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Relationship between Conscientiousness and Adversity Quotient with Task Performance: Mediating Role of Intrinsic Work Motivation

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The main purpose of the present research was to study the mediating role of intrinsic work motivation in the relationship between conscientiousness and adversity quotient with firefighters' task performance in Isfahan. The research method was correlational, and the statistical population included all firefighters (600 persons) in Isfahan, among which 228 persons were selected via simple random sampling. The research questionnaires were Intrinsic Work Motivation (Gagne et al., 2015), Conscientiousness (McCrae & Costa, 1992), Adversity Quotient Profile (PEAK Learning Inc., 2008), and Task Performance (Patterson, 1963). Data were analyzed by using Pearson's Correlation coefficient and structural equation modeling (SEM). SPSS23 and AMOS23 software were used for data analysis. The results showed that conscientiousness directly affects task performance and intrinsic work motivation; Adversity quotient directly affects intrinsic work motivation; Intrinsic work motivation directly affects task performance

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(P≤0.001).Moreover, results of structural equation modeling showed that the proposed model has appropriate goodness of fit, and by examining the indirect and mediating effects through a bootstrap method, it was demonstrated that intrinsic work motivation mediates the effect of conscientiousness and adversity quotient on task performance (P<.05).Therefore, findings of present study indicate that conscientiousness and adversity quotient could increase task performance through positive effect on intrinsic work motivation.

Keywords: conscientiousness, adversity quotient, intrinsic work motivation, task performance, Firefighters

In recent years, emergencies and accidents related to the natural environment or made by humanity have occurred frequently and have swept across the earth (Jintao, Naiding, Jinfu & Haoran, 2014). Accurate and effective reactions need in critical emergencies and critical events. The first group that should be present in the area, at the time of accidents critical emergency, to contrast with such events, are firefighters (Kyriacou, Nicolaidou, Hadjichristofi, Kyprianou, Christou & Constantinou, 2016). The firefighters are responsible for the safety of citizens in complex and emergencies such as fire control and other hazards and protect from the lives and property of individuals by doing preventive actions through risks assessment (Kim, Ahn, Kim, Yoon & Roh, 2016). In other words, the nature of the firefighters' job is difficult and dangerous (Yoon, Kim, Kim & Ahn, 2016); because they are continuously exposed to various physical and chemical hazards such as noise, harmful effects of toxic substances in hazardous and harsh environments, etc., and experience countless accidents and events in multiple locations (Chung & Park, 2011). Accordingly, since in today's dynamic world, employee performance is at the top of many efforts to improve and develop the work environment (Pollock, 2015), it is essential to

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identify and examine affecting factors on the task performance of firefighters due to the nature of their job.

Some researchers consider task performance as a composite structure based on which successful employees can be identified and separated from unsuccessful employees by a set of specific criteria. In other words, task performance is the actual work of employees based on the description of their duties (Ohme & Zacher, 2015). In another definition, job performance is a set of behaviors that employees display in relation to the job (Smeank & Hance, 2005). Given that employee's performance is determined by more than one type of behavior and influenced by many factors, it can be said that task performance has a multidimensional concept. Armstrong and Taylor (2014) believe that, employee performance as a multidimensional concept consists of two aspects. One is the behavioral aspect which includes processes, and the other is the consequence aspect which contains results. According to Sonnetag, Volmer, and Spychala (2008), behavioral aspect refers to what individuals do in the workplace. The consequence aspect includes the results of individual behaviors (Okolocha, Bonaventure, Akam, Uche, Uchehara & Omelogo, 2021). Optimal task performance is one of the most vital goals of organizations, which increases the organization's productivity. This, in turn, provides a platform for upgrading the quality of services and production of the organization and improving the national economy (Pourkarimi, Homayeni Damirchi, gharloghi & Karami, 2019).

To date, many researchers have sought to identify the various antecedents of this behavior to strengthen and develop task performance. The result of this research has been identifying various organizational (situational), personality, and individual

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antecedents (Burney, Henle & Widener, 2009). Among antecedents, which have been studied in the present research, are conscientiousness and Adversity Quotient (AQ) as the personality traits and intrinsic work motivation as the motivation.

According to research by Udin & Yuniawan (2020), Babar & Tahir (2020), Tuffour & Ockrah-Anyim (2020), and Bello &Bello (2021), employees' personality traits can be considered as one of the critical antecedents of task performance. According to Fander (1997), personality is a pattern of thinking, feeling, and behavior resulting from individual characteristics with hidden or overt psychological mechanisms behind these patterns (Fander, 1997). Hogan's (2004) reasoning about the relationship between personality traits and performance is that employees' performance can be explained according to their personality traits. According to Moskowitz & Cote (1995), the occurrence of behaviors that are contrary to the personality traits of individuals leads to the experience of negative feelings for them. Therefore, in similar situations, persons behave consistently with predictions resulting from their personality traits (Mahdad, Hesam Ghasemi & Ghafouri, 2019).In this regard, today, the approach of the five big personality factors is primarily accepted as one of the most useful tools for predicting task performance (Ozura, Ihan & Musek, 2010); based on this approach, individual differences in personality traits can be explained through the five factors of extraversion, empiricism, neuroticism, conscientiousness, and agreement (Swider & Zimmerman, 2010).In this direction, according to the findings of researchers such as Meghna & Dixit (2019), Debusscher, Hofmans & De Fruyt (2017), and Mehdad & Minaeian (2020), it can be said that among the personality traits, conscientiousness has the most relation with task performance. Progressive

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thinkers in five big personality factors believe that conscientiousness is a personality trait with ethical contents. Persons with personality traits of conscientiousness as a fundamental and infrastructure personality variable in predicting behavior are progressive, efficient, energetic, organized and regular, hardworking, and goal-oriented. When faced with serious problems and issues, they have the necessary perseverance and competence (McCrae & Costa, 1997). Therefore, these persons show more effort to do their activities and duties optimally, which leads to high task performance.

