. These variables were collected because differences in professional experience, hierarchical position, workload, and exposure to audit engagements may influence auditors' ethical judgments and documentation behavior. All substantive constructs were measured using Likert-type items, with responses ranging from 1, indicating strongly disagree, to 5, indicating strongly agree. Higher scores represented higher levels of the construct being assessed. The initial questionnaire was reviewed by a panel of specialists in auditing, accounting, organizational behavior, and research methodology to evaluate the conceptual relevance, clarity, professional appropriateness, and content coverage of the items. Minor linguistic modifications were subsequently made to ensure that the wording corresponded with terminology commonly used by external auditors in Iran. A pilot administration was then conducted with a small group of external auditors who were not included in the final sample in order to identify ambiguous wording, excessive item redundancy, or difficulties in interpreting the hypothetical audit situations.

Ethical culture was operationalized as the extent to which an audit engagement environment communicated, reinforced, and supported ethical professional conduct. The measure covered shared expectations concerning integrity, consultation when ethical concerns arise, willingness of supervisors to discuss problematic audit

evidence, consistency between stated ethical values and actual managerial conduct, support for professional skepticism, openness in reporting disagreements, and the perceived protection of auditors who raise legitimate professional concerns. Because ethical culture was conceptualized as a shared contextual characteristic rather than merely an individual perception, individual responses were first obtained from members of each engagement team and subsequently examined for within-team agreement and between-team differentiation before aggregation to the team level. Higher scores indicated a stronger collective ethical culture characterized by clearer ethical expectations, greater supervisory support for professional judgment, and lower perceived interpersonal risk associated with raising audit concerns.

Perceived time pressure was assessed through items reflecting the extent to which auditors believed that engagement deadlines, budgeted audit hours, simultaneous assignments, client expectations, and workload demands restricted the amount of time available for adequate evidence evaluation and documentation. Items addressed experiences such as insufficient time to investigate unexpected findings, pressure to complete procedures rapidly, difficulty allocating additional time to ambiguous audit evidence, perceived conflict between audit quality and engagement deadlines, and pressure to finalize working papers within predetermined budgets. Higher scores represented greater perceived time pressure. Ethical concern was assessed as the auditor's recognition that an audit issue could threaten professional standards, audit quality, financial reporting reliability, stakeholder interests, or the ethical acceptability of the engagement decision. Items measured the extent to which participants noticed ethically problematic implications, experienced professional concern regarding questionable evidence or management explanations, perceived a responsibility to investigate inconsistencies, and believed that the matter warranted additional professional attention. Ethical concern was conceptualized as an evaluative state preceding behavioral action rather than as the final professional response itself.

Audit documentation was measured as the extent to which auditors converted their professional concerns into a clear, traceable, and defensible documentary record. The documentation measure addressed the completeness of recording identified issues, description of contradictory or unusual audit evidence, explanation of the professional reasoning underlying the auditor's conclusion, identification of additional procedures performed, documentation of consultations with supervisors or specialists, recording of unresolved disagreements, and maintenance of a sufficiently detailed audit trail to permit an experienced reviewer to understand the nature of the issue and the basis for the resulting decision. Higher scores indicated more comprehensive and accountable documentation. To reduce conceptual overlap between routine documentation and meaningful action, the items emphasized documentation undertaken in response to ethically or professionally significant audit concerns rather than general compliance with ordinary working-paper requirements.

Accountable audit action constituted the principal outcome variable and was defined as observable professional action intended to address, escalate, investigate, or resolve an identified audit concern in a manner consistent with the auditor's professional responsibilities. The measure included behaviors such as extending audit procedures, seeking additional corroborating evidence, challenging an insufficient management explanation, consulting a senior team member or engagement partner, escalating an unresolved issue, requesting adjustment of a material misstatement, reconsidering the reliability of relevant evidence, documenting disagreement, and refusing to prematurely close an issue solely to satisfy time or budget constraints. The distinction between ethical concern and accountable audit action was explicitly maintained in the measurement model: ethical concern represented recognition and professional apprehension, whereas accountable audit action represented the behavioral response

resulting from that concern. Documentation was positioned as an intermediate accountability mechanism through which professional concern became reviewable, traceable, and more likely to result in substantive action.

Several procedural measures were used to reduce common-method bias. The questionnaire emphasized anonymity and the absence of correct or preferred responses, predictor and outcome constructs were separated into different sections of the instrument, construct labels were not displayed to respondents, and item wording was varied to reduce mechanically consistent responding. In addition, the questionnaire was designed so that the ethical culture items referred primarily to shared team practices, time-pressure items referred to engagement constraints, ethical-concern items referred to professional evaluation, and documentation and action items focused on concrete responses. Reliability and construct validity were subsequently evaluated empirically rather than assumed on the basis of the initial instrument design.

Data analysis was conducted using IBM SPSS Statistics and multilevel structural equation modeling software. Prior to hypothesis testing, the dataset was screened for coding errors, missing observations, univariate and multivariate outliers, and implausible response patterns. The proportion and pattern of missing values were examined before determining the appropriate method of treatment. Descriptive statistics, including means, standard deviations, ranges, skewness, and kurtosis, were calculated for all study variables. The distributional characteristics of continuous variables were evaluated to determine whether the assumptions required for subsequent parametric analyses were sufficiently satisfied. Multicollinearity among predictors was assessed using intercorrelations, tolerance statistics, and variance inflation factors. The internal consistency of each multi-item construct was examined using Cronbach's alpha and composite reliability. Confirmatory factor analysis was performed to evaluate the distinctiveness of ethical culture, time pressure, ethical concern, audit documentation, and accountable audit action. Standardized factor loadings, average variance extracted, composite reliability, and correlations among latent variables were examined to assess convergent and discriminant validity. Overall measurement-model adequacy was evaluated using multiple fit indices, including the chi-square statistic relative to degrees of freedom, the comparative fit index, Tucker–Lewis index, root mean square error of approximation, and standardized root mean square residual.

