

## Explaining the role of job stress and ego empowerment in improving audit quality

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### Abstract

**Introduction:** Ego functions include communication with reality, regulation and control of instinctual forces, thematic relations, thought processing, defensive functions, combined functions and judgment. The purpose of this study was to investigate the relationship between audit quality with job stress and ego empowerment.

**Method:** This was a cross sectional study conducted on the auditors of the auditing organization and independent auditing companies, which included at least 3 auditors in 2019. finally, 815 people create the total statistical population of this research. Audit quality questionnaire, Job Stress Questionnaire, and Ego Strength Psychological Questionnaire were used to collect data.

**Results:** Total number of 399 auditors with mean age of  $31.7 \pm 5.6$  years (159 female and 240 male subjects) were included in our study. Results showed that job stress and ego empowerment can predict audit quality. ego empowerment can predict audit quality. the effect of "job stress" on "audit quality" was confirmed as the null hypothesis, by a p-value of 0.465 ( $t_{0.95} = 1.96$ ); so, significance of the effect of "job stress" on "audit quality" can be accepted at the level of type I error (0.05) in this model. job stress can predict the quality of auditing. Effect of "ego empowerment" on "audit quality" was confirmed by statistic P-value of 0.174 ( $t_{0.95} = 1.96$ ), rejecting H1 hypothesis; so, ego empowerment can predict the quality of auditing.

**Conclusion:** The results showed that job stress and ego empowerment can predict audit quality.

### Keywords: Financial Audit; Occupational Stress; Ego.

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### Introduction

Given the conflict in the dominant interest in the audit environment and the nature of the issues at hand, auditors must have sufficient professional skills or qualification. However, there are no similar definitions of the dimensions of this concept in previous literature and researches, and its dimensions have undergone fundamental changes according to the requirements of time. The study of the historical evolution of this concept also indicates the expansion of its dimensions to concepts such as communication skills,

management knowledge and accountability (1). The results of psychological and sociological research indicate that the appropriate decision-making process requires a balance between emotions and perceptions of individuals (2). For example, Lidox (1993) concluded that people's perceptions of his emotional reactions can help him choose and ultimately make decisions in different situations. Also, if the person has experienced similar feelings and mental states in the past and is aware of them, his ability to judge and make decisions will increase. Therefore, it is

necessary to know the source of emotional reactions and managing and understanding the relationships between them, because if not properly managed, they will easily lead to bias in judgment and decision making (3). In general, the purpose of auditors is to protect the interests of shareholders against significant distortions and errors in the financial statements, and in the meantime, the incentives of managers to apply personal interests in the quality of profits, prevent auditors from achieving their goals. In order to prevent that, auditors can, by increasing the quality of the audit, discover potential earnings management by managers and put managers in a tight spot in earnings management (4). Therefore, the quality of auditing in companies depends on the mental and psychological condition of auditors and can influence the company's decisions. Some factors that can affect the auditor's job are job stress, the auditor's ability and the organization of the auditors' personality. Recent studies in the field of job stress have provided the basis for the development of theories about work behaviors. Theoretically, job stress is a consequence of the perception of imbalance between stressors and a person's ability to deal with these stressors (5)

According to Freud, the founder of psychoanalysis, human personality has three structures, id, ego, and Super-ego. I or ego refers to the second personality structure in Freud's theory that arises from the forces within the. Ego functions include communication with reality, regulation and control of instinctual forces, thematic relations, thought processing, defensive functions, and judgment (6). The ego's ability refers to the capacity of "I" to handle conflicting demands of id, superego, and external reality requirements, and to the extent that if "I" is unable to strike a functional balance, the personality of the involved person would be. According to steigfried's definition, the capability of "I" is the ego's ability to face external reality, when I strikes a balance between the desires of id, the superego, and the external

environment (7). While no other studies have evaluated stress variable along with the ego empowerment; The purpose of this study was to investigate the relationship between audit quality with job stress and ego empowerment.

#### **Methods:**

This was a cross sectional study conducted on the auditors of the auditing organization and independent auditing companies. The present study has 3 main variables: audit quality (dependent), job stress and ego empowerment. The statistical population of this research was all the 191 auditors of the auditing organization and 208 independent auditing companies, which included at least 3 auditors in 2019, which finally 815 people created the total statistical population of the research. The sample size of the population according to Cochran's formula (where e is the margin of error, p is the proportion of the population, and q is the 1-p) was 261. Sampling was done by simple random method by listing the name of all auditors and assigning a code for each one; then a computer software (Random Name Picker) randomly chose the participants. Inclusion criteria was being auditors of the auditing organization or independent auditing companies. Exclusion criteria was the uncompleted questionnaires and unwillingness to participate or continue the study. The information gathering in this research was initially conducted by library studies, field research.