Some researchers such as Wiradendi Wolor, Pratama, Aditya, Fadillah & Purwana (2020), Lubis (2019), Runtu, Aldrin & Merdiaty (2019), Irawan & Yulihasri (2019), and Ablaña, Isidro & Cabrera (2016), have investigated the relationship between AQ with task performance. Stoltz introduced AQ in 1997, which is based on three origins of the scientific field (cognitive psychology, psychoneuroimmunology, and neurophysiology). According to him, AQ as characteristic of the trait-like, to achieve success is better than general intelligence, training, or any social skill. In one definition, AQ is a person's capacity to respond to life's difficulties such as stress, problems, and issues (Stoltz, 2000; quoted by Mehdad, Vali Nezhad & Hosseini, 2018). Also, it can be said that AQ is an individual's intelligence in facing obstacles or problems regularly. AQ helps persons strengthen their abilities and stamina in the face of the challenges of daily life (Ablaña, Isidro & Cabrera, 2016). AQ has the most relation with persons' ability, and it is widely used to measure and strengthen human flexibility (Stoltz, 2000; quoted by Mehdad, Vali Nezhad & Hosseini, 2018). Generally, the concept of AQ can predict success in performance and

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performance of social life (Espaňola, 2016). Canivel (2010; quoted by Mehdad, Vali Nezhad & Hosseini, 2018) considers four dimensions of control (restrain), ownership (responsibility), reach, and endurance (resistance) for AQ. Stoltz (2000) showed that persons with high AQ have optimal performance against problems and challenges large and small that they constantly face. They not only learn from these challenges, instead respond to them better and faster. For jobs and organizations, the workforce with high AQ means increased capacity, productivity, innovation, low erosion, and higher morale. Everyone has a different level of AQ, which causes a difference in performance (Hastuti, Sari & Riyadi, 2018).

In addition, studies by Adebayo, Adeogun & Umunna (2020), Unegbu, Babalola & Basahuwa (2020), Truong & Le (2020), and Syamsir (2020) show that work motivation is one of the most important predictors of task performance. Organizationally, motivation can be defined as an intrinsic state that leads to changes in behavior and movement in the direction of advancement and organizational goals. In addition, motivation leads to behavior orientation, the intensity of behavior, and its stability over time (Mehdad, 2018). According to the definition of Mathis and Jackson (2002), Motivation is "the desire in a person that causes the person to take action" (Bastari, Eliyana & Wijayanti, 2020). In another definition, motivation is considered as a behavioral, emotional, and cognitive process that leads to suasion employees to do work requirements to achieve the goals of the organization (Said, Abed & Abdo, 2013). Work motivation is not separate from social, developmental, and physiologic needs, which must be answered. persons to do their activities, need to have stimulant, to advance it and the factor of achieving goals in any

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organization, is the motivated force, and if a person does not have the convenient work motivation it leads to a decrease in efficiency (Mirzaeian & Mehdad, 2017).

In this direction, research done by Fatkhuri, Jufri & Prasetyo (2020), Sunardi, Adam & Putra (2020), Al-Douri, Aldabbagh, Mohammad & Qawasmeh (2020), and Shin, Hur, Moon & Lee (2019) all show that one of the factors Affecting employees' task performance is intrinsic work motivation. In intrinsic motivation, the activity itself is valuable to the individual, and from doing, satisfaction will gain, which is considered a reward for the person. In this state, the motivations originate directly from within the person, and it is not necessary to apply external pressures. What makes doing work necessary and enjoyable is itself and nothing else (Gagne et al., 2015). Therefore, based on the results of research, intrinsic work motivation causes employees to focus more on work, and as a result, they show themselves more inclinations to do things optimally (Gumusluoglu & Lsev, 2009).

Also, based on the accessible data, e.g., Watanabe, Tareq & Kanazawa (2011), Lubis (2019), and Azizian Kohan, Moharramzadeh, Rouhnavaz & Toosi (2020), which indicates the positive and direct effect of conscientiousness and AQ on work motivation, it is assumed that conscientiousness and AQ, in addition to a direct impact on task performance, indirectly and through the effect on intrinsic work motivation, improve task performance. Therefore, in the present study, intrinsic work motivation is considered as a mediator. In other words, both the direct effect of conscientiousness, AQ and intrinsic work motivation on task performance and the indirect impact of

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conscientiousness and AQ through intrinsic work motivation on task performance have been investigated.

Since, due to the nature of firefighting job, this occupation is of special importance compared to other occupations and the performance of firefighters should be looked at differently and more specifically than the performance of staff in other organizations. This means that the employees of the fire department must have the characteristics appropriate for this profession when obtaining this job. According to this and because of the high sensitivity of this job, by searching valid scientific sources, some factors and variables affecting firefighters' task performance, which no research has been done in Iran concerning them have been extracted. Therefore, the present study was done to answer the questions: Is there a relationship between conscientiousness, AQ, and intrinsic work motivation with task performance? And does intrinsic work motivation mediate the relationship between conscientiousness and AQ with task performance or not? According to this, the conceptual model of the research was developed as described in Figure 1.

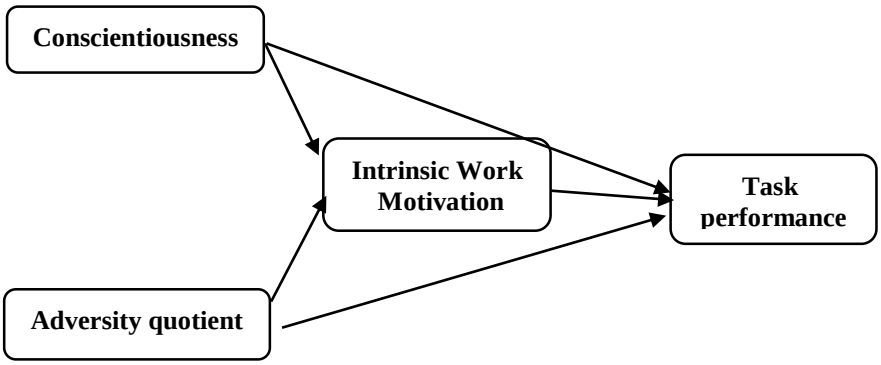


Figure 1. Conceptual research model

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Based on the presented conceptual model, research hypotheses were formulated as follows:

Hypothesis 1: Conscientiousness has a direct effect on task performance.

Hypothesis 2: Conscientiousness has a direct effect on intrinsic work motivation.

Hypothesis 3: AQ has a direct effect on task performance.

Hypothesis 4: AQ has a direct effect on intrinsic work motivation.