Because participants were nested within 52 engagement teams, the independence assumption underlying conventional single-level regression was not assumed. An unconditional multilevel model was first estimated for the principal dependent variables to calculate intraclass correlation coefficients and determine the proportion of variance attributable to between-team differences. Before aggregating individual perceptions of ethical culture to the engagement-team level, within-group agreement and between-group reliability were assessed using appropriate indices of interrater agreement and intraclass correlation. Aggregation was considered justified only when responses demonstrated sufficient within-team consensus and meaningful between-team variability. Ethical culture was then modeled as a Level-2 contextual construct, whereas perceived time pressure, ethical concern, audit documentation, and accountable audit action were modeled primarily as Level-1 variables. Individual-level continuous predictors involved in interaction terms were centered appropriately around their team means where necessary to separate within-team effects from between-team differences, while team-level predictors were centered around the grand mean to facilitate interpretation of cross-level coefficients.

The hypothesized model was tested using multilevel structural equation modeling. The primary within-level pathway specified ethical concern as a predictor of accountable audit action and audit documentation as a mediating mechanism connecting ethical concern with accountable action. This specification permitted examination of whether auditors who recognized stronger ethical concerns were more likely to create a

comprehensive documentary record and whether such documentation, in turn, increased the likelihood of substantive professional action. Perceived time pressure was tested both as a direct predictor and as a moderator of the relationship between ethical concern and documentation and, where theoretically appropriate, of the relationship between documentation and accountable audit action. Negative interaction coefficients were interpreted as evidence that time pressure weakened the conversion of professional concern into documented and accountable action. Ethical culture was entered at the engagement-team level to test whether teams characterized by stronger ethical norms demonstrated higher average levels of documentation and accountable action. Cross-level interaction effects were also estimated to determine whether a strong ethical culture strengthened the ethical concern–documentation relationship and buffered the potentially adverse influence of time pressure on the translation of concern into professional action.

Indirect effects were examined using bias-corrected bootstrap confidence intervals, with the mediation effect considered statistically supported when the confidence interval for the indirect coefficient did not contain zero. Conditional indirect effects were estimated to determine whether the indirect pathway from ethical concern to accountable audit action through documentation varied as a function of perceived time pressure and team ethical culture. Significant interactions were probed using simple-slope analysis at relatively low, average, and relatively high values of the moderator, conventionally represented by one standard deviation below the mean, the mean, and one standard deviation above the mean. Where appropriate, regions of significance were additionally examined to identify the range of moderator values over which the focal relationship remained statistically distinguishable from zero. Age, educational level, professional auditing experience, organizational tenure, professional rank, and recent engagement workload were included as control variables when they demonstrated a theoretically or empirically meaningful relationship with the principal dependent variables. Statistical significance was evaluated using a two-tailed alpha level of .05, while standardized coefficients, confidence intervals, and effect-size information were reported alongside probability values to permit substantive interpretation of the magnitude and precision of the observed relationships. This analytical strategy enabled simultaneous examination of individual professional processes, team-level ethical context, mediation through audit documentation, and cross-level boundary conditions affecting whether ethical concern ultimately resulted in accountable audit action.

3. Findings and Results

The final sample consisted of 304 external auditors working in 52 audit engagement teams in Tehran. Of the participants, 187 were men (61.5%) and 117 were women (38.5%). The mean age of the participants was 36.84 years (SD = 8.21), with ages ranging from 24 to 59 years. With respect to age categories, 62 participants (20.4%) were younger than 30 years, 129 (42.4%) were between 30 and 39 years, 83 (27.3%) were between 40 and 49 years, and 30 (9.9%) were 50 years or older. Regarding educational attainment, 131 participants (43.1%) held a bachelor's degree, 158 (52.0%) held a master's degree, and 15 (4.9%) held a doctoral degree. The average professional auditing experience was 8.93 years (SD = 6.11). Ninety participants (29.6%) had between 1 and 5 years of professional experience, 92 (30.3%) had between 6 and 10 years, 61 (20.1%) had between 11 and 15 years, and 61 (20.1%) had more than 15 years of auditing experience. In terms of professional position, 86 participants (28.3%) were audit assistants, 103 (33.9%) were senior auditors, 69 (22.7%) were supervisors, and 46 (15.1%) were audit managers or partners. Participants reported involvement in an average of 7.42 external audit engagements during the preceding twelve months (SD = 3.18). The 52 audit engagement teams included between 4 and 9 respondents, with a mean of 5.85 auditors per team, providing adequate within-team representation for the examination of team-level ethical

culture and cross-level effects. Preliminary examination of demographic characteristics showed sufficient variation in age, education, professional experience, hierarchical position, and recent engagement exposure, indicating that the analytical sample represented auditors occupying different levels of responsibility and professional seniority within external auditing practice.

Table 1. Descriptive Statistics, Reliability, Convergent Validity, and Correlations among the Main Study Variables

Variable	Mean	SD	Cronbach's α	CR	AVE	1	2	3	4	5
1. Ethical culture	3.72	0.56	.91	.92	.61	.78				
2. Perceived time pressure	3.49	0.68	.89	.90	.57	-.32***	.75			
3. Ethical concern	3.88	0.57	.90	.91	.59	.34***	.08	.77		
4. Audit documentation	3.69	0.62	.93	.93	.64	.46***	-.38***	.50***	.80	
5. Accountable audit action	3.74	0.60	.92	.93	.63	.49***	-.41***	.44***	.65***	.79

As shown in Table 1, the mean scores indicated that the participants generally reported relatively favorable ethical conditions and professional responses. Ethical concern exhibited the highest mean score (M = 3.88, SD = 0.57), suggesting that auditors generally perceived themselves as attentive to ethically and professionally problematic audit circumstances. Accountable audit action also demonstrated a relatively high mean (M = 3.74, SD = 0.60), followed closely by ethical culture (M = 3.72, SD = 0.56) and audit documentation (M = 3.69, SD = 0.62). Perceived time pressure had a mean of 3.49 (SD = 0.68), indicating that deadline, workload, and budget constraints were a meaningful feature of the participants' engagement environments. All constructs demonstrated satisfactory internal consistency, with Cronbach's alpha coefficients ranging from .89 to .93 and composite reliability coefficients ranging from .90 to .93. All average variance extracted values exceeded .50, ranging from .57 for perceived time pressure to .64 for audit documentation, supporting convergent validity. The square root of AVE for each construct was also greater than its correlations with the other constructs, providing evidence that the theoretically distinct dimensions were empirically distinguishable. The correlation pattern was consistent with the proposed model. Ethical culture was positively associated with ethical concern ($r = .34$, $p < .001$), audit documentation ($r = .46$, $p < .001$), and accountable audit action ($r = .49$, $p < .001$), whereas it was negatively associated with perceived time pressure ($r = -.32$, $p < .001$). Perceived time pressure was negatively related to audit documentation ($r = -.38$, $p < .001$) and accountable audit action ($r = -.41$, $p < .001$), suggesting that auditors exposed to greater engagement pressure were less likely to report extensive documentation or substantive action in response to professional concerns. Ethical concern showed substantial positive relationships with both audit documentation ($r = .50$, $p < .001$) and accountable audit action ($r = .44$, $p < .001$). The strongest bivariate relationship was observed between audit documentation and accountable audit action ($r = .65$, $p < .001$), providing preliminary support for the proposition that documentation represents an important behavioral bridge through which recognition of an ethical issue is translated into accountable professional conduct. None of the correlations approached levels suggesting problematic redundancy or multicollinearity.