In order to collect information three questionnaires were used: A) Audit quality questionnaire (standard) which has been prepared by Knechel et al. (8). B) Job Stress Questionnaire (Standard) which has been developed by the UK Safety and Health Administration. C) Ego Strength Psychological Questionnaire (PIES) (Standard). The validity of the content of this questionnaire has also been confirmed by the supervisor and consultant and some accounting experts. In this study, Cronbach's alpha test was used to assess the reliability which Cronbach's alpha

coefficients for the questionnaires (audit quality, job stress, ego empowerment) were 0.81, 0.85 and 0.84, respectively. To analyze the data of this research, descriptive statistical analysis and inferential statistics was used. In the descriptive statistics section, frequency distribution tables, bar graphs, mean and standard deviation were used, and in the inferential statistics section, data was analyzed with Kolmogorov-Smirnov test and structural equations using Statistical Package for the Social Sciences (SPSS) and Asset Management Operating System (AMOS) software.

For the inferential statistics, Kolmogorov-Smirnov test was used with the hypotheses of  $H_0$ : the intended distribution is normal; and  $H_1$ : the intended distribution is not normal.

The P value for all variables was  $>0.05$ , thus hypothesis  $H_0$  is accepted. Therefore, the assumption that the distribution of variables is normal was accepted (table 1). In confirmatory factor analysis results, exploratory factor Analysis of Audit Quality Questionnaire was done as shown

in table 2. The results of KMO and Bartlett tests as prerequisites for confirmatory factor analysis which showed adequacy of the sample size for confirmatory factor analysis. The value of KMO statistic was greater than the default value of 0.6 and therefore the number of samples used to perform confirmatory factor analysis was appropriate. Also, the significance level for Bartlett test was less than the default value of 0.05 and as a result, the correlation matrix of the observed values would not be a single value and there was a relationship between the variables. Therefore, factor analysis could be used. the value of KMO statistic for the job stress questionnaire was greater than the default value of 0.6 and therefore the number of samples used to perform confirmatory factor analysis was appropriate. Also, the significance level for Bartlett test was less than the default value of 0.05 and as a result, the correlation matrix of the observed values would not be a single value and there was a relationship between the variables. Therefore, factor analysis could be used. According to the results of Table 2, the value of KMO

Table 1: Results of Kolmogorov-Smirnov test

		Audit quality	Job stress	Ego empowerment
Number of data		261	261	261
Normal parameters	Mean	3.290	3.113	3.294
	Standard deviation	0.679	0.649	0.630
	Kolmogorov-Smirnov Z statistics	1.138	0.961	0.499
	P value	0.150	0.315	0.964

Table 2: Results of KMO and Bartlett test, audit quality questionnaire

		audit quality questionnaire	job stress questionnaire	ego strength psychology questionnaire
Bartlett test	KMO criteria	0.930	0.951	0.964
	Chi square statistic	2401	6576	1235
	Degrees of freedom	120	595	2016
	Significance	0.000	0.000	0.000

statistic for the ego strength psychology questionnaire was greater than the default value of 0.6 and therefore the number of samples used to perform confirmatory

factor analysis was appropriate. Also, the significance level for Bartlett test was less than the default value of 0.05 and as a result, the correlation matrix of the

observed values would not be a single value and there is a relationship between the variables. Therefore, factor analysis could be used.

**Results**

Total number of 399 auditors with mean age of 31.7± 5.6 years (159 female and 240 male subjects) were included in our study. 191 auditors of the auditing organization and 208 independent auditing companies were involved in this study.

For the inferential statistics, Kolmogorov-Smirnov test was used with the hypotheses of H<sub>0</sub>: the intended distribution is normal; and H<sub>1</sub>: the intended distribution is not normal.

the P value for all variables was >0.05, thus hypothesis H<sub>0</sub> is accepted. Therefore, the assumption that “the distribution of variables is normal” was accepted (table 4). Structural equation test results as shown in the diagram of the tested structural equation model for testing the research hypotheses for the standard estimation mode and for the significance mode is shown in Figures 1 and 2. The results related to the goodness of fit of the model are shown in Table 4. The significance level of the chi-square test that tests the saturation of the structural model,

for this model, is greater than the type 1 error (0.05), and therefore it can be accepted at this level of error that the fitted model, includes all of the significant relations between the variables and their indices and at the error level of 0.05 is considered the saturated model. The saturation of the model indicates the absence of other significant relationships in the model. Also, the goodness of fit indicators of GFI and AGFI in this model are estimated to be greater than the default value of 0.9, which indicates the high capability of the model in explaining the relationship between these variables. Also, the RMR and RMSEA indices, which are related to the amount of error of the relevant model in predicting the correct values of observations, were small values and their proximity to zero indicates a small error of the model in explaining the relationships. Also, the probability value of RMSEA (PCLOSE) shows that with this probability, the error of the fitted model is less than the default value of 0.05. As a result, the results of the model are valid and can be cited, and the model is well-fitted.

