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An Analytical Approach to the Function of Internal Auditors' Job Well-Being in Auditor Professional Maturity

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A B S T R A C T

Objective: The objective of this study was to develop and validate a comprehensive model of internal auditors' job well-being and examine its effect on auditor professional maturity.

Methods and Materials: This research adopted a mixed-methods design combining qualitative and quantitative approaches. In the qualitative phase, thematic analysis was conducted through semi-structured interviews with expert internal auditors and academic specialists to identify the underlying dimensions of internal auditors' job well-being. Extracted themes were categorized into overarching, organizing, and basic themes, forming the conceptual framework of the model. In the quantitative phase, data were collected using a researcher-developed questionnaire measuring job well-being dimensions and a standardized instrument assessing auditor professional maturity. The statistical population consisted of internal auditors, and sampling was conducted using purposive selection in the qualitative phase and survey-based sampling in the quantitative phase. The Delphi technique was employed to confirm content validity and expert consensus regarding identified components. Measurement model reliability and validity were evaluated using confirmatory factor analysis, Cronbach's alpha, composite reliability, convergent validity (AVE), and discriminant validity (Fornell–Larcker criterion). Structural Equation Modeling based on the Partial Least Squares (PLS-SEM) approach was applied to test the research hypothesis and assess model fit.

Findings: The structural model demonstrated satisfactory measurement and structural fit indices. Results indicated that internal auditors' job well-being has a positive and statistically significant effect on auditor professional maturity ($\beta = 0.564$, $T = 20.226$). The model explained approximately 52.9% of the variance in professional maturity. All dimensions of job well-being—including professional satisfaction, growth and development opportunities, social support and communication, psychological and physical health, and enhancement of audit process quality—were validated and significantly contributed to the latent construct of job well-being. Reliability, convergent validity, discriminant validity, and predictive relevance indices confirmed the robustness of the proposed model.

Conclusion: The findings indicate that internal auditors' job well-being functions as a fundamental driver of professional maturity by strengthening psychological

readiness, ethical judgment, professional competence, and organizational engagement. Promoting well-being-oriented organizational environments can enhance audit effectiveness, reinforce professional independence, and improve governance quality. The study highlights the strategic importance of integrating human-centered well-being policies into professional auditing frameworks to achieve sustainable professional development.

Keywords: *Internal auditors' job well-being; auditor professional maturity; structural factors; environmental factors.*

1 Introduction

The contemporary auditing environment is undergoing profound transformation as organizations increasingly operate within complex regulatory, technological, and ethical ecosystems. These developments have intensified expectations placed upon auditors, particularly internal auditors, whose responsibilities now extend beyond traditional compliance verification toward risk governance, strategic assurance, and organizational value creation. In such an environment, professional maturity has emerged as a central construct explaining auditors' effectiveness, independence, and decision-making quality. Professional maturity reflects the progressive integration of technical competence, ethical judgment, experiential learning, and psychological readiness required for high-quality auditing performance (Curtis et al., 2018; McCarthy, 2018). Earlier maturity frameworks emphasized procedural capability development, yet contemporary research highlights that professional maturity cannot be understood solely through technical proficiency; rather, it evolves through interaction between individual psychological resources, organizational context, and occupational well-being. As audit environments become more dynamic and uncertain, internal auditors must continuously adapt, demonstrating resilience, learning capacity, and professional judgment aligned with organizational accountability requirements (Abolghasemi et al., 2021; Tajik Jalayeri et al., 2022). Consequently, understanding the antecedents of professional maturity represents a strategic priority for both academic research and audit governance systems.

Among the emerging determinants of professional maturity, job well-being has attracted growing scholarly attention. Job well-being refers to the holistic experience of psychological health, emotional satisfaction, occupational engagement, and perceived meaning in professional roles. Research across organizational psychology suggests that employee well-being enhances motivation, adaptability, and performance sustainability, thereby influencing professional growth trajectories (Kun & Gadanecz, 2022; Russell, 2008). Within auditing contexts, well-being assumes particular importance because auditors routinely operate under time pressure, ethical dilemmas, and high accountability expectations. Studies indicate that excessive job demands, emotional exhaustion, and role ambiguity may weaken professional judgment and increase counterproductive behaviors, whereas supportive work environments strengthen cognitive functioning and ethical decision-making (Chen et al., 2017; Griffith et al., 2025). The auditing profession's transition toward knowledge-intensive and judgment-based activities further reinforces the need to examine well-being as a foundational mechanism supporting professional maturity development.

Recent auditing literature demonstrates that auditors' subjective well-being directly contributes to audit quality and professional effectiveness. Empirical evidence shows that well-being enhances concentration, reduces cognitive bias, and strengthens evaluative reasoning, thereby improving audit outcomes (Muterera & Brettle, 2024). Commercialization pressures within audit firms, however, may create tensions between productivity expectations and psychological health, influencing auditors' satisfaction and independence (Ponomareva et al., 2020; Safarzadeh et al., 2024). Internal auditors are particularly vulnerable to such pressures because they operate at the intersection of organizational management and governance oversight, often facing dual accountability roles that may produce conflict or ambiguity (Khanmohammadi et al., 2025). When organizational climates fail to support auditors' psychological safety, professional maturity development may stagnate despite technical expertise. Conversely, positive organizational environments characterized by trust, collaboration, and meaningful engagement foster learning and professional identity formation among auditors (Summers et al., 2021; Umans et al., 2016). These findings collectively suggest that job well-being is not merely an individual outcome but a structural resource shaping professional evolution.

Professional maturity itself has been conceptualized as a multidimensional construct encompassing competence, ethical awareness, independence, and adaptive career orientation. Career development research emphasizes that professional maturity emerges through continuous learning, mentoring relationships, and reflective experience

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accumulation (Barker et al., 1999; Payne & Huffman, 2005). Mentoring and observational learning environments enable auditors to internalize professional norms and enhance decision-making capabilities, reinforcing maturity progression over time (Diaz et al., 2017; Griffith et al., 2025). Furthermore, career adaptability and optimism are recognized as psychological precursors of professional growth, allowing individuals to navigate evolving occupational demands effectively (Rottinghaus et al., 2005). In auditing contexts, these developmental mechanisms are closely linked to job satisfaction and organizational commitment, both of which strengthen professional maturity and ethical engagement (Abbasi Estamal & Marefat, 2022). Thus, professional maturity represents the cumulative outcome of psychological resources, experiential learning, and supportive organizational structures.