Table 2. Measurement Model Fit and Multilevel Aggregation Statistics

Model or statistic	χ^2	df	χ^2/df	CFI	TLI	RMSEA	SRMR	$\Delta\chi^2$
Five-factor hypothesized model	412.63	265	1.56	.958	.951	.043	.046	—
Four-factor model: documentation and accountable action combined	681.92	269	2.54	.879	.864	.071	.078	269.29***
Four-factor model: ethical concern and documentation combined	724.15	269	2.69	.866	.850	.075	.082	311.52***
Three-factor model	956.84	272	3.52	.781	.756	.091	.103	544.21***

One-factor model			1468.27	275	5.34	.619	.587	.120	.138	1055.64***

Multilevel statistic	Ethical culture	Time pressure	Ethical concern	Audit documentation	Accountable audit action
ICC(1)	.22	.11	.08	.17	.19
ICC(2)	.62	—	—	—	—
Mean within-team agreement, rWG	.82	—	—	—	—

The measurement model and multilevel diagnostics are presented in Table 2. Confirmatory factor analysis supported the hypothesized five-factor measurement structure. The five-factor model provided a satisfactory fit to the observed data, $\chi^2(265) = 412.63$, $\chi^2/df = 1.56$, CFI = .958, TLI = .951, RMSEA = .043, and SRMR = .046. Each of these indices was within commonly accepted ranges for good model fit. In particular, the CFI and TLI exceeded .95, the RMSEA remained below .05, and the SRMR was substantially below .08. Alternative models in which theoretically distinct constructs were combined produced markedly poorer fit. Combining audit documentation and accountable audit action resulted in $\chi^2(269) = 681.92$, CFI = .879, TLI = .864, and RMSEA = .071, and the deterioration relative to the hypothesized model was statistically significant, $\Delta\chi^2 = 269.29$, $p < .001$. Similarly, combining ethical concern and documentation generated substantially poorer fit, $\chi^2(269) = 724.15$, CFI = .866, TLI = .850, and RMSEA = .075. The three-factor and one-factor alternatives performed even more poorly, indicating that the observed relationships could not be adequately represented by a smaller number of undifferentiated constructs. The particularly weak fit of the single-factor model, $\chi^2(275) = 1468.27$, CFI = .619, TLI = .587, RMSEA = .120, and SRMR = .138, additionally suggested that a single common response tendency was unlikely to account for the covariance among the study variables. Standardized factor loadings in the accepted five-factor solution ranged from .67 to .88 and were statistically significant at $p < .001$.

The multilevel diagnostics further supported the use of hierarchical modeling. For ethical culture, ICC(1) was .22, indicating that approximately 22% of the variance in ethical-culture perceptions was attributable to systematic differences between audit engagement teams rather than solely to individual differences among auditors. The mean within-team agreement coefficient was rWG = .82, indicating a relatively high degree of consensus among auditors belonging to the same engagement team. The ICC(2) coefficient of .62 provided additional support for the reliability of team-level mean differences, particularly given the relatively small average team size. Taken together, the ICC and within-team agreement results justified aggregation of ethical-culture perceptions to the engagement-team level. The intraclass correlations for audit documentation and accountable audit action were .17 and .19, respectively, demonstrating that 17% of the variance in documentation and 19% of the variance in accountable action occurred between engagement teams. These values were sufficiently large to indicate non-independence of individual observations and supported the use of multilevel structural equation modeling rather than ordinary single-level regression. Smaller but nontrivial between-team components were also identified for perceived time pressure (ICC = .11) and ethical concern (ICC = .08), suggesting that engagement membership influenced both perceived work conditions and professional responses, although these constructs remained primarily individual-level variables in the hypothesized model.

Table 3. Multilevel Structural Model Predicting Audit Documentation and Accountable Audit Action

Predictor and path	Standardized β	SE	z	p	95% CI
Ethical concern → Audit documentation	.42	.050	8.40	<.001	[.32, .52]
Perceived time pressure → Audit documentation	-.27	.052	-5.19	<.001	[-.37, -.17]
Ethical culture → Audit documentation	.29	.067	4.33	<.001	[.16, .42]

Ethical concern × Time pressure → Audit documentation	-.14	.055	-2.55	.011	[-.25, -.03]
Ethical concern × Ethical culture → Audit documentation	.17	.064	2.66	.008	[.04, .29]
Time pressure × Ethical culture → Audit documentation	.15	.060	2.50	.012	[.03, .27]
Audit documentation → Accountable audit action	.51	.047	10.85	<.001	[.42, .60]
Ethical concern → Accountable audit action	.16	.058	2.76	.006	[.05, .27]
Perceived time pressure → Accountable audit action	-.18	.062	-2.90	.004	[-.30, -.06]
Ethical culture → Accountable audit action	.24	.076	3.16	.002	[.09, .39]
Documentation × Time pressure → Accountable audit action	-.10	.046	-2.17	.031	[-.19, -.01]
Explained variance					R^2
Audit documentation, within-team level					.44
Accountable audit action, within-team level					.57
Audit documentation, between-team level					.39
Accountable audit action, between-team level					.42

The multilevel structural model provided strong support for the hypothesized process linking ethical concern with documentation and accountable audit action. Ethical concern had a substantial positive effect on audit documentation, $\beta = .42$, SE = .050, $z = 8.40$, $p < .001$, indicating that auditors who experienced greater professional or ethical concern were significantly more likely to develop a clear and comprehensive documentary record of the relevant audit issue. In contrast, perceived time pressure had a significant negative effect on documentation, $\beta = -.27$, SE = .052, $z = -5.19$, $p < .001$, showing that increased pressure arising from deadlines, workload, or budget constraints reduced the extent to which auditors documented problematic evidence and the reasoning underlying their professional response. Team-level ethical culture had a positive cross-level main effect on documentation, $\beta = .29$, SE = .067, $z = 4.33$, $p < .001$, demonstrating that auditors working in teams characterized by stronger ethical norms, greater openness to professional disagreement, and greater supervisory support generated more extensive documentation even after individual differences in ethical concern and time pressure were taken into account.