Hypothesis 5: Intrinsic work motivation has a direct effect on task performance.

Hypothesis 6: Conscientiousness affects task performance through intrinsic work motivation.

Hypothesis 7: AQ affects task performance through intrinsic work motivation.

Method

The present study is considered a correlational study of structural equations type. The statistical population of this research consisted of all firefighters (600 persons) working in Isfahan's fire department and safety services in 1399. From mentioned population, based on proposed models for optimal sample size in structural equation model (SEM) studies, Bentler & Chou' model (1988, quoted by Hooman, 2008) was used. In this model, at least 5 samples recommend for each free parameter (not every variable) in the SEM. Given that, there are 30 free parameters in the model of this study, selecting a sample size of about 200 people seemed sufficient and due to response rate control, 230 questionnaires were distributed, of which 228

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were analyzed. The research sample selection was carried out by simple random sampling method and using the list of names of firefighters of operational stations. Data were analyzed using Pearson's correlation coefficient and structural equation modeling (SEM), using SPSS23 and AMOS23 statistical software and bootstrap method.

Instruments

Conscientiousness

To measure conscientiousness,12 related items from the NEO questionnaire (Costa & McCrae, 1992), with 5 points Likert scale was used. This questionnaire has been used in numerous research, which all confirm its appropriate validity and high reliability. For example, Grossi Farshi (2001; quoted by Mahdad, Hesam Ghasemi & Ghafouri, 2019), according to the validation of this questionnaire in Iran, reported its validity of .66 and its reliability for conscientiousness 0.87 and in the research of Mehdad & Minaeian (2020), reported the reliability for conscientiousness .76. In the present study, to evaluate the validity of the questionnaire, the convergent validity of the Average Variance Extracted (AVE) criterion (.564), and discriminant validity of the Fornell-Larcker criterion (.75) were used, which shows the acceptable validity of this questionnaire. Moreover, in the present research, Cronbach's alpha and Composite Reliability (CR) of the questionnaire were .718 and .871, respectively.

Adversity Quotient (AQ)

To measure AQ, the 14-item Adversity Quotient Profile (AQP) (PEAK Learning Inc., 2008; quoted by Mehdad, Vali Nezhad & Hosseini, 2018) was used. The AQP is answered and

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scored based on a five-point Likert scale ranging from 0 (not at all) to 4 (completely). Each item comprises four sub-items, each measuring one of the subscales of perceived control, origin and ownership, reach, and endurance. Thus, the possible range of scores for each subscale is 0 to 56. In the AQP, a higher score in each subscale indicates a higher tendency towards it. Cronbach's alpha for the total questionnaire (.91) and its subscales (perceived control [.82], origin and ownership [.83], reach [.84] and endurance [.80]) have been reported by PEAK Learning Inc. (2008; quoted by Mehdad, Vali Nezhad & Hosseini, 2018). In repeated independent studies done by the Educational Testing Services (ETS), the high reliability of the AQP and its subscales has been confirmed (quoted by Mehdad, Vali Nezhad & Hosseini, 2018). According to research by Shariatmadari (2011, quoted by Mehdad & Vali Nezhad, 2014), the validity coefficient of the questionnaire using the simultaneous validity method was 0.357, and the reliability of the questionnaire through the Cronbach's alpha method was .927. In Mehdad, Vali Nezhad & Hosseini's (2018) study, the Cronbach's alphas obtained for the subscales of perceived control, origin, and ownership, reach and endurance were .77, .79, .77, and .75, respectively. In the present study, to evaluate the validity of the questionnaire, the convergent validity of AVE criterion (.529), and discriminant validity of the Fornell-Larcker criterion (.727) were used, which shows the acceptable validity of this questionnaire. In present study, to evaluate the validity of the questionnaire, the convergent validity of the Average Variance Extracted (AVE) criterion (.529), and discriminant validity of the Fornell-Larcker criterion (.727) were used, which shows the acceptable validity of this questionnaire. Moreover, in

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the present research, Cronbach's alpha and CR of the questionnaire were .869 and 0.705, respectively.

Intrinsic Work Motivation

To measure intrinsic work motivation, 3 related items from work motivation questionnaire was developed by Gagne et al. (2015) was used. This questionnaire has been used in several countries and was used for the first time in Iran by Mirzaeian & Mehdad (2017). This questionnaire has 19 items and six dimensions, including motivation (with three questions), social extrinsic (with three questions), material extrinsic (with three questions), introjected motivation (with four questions), identified motivation (with three questions), and intrinsic motivation (with three questions) with 7-point Likert scale from not at all to completely. The reliability reported by Gagne et al. (2015), using Cronbach's alpha is .92 for Norwegian, 0.89 for German, .90 for Chinese, and .91 for Indonesian respondents. Also, the reliability reported by Mirzaeian and Mehdad (2017) using Cronbach's alpha for Iranian in the dimension of intrinsic motivation is .88. In the present study, to evaluate the validity of the questionnaire, the convergent validity of the Average Variance Extracted (AVE) criterion (.824), and discriminant validity of the Fornell-Larcker criterion (.908) were used, which shows the acceptable validity of this questionnaire. Moreover, in the present research, Cronbach's alpha and CR of the questionnaire were .893 and .933, respectively.

Task performance

Paterson (1963) provided the task performance questionnaire, which includes ten items with a 5-point Likert response scale (very low =1 to very much =5). To measure the reliability of this

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questionnaire, Salehi (2003; quoted by Mehdad & Minaeian, 2020) used two methods of Cronbach's alpha and split-half. It was found that Cronbach's alpha coefficient is .86 and split-half is .78. Also, Cronbach's alpha of the questionnaire reported by Mehdad & Minaeian (2020) was 0.83. In the present study, to evaluate the validity of the questionnaire, the convergent validity of the Average Variance Extracted (AVE) criterion (.593), and discriminant validity of the Fornell-Larcker criterion (.77) were used, which shows the acceptable validity of this questionnaire. Moreover, in the present research, Cronbach's alpha and CR of the questionnaire were .829 and .864, respectively.

Results

The results of descriptive findings and internal correlation of research variables are presented in Table 1. The results show that the internal correlation of research variables is significant ($p<.01$). Only the relationship between AQ and task performance is not significant.