The influence of individual psychological characteristics on auditing performance further underscores the relevance of well-being. Research demonstrates that auditors' psychological capital, experience, and professional skepticism significantly enhance judgment quality and decision reliability (Arefmanesh & Saffari, 2024; Chen et al., 2023). Similarly, self-efficacy and creativity have been shown to improve fraud risk assessment capabilities, indicating that positive psychological states reinforce professional competence development (Bairami et al., 2025). Advances in behavioral auditing research also reveal that emotional and cognitive processes play a crucial role in audit judgments, linking affective neuroscience with professional decision-making outcomes (Munidewi et al., 2024). These findings collectively highlight that professional maturity cannot be separated from auditors' psychological functioning and occupational well-being. When auditors experience psychological security, positive affect, and engagement, they demonstrate higher-quality judgments and more responsible professional conduct (Seyednejad Fahim & Hosseinnia Dilman, 2023).

Organizational and contextual factors further contribute to shaping auditors' professional maturity. Social and human capital within audit environments facilitate knowledge exchange, collaborative learning, and professional development opportunities (Hooshmand Naqabi et al., 2023). Ethical climates promoting fairness, positive emotions, and value orientation strengthen auditors' willingness to report irregularities and maintain professional integrity (Kadkhodaei Eliaderani & Banimahd, 2021). Moreover, technological transformation and ESG-oriented governance models have expanded auditors' responsibilities, requiring higher levels of competence and adaptive maturity to ensure audit efficiency and transparency (Zhang & Guo, 2024). External disruptions such as the COVID-19 pandemic have also transformed auditing processes, highlighting the importance of resilience and psychological well-being in maintaining professional effectiveness under uncertainty (Castka et al., 2021). These developments demonstrate that professional maturity emerges within a dynamic interplay between organizational structures, environmental pressures, and individual well-being.

The concept of job resources has been widely emphasized in explaining occupational well-being among accounting professionals. Access to supportive leadership, professional autonomy, learning opportunities, and collaborative environments significantly enhances subjective well-being and reduces occupational stress (Molina-Sánchez et al., 2019). Studies of auditors' workplace experiences confirm that collective belonging and social interaction improve emotional health and professional satisfaction (Umans et al., 2016). Positive work climates also mitigate job anxiety and disengagement caused by excessive workload or role conflict (Chen et al., 2017). In addition, structured professional frameworks such as international auditing standards contribute to role clarity and enhance internal audit effectiveness, indirectly supporting auditors' well-being and professional growth (Tajik Jalayeri et al., 2022). Therefore, job well-being functions as a strategic organizational asset rather than a peripheral human-resource concern.

Despite growing scholarly interest, significant gaps remain in understanding how job well-being translates into professional maturity among internal auditors. Prior research has largely examined well-being outcomes such as satisfaction or engagement independently, without integrating them into a comprehensive maturity-development framework (Vaz et al., 2018). Similarly, studies investigating professional maturity have often focused on contextual antecedents or organizational commitment rather than holistic well-being dimensions (Abbasi Estamal & Marefat, 2022; Abolghasemi et al., 2021). Furthermore, behavioral auditing research increasingly recognizes the importance of emotional regulation, ethical perception, and whistleblowing intentions, yet these factors have rarely been examined within an integrated well-being–maturity model (Tuan Mansor et al., 2021). Addressing this gap is particularly important for internal auditors, whose organizational

positioning requires both psychological resilience and professional independence.

In emerging audit environments characterized by rapid technological change, heightened accountability demands, and evolving governance expectations, cultivating internal auditors' job well-being may serve as a fundamental pathway toward sustainable professional maturity. By fostering psychological health, social support, and developmental opportunities, organizations can enhance auditors' capacity for independent judgment, ethical reasoning, and adaptive performance. Integrating well-being perspectives with professional maturity theory therefore offers a comprehensive approach to strengthening audit effectiveness and organizational trust. Accordingly, the aim of this study is to develop a model of internal auditors' job well-being and examine its effect on auditor professional maturity.

2 Methods and Materials

The present study employed a mixed-methods research design integrating qualitative and quantitative approaches in order to develop and empirically validate a comprehensive model explaining the relationship between internal auditors' job well-being and auditor professional maturity. The qualitative phase was conducted using thematic analysis to explore and conceptualize the dimensions of internal auditors' job well-being. The purpose of this phase was theory development and identification of underlying constructs that could later be operationalized and tested quantitatively. Data were collected through in-depth semi-structured interviews with subject-matter experts, including university professors specializing in auditing and experienced internal auditors who were members of the Iranian Institute of Internal Auditors. A combined purposive and snowball sampling strategy was adopted. Initially, three key experts were deliberately selected based on academic expertise and professional experience, and subsequent participants were identified through referrals. Interviews continued until theoretical saturation was achieved, defined as the stage at which newly collected data no longer produced novel conceptual insights.

Interview transcripts were analyzed through a systematic three-stage coding process consisting of open coding, axial coding, and selective coding. This procedure enabled the extraction of basic themes, organizing themes, and overarching themes forming the conceptual foundation of the proposed model. To enrich conceptual interpretation and ensure theoretical rigor, relevant academic articles and scholarly sources were reviewed through national and international databases, including SID, MAGIRAN, ScienceDirect, Emerald Insight, and Online Library resources. Trustworthiness of the qualitative findings was strengthened through triangulation by combining multiple data sources and conducting member checking and external expert review. Reliability of the extracted themes was further enhanced through a Delphi process in which preliminary results were repeatedly evaluated by expert panels until consensus was achieved.