The interaction results revealed that the translation of ethical concern into documentation depended substantially on the conditions under which auditors worked. The interaction between ethical concern and perceived time pressure was negative and statistically significant, $\beta = -.14$, SE = .055, $z = -2.55$, $p = .011$. Thus, although ethical concern generally increased documentation, this relationship became weaker as perceived time pressure increased. In practical terms, recognizing that an issue was ethically or professionally problematic did not guarantee that the concern would be fully documented when auditors simultaneously experienced strong deadline or budget pressure. Conversely, the cross-level interaction between ethical concern and ethical culture was positive, $\beta = .17$, SE = .064, $z = 2.66$, $p = .008$. The positive coefficient showed that the association between ethical concern and documentation was stronger in engagement teams with a more supportive ethical culture. A further significant interaction between time pressure and team ethical culture was observed, $\beta = .15$, SE = .060, $z = 2.50$, $p = .012$. Because the main effect of time pressure was negative, the positive interaction coefficient indicated that stronger ethical culture buffered part of the adverse effect of time pressure on documentation. Accordingly, time pressure remained detrimental, but its negative association with documentation was less pronounced in teams where ethical expectations were clear, professional skepticism was supported, and raising concerns was institutionally legitimate.

Audit documentation was the strongest direct predictor of accountable audit action, $\beta = .51$, SE = .047, $z = 10.85$, $p < .001$. This result indicated that auditors who created a more explicit, traceable, and professionally defensible documentary record were substantially more likely to extend audit procedures, seek additional evidence, challenge management explanations, consult senior personnel, escalate unresolved issues, or otherwise engage in substantive

professional action. Ethical concern retained a smaller but significant direct relationship with accountable audit action after documentation was included in the model, β = .16, SE = .058, z = 2.76, p = .006, suggesting partial rather than complete mediation. Perceived time pressure exerted an additional negative direct effect on accountable action, β = -.18, SE = .062, z = -2.90, p = .004. Ethical culture also showed a significant positive direct effect at the team level, β = .24, SE = .076, z = 3.16, p = .002. Finally, the interaction between documentation and time pressure was negative, β = -.10, SE = .046, z = -2.17, p = .031, indicating that even when auditors had produced relatively strong documentation, high time pressure somewhat weakened the likelihood that the documented concern would progress into consequential professional action. Collectively, the model explained 44% of the within-team variance in audit documentation and 57% of the within-team variance in accountable audit action. At the engagement-team level, the model accounted for 39% of between-team differences in documentation and 42% of between-team differences in accountable audit action, indicating substantial explanatory power at both levels of the analysis.

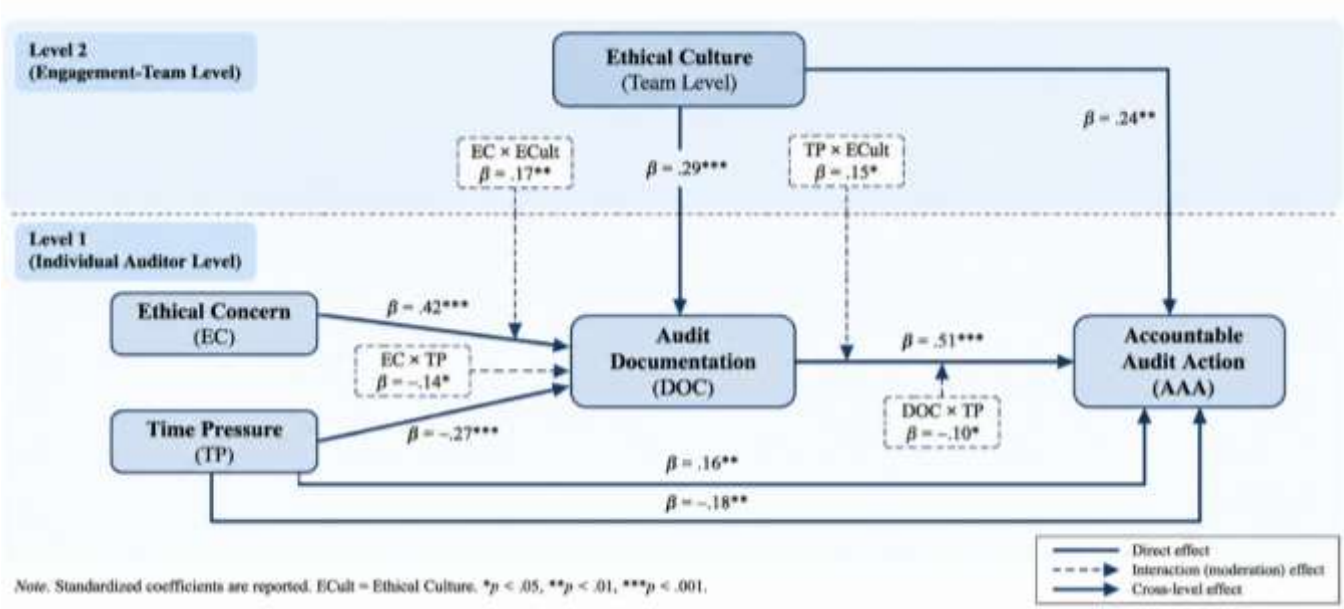


Figure 1. Estimated Cross-Level Model Linking Ethical Concern, Ethical Culture, Time Pressure, Audit Documentation, and Accountable Audit Action

The estimated structural pattern depicted in Figure 1 indicates that the movement from ethical recognition to accountable behavior was neither automatic nor exclusively dependent on auditors' individual ethical sensitivity. Ethical concern showed a strong pathway to audit documentation, and documentation subsequently represented the dominant proximal predictor of accountable action. At the same time, the strength of this sequence depended on the organizational and temporal context surrounding the auditor. Time pressure weakened both the conversion of concern into documentation and, to a lesser extent, the conversion of documentation into accountable action, whereas ethical culture strengthened the concern-to-documentation pathway and mitigated the detrimental influence of time pressure. The figure therefore represents accountable audit action as the outcome of a cross-level process in which individual professional concern becomes behaviorally consequential when it is translated into a formal audit trail and when the engagement environment provides sufficient normative and supervisory support for acting upon that record.