Table 1

Descriptive Findings and Internal Correlation of Research Variables

	Variable	Mean	SD	1	2	3
1	adversity quotient	133.64	31.19			
2	conscientiousness	44.22	3.52	.200**		
3	intrinsic work motivation	17.75	3.11	.163**	.38**	
4	task performance	39.67	4.35	.075	.497**	.386**

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*p<.01 **p<.05

The structural equation modeling (SEM) method was used to test the proposed model of the effect of AQ and conscientiousness on task performance with the mediating role of intrinsic work motivation. The fit of the proposed model with the data based on fitness indices including Chi-Square as absolute fitness index is reported in Table 2. To evaluate the model fit indices from several other indices including Parsimonious Normed Fit Index (PNFI), Comparative Fit Index (CFI), Parsimonious Comparative Fit Index (PCFI), Incremental fit index (IFI), Goodness of Fit Index (GFI), and Root Mean Square Error of Approximation (RMSEA) are used. To test the research hypotheses before using the SEM, the defaults of this method were examined. Defaults are multivariate data outliers, univariate and multivariate normality. In investigating the normality of univariate, the distribution status of the main variables of the research was examined using skewness and kurtosis indices. According to Kline (2016), the absolute value of skewness and kurtosis of variables should not be more than 3 and 10, respectively (Harrington, 2009). Therefore, since the absolute value of skewness for any of the variables is not greater than 3 and the absolute value of kurtosis is not greater than 10, it can be assumed that performing this analysis is not problematic in terms of the normality of the univariate.

Moreover, to investigate the normality of multivariate, Mardia standardized kurtosis coefficient and critical ratio have been used. According to Blunch (2012), values less than 5 for the Mardia standardized kurtosis coefficient are considered as non-violation of multivariate normality. In this study, the Mardia

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coefficient in the model is equal to 3.31, which is less than 5. Therefore, the default of multivariate normality has been respected.

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Table 2

Fit Indices of the Research Model

Fitting indices	x^2	df	p-value	CMIN/Df	RMSEA	CFI	PCFI	IFI	GFI
Primal model indices	852.759	371	.001	2.29	.076	.781	.714	.785	.764
Final model indices	660.341	341	.001	1.94	.064	.922	.769	.918	.909
Required amount	Based on other indices	-	0.05<	5<	0.1<	0.9>	0.5>	0.9>	0.9>
Status in the model	good	-	-	desirable	desirable	desirable	desirable	desirable	desirable

Based on the results presented in Table 2, in the primal model, most of the indicators were lower than the desired level. Since the Reach factor in AQ had a low factor loading, it was removed. Also, covariance was plotted between several errors and thus the final model was obtained. In the final model, the relative Chi-square index is 1.94, which indicates that this pattern is in an acceptable state. The value of IFI and CFI comparative indices is higher than .9. The value of PCFI as an indicator of goodness of fit is higher than .5 and is desirable. The value of RMSEA as the most important indicator of overall fit is equal to .064 and shows that in general, the pattern has a good fit.

The model of the final structural equation of the research is presented in Figure 2 and the results of direct and indirect effects of the variables in the model are presented in Table 3.

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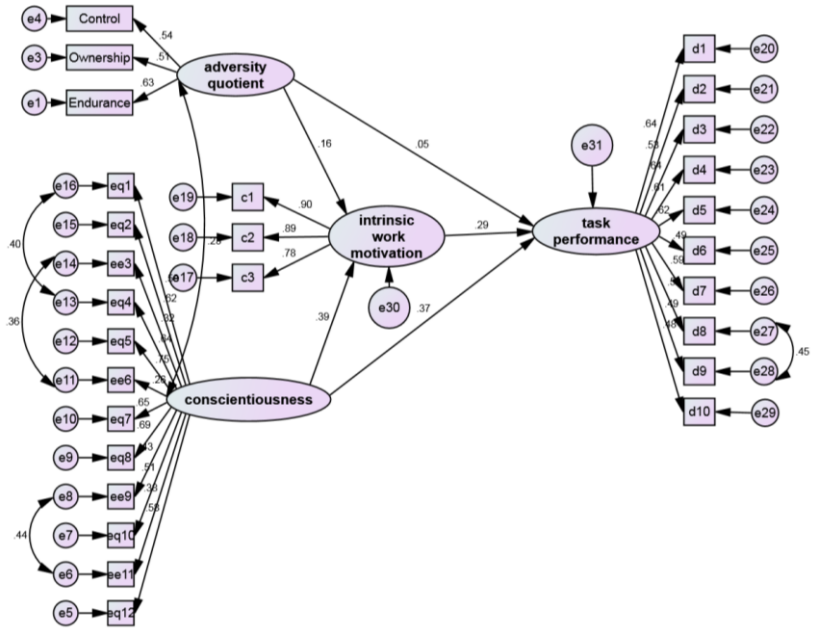


Figure 2. The final structural equation model of the effect of adversity quotient and conscientiousness on task performance with the mediating role of intrinsic work motivation

Table 3

Total, Direct and Indirect Effects of Research Variables by the Bootstrap Method

Effects	Independent variable	Mediator	Dependent variable	Standard coefficient	Sig.
Total	intrinsic work motivation	→	task performance	-	-
	adversity quotient	→	intrinsic work motivation	-	-
	adversity quotient	→	task	**.105**	**.049**

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	conscientiousness	→	performance intrinsic work motivation	-	-
	conscientiousness	→	task performance	**.480**	**.019**
	intrinsic work motivation	→	task performance	**.288**	**.025**
	adversity quotient	→	intrinsic work motivation	**.16**	**.041**
Direct	adversity quotient	→	task performance	**.05**	**.777**
	conscientiousness	→	intrinsic work motivation	**.392**	**.006**
	conscientiousness	→	task performance	**.367**	**.014**
	adversity quotient	intrinsic work motivation	task performance	**.046**	**.032**
Indirect	conscientiousness			**.113**	**.017**

Based on the results in Table 3, in the presence of all variables and in SEM, the direct effect of conscientiousness on task performance (.367), AQ on intrinsic work motivation (.16), conscientiousness on intrinsic work motivation (.392), and intrinsic work motivation on task performance (.288) were significant ($p \leq .05$). Only the effect of AQ on task performance (.05) is not significant ($p > .05$). According to the results, with increasing intrinsic work motivation, task performance increases, also with increasing AQ, intrinsic work motivation

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increases, and with increasing conscientiousness, intrinsic work motivation, and task performance increases.