The quantitative phase followed a descriptive–analytical survey design aimed at testing the conceptual model derived from the qualitative findings at a broader empirical level. The statistical population consisted of all internal auditors who were members of the Iranian Institute of Internal Auditors and actively employed in internal audit units during the research period. Due to the absence of an accurate official registry specifying the exact population size, the population was treated as unlimited. Sample size was determined using Cochran's formula for an infinite population at a 95% confidence level, resulting in an estimated sample of 384 participants. To increase statistical power and research validity, 400 questionnaires were distributed using convenience sampling among eligible participants, and 395 valid questionnaires were returned and included in the final analysis.

Data collection instruments were developed separately for the qualitative and quantitative phases while maintaining methodological continuity between them. In the qualitative stage, semi-structured interview protocols were designed to explore perceptions, experiences, and professional interpretations related to internal auditors' job well-being and professional development. Interview questions were flexible and exploratory, allowing participants to elaborate on organizational, psychological, and professional aspects influencing well-being and maturity.

The quantitative phase utilized two main instruments. The first instrument was a researcher-developed questionnaire measuring internal auditors' job well-being. The items of this questionnaire were directly derived from the themes identified through thematic analysis using the Attride-Stirling (2001) framework. Prior to final administration, the stability and consensus of identified components were verified through Delphi analysis, ensuring that only validated dimensions were operationalized. The questionnaire employed Likert-scale measurement to capture respondents' perceptions of professional

satisfaction, growth opportunities, organizational support, communication effectiveness, psychological health, and audit process quality.

The second instrument measured auditor professional maturity using the standardized questionnaire developed within the Common Body of Knowledge (CBOK, 2015) framework of internal auditing. This questionnaire consisted of seven items rated on a five-point Likert scale ranging from "strongly disagree" to "strongly agree." The instrument evaluates professional maturity in terms of independence, professional competence, ethical awareness, and role effectiveness.

Validity and reliability of the quantitative instruments were carefully assessed. Content validity was ensured because questionnaire items were grounded in qualitative findings and subsequently reviewed and confirmed by academic experts and professional auditors. Construct validity was examined through confirmatory factor analysis, evaluating measurement model fit indices. Reliability was assessed using Cronbach's alpha coefficients and composite reliability measures, all of which exceeded the accepted threshold of 0.70, indicating satisfactory internal consistency and measurement stability.

Data analysis was conducted sequentially in accordance with the mixed-methods research design. In the qualitative phase, thematic analysis enabled systematic identification and organization of conceptual patterns emerging from interview data. Coding procedures transformed raw textual data into structured themes representing dimensions of internal auditors' job well-being. Triangulation techniques and iterative Delphi rounds ensured analytical rigor, minimized researcher bias, and strengthened consensus regarding extracted constructs.

In the quantitative phase, statistical analysis was performed to validate the conceptual model and examine relationships among variables. Structural Equation Modeling based on the Partial Least Squares (PLS-SEM) approach was applied because of its suitability for predictive modeling and latent construct analysis. The analytical process involved assessment of measurement model fit followed by evaluation of the structural model. Measurement model evaluation included examination of indicator reliability through factor loadings, internal consistency reliability via Cronbach's alpha and composite reliability, convergent validity using Average Variance Extracted (AVE), and discriminant validity based on established criteria. Predictive relevance of the model was assessed using the Stone–Geisser Q^2 statistic, while overall model fit was evaluated through the Goodness-of-Fit (GOF) index.

After confirming acceptable measurement and structural model fit, hypothesis testing was conducted to evaluate the effect of internal auditors' job well-being on auditor professional maturity. Path coefficients and t-statistics obtained through bootstrapping procedures were used to determine statistical significance and explanatory power of the proposed model. This integrated analytical strategy enabled both theory development and empirical validation, ensuring methodological coherence between qualitative insights and quantitative verification.

3 Findings and Results

In order to familiarize readers with the characteristics of the statistical sample, the demographic information of the research participants is presented in Table 1.

Table 1

Demographic Information of the Study Participants

Variable	Criteria (Qualitative Section)	Frequency	Percentage	Criteria (Quantitative Section)	Frequency	Percentage
Gender	Male	14	87.50%	Male	320	81.01%
	Female	2	12.50%	Female	75	18.99%
	Total	16	100%	Total	395	100%
Age	Up to 45 years	3	18.75%	Up to 45 years	40	10.13%
	46–55 years	7	43.75%	46–55 years	290	73.42%
	Above 56 years	6	37.50%	Above 56 years	65	16.45%
	Total	16	100%	Total	395	100%
Work Experience	Less than 15 years	3	18.75%	Less than 15 years	140	35.44%
	More than 15 years	13	81.25%	More than 15 years	255	64.56%
	Total	16	100%	Total	395	100%
Academic Rank	PhD	16	100.00%	PhD	81	20.51%
	Master's degree	0	0%	Master's degree	276	69.87%
	Bachelor's degree	0	0%	Bachelor's degree	38	9.62%
	Total	16	100%	Total	395	100%

The descriptive results of the statistical samples in both qualitative and quantitative sections indicate considerable alignment in the demographic characteristics of participants, which strengthens the richness of the mixed-method findings. In both sections, the research population was predominantly male (87.50% in the qualitative section and 81.01% in the quantitative section) and possessed more than 15 years of work experience (81.25% in the qualitative section and 64.56% in the quantitative section), suggesting the dominance of experienced and practice-oriented perspectives across both phases. The largest age group in the qualitative section (43.75%) and particularly in the quantitative section (73.42%) fell within the 46–55-year range, indicating that the study primarily relied on the viewpoints of middle-aged professionals with mature professional expertise. The academic rank results reveal a substantive difference in sample composition consistent with the objectives of each research phase. In the qualitative section, all 16 participants (100%) held doctoral degrees, emphasizing the deliberate selection of academic experts and specialists to extract deep theoretical foundations. In contrast, in the quantitative section, the majority of participants (69.87%) held master's degrees, while only 20.51% possessed doctoral degrees. This distribution reflects a more realistic and broader representation of the professional population of internal auditors and demonstrates that the final model was tested within a representative professional environment while maintaining a strong theoretical foundation. The high proportion of experienced individuals in the qualitative sample enhances confidence in the depth and validity of the extracted theoretical bases, while the replication of similar characteristics within the larger quantitative sample—despite relatively greater diversity in work experience—indicates that the final model was evaluated within a population comparable to the qualitative sample, thereby strengthening the validity and generalizability of the proposed framework.