Table 4. Indirect, Conditional Indirect, and Moderated Mediation Effects

Effect	Estimate	Boot SE	95% Bootstrap CI	p
Ethical concern → Documentation → Accountable audit action	.214	.033	[.154, .285]	<.001
Ethical culture → Documentation → Accountable audit action	.148	.041	[.076, .237]	<.001
Time pressure → Documentation → Accountable audit action	-.138	.031	[-.205, -.084]	<.001
Ethical concern → Documentation → Action at low time pressure (-1 SD)	.319	.049	[.229, .423]	<.001
Ethical concern → Documentation → Action at mean time pressure	.214	.033	[.154, .285]	<.001
Ethical concern → Documentation → Action at high time pressure (+1 SD)	.121	.036	[.058, .198]	.001
Ethical concern → Documentation → Action at low ethical culture (-1 SD)	.132	.039	[.066, .218]	<.001
Ethical concern → Documentation → Action at mean ethical culture	.214	.033	[.154, .285]	<.001
Ethical concern → Documentation → Action at high ethical culture (+1 SD)	.301	.050	[.212, .409]	<.001
Index of moderated mediation by time pressure	-.099	.031	[-.165, -.044]	—
Index of moderated mediation by ethical culture	.086	.029	[.035, .148]	—

The mediation and conditional indirect-effect results presented in Table 4 clarified the mechanism through which ethical concern was translated into accountable audit action. The overall indirect effect of ethical concern on accountable audit action through audit documentation was positive and statistically significant, $\beta = .214$, Boot SE = .033, 95% CI [.154, .285], $p < .001$. Because the confidence interval did not include zero and the direct effect of ethical concern remained significant after documentation was incorporated into the model, the findings supported partial mediation. This means that ethical concern influenced accountable action through two complementary routes: a smaller direct route and a stronger indirect route in which the concern was first transformed into an explicit documentary record. Ethical culture also produced a significant positive indirect effect through documentation, $\beta = .148$, 95% CI [.076, .237], whereas perceived time pressure exhibited a significant negative indirect effect, $\beta = -.138$, 95% CI [-.205, -.084]. These findings indicated that contextual characteristics of the engagement environment affected accountable action partly because they altered the extent to which professional concerns were documented.

The conditional indirect effects showed a clear attenuation of the ethical concern–documentation–action pathway under increasing time pressure. At one standard deviation below the mean of time pressure, the indirect effect of ethical concern on accountable audit action through documentation was $\beta = .319$, 95% CI [.229, .423]. At the mean level of time pressure, the corresponding effect decreased to $\beta = .214$, 95% CI [.154, .285], and at one standard deviation above the mean it declined further to $\beta = .121$, 95% CI [.058, .198]. Although the mediation pathway remained statistically significant even under relatively high time pressure, its magnitude was less than half that observed under low-pressure conditions. The index of moderated mediation by time pressure was negative and statistically different from zero, index = -.099, Boot SE = .031, 95% CI [-.165, -.044], demonstrating that the indirect effect of ethical concern on accountable action systematically weakened as time pressure increased. Therefore, time pressure did not simply reduce general audit effort; it specifically interfered with the process through which recognized ethical concerns were converted into documented and subsequently accountable professional responses.

The opposite pattern was observed for team ethical culture. When ethical culture was one standard deviation below its mean, the indirect effect of ethical concern on accountable action through documentation was $\beta = .132$, 95% CI [.066, .218]. At the mean level of ethical culture, the indirect effect increased to $\beta = .214$, and at one standard deviation above the mean it increased to $\beta = .301$, 95% CI [.212, .409]. The index of moderated mediation was positive and statistically significant, index = .086, Boot SE = .029, 95% CI [.035, .148]. Thus, stronger team ethical culture significantly amplified the extent to which ethical concern was transformed into accountable action through documentation. This result was particularly important because it demonstrated that ethical culture operated not

only as a background predictor of higher audit quality behavior but also as a cross-level enabling condition that strengthened the behavioral consequences of auditors' ethical concern.

Additional examination of the interaction effects indicated that the relationship between ethical concern and documentation was strongest when auditors simultaneously experienced low time pressure and worked within engagement teams characterized by a strong ethical culture. Conversely, the weakest concern-to-documentation relationship occurred among auditors facing high time pressure within teams characterized by relatively weak ethical culture. Simple-slope analysis showed that ethical concern remained positively associated with documentation across the observed range of contextual conditions, but the magnitude of this association differed considerably. Under supportive conditions, auditors appeared substantially more capable of converting recognition of problematic evidence into a formal and reviewable audit trail. Under unfavorable conditions, especially when severe time pressure coincided with a weaker ethical culture, the behavioral expression of concern was substantially constrained.

Control-variable analyses did not materially alter the substantive findings. Professional auditing experience demonstrated a small positive relationship with accountable audit action, indicating that more experienced auditors were somewhat more likely to escalate or substantively address problematic audit matters. Professional rank was also positively associated with accountable action, although its effect decreased after ethical culture, documentation, and time pressure were introduced into the structural model. Age, educational level, and organizational tenure did not demonstrate independent effects sufficiently large to change interpretation of the principal relationships. Variance inflation factors for all predictors remained below 2.50 and tolerance statistics remained above .40, indicating that multicollinearity did not compromise coefficient estimation. Examination of residuals and influential observations likewise revealed no evidence that a small number of cases were driving the principal structural effects.