The results of indirect effects in Table 3 show that the indirect effect of AQ on task performance with the mediating role of intrinsic work motivation is significant (p≤.05). Given the insignificance of the direct effect of this variable, it can be said that intrinsic work motivation is a complete mediator of this relationship. Therefore, it can be said that AQ leads to increased intrinsic work motivation, and with increasing intrinsic work motivation, task performance increases. Also, the results showed that the indirect effect of conscientiousness on task performance with the mediating role of intrinsic work motivation is significant (p≤.05). Given the significance of the direct effect of this variable, it can be said that intrinsic work motivation is a minor mediator of this relationship. Therefore, it can be said that conscientiousness has an effect on increasing task performance in employees, but with the addition of intrinsic work motivation, this effect increases.

Discussion

This study aimed to determine the relationship between conscientiousness, AQ, and intrinsic work motivation with task performance and, also, to determine the mediating role of intrinsic work motivation in the relationship between conscientiousness and AQ with task performance among firefighters in Isfahan.

The finding of the first hypothesis of the research based on the direct effect of conscientiousness on task performance showed that conscientiousness has a direct and significant impact on task performance. This finding is consistent with the results of Meghna & Dixit (2019); Debucher, Hoffmans & De

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Frewit (2017), and Mehdad and Minaeian (2020). In explaining this finding, it can be said that since conscientiousness refers to individual differences in systematization, performing tasks, controlling impulses, and planning to do behaviors, Conscientious employees have goals, strong and predetermined desires. Also, employees with high scores in conscientiousness are trustworthy, accurate, punctual, and responsible persons. They are efficient and successful in social, professional, and academic fields (Tiliopoulos, Pallier & Coxon, 2010). Therefore, these persons show more effort to do their activities and tasks optimally, and as a result, conscientious persons will show higher task performance.

The finding of the second hypothesis of the research based on the direct effect of conscientiousness on intrinsic work motivation showed that conscientiousness has a direct and significant impact on intrinsic work motivation. This finding is consistent with the results of Watanabe, Tareq& Kanazawa (2011) and Azizian Kohan, Moharramzadeh, Rouhnavaz&Toosi (2020). In explaining this finding, it can be said that traits are Stability similarities in rational or stylistic behavior of the person that affect the manifestation of a person's motivations (Spangler, House & Palrecha, 2004). In other words, persons with conscientiousness personality traits are trustworthy, responsible, purposeful, law-abiding (Barrick, Mount & Judge, 2001), Disciplined, determined, compatible, and self-controlled (Hogan & Ones, 1997) and besides proper focus and efficiency in group activities, they have logical thinking and high concentration when working, also. Therefore, since conscientiousness is a fundamental and infrastructure personality variable in predicting behavior, highly conscientious

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employees have stronger and higher intrinsic work motivation and do their work with more perseverance, effort, and responsibility (McCrae & Costa, 1997).

The finding of the third hypothesis of the research based on the direct effect of AQ on task performance showed that AQ has no direct and significant impact on task performance. This finding is consistent with the result of Ablaña, Isidro & Cabrera (2016), and is not consistent with the results of Wiradendi Wolor, Pratama, Aditya, Fadillah & Purwana (2020); Lubis (2019); Runtu, Aldrin &Merdiaty (2019) and Irawan & Yulihasri, (2019). In other words, as was mentioned in the problem statement section, persons with high AQ have optimal performance against problems and challenges large and small that they constantly face. They not only learn from these challenges, instead respond to them better and faster (Stoltz, 2000). For jobs and organizations, the workforce with high AQ means increased capacity, productivity, innovation, low erosion, and higher morale. Everyone has a different level of AQ, which causes a difference in performance (Hastuti, Sari &Riyadi, 2018). According to this, it was expected that the AQ affects task performance and improves performance. Therefore, how can the reason for the inconsistency between this finding with the findings of other researchers be explained? Here, can be referred to the differences in the study population of other researchers with the study population in this study and also, the almost complex and long response structure of the AQP that is also referred to in the limitations of the research.

The finding of the fourth hypothesis of the research based on the direct effect of AQ on intrinsic work motivation showed that AQ has a direct and significant impact on intrinsic work motivation. This finding is consistent with the result of Lubis

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(2019). In explaining this finding, it can be said that persons with high AQ in the face of any difficulty and problem, both personally and professionally, can balance themselves (Runtu, Aldrin &Merdiaty, 2019). Also, persons with high AQ have more motivation to continue their activities because of the ability to solve problems in the face of hardships and difficulties. In contrast, persons with a low AQ, with the inability to solve problems and surrender against them, lack the motivation to continue their activities. Therefore, it can be said that the high AQ allows the individual to seize the existing problems and challenges as an opportunity for career development and, with high motivation and efforts beyond expectations, seek to responsiveness to them. As a result, it is expected that persons with high AQ have high intrinsic work motivation.

The finding of the fifth hypothesis of the research based on the direct effect of intrinsic work motivation on task performance showed that intrinsic work motivation has a direct and significant impact on task performance. This finding is consistent with the results of Fatkhuri, Jufri & Prasetyo (2020); Sunardi, Adam & Putra (2020); Al-Douri, Aldabbagh, Mohammad &Qawasmeh (2020) and Shin, Hur, Moon & Lee (2019). In explaining this finding, it can be said that employees with high intrinsic work motivation, regardless of external events, effort to achieve organizational goals and duties. Therefore, such persons are more responsible, more regular, more hard-working, and more flexible because of the enjoyment and satisfaction of the work process that the result will be an increase persons' task performance in the workplace and greater productivity of the organization.