In this section, triangulation was employed in the qualitative study to assess coding credibility. Triangulation, conceptually derived from geometry, evaluates reliability in qualitative research through at least three sources to ensure that the generated codes possess sufficient validity and trustworthiness and that the study does not suffer from what is termed "intrinsic bias." Accordingly, following expert review after completion of the coding process, validation of the qualitative section was conducted across four dimensions.

Table 2

Validity of the Qualitative Section of the Study

Triangulation Dimensions	Description
Data Source Triangulation	The objective was to evaluate theoretical appropriateness and conceptual alignment between organizing themes and prior scientific literature. Because organizing themes were extracted from previous studies based on analytical requirements, the validity of the identified codes was confirmed through their consistency with concepts recognized in earlier research.
Researcher Triangulation	The aim was to evaluate the data collection process during interviews and coding procedures. Participants' subjective interpretations regarding coding and interview-question design constituted the basis of validation. Multiple researchers participated collaboratively, discussing interview styles, interpretations of codes, and potential deviations to ensure consistency.
Methodological Triangulation	This dimension assessed data collection methods within the qualitative study. Attention was given to achieving theoretical saturation during interviews. Open (in-depth) and semi-structured interviews were employed, demonstrating that data collection was not unilateral but based on a combination of interview techniques and preliminary coding conducted during interviews, thereby enhancing study credibility.
Theory Triangulation	Although conceptually overlapping with source triangulation, this dimension aimed to connect organizing themes and overarching themes emerging from axial and selective coding stages. Because theme organization relied on relevant interdisciplinary theories—particularly management theories—the identified codes were validated through theoretical triangulation.

In the quantitative section, validity was assessed using the Delphi technique. Specifically, to achieve theoretical adequacy regarding the identified dimensions and components within the target population, Delphi analysis was conducted to examine the applicability and acceptance of the concepts among professionals.

Given the absence of a coherent framework concerning the job well-being of internal auditors, thematic analysis was initially employed to identify the model's components and themes. Thematic analysis functions as an operational process of content analysis, examining conceptual foundations through simultaneous content exploration of similar studies and expert interviews to determine relevant dimensions.

Table 3

Keyword Search Used in Selecting Similar Studies

Keywords of the Internal Auditors' Job Well-Being Model
Career Goals
Personal Perception
Professional Factors
Job Satisfaction
Organizational Culture
Organizational Structures

Following identification of the keywords associated with the internal auditors' job well-being model, international and domestic research databases were consulted to locate comparable studies for determining organizing themes. A total of 27 initial sources were identified. After several stages of screening based on content relevance, title evaluation, and analytical compatibility, 12 studies were ultimately found to align with the research topic and analytical process. At this stage, concepts were categorized according to organizing themes so that overarching and basic themes could subsequently be developed through expert interviews. The analysis was conducted using a critical appraisal method with participation from research experts, based on criteria including research objectives, methodological logic, research design, sampling procedures, data collection methods, reflexivity, analytical rigor, theoretical articulation, transparency of findings, and scholarly value, alongside the selected keywords. Based on the results of this evaluation, six studies that failed to achieve the required score (above 30 points) were excluded from further review. Subsequently, to determine certain organizing themes of internal auditors' job well-being models, a scoring procedure was applied. According to this method, all extracted subcriteria from approved articles were listed in the columns of an evaluation table, and the names of validated researchers were entered across rows. A check mark was assigned where a researcher utilized a given subcriterion. Column totals were then calculated, and subcriteria with an average value exceeding 1.5—representing the mean threshold across reviewed studies—were selected as research components.

Table 4

Analysis of Research Components

Organizing Themes	Motarra & Bertel (2024)	Kahn et al. (2022)	Summers et al. (2021)	Panomarova et al. (2020)	Molina-Sanchez et al. (2019)	Yeomans et al. (2016)
Personal Perception	—	—	✓	✓	—	—
Professional Factors	—	✓	✓	✓	✓	✓
Job Satisfaction	—	✓	✓	✓	✓	✓
Organizational Culture	✓	✓	✓	✓	—	—
Organizational Structures	✓	✓	—	—	—	—

Considering that five studies were confirmed during the critical appraisal stage, the organizing themes were determined in order to focus interview questions toward identifying overarching and basic themes. Dimensions that appeared in more than half of the validated studies were identified as the principal organizing themes of the internal auditors' job well-being model. The themes of personal perception and organizational structures, having obtained scores lower than the average threshold, were excluded. Subsequently, the results of reviewed studies and expert interviews were examined to comprehensively identify overarching, organizing, and basic themes. Information related to these themes is presented in Table 5.