Overall, the findings supported the proposed cross-level model. Ethical concern was necessary but not sufficient for accountable audit action. Its strongest behavioral influence occurred through audit documentation, which functioned as the principal mechanism connecting professional recognition with observable audit response. Perceived time pressure disrupted this process at more than one point by reducing documentation and weakening the subsequent translation of documentation into action. By contrast, a strong engagement-team ethical culture directly promoted both documentation and accountable action, strengthened the extent to which ethical concern produced documentation, and buffered the negative consequences of time pressure. The results therefore indicate that accountable audit action emerges from the interaction of individual ethical awareness, formal documentation behavior, temporal constraints, and the normative environment of the engagement team rather than from any single individual or organizational factor in isolation.

4. Discussion and Conclusion

The present study examined how ethical concern is translated into accountable audit action through audit documentation and how this process is shaped by perceived time pressure and engagement-team ethical culture. The findings supported the proposed cross-level model and showed that accountable audit action cannot be understood solely as a direct consequence of auditors' ethical awareness. Ethical concern had a significant positive relationship with audit documentation, and documentation was the strongest direct predictor of accountable audit action. Ethical concern also retained a smaller direct effect on accountable action, indicating partial mediation. Perceived time pressure reduced both documentation and accountable action and weakened the relationship

between ethical concern and documentation. In contrast, engagement-team ethical culture positively predicted documentation and accountable action, strengthened the relationship between ethical concern and documentation, and buffered part of the negative effect of time pressure. The conditional indirect effects further showed that the pathway from ethical concern to accountable action through documentation was strongest under low time pressure and strong ethical culture and weakest when auditors faced high time pressure and worked in teams with weaker ethical norms. These findings provide empirical support for viewing ethical auditing behavior as a cross-level process in which individual recognition, organizational context, and formal documentation jointly determine whether concerns become consequential professional actions.

The positive association between ethical concern and audit documentation indicates that auditors who recognize stronger ethical or professional implications are more likely to create a clearer, more comprehensive, and more defensible audit trail. This finding is consistent with the proposition that ethical recognition gains organizational significance only when it is enacted through observable and reviewable professional behavior. Ethical enactment theory specifically emphasizes the transition from recognizing a problematic issue to converting that recognition into actions that can be reviewed and evaluated by others [1]. The present findings extend this logic by identifying documentation as a central behavioral mechanism in that transition. In external auditing, an undocumented concern may remain cognitively important to the individual auditor but may have little influence on the formal engagement process. Once documented, however, the concern becomes visible to reviewers, supervisors, engagement partners, and potentially other governance actors. Documentation therefore converts a private judgment into an institutional record, increasing the likelihood that the issue will attract further scrutiny and require resolution.

The strong relationship between audit documentation and accountable audit action was one of the most important findings of the study. Documentation had a substantially larger standardized effect on accountable action than the direct effect of ethical concern, suggesting that what auditors record may be more consequential for subsequent professional behavior than recognition alone. This finding supports the idea that accountability depends on traceability, justification, and reviewability. Research on ethics-based auditing has similarly emphasized that ethical evaluation must be embedded in systematic procedures and auditable records if it is to generate meaningful organizational accountability [9, 10]. Although those studies focused on automated decision-making systems rather than financial statement auditing, the underlying principle is comparable: accountability emerges when ethical concerns are made visible through structured evidence, formal evaluation, and documented intervention points. The broader emergence of artificial intelligence ethics auditing also reinforces the importance of documented processes that permit independent scrutiny of how concerns were identified and addressed [11]. In this respect, the present findings suggest that audit documentation should be understood not merely as a compliance requirement but as an active mechanism through which professional concern is converted into organizational accountability.

The partial rather than complete mediation effect is also theoretically meaningful. Ethical concern continued to predict accountable audit action after documentation was included in the model, although the effect became smaller. This suggests that some auditors may move directly from concern to action without documentation fully accounting for the process. For example, an auditor may immediately challenge a management explanation, consult a supervisor, or request additional evidence upon recognizing a serious issue. Nevertheless, the larger indirect effect through documentation indicates that formalizing the concern substantially increases the probability of consequential professional response. This pattern is compatible with evidence showing that auditors' actions are

embedded in interpersonal and hierarchical processes. Research on audit team voice has demonstrated that auditors may possess relevant information or concerns but hesitate to communicate them when they anticipate interpersonal or organizational costs [2]. Similarly, staff auditors' willingness to speak up depends partly on expected leadership feedback and the advice they receive from peers [3]. The current study extends this line of research by suggesting that even after concerns are recognized or voiced, documentation may be required to move the issue from informal awareness to a form that can influence subsequent engagement decisions.

The findings concerning time pressure were also consistent with prior audit research. Perceived time pressure negatively predicted audit documentation and accountable audit action, indicating that auditors working under stronger deadline and budget constraints were less likely to develop comprehensive documentation and less likely to undertake substantive professional responses to concerns. Prior evidence has shown that time-budget and time-deadline pressures can encourage behaviors that threaten audit quality, including premature sign-off, reduced evidence collection, and underreporting of time [12]. Reviews of reduced audit quality acts likewise show that organizational and task pressures can contribute to behaviors that compromise the nature, extent, or execution of audit procedures [13]. The present findings add to this literature by demonstrating that time pressure affects not only general audit effort but also the specific ethical transition from concern to reviewable action.

The significant interaction between ethical concern and time pressure is particularly important in this regard. Ethical concern remained positively related to documentation at different levels of time pressure, but the relationship became substantially weaker as pressure increased. This means that auditors may recognize the same degree of professional concern but respond differently depending on the temporal constraints under which they operate. Under severe deadline or budget pressure, auditors may conclude that additional documentation, consultation, evidence gathering, or escalation will jeopardize engagement efficiency. Consequently, recognized concerns may be recorded less comprehensively or may not receive the depth of follow-up they would receive under less restrictive conditions. This interpretation is consistent with evidence that audit-quality-threatening behavior results from the interaction of situational and dispositional factors rather than from a simple absence of ethical awareness [14]. It also aligns with recent evidence linking time pressure to audit quality and showing that organizational context plays an important role in determining how auditors respond to such pressure [15].