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The finding of the sixth hypothesis of the research based on that conscientiousness affects task performance through intrinsic work motivation, it was confirmed that intrinsic work motivation mediates the effect of conscientiousness on task performance. According to the obtained finding based on the significant direct impact of conscientiousness on task performance, intrinsic work motivation is a partial mediator of this relationship. Since according to searches conducted to valid foreign and internal scientific sources such as Google Scholar, Direct, Magiran.com, Science, etc., similar studies were not available to the researcher; therefore, Citation in alignment and non-alignment of findings cannot be given. In explaining this finding, it can be said that conscientious persons have high intrinsic work motivation because of having characteristics such as discipline, perseverance, hard work, flexibility, diligence, and high responsibility that this critical thing also leads to the growth of a feeling of meaningful and a plenty desire to do activities and tasks without attention to external rewards (keyvanloo, Rahimi Pordanjani & Mohamadzade Ebrahimi, 2016). Hence, such persons, because of having such characteristics and that seek to overtake from the present situation, spontaneously, use all their strength and efforts to do their duties optimally and effectively. As a result, it can be argued that conscientiousness increases intrinsic work motivation and intrinsic work motivation improves and upgrades task performance.

The finding of the seventh hypothesis of the research based on that AQ effects on the task performance through intrinsic work motivation, it was confirmed that intrinsic work motivation mediates the impact of AQ on the task performance, and according to the obtained finding based on the non-

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significant direct effect of AQ on task performance, intrinsic work motivation is the complete mediator of this relationship. Since the according to searches conducted to valid foreign and internal scientific sources, similar studies were not available to the researcher; therefore, Citation in alignment and non-alignment of findings cannot be given. In explaining this finding, it can be said that in difficult situations, persons with high AQ, because of adapting to different problems and stress in the best possible way and creating the best solution to their problem, have more intrinsic motivation to continue their activities (Hema &Gupta, 2015), and persons who cannot overcome problems, can easily be stressed and emotional, and because of lack of intrinsic motivation to do their activities, they retreat and stop their efforts (Rathee & Sharma, 2018).Therefore, since employee performance results from their level of arousal (Mehdad, 2018), aroused persons show more work and effort than unmotivated persons. As a result, it is expected that high AQ leads to increased intrinsic work motivation, and persons with high intrinsic work motivation show more and higher task performance.

According to the findings of the present study, based on the effect of conscientiousness and AQ through intrinsic work motivation on the task performance of employees, it is recommended to managers of the fire department and safety services in particular and managers of other organizations in general that in the process of selection and recruitment employees, will conduct a scientific evaluation the personality traits of applicants using appropriate tools and put conscientiousness as a determining criterion for employees selection, in priority. In addition, they have to displace current

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employees given the importance of the jobs according to conscientiousness personality trait. Also, a particular process should be considered to take into account the AQ in employee selection and recruitment system that to examine the applicants in terms of the degree of adversity along with other general and specific factors, especially in important and critical jobs.

Limitations

The present study, like any other study in the humanities, has some limitations that can be mentioned to the limitation of doing it in a particular organization that leads to caution in the generalizability of the findings and the research method was a correlation that makes a causal inference from research results impossible. Also, have been included limitation on the use of self-report tools in this research. In addition, the almost complex and long response structure of the AQP should be mentioned that there is a need to revise its structure without compromising its content validity.

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References

Ablaña, M. V., Isidro, D. J., & Cabrera, G. A. (2016). Correlation between Adversity Quotient and Job Performance of LGU Employees of Tayabas City. Input to Effective Public Personnel Management. *Tilamsik*, 8(2), 109-122.

[Downloaded from bijp.ir on 2026-11-20]

[DOR: 20.1001.1.20081251.2021.15.1.6.5]

[DOI: 10.66224/ijpb.15.1.7]

Adebayo, O., Adeogun, S., & Umunna, M. (2020). Motivation and Job Performance of Administrative Personnel in Agricultural Institutions. *Management of Organizations: Systematic Research*, 83(1), 1-13.

Al-Douri, J. A., Aldabbagh, I., Mohammad, M. M., & Qawasmeh, R. A. A. (2020). The Impact of Islamic Work Ethics on Job Performance with Mediating Role of Intrinsic Motivation. *Academy of Strategic Management Journal*, 19(2), 1-11.

Azizian Kohan, N., Moharramzadeh, M., Rouhnavaz, S., & Toosi, D. (2020). Investigating the effect of personality traits on professional ethics with the mediating role of job motivation of Ardabil swimming pool instructors. *Bioethics Journal*, 10(35), e21, 1-14.

Babar, M., & Tahir, M. (2020). The effects of big five personality traits on employee job performance among university lecturers in Peshawar city. *International Journal of Management & Entrepreneurship Research*, 2 (1), 43-50.

Barrick, M. R., Mount, M. K., & Judge, T. A. (2001). Personality and performance at the beginning of the new millennium: What do we know and where do we go next? *International Journal of Selection and Assessment*, 9, 9 - 30.

Bastari, A., Eliyana, A., & Wijayanti, T. (2020). Effects of transformational leadership styles on job performance with job motivation as mediation: *A study in a state-owned enterprise. Management Science Letters*, 10(12), 2883-2888.

Bello, M. B., & Bello, Y. O. (2021). Personality traits and employees' job performance in hotel industry. *Journal of Tourism Theory and Research*, 7(2), 85-96.

[Downloaded from bijp.ir on 2026-11-20]

[DOR: 20.1001.1.20081251.2021.15.1.6.5]

[DOI: 10.66224/ijpb.15.1.7]

Blunch, N. (2012). Introduction to structural equation modeling using IBM SPSS statistics and AMOS. Sage (2nd ed., pp. 24-32).

Burney, L. L., Henle, C. A., & Widener, S. K. (2009). A path model examining the relations among strategic performance measurement system characteristics, organizational justice, and extra- and in- role performance. Accounting, *Organizations and Society*, 34 (3-4), 305-321.

Canivel, L. D. (2010). Principle adversity quotient: styles, performance and practice. MSc thesis, University of the Philippines Dili man.

Chung, Y. K., & Park, C. Y. (2011). The effects of injury and accidents on self-rated depression in male municipal firefighters. *Saf Health Work*, 2(2), 158- 168.

Debusscher, J., Hofmans, J., & De Fruyt, F. (2017). The multiple face(t)s of state conscientiousness: Predicting task performance and organizational citizenship behavior. *Journal of Research in Personality*, 69, 78–85.

Espaňola, R. P. (2016). Adversity Quotient (AQ) and academic performance of selected students in Msu Marawi city. *Proceedings Journal of Education, Psychology and Social Science Research*, 3(1), 60-66.