The predictive role of the job stress and ego empowerment on the quality of auditing was investigated.

Table 3: Results of Kolmogorov-Smirnov test

		Audit quality	Job stress	Ego empowerment
Number of data		261	261	261
Normal parameters	Mean	3.290	3.113	3.294
	Standard deviation	0.679	0.649	0.630
Kolmogorov-Smirnov Z statistics		1.138	0.961	0.499
P value		0.150	0.315	0.964

Table 4: Results of goodness of fit of the structural equation model for research hypotheses

PCLOSE	RMSEA	P-Value	X <sup>2</sup>	AGFI	GFI	RMR
0.543	0.062	0.328	214.858	0.917	0.923	0.014

Table 5: Estimation of structural equation model coefficients related to the main research question

Independent	Dependent	Coefficient	Standard coefficient	Estimation error	Critical value	Significance
Ego empowerment	Audit quality	0.209	0.222	0.057	3.673	<0.0001
Job stress	Audit quality	-0.480	-0.505	0.067	-7.175	<0.0001

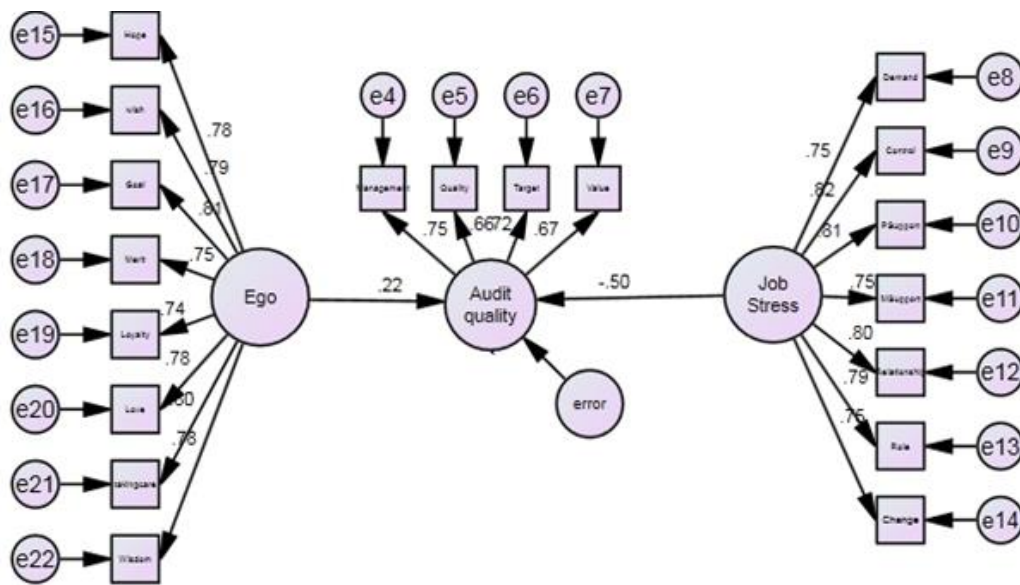


Figure 1: Diagram of the tested structural equation model for testing the research hypotheses in the standard estimation mode