The negative interaction between documentation and time pressure in predicting accountable audit action further indicates that pressure can constrain the process even after a concern has been formally recorded. This is a particularly important finding because it suggests that documentation alone is not sufficient to guarantee action. Auditors may create an adequate record of a concern but still face constraints that discourage further testing, escalation, or confrontation with management. High time pressure may therefore interrupt ethical enactment at multiple stages. It can reduce the extent to which concerns are documented initially, and it can also weaken the extent to which documented concerns generate consequential action. This pattern helps explain why formal documentation systems, although necessary, cannot fully protect audit quality when engagement conditions strongly incentivize rapid completion. The organizational model of reduced audit quality behavior similarly emphasizes that formal professional expectations may be undermined by contextual demands when efficiency pressures become dominant [13].

The findings concerning ethical culture provide a complementary explanation. Team-level ethical culture positively predicted both audit documentation and accountable audit action, indicating that auditors working in engagement teams characterized by stronger ethical norms were more likely to formalize concerns and act upon them. This result is consistent with the broader audit-firm culture literature, which shows that shared values,

leadership signals, reward structures, and informal norms influence professional judgment and audit quality [4]. The present study extends this literature by demonstrating that ethical culture operates not only as a general background condition but also as a cross-level contextual factor that shapes individual behavior. When team culture communicates that professional skepticism, consultation, documentation, and escalation are legitimate and valued, individual auditors appear more willing to translate ethical recognition into formal and substantive action.

The significant interaction between ethical culture and ethical concern further supports this interpretation. Ethical concern was more strongly associated with documentation in teams with stronger ethical cultures. This suggests that the same level of individual concern can have different behavioral consequences depending on the normative environment of the engagement team. Strong ethical cultures may reduce perceived interpersonal and career risks associated with raising difficult issues, encourage more complete discussion of contradictory evidence, and legitimize additional audit work even when it creates delay or inconvenience. This interpretation is consistent with research on psychological safety, which has shown that employees are more likely to express uncertainty, disagreement, or concerns when they believe that doing so will not result in interpersonal punishment [5]. In audit teams, this dynamic is especially relevant because junior auditors may identify important issues but lack the authority to determine the engagement response independently.

Recent research concerning AI-enabled anonymous communication also provides support for this interpretation. Evidence suggests that reducing interpersonal exposure can increase psychological safety and facilitate speaking up in audit teams [6]. Although the present study did not examine anonymous communication directly, its findings imply that supportive ethical culture may perform a similar enabling function by reducing the perceived cost of expressing and documenting concerns. When auditors believe that supervisors value ethical challenge, the pathway from concern to documentation becomes stronger. Conversely, where team culture is perceived as unsupportive, auditors may recognize concerns but hesitate to formalize them because documentation creates a visible record that may trigger conflict, delay, or supervisory scrutiny.

The buffering effect of ethical culture on time pressure represents another important contribution. The positive interaction between time pressure and ethical culture showed that stronger ethical culture reduced the magnitude of the negative relationship between pressure and documentation. Thus, time pressure remained harmful, but its effect was less severe in teams with stronger ethical norms. This result closely aligns with recent work showing that ethical culture and time pressure jointly influence audit quality [15]. A strong ethical culture may communicate that engagement efficiency should not override professional standards and that additional procedures or documentation are legitimate when concerns arise. In this sense, ethical culture may influence how auditors interpret pressure. The same deadline can be experienced as an inflexible demand to finish quickly in one team and as a practical constraint that may be adjusted when audit quality requires additional work in another.

The findings also resonate with research on ethics consultation and material misstatement resolution. Audit partners often encounter complex ethical issues that are reframed through consultation, risk assessment, and organizational considerations [7]. Similarly, the resolution of material misstatements depends on partner judgment, evidence evaluation, client interaction, and the broader engagement process rather than on technical rules alone [8]. The current study demonstrates that these contextual dynamics are relevant not only at the partner level but across the audit hierarchy. Ethical concerns identified by individual auditors must enter an organizational process before they can influence the final audit response, and documentation appears to be one of the main mechanisms through which this occurs.

Taken together, the results support a more process-oriented understanding of ethical behavior in external auditing. The findings suggest that ethical concern should not be treated as equivalent to ethical action, nor should ethical behavior be explained solely by auditors' personal characteristics. Accountable action emerges from a sequence in which recognition is formalized through documentation and then converted into substantive response. This sequence is simultaneously constrained by time pressure and enabled by ethical culture. Such a perspective integrates research on audit quality, ethical culture, psychological safety, voice, consultation, and accountability. It also helps explain why audit failures may occur even in organizations where auditors possess adequate technical knowledge and recognize problematic circumstances. The key issue may not be whether auditors notice a concern, but whether the engagement environment allows that concern to become visible, reviewable, and behaviorally consequential.

Several limitations should be acknowledged when interpreting the findings. First, the study employed a cross-sectional design, which limits the ability to establish causal ordering among ethical concern, documentation, and accountable audit action. Although the hypothesized direction is theoretically plausible, reciprocal relationships may also exist; for example, auditors who routinely engage in accountable action may become more attentive to ethical concerns or more disciplined in their documentation practices. Second, the study relied primarily on self-reported perceptions and behaviors, which may be affected by social desirability, recall bias, or respondents' efforts to present themselves as professionally responsible. Third, although the multilevel design strengthened the analysis by accounting for auditors nested within engagement teams, the sample was drawn from external auditors working in Tehran, which may limit generalizability to other regions, countries, regulatory environments, or audit-market structures. Fourth, the study measured ethical culture at the engagement-team level using aggregated perceptions, and although within-team agreement supported aggregation, team culture may not capture all relevant characteristics of the wider audit firm. Finally, the model focused on ethical culture, time pressure, documentation, and accountable action and therefore did not incorporate other potentially influential factors such as client importance, partner leadership style, professional identity, incentive systems, regulatory inspection risk, technological audit tools, or individual moral courage.