Fatkhuri, Jufri, A., & Prasetyo, T. B. (2020). Human resource performance improvement based upon job autonomy, intrinsic motivation and job demands. *Journal Ekonomidan Perbankan Syariah*, 12(1), 47-59.

Funder, D. (1997). The Personality Puzzle. New York, NY: Norton.

Gagne, M., Forest, J., Vansteenkiste, M., Crevier-Braud, L., Van den Broeck, A., Aspeli, A., & et al. (2015). The multidimensional work motivation scale: Validation

[Downloaded from bijp.ir on 2026-11-20]

[DOR: 20.1001.1.20081251.2021.15.1.6.5]

[DOI: 10.66224/ijpb.15.1.7]

evidence in seven languages and nine countries. *European Journal of Work and Organizational Psychology*, 24(2), 178-196.

Gumusluoglu, L., & Lsev, A. (2009). Transformational leadership, creativity and organizational innovation. *Journal of Business Research,* 62(4), 461-473.

Harrington, D. (2009). Confirmatory factor analysis. Oxford university press.

Hastuti, T. D., Sari, D. R., & Riyadi. (2018). Student profile with high adversity quotient in math learning. *Journal of Physics: Conference Series*, 983(1), 1-6.

Hema, G., & Gupta, S. M. (2015). Adversity Quotient for prospective higher education. *The International Journal of Indian Psychology*, 2(3).

Hogan, J., & Ones, D. S. (1997). *Conscientiousness and Integrity at Work.* In R. Hogan, J. A. Johnson, & S. R. Briggs (Eds.), Handbook of personality psychology (p. 849–870). Academic Press.

Hooman, H. A. (2008). *Structural Equation Modeling Using LISREL Software*. 2nd Edition, Tehran: Samt Publications.

Irawan, W., & Yulihasri. (2019). Effect of adversity quotient, motivation and discipline on the performance of employees PT. PLN (Persero) West Sumatra Padang Indonesia. *International Journal of Innovative Science and Research Technology*, 4(4), 564-568.

Jintao, L. U., Naiding, Y., Jinfu, Y. E., & Haoran, W. U. (2014). The influence paths of emotion on the occupational safety of rescuers involved in environmental emergencies-systematic review article. *Iran J Public Health,*43(11), 1478–1485.

[Downloaded from bijp.ir on 2026-11-20]

[DOR: 20.1001.1.20081251.2021.15.1.6.5]

[DOI: 10.66224/ijpb.15.1.7]

Keyvanloo, L., Rahimi Pordanjani, T., & Mohamadzade Ebrahimi, A. (2016). The mediating role of intrinsic motivation in the relationship between Islamic work ethics and job satisfaction and organizational commitment. *Medical Ethics and History of Medicine*, 8(6), 69-82.

Kim, Y. K., Ahn, Y. S., Kim, K., Yoon, J. H., & Roh, J. (2016). Association between job stress and occupational injuries among Korean firefighters: a nationwide cross-sectional study. *BMJ Open*, 6(11), 1-9.

Kline, R. (2016). Data preparation and psychometrics review. Principles and practice of structural equation modeling (4th ed., pp. 64-96). New York, NY: Guilford.

Kyriacou, E., Nicolaidou, I., Hadjichristofi, G., Kyprianou, S., Christou, S., & Constantinou, R. (2016). Health and rescue services management system during a crisis event. *Healthc Technol Lett*, 3(3), 205–211.

Learning, P. (2008). Measuring AQ Profile. www.peaklearning.com.

Lubis, A. (2019). The influence of adversity quotient and job stress on employee performance through work motivation as an intervening variable (Study of conventional taxi drivers in Medan City). *MEC-J (Management and Economics Journal)*, 3(2), 182-194.

Mehdad, A., Hesam Ghasemi, H., & Ghafouri, M. (2019). The effect of organizational loyalty and organizational embeddedness on adaptive performance: The moderating role of conscientiousness. *Organizational Behavior Studies*, 8(1), 25-47.

Mehdad, A., & Vali Nezhad, A. (2014). The relationship between perceptions of organizational injustice with job stress and cyberbullying: The moderating role of adversity

[Downloaded from bijp.ir on 2026-11-20]

[DOR: 20.1001.1.20081251.2021.15.1.6.5]

[DOI: 10.66224/ijpb.15.1.7]

quotient. *Scientific Journal of Social Psychology*, 9(31), 67-88.

McCrae, R. R., & Costa, P. T. (1992). Validation of Five-Factor model of personality across instruments and observers. *Journal of personality and social psychology*, 52, 81-90.

McCrae, R. R., & Costa, P. T. (1997). Personality in adulthood: a five - factor theory perspective.2nd ed. New York: The Guilford press.

Meghna, & Dixit, V. (2019). Relationship of conscientiousness and job performance in service sector: A literature review. *Journal of the Gujarat Research Society*, 21(14), 116-124.

Mehdad, A., Hesam Ghasemi, H., & Ghafouri, M. (2019). The effect of organizational loyalty and organizational embeddedness on adaptive performance: The moderating role of conscientiousness. *Organizational Behavior Studies*, 8(1), 25-47.

Mehdad, A., & Vali Nezhad, A. (2014). The relationship between perceptions of organizational injustice with job stress and cyberbullying: The moderating role of adversity quotient. *Scientific Journal of Social Psychology*, 9(31), 67-88.

Mehdad, A., & Minaeian, S. h. (2020). Mediating role of achievement motivation on relationship of conscientiousness with role performance and extra-role performance. *Career and Organizational Counseling*, 12(43), 73-90.

Mehdad, A., Vali Nezhad, A., & Hosseini, M. S. (2018). Prediction of cyber bullying through components of adversity quotient. *International Journal of Psychology(IPA)*, 12(1), 30-49.

[Downloaded from bijp.ir on 2026-11-20]

[DOR: 20.1001.1.20081251.2021.15.1.6.5]

[DOI: 10.66224/ijpb.15.1.7]

Mehdad, A. (2018). *Industrial and Organizational Psychology*. 13th Edition, Tehran: Jungle Publications, 560 pages.

Mirzaeian, A., & Mehdad, A. (2017). Prediction of work efforts and organizational citizenship behaviors through dimensions of work motivation. *Journal of Psychological Achievements*, 24(1), 111-126.