Table 5

Identification and Extraction of Overarching, Organizing, and Basic Themes

Overarching Themes	Organizing Themes	Basic Themes
A Deep and Sustainable Sense of Satisfaction in the Internal Auditing Profession	Work–Life Balance of Internal Auditors	Time planning for non-work activities; creating flexible and adaptive work environments; effective management of job stress and pressures; support for social and cultural activities
	Dynamic and Supportive Organizational Culture in Internal Auditing	Promotion of shared values and team cohesion; transparent and effective communication among team members; fostering innovation and creativity; respect for diversity and individual differences; strengthening collaboration among internal auditors; enhancing organizational belonging; encouraging participation in strategic decision-making; organizing social and team-building events
Professional Growth and Development Opportunities for Internal Auditors	Continuous Training and Learning Programs	Specialized training courses and practical workshops; access to credible educational resources; regular evaluation of performance and competencies; encouragement of continuous learning and professional updating; experience exchange opportunities; professional seminars and conferences; development of professional networks and international communication
	Clear and Accessible Career Paths	Identification and development of internal talents; merit-based promotion; challenging projects and new opportunities; support for innovative ideas; international opportunities for auditors; participation in international projects; job exchange programs; creation of diverse and attractive career opportunities
Social Support and Effective Workplace Communication among Internal Auditors	Internal Organizational Communication and Positive Interactions	Regular team meetings; establishment of open communication channels; encouragement of group decision participation; social and team-building events; safe environments for expressing ideas; strengthening interpersonal relations and collaboration; communication skills training workshops
	Professional Networking in Internal Auditing	Opportunities to meet specialists and experts; organization of specialized conferences and seminars; encouragement of membership in professional associations; online platforms for experience exchange; joint events with other organizations
Psychological and Physical Health of Internal Auditors	Workplace Health and Wellness Programs	Stress management training programs; mental health workshops; provision of psychological counseling services; creation of safe and healthy workplaces; encouragement of regular short breaks
	Emotional and Psychological Support for Internal Auditors	Group counseling sessions; supportive programs for managing occupational pressures; encouragement of emotional expression; recreational and social opportunities; supportive dialogue platforms; emotional intelligence training workshops; participation in social activities
Enhancement of Quality and Accuracy in Internal Auditing Processes	Compliance with Professional and Ethical Standards	Safe environments for reporting problems; adherence to auditing principles and international standards; transparency and accuracy in reporting and documentation; use of advanced software and analytical tools; continuous legal and regulatory training; ongoing improvement of auditing processes; culture of accountability and transparency; modern data analysis techniques; performance feedback sessions
	Strengthening Effective Communication and Organizational Collaboration	Improving communication between audit teams and other departments; regular knowledge-exchange meetings; interorganizational collaboration platforms; participation in strategic decisions; communication skills training; use of modern communication tools; international professional networking; reinforcement of teamwork in joint projects
	Risk Management and Internal Controls	Identification and evaluation of audit-related risks; design and implementation of effective internal controls; continuous monitoring of control performance; staff training in risk management; advanced risk identification techniques; risk and control review meetings; development of risk-prevention culture; documentation and reporting of risks and controls

The Delphi analysis functions as a bridge between qualitative and quantitative methods because, by evaluating the reliability and validity of the dimensions of the designed model, it enables the transformation of qualitative components into measurable quantitative indicators. Through expert consensus and precise clarification of components, this method provides the basis for designing valid and operational research instruments applicable to the target population in the quantitative phase. In the present study, Delphi analysis was employed to evaluate the reliability of the themes extracted from the proposed model. This analysis was based on two criteria: the agreement coefficient and the mean value. To conduct this assessment, the research components were first organized into a seven-point questionnaire and distributed among panel members. Through several iterative rounds of questionnaire distribution and feedback, the reliability level of the research components was examined.

Table 6

Delphi Analysis of Identified Components

Categories	Components	First Delphi Round Mean	First Delphi Round Agreement Coefficient	Second Delphi Round Mean	Second Delphi Round Agreement Coefficient	Result
Deep and Sustainable Satisfaction in the Internal Auditing Profession	Work–Life Balance of Internal Auditors	5.98	0.87	5.69	0.81	Confirmed
	Dynamic and Supportive Organizational Culture in Internal Auditing	6.32	0.70	6.44	0.80	Confirmed
Professional Growth and Development Opportunities	Continuous Training and Learning Programs	5.06	0.82	5.74	0.84	Confirmed
	Clear and Accessible Career Paths for Internal Auditors	5.78	0.90	6.11	0.87	Confirmed
Social Support and Effective Workplace Communication	Internal Organizational Communication and Positive Interactions	6.36	0.85	5.69	0.79	Confirmed
	Professional Networking in Internal Auditing	5.40	0.73	6.03	0.83	Confirmed
Psychological and Physical Health of Internal Auditors	Workplace Health and Wellness Programs	6.35	0.88	5.63	0.81	Confirmed
	Emotional and Psychological Support for Internal Auditors	5.55	0.74	6.32	0.83	Confirmed
Enhancement of Quality and Accuracy in Internal Auditing Processes	Compliance with Professional and Ethical Standards	5.30	0.65	5.45	0.81	Confirmed
	Strengthening Effective Communication and Organizational Collaboration	6.01	0.88	5.76	0.79	Confirmed
	Risk Management and Internal Controls	5.30	0.67	5.44	0.85	Confirmed

Based on the two criteria of mean value and agreement coefficient, all components related to the internal auditors' job well-being model were confirmed. In other words, since the mean scores of the main components exceeded the threshold value of 5 and the obtained agreement coefficients were greater than 0.50, all components identified in the qualitative phase were validated.

The Structural Equation Modeling (SEM) procedure was conducted in two main stages. First, model fit was evaluated, including measurement model fit, structural model fit, and overall model fit. Subsequently, the research hypotheses were tested. Measurement model assessment relied on three criteria: reliability, convergent validity, and discriminant validity. Reliability of the measurement model was examined using factor loadings, Cronbach's alpha coefficients, and composite reliability indices.

The predictive capability of the model was evaluated using the nonparametric Stone–Geisser test. Examination of the Q^2 values presented in Table 7 indicates that none of the Q^2 statistics were negative and that the minimum predictive relevance thresholds were satisfied.

Table 7

Goodness-of-Fit Predictive Indices

Dimensions	CV.Redundancy (Q^2)	CV.Communality (Q^2)
Deep and Sustainable Satisfaction	0.553	0.624
Enhancement of Quality and Accuracy in Processes	0.851	0.773
Auditor Professional Maturity	0.772	0.806
Internal Auditors' Job Well-Being	—	0.667
Social Support and Effective Workplace Communication	0.806	0.540
Psychological and Physical Health	0.794	0.500
Professional Growth and Development Opportunities	0.568	0.578

After evaluating both measurement and structural components of the model, overall model fit was assessed using the Goodness-of-Fit (GOF) index. Values of 0.10, 0.25, and 0.36 represent weak, moderate, and strong levels of model fit, respectively. The GOF index is calculated according to Equation (1):

$$GOF = \sqrt{\bar{Communalities} \times \bar{R^2}}$$

where $\bar{Communalities}$represents the average communality values of latent variables and $\bar{R^2}$denotes the mean coefficient of determination for endogenous constructs.