Future studies should examine the proposed model using longitudinal, experimental, and multi-source designs to clarify causal relationships and reduce reliance on self-report data. Longitudinal research could track auditors across different stages of an engagement to determine how ethical concerns emerge, become documented, and lead to subsequent actions over time. Experimental studies could manipulate time pressure, leadership response, ethical climate, or documentation requirements to isolate their effects on auditor behavior. Future research could also incorporate archival indicators of documentation quality, review notes, consultation records, or engagement adjustments to complement questionnaire-based measures. Cross-national studies would be useful for determining whether the observed relationships vary across regulatory systems, professional cultures, litigation environments, or audit-market structures. Additional research should investigate whether leadership style, partner accessibility, professional skepticism, psychological safety, moral courage, client economic importance, audit technology, and incentive structures strengthen or weaken the concern-to-action pathway. It would also be useful to distinguish different forms of time pressure, including time-budget pressure, reporting-deadline pressure, staffing shortages, and simultaneous engagement demands. Finally, future studies could investigate whether digital documentation systems, artificial intelligence-assisted audit tools, anonymous reporting channels, or automated escalation mechanisms strengthen the reviewability of ethical concerns and reduce the extent to which time pressure suppresses accountable action.

The findings suggest several practical implications for audit firms and professional organizations. Audit firms should treat documentation as an active accountability mechanism rather than merely a compliance requirement and should design review systems that encourage auditors to record unresolved concerns, contradictory evidence, consultations, and the rationale underlying significant professional judgments. Engagement leaders should communicate clearly that raising and documenting legitimate concerns will not be interpreted as inefficiency or lack of competence. Firms should also monitor time budgets and deadlines to identify circumstances in which performance pressure may discourage adequate documentation or follow-up. Where significant concerns arise, engagement teams should have explicit mechanisms for obtaining additional time, personnel, or specialist support. Ethical culture can be strengthened through leadership behavior, consistent responses to raised concerns, transparent escalation procedures, and reward systems that prioritize audit quality over short-term efficiency. Training programs should go beyond ethical recognition and focus on how auditors should document, communicate, escalate, and resolve concerns under realistic engagement pressures. Audit firms may also benefit from protected consultation channels, formal escalation pathways, and review procedures that ensure significant concerns remain visible until appropriately resolved. In combination, these practices can help ensure that ethical awareness is converted into traceable, reviewable, and substantively accountable audit action.

Authors' Contributions

Authors equally contributed to this article.

Ethical Considerations

All procedures performed in this study were under the ethical standards.

Acknowledgments

Authors thank all participants who participate in this study.

Conflict of Interest

The authors report no conflict of interest.

Funding/Financial Support

According to the authors, this article has no financial support.

References

[1] N. S. Sewpersadh, "From Ethical Recognition to Reviewable Action in External Auditing: Ethical Enactment Theory," *Journal of Business Ethics,* 2026, doi: 10.1007/s10551-026-06433-2.

[2] S. M. Clor-Proell, K. Kadous, and C. A. Proell, "The Sounds of Silence: A Framework, Theory, and Empirical Evidence of Audit Team Voice," *Auditing: A Journal of Practice & Theory,* 2021, doi: 10.2308/AJPT-2021-015.

[3] E. E. Griffith, K. Kadous, and C. A. Proell, "Friends in Low Places: How Peer Advice and Expected Leadership Feedback Affect Staff Auditors' Willingness to Speak Up," *Accounting, Organizations and Society,* 2020, doi: 10.1016/j.aos.2020.101153.

[4] C. Alberti, J. Bedard, O. Bik, and A. Vanstraelen, "Audit Firm Culture: Recent Developments and Trends in the Literature," *European Accounting Review,* vol. 31, no. 1, pp. 59-109, 2022, doi: 10.1080/09638180.2020.1846574.

[5] A. Edmondson and D. Bransby, "Psychological Safety Comes of Age: Observed Themes in an Established Literature," *Annual Review of Organizational Psychology and Organizational Behavior,* vol. 10, no. 1, pp. 55-78, 2023, doi: 10.1146/annurev-orgpsych-120920-055217.

[6] E. Griffith, D. Li, and Y. Zhou, "Psychological Safety, AI-Enabled Anonymous Communication, and Speaking Up in Audit Teams," in *SSRN Electronic Journal*, ed, 2025.
[7] M. Hazgui and M. Brivot, "Debating Ethics or Risks? An Exploratory Study of Audit Partners' Peer Consultations about Ethics," *Journal of Business Ethics,* vol. 175, no. 4, pp. 741-758, 2022, doi: 10.1007/s10551-020-04576-4.
[8] E. Maksymov, M. Peecher, A. Sutherland, and J. Weber, "Audit Partners' Role in Material Misstatement Resolution: Survey and Interview Evidence," *Journal of Accounting Research,* vol. 62, no. 1, pp. 275-333, 2024, doi: 10.1111/1475-679X.12506.
[9] J. Mökander and M. Axente, "Ethics-Based Auditing of Automated Decision-Making Systems: Intervention Points and Policy Implications," *AI & Society,* vol. 38, pp. 153-171, 2021, doi: 10.1007/s00146-021-01286-x.
[10] J. Mökander, J. Morley, M. Taddeo, and L. Floridi, "Ethics-Based Auditing of Automated Decision-Making Systems: Nature, Scope, and Limitations," *Science and Engineering Ethics,* vol. 27, 2021, doi: 10.1007/s11948-021-00319-4.
[11] D. Schiff, S. Kelley, and J. Camacho Ibáñez, "The Emergence of Artificial Intelligence Ethics Auditing," *Big Data & Society,* vol. 11, 2024, doi: 10.1177/20539517241299732.
[12] R. Nehme, A. Michael, and J. Haslam, "The Impact of Time Budget and Time Deadline Pressures on Audit Behaviour: UK Evidence," *Meditari Accountancy Research,* 2021, doi: 10.1108/MEDAR-09-2019-0550.
[13] T. Hyatt, D. Prawitt, and K. Stubbs, "Reduced Audit Quality Acts: A Review and Organizational Model," *International Journal of Auditing,* vol. 28, no. 2, pp. 288-306, 2024, doi: 10.1111/ijau.12331.
[14] S. Liu, N. Sulaiman, and S. Shahimi, "The Effects of Situational and Dispositional Factors on Audit Quality Threatening Behaviour: Exploring the Moderating Influence of Religiosity," *Asian Review of Accounting,* vol. 32, no. 4, pp. 667-692, 2024, doi: 10.1108/ARA-11-2022-0274.
[15] A. Samagaio, P. M. Francisco, T. Felício, and P. Verga Matos, "The Relationship between Time Pressure, Ethical Culture and Audit Quality," *Management Decision,* vol. 64, no. 6, pp. 2143-2174, 2026, doi: 10.1108/MD-04-2024-0870.