Moskowitz, D. S., & Cote, S. (1995). Do inmerpersonal traits predict affect? A comparison of three modles. *Journal of Personality and Social Psychology*, 69, 915-924.

Ohme, M., & Zacher, H. (2015). Job performance ratings: The relative importance of mental ability, conscientiousness and career adaptability. *Journal of Vocational Behavior*, 87, 161-170.

Okolocha, C. h., Bonaventure, Akam, G., Uche, Uchehara, F., & Omelogo. (2021). Effect of job satisfaction on job performance of university lecturers in South-East, Nigeria. *International Journal of Management Studies and Social Science Research*, 3, 119- 137.

Ozura, A., Ihan, A., & Musek, J. (2010). Can the big five factors of personality predict lymphocyte counts? *Psychiatria Danubina*, 24 (1), 66-72.

Patterson, D. G. (1963). The Scott company graphic rating scale. *The Journal of Personnel Research*, 1, 361 - 376.

Pollock, P. W. (2015). Learning to be engaged: Leader goal orientation, employee goal orientation and the mediating role of employee learning on employee engagement and performance (Doctoral dissertation, St. Ambrose University).

Pourkarimi, J., Homayeni Damirchi, A., gharloghi, S., & Karami, M. (2019). Mediating effect of organizational learning on the relationship between Re-engineering and

[Downloaded from bijp.ir on 2026-11-20]

[DOR: 20.1001.1.20081251.2021.15.1.6.5]

[DOI: 10.66224/ijpb.15.1.7]

organizational performance. *Journal of new approaches in educational administration,* 9(36), 263-282.

Rathee, N., & Sharma, S. (2018) 'Adversity Quotient among high school students in relation to demographic variables. *International Journal of Humanities and Social Science Invention*, 7(05), 33–36.

Runtu, D., Aldrin, N., & Merdiaty, N. (2019). Effect of work ethics on job performance with adversity quotient as a mediator: Work ethics on job performance with adversity quotient. *International Journal of Research in Business and Social Science*, 8(5), 98–103.

Said, R. M., Abed, F. A., & Abdo, L. M. (2013). Work motivating factors as identified by nurses in children hospital at Elmonira and Specialized Pediatric Hospital Cairo University. *The Medical Journal of Cairo University*, 81(2), 27-31.

Shin, Y., Hur, W. M., Moon, T. W., & Lee, S. (2019). A motivational perspective on job insecurity: Relationships between job insecurity, intrinsic motivation, and performance and behavioral outcomes. *International Journal of Environmental Research and Public Health*, 1-16.

Smeank, R. A., & Hance, J. A. (2005). The relationship between job involvement, job satisfaction and task performance. *Journal of Vocational behavior,* 81, 190-208.

Spangler, W. D., House, R. J., & Palrecha, R., (2004). Personality and leadership, In R. Schneider, D.B. Smith (EDS), *Personality and organization,* 251 - 291, Mahwah, NJ: Lawrence Erlbaum, USA: Sixth. Ed.

[Downloaded from bijp.ir on 2026-11-20]

[DOR: 20.1001.1.20081251.2021.15.1.6.5]

[DOI: 10.66224/ijpb.15.1.7]

Stoltz, P. G. (2000). Adversity Quotient@Work: Make Everyday Challenges the Key to You. Success--Putting the Principles of AQ into Action, Harper Collins, New York.

Sunardi, Adam, M., & Putra, T. R. I. (2020). Intrinsic motivation and personal value in predicting the job satisfaction and employee performance: Study in marine and fisheries department of Aceh Jaya. *International Journal of Business Management and Economic Review*, 3(1), 7-16.

Swider, B. W., & Zimmerman, R. D. (2010). Born to burnout: A meta- analytic path model of personality, job burnout and work outcomes. *Journal of Vocational Behavior*, 76 (3), 487-506.

Syamsir. (2020). Competence, job satisfaction, work motivation, and job performance of the village (Nagari) masters in managing E-Village finance. *International Journal of Advanced Science and Technology*, 29(08), 1337-1350.

Tiliopoulos, N., Pallier, G., & Coxon, A. P. M. (2010). A circle of traits: A perceptual mapping of the NEO-PI-R. *Personality and Individual Differences,* 48(1), 34-39.

Truong, T. C., & Le, Q. D. (2020). Factors affecting motivation and performance of lawyers in Vietnam. *Management Science Letters*, 10, 1903-1914.

Tuffour, J. K., & Ockrah-Anyim, I. (2020). Managers' personality traits and employee job performance in the telecommunication industry. *Journal of Applied Business and Economics*, 22(3), 115-129.

Udin, U., & Yuniawan, A. (2020). Psychological capital, personality traits of Big-Five, organizational citizenship behavior, and task performance: testing their relationships. *Journal of Asian Finance, Economics and Business,* 7(9), 781-790.

[Downloaded from bijp.ir on 2026-11-20]

[DOR: 20.1001.1.20081251.2021.15.1.6.5]

[DOI: 10.66224/ijpb.15.1.7]

Unegbu, V. E., Babalola, Y. T., & Basahuwa, C. B. (2020). The role of motivation in librarians' job performance in public university libraries. *Journal of Management Information Systems & E-commerce*, 7(1), 1-12.

Watanabe, S. H., Tareq, M., & Kanazawa, Y. (2011). When openness to experience and conscientiousness affect continuous learning: A mediating role of intrinsic motivation and a moderating role of occupation. *Japanese Psychological Research*, 53(1), 1-14.

Wiradendi Wolor, C., Pratama, A., Aditya, S., Fadillah, F. N., & Purwana, D. (2020). Adversity quotient in improving millennial generation salespeople's performance in the industrial revolution 4.0. *Humanities & Social Sciences Reviews*, 8(1), 220-226.

Yoon, J. H., Kim, Y. K., Kim, K. S., & Ahn, Y. S. (2016). Characteristics of workplace injuries among nineteen thousand Korean firefighters. *Journal of Korean Medical Science*, 31(10), 1546-1552.

[Downloaded from bijp.ir on 2026-11-20]

[DOR: 20.1001.1.20081251.2021.15.1.6.5]

[DOI: 10.66224/ijpb.15.1.7]

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