Table 8

Communality and R² Values

Latent Variables	Communality	R²
Auditor Professional Maturity	0.894	0.530

Table 9

Overall Model Fit Results

Mean Communality	Mean R²	GOF
0.743	0.786	0.838

Considering the obtained GOF value of 0.838, the overall model demonstrates an excellent level of fit.

To examine the validity of the measurement instrument, convergent validity and discriminant validity were assessed using Confirmatory Factor Analysis (CFA) and the Average Variance Extracted (AVE) method. The confirmatory approach evaluates the consistency of observed data with a predetermined factorial structure. In fact, confirmatory factor analysis assesses the adequacy of the questionnaire items selected to represent latent constructs. CFA represents an extension of traditional factor analysis and constitutes one of the fundamental components of Structural Equation Modeling (SEM), in which specific hypotheses concerning factor-loading structures are tested. According to the criterion proposed by Fornell and Larcker (1981), factor loadings greater than 0.50 indicate acceptable validity. Moreover, the AVE values for constructs must be equal to or greater than 0.50. Based on the findings of the present study, all factor loadings were at least 0.70, confirming convergent validity. Additionally, the t-statistics for all variables exceeded 1.96, indicating statistically significant contributions of the indicators to their corresponding constructs (Table 10).

Table 10

Factor Loadings and t-Statistics of Questionnaire Items

Components	Factor Loading	t-Statistic
Deep and Sustainable Satisfaction in the Internal Auditing Profession	0.977	97.172
	0.977	20.216
Professional Growth and Development Opportunities	0.869	52.079
	0.880	53.480
Social Support and Effective Workplace Communication	0.953	28.279
	0.952	22.141
Psychological and Physical Health of Internal Auditors	0.939	91.296
	0.943	11.313
Enhancement of Quality and Accuracy in Internal Auditing Processes	0.986	50.362
	0.972	30.530
	0.981	41.220
Auditor Professional Maturity	0.956	99.734
	0.964	57.332
	0.970	20.400
	0.970	94.913
	0.964	91.456
	0.962	33.658
	0.823	28.353

As shown in Table 11, the AVE values for all constructs exceed 0.50 and therefore remain within acceptable thresholds, confirming convergent validity of the constructs. Furthermore, composite reliability coefficients and Cronbach's alpha values obtained for all constructs demonstrate satisfactory internal consistency of the measurement models.

Table 11

Convergent Validity and Reliability Indicators

Dimensions	Cronbach's Alpha	Rho	Composite Reliability	AVE
Deep and Sustainable Satisfaction	0.952	0.952	0.977	0.954
Enhancement of Quality and Accuracy in Processes	0.979	0.979	0.986	0.959
Auditor Professional Maturity	0.980	0.982	0.983	0.894
Internal Auditors' Job Well-Being	0.968	0.972	0.972	0.763
Social Support and Effective Workplace Communication	0.898	0.898	0.952	0.908
Psychological and Physical Health	0.871	0.871	0.939	0.885
Professional Growth and Development Opportunities	0.893	0.894	0.867	0.765

Discriminant validity was assessed using the Fornell and Larcker (1981) criterion. According to this approach, discriminant validity is confirmed when the square root of each construct's AVE exceeds its correlations with other constructs. Table 12 presents the inter-construct variance matrix used to evaluate discriminant validity. Diagonal values represent the square roots of AVE.

Table 12

Inter-Construct Variance Matrix (Discriminant Validity Assessment)

Constructs	1	2	3	4	5	6	7
Deep and Sustainable Satisfaction	0.977						
Enhancement of Quality and Accuracy in Processes	0.601	0.979					
Auditor Professional Maturity	0.668	0.573	0.945				
Internal Auditors' Job Well-Being	0.579	0.669	0.464	0.873			
Social Support and Effective Workplace Communication	0.667	0.615	0.536	0.464	0.953		
Psychological and Physical Health	0.661	0.545	0.546	0.668	0.662	0.941	
Professional Growth and Development Opportunities	0.602	0.503	0.533	0.579	0.547	0.421	0.875

As indicated in Table 13, the R^2 values of latent variables represent the degree to which dependent variables are explained by independent variables. Accordingly, 52.9% of the variance in auditor professional maturity is explained by internal auditors' job well-being.

Table 13

Coefficient of Determination (R^2) of the Research Model

Dimensions	R^2	Adjusted R^2
Auditor Professional Maturity	0.530	0.529

Figure 1

Structural model of the research hypothesis with standardized factor loadings.

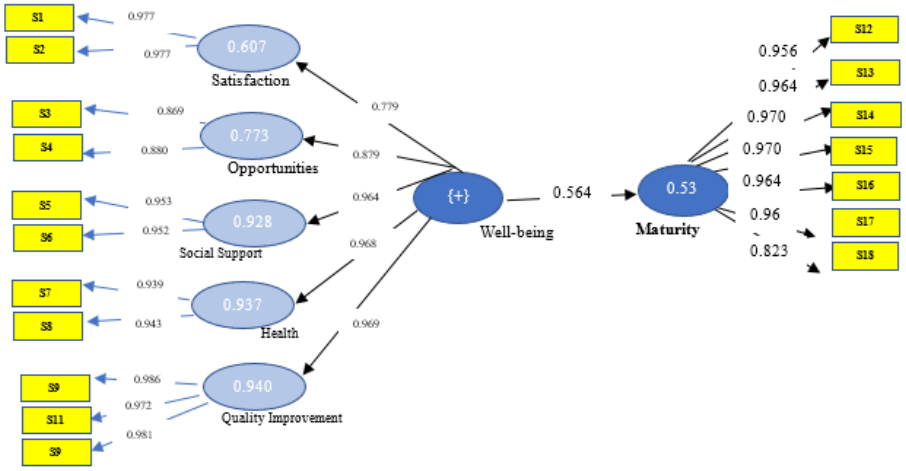

Figure 2

Structural model of the research hypothesis with t-statistics values.