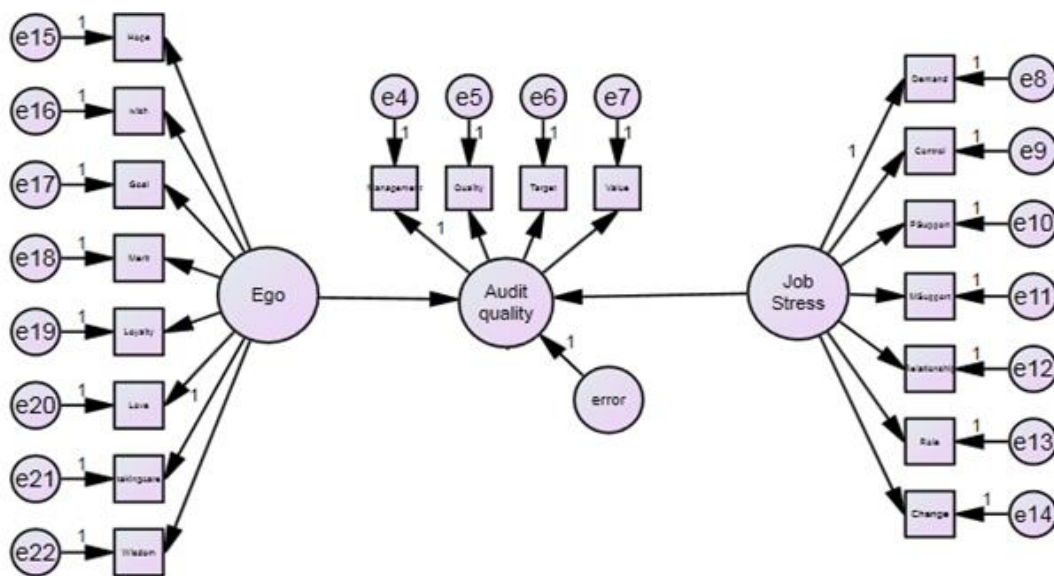


Figure 2: Diagram of the tested structural equation model for testing the research hypotheses in significance mode

Table 5 shows the results of the fitted model to examine the main research question. Based on the results of Table 5, it can be seen that the test statistics related to the effect of "ego empowerment, job stress, personality organization" on "audit quality" are greater than the critical value of 0.05 ( $t_{0.95} = 1.96$ ) and as a result, the significance

of the effect of "ego empowerment and job stress" on "audit quality" can be accepted at the level of type I error (0.05) in this model. Therefore, in response to the main research question, it can be said that job stress and ego empowerment can predict the quality of auditing.

Finally, the regression formula is:

$$\text{audit quality} = -0.408 * \text{JobStress} + 0.209 * \text{Ego}$$

The first sub-question of the research:

Can Job Stress Predict Audit Quality?

Table 5 shows the results of the fitted model to examine the second sub-question of the research. The test statistics related to the effect of "job stress" on "audit quality" was confirmed by rejection of the null hypothesis with p-value of 0.465 ( $t_{0.95} = 1.96$ ) and as a result the significance of the effect of "job stress" on "audit quality" can be accepted at the level of type I error (0.05) in this model. Therefore, in response to the first sub-question of the research, it can be said that job stress can predict the quality of auditing.

The regression formula is:

$$\text{audit quality} = -0.408 * \text{JobStress}$$

The second sub-question of the research:

Can ego empowerment predict the audit quality?

Table 5 shows the results of the fitted model to examine the second sub-question of the research. The test statistics related to the effect of "ego empowerment" on "audit quality" have test statistics of P-value=0.174 ( $t_{0.95} = 1.96$ ) and as a result the significance of the effect of "ego empowerment" on "audit quality" can be accepted at the level of type I error (0.05) in this model. Therefore, in response to the second sub-question of the research, it can be said that job stress can predict the quality of auditing ( $P < 0.0001$ ).

The regression formula is:

$$\text{audit quality} = 0.209 * \text{Ego}$$

## Discussion

The test results of this question showed that job stress and ego empowerment can predict audit quality. In other words, changes in the company's audit quality can be justified and predicted based on personality organization, job stress and ego empowerment, and the audit quality can be predicted based on these two variables. Our results showed that job stress can predict audit quality.

The test statistics related to the effect of "ego empowerment" on "audit quality" are greater than the critical value of 0.05 ( $t_{0.95} = 1.96$ ) and as a result, the significance of the effect of "ego empowerment" on "audit quality" can be accepted at the level of type I error (0.05) in this model. Therefore, in response to the second sub-question of the research, it can be said that ego empowerment can predict the quality of auditing. Therefore, our results of study for the predictive role of the stress or ego empowerment on the audit quality, can be compared to other studies in other countries. The results of research by Ahmadi Hesar et al. (9) and Rajabalizadeh (10) are consistent with the results of this study. Ahmadi Hesar et al. (9) analyzed the psychological factors affecting the skills of auditors in a research (Case study: Auditors of the Supreme Audit Court). The results showed that the variables of responsibility, perception, communication skills, simplification of complexities, relevant and irrelevant information, exceptions, reliability, knowledge, selection, adaptability, automation, creativity, stress tolerance and inability to describe the decision-making process can be considered as effective psychological characteristics in the skill of auditors. The findings showed that job stress can predict audit quality. In other words, changes in the company's audit quality can be justified and predicted based on job stress, and the quality of the audit can be predicted based on this variable. Therefore, the results of this study can be considered consistent with the research of Ahmadi Hesar et al. (9).

## Limitations:

In our study a high percentage of male subjects (60.15%) may have scantily biased the results. Also, as there are a lot of other confounding factors that affect the state of stress in people, further studies should take more variables into account. There were few studies with a similar research question to ours and comparison with multiple studies' results was not provided.

## Conclusion

The findings showed that ego empowerment can predict audit quality. In other words, changes in the quality of the company's audit can be justified and predicted based on the ego empowerment and the audit quality can be predicted based on this variable. Therefore, in response to the main research question, it can be said that job stress and ego empowerment can predict the quality of auditing.

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