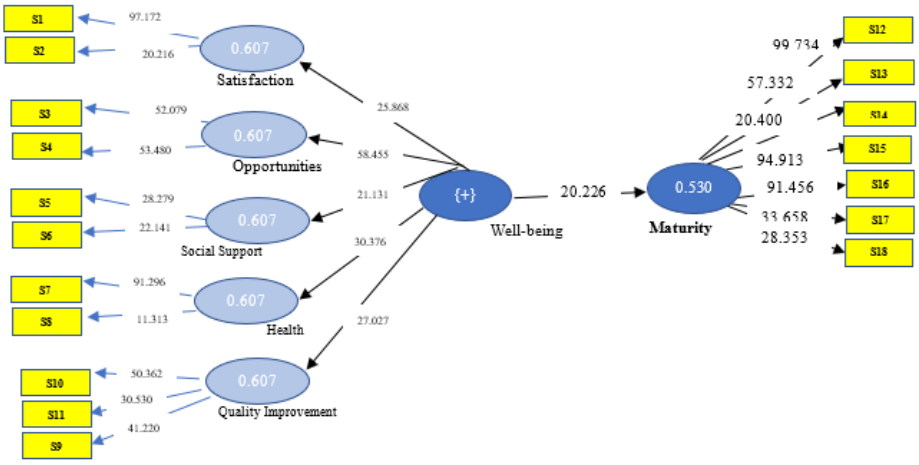

Table 14

Results of Research Hypothesis Testing

Research Hypothesis	Description	Path Coefficient (β)	Significance (T-Value)	Result
Main Hypothesis	Internal auditors' job well-being has a significant effect on auditor professional maturity.	0.564	20.226	Hypothesis Confirmed

According to Figures 1 and 2, the standardized path coefficient indicates that internal auditors' job well-being exerts a positive and statistically significant effect on auditor professional maturity. The path coefficient is positive and equal to 0.564, while the t-statistic equals 20.226. Since this value exceeds the critical threshold of 1.96, the research hypothesis is supported.

4 Discussion

The findings of the present study demonstrated that internal auditors' job well-being exerts a positive and statistically significant effect on auditor professional maturity. The structural model results indicated that job well-being explains a substantial proportion of variance in professional maturity, suggesting that psychological, organizational, and social dimensions of work experience function as critical developmental resources rather than merely contextual conditions. This finding aligns with contemporary perspectives in auditing research emphasizing that professional maturity evolves through the interaction of technical competence, experiential learning, and psychological readiness (Abolghasemi et al., 2021). The confirmation of the main hypothesis reinforces the argument that auditors who experience higher levels of occupational satisfaction, psychological stability, and organizational support demonstrate stronger professional judgment, independence, and ethical awareness.

One of the central outcomes of this research concerns the role of deep and sustainable professional satisfaction in strengthening auditor maturity. The results showed that auditors who perceive meaningful engagement and long-term satisfaction in their professional roles exhibit higher maturity levels. This finding is consistent with studies indicating that job satisfaction enhances organizational commitment and professional responsibility among auditors (Abbasi Estamal & Marefat, 2022). Subjective well-being improves motivation and persistence, enabling professionals to cope with demanding audit environments and maintain high-quality decision-making processes (Russell, 2008). Prior research has similarly shown that auditors' subjective well-being contributes directly to audit quality by enhancing cognitive clarity and reducing decision fatigue (Muterera & Brettle, 2024). The present findings extend these insights by demonstrating that well-being does not only improve performance outcomes but also facilitates the developmental progression toward professional maturity.

The identified importance of organizational culture and supportive work environments further confirms that professional maturity is socially embedded rather than individually constructed. Internal auditors operate within complex organizational structures where collaboration, transparency, and psychological safety influence professional identity formation. Evidence suggests that collective workplace belonging enhances auditors' emotional stability and professional confidence (Umans et al., 2016). Similarly, research on workplace well-being among professional practitioners highlights that supportive organizational climates reduce stress and improve engagement, thereby fostering sustained professional growth (Summers et al., 2021). The present study's findings therefore support the view that dynamic organizational cultures serve as enabling environments in which auditors refine judgment capabilities and ethical reasoning skills. Moreover, studies examining role conflict and independence challenges in internal auditing emphasize that unclear expectations undermine professional maturity, while supportive governance structures strengthen auditors' autonomy and integrity (Khanmohammadi et al., 2025).

Another significant dimension confirmed by the results concerns professional growth and development opportunities. Continuous learning, mentoring, and career advancement pathways were shown to be essential components of job well-being contributing to professional maturity. Career development literature consistently highlights mentoring relationships and professional learning climates as key drivers of competence development and career progression (Barker et al., 1999; Payne & Huffman, 2005). Observational learning and cognitive process modeling further enhance auditors' analytical capabilities and judgment sophistication (Griffith et al., 2025). The findings of this study reinforce earlier evidence indicating that professional experience alone is insufficient; structured developmental opportunities are necessary to transform experience into maturity (Curtis et al., 2018). Furthermore, workplace happiness and psychological capital have been associated with enhanced adaptability and resilience, which are essential attributes of mature professionals operating in uncertain environments (Kun & Gadanecz, 2022). Thus, job well-being operates partly through developmental mechanisms that strengthen auditors' long-term professional competence.

The results also emphasized the importance of social support and effective communication within the workplace. Social interaction and professional networking were found to contribute significantly to professional maturity, suggesting that maturity develops through collaborative knowledge exchange. Prior research indicates that auditors' social and human capital enhances service quality and professional effectiveness (Hooshmand Naqabi et al., 2023). Positive interpersonal environments promote ethical reporting behavior and strengthen accountability perceptions among internal auditors (Kadkhodaei Eliaderani & Banimahd, 2021). Additionally, studies grounded in

behavioral auditing demonstrate that emotional and cognitive interactions influence audit judgment formation (Munidewi et al., 2024). The present findings confirm that well-being-enhancing communication structures facilitate reflective learning and shared professional norms, thereby accelerating maturity development.

Psychological and physical health emerged as another decisive factor influencing professional maturity. The findings suggest that auditors experiencing psychological safety, emotional balance, and manageable workload pressures demonstrate stronger professional judgment capabilities. Research examining psychological well-being among accounting professionals has shown that positive affect and psychological safety improve decision-making quality and professional engagement (Seyednejad Fahim & Hosseinnia Dilman, 2023). Conversely, excessive job demands and anxiety are associated with counterproductive work behaviors and impaired cognitive functioning (Chen et al., 2017). The results of this study therefore corroborate the argument that professional maturity cannot be achieved in environments characterized by chronic stress or burnout. Instead, organizations must cultivate conditions supporting emotional resilience and mental health, which in turn enhance professional independence and ethical conduct.

The findings relating to enhanced audit quality and process accuracy further support the integrative role of job well-being. Compliance with professional standards, effective collaboration, and risk management practices were identified as outcomes associated with higher maturity levels. Earlier studies indicate that adherence to international professional practices frameworks strengthens internal audit effectiveness and organizational governance outcomes (Tajik Jalayeri et al., 2022). Similarly, research on auditor competence demonstrates that experience, time management, and professional expertise significantly influence audit judgment quality (Hendar & Harahap, 2023). The present study extends this knowledge by revealing that well-being functions as an underlying enabling condition through which professional competence translates into mature auditing behavior. Additionally, personality traits and professional skepticism have been shown to enhance audit quality, suggesting that psychological factors play an integral role in professional development (Chen et al., 2023).

From a broader organizational perspective, the results also resonate with maturity model frameworks emphasizing the progressive development of intellectual and professional capabilities. Maturity models in financial management and intellectual capital research indicate that organizational performance improves when human capabilities evolve systematically alongside structural processes (McCarthy, 2018; Vaz et al., 2018). Internal auditors' job well-being can therefore be interpreted as a foundational stage in organizational maturity development, enabling individuals to transition from procedural compliance toward strategic advisory roles. Moreover, technological transformation and ESG-oriented governance increasingly require auditors to demonstrate adaptive maturity, integrating analytical skills with ethical accountability (Zhang & Guo, 2024). The positive relationship identified in this study thus reflects broader shifts in the auditing profession toward human-centered performance models.

The present findings also contribute to understanding the behavioral dynamics underlying auditors' professional conduct. Self-efficacy, creativity, and psychological resources have been shown to enhance fraud risk assessment and decision accuracy (Bairami et al., 2025). Job well-being strengthens these psychological resources by fostering confidence and intrinsic motivation, enabling auditors to perform complex evaluations under uncertainty. Likewise, commercialization pressures within audit firms may undermine well-being and independence if organizational support mechanisms are insufficient (Ponomareva et al., 2020; Safarzadeh et al., 2024). The results of this study highlight that promoting well-being not only benefits individual auditors but also safeguards audit quality and institutional trust. This perspective aligns with governance research suggesting that whistleblowing intentions and ethical responsiveness depend heavily on organizational environments that nurture psychological security (Tuan Mansor et al., 2021).

5 Conclusion

Overall, the discussion confirms that internal auditors' job well-being constitutes a multidimensional construct encompassing psychological satisfaction, professional development, social support, health conditions, and organizational culture. These elements collectively facilitate the transition from technical competence to professional maturity. The study therefore advances existing literature by integrating well-being theory with professional maturity frameworks and demonstrating empirically that sustainable professional development in auditing is fundamentally human-centered. In increasingly complex governance environments, investment in auditors' well-being represents not merely an employee welfare initiative but a strategic

mechanism for enhancing audit reliability, ethical accountability, and organizational effectiveness.

Despite its contributions, this study presents several limitations. First, the research relied primarily on self-reported questionnaire data, which may introduce common method bias and subjective evaluation effects. Second, the cross-sectional design limits causal interpretation of relationships between job well-being and professional maturity. Third, the study focused on internal auditors within a specific professional and institutional context, which may restrict generalizability to external auditors or other professional domains. Additionally, cultural and organizational characteristics unique to the studied environment may influence perceptions of well-being and maturity differently than in other settings. Finally, although structural equation modeling provides strong analytical rigor, qualitative nuances of professional development may not be fully captured through quantitative indicators alone.

Future studies may adopt longitudinal research designs to examine how job well-being influences professional maturity over time and across career stages. Comparative studies between internal and external auditors, or across different national regulatory environments, could provide deeper insight into contextual influences on maturity development. Researchers may also explore mediating mechanisms such as psychological capital, organizational learning climate, ethical leadership, or digital competence. Integrating neuroscientific and behavioral perspectives may further clarify cognitive processes underlying mature professional judgment. Moreover, mixed-method approaches combining narrative analysis with quantitative modeling could enrich understanding of how auditors experience professional growth in real organizational environments.

From a practical standpoint, audit organizations should prioritize policies that enhance auditors' job well-being through supportive leadership, fair workload distribution, and opportunities for continuous professional learning. Establishing mentoring systems, strengthening professional communication networks, and promoting psychological safety can accelerate maturity development among auditors. Investment in mental health programs, flexible work arrangements, and collaborative organizational cultures may improve both employee satisfaction and audit effectiveness. Regulatory bodies and professional associations should also integrate well-being considerations into competency development frameworks, recognizing that sustainable audit quality depends not only on technical standards but also on the holistic well-being of auditing professionals.

Authors' Contributions

All authors have contributed significantly to the research process and the development of the manuscript.

Declaration

In order to correct and improve the academic writing of our paper, we have used the language model ChatGPT.

Transparency Statement

Data are available for research purposes upon reasonable request to the corresponding author.

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Declaration of Interest

The authors report no conflict of interest.

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Ethical Considerations

In this research, ethical standards including obtaining informed consent, ensuring privacy and confidentiality were observed.

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