



The Survey of Whistleblowing Intentions for Accounting Frauds Based on Demographic Individual Differences among Accounting Staff

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ABSTRACT

Given the widespread and deep economic-social consequences of accounting fraud in micro and macro levels of society and the effectiveness of whistleblowing in their discovery and the effect of demographic characteristics on moral behavior as whistleblowing, this study aimed to examine the whistleblowing intentions for accounting fraud including account manipulation and embezzlement based on demographic individual differences, which are important factors in employment, role-playing and job promotion. The statistical population consisted of accounting staff in private and public sectors and the sample size with random distribution was 596. The data collection tools were questionnaire and exclusive scenarios for accounting fraud. The research method was comparative and correlational in nature. The results showed that at the level of 95% there was a significant difference in the whistleblowing intentions for two types of fraud in terms of gender, age and experience and there was no significant difference in terms of educational level.

Keywords:

Accounting fraud, Whistleblowing, Account Manipulation, Embezzlement, Demographic variables

1. Introduction

Based on instrumental and communicative rationality, human beings have formed communities with their coexistence. With the development and complexity of communities, the coordination for an optimal performance was required for formal and inclusive rules as a social contract, as Rafipoor (2009) suggests that the most important factor influencing the proper functioning of a large social system is to develop and observe appropriate rules, so that in the worst case the society not to suffer from anomalies and disturbances (Rafipoor, 2009). Therefore, fraud in the concept of unethical or illegal behaviors and actions is one of the concerns of communities, posing a serious threat to the health of society at micro and macro levels. In this regard, foreign and domestic financial scandals such as embezzlements and an undesirable Iranian rating of 130 in corruption among 180 countries (International Transparency, 2017) suggests the important aspects of accounting and finances in these scandals. According to ACFEⁱ (2018), 89% of the frauds are related to misuse of assets and 10% to fraudulent financial reporting (ACFE, 2018), the first two of which have been confirmed in accounting and auditing standards and their whistleblowing is the subject of the present study. According to the PricewaterhouseCoopers report (2018), the destructive effects of fraud include adverse effects on staff behavior (48%), business relationships (38%), validity (36%), relationships with lawmakers (30%) and stock prices (16%). Therefore, the detection of frauds is of great importance due to the costs, extent and the destructive effects of fraud. According to ACFE report (2018), whistleblowing with a discovery rate of 40% has the highest effect and significant contribution to the discovery of fraud, so that in the regulations such as the Sarbanes-Oxley Act it is considered as the main element (Nur et al., 2004) and numerous studies have confirmed the effectiveness of whistleblowing (ACFE, 2018; Price water house Coopers, 2018; Dyck et al., 2010; Read and Rama, 2003; Hooks et al., 1994). To recognize whistleblowing due to its unique role in discovering frauds and eliminating their destructive effects, it is important to consider numerous individual and organizational factors affecting ethical behavior, which is one of the demographic characteristics (Rahmanseresht, 2018), and given that whistleblowing is also an ethical behavior, it should be affected by these factors. To understand the individual

demographic factors affecting the whistleblowing intentions, Gilligan's theory of gender socialization (1982) refers to different teachings in the education and socialization of women and men that in women are based on relationship and compassion and in men are based on justice and law and women intend to show more ethical behaviors (Gilligan, 1982), which has been confirmed in empirical studies such as Brown et al. (2016) and Andon et al. (2018). In addition, based on Kohlberg's theory of moral development, aging enhances moral understanding (Kohlberg, 1981) and in studies such as Costouros et al. (2017) the results show a positive correlation between age and ethical behavioral intentions. In addition, given the increase in socialization, experience leads to a better understanding of ethical standards (Nikoomaram, 2013) and the more situations requiring ethical behaviors are recognized, the more whistleblowing intentions are developed that its positive effect is confirmed in studies such as Erkmen (2014). In addition, for education, according to Kohlberg's theory of moral development, higher education can improve moral judgment and increase the intention to show moral sensitivity (Lam and Guicheng, 2008). Given limited research on whistleblowing in the context of accounting in Iran and, on the other hand, its effective operation in detecting fraud, acknowledged by international accounting institutions, and to improve accounting situation in the fight against fraud, which depends on knowing whistleblowing and the factors affecting it, the need to conduct research on the topic becomes evident. Therefore, given the importance of whistleblowing in discovering frauds and the necessity of recognizing the phenomenon and whistleblowers and given that whistleblowing intention is an individual choice and action, with the aim of identifying individual differences with a demographic approach (effective in selection, assignment and promotion) in whistleblowing intentions, the question arises that how whistleblowing intention is in a variety of demographic groups and as the topic has not been addressed in previous studies, considering whistleblowing for two types of fraud including account manipulation and embezzlement, the present study specifically addresses the topic in terms of common demographic variables (gender, age, experience, and education) and a broadly representative sample. Therefore, the general purpose of this study is to develop the theoretical foundations

related to fraud whistleblowing, and in the next step, to examine the effect of the above mentioned demographic variables on whistleblowing for two types of fraud including account manipulation and embezzlement. In terms of the added value of the research, it is also expected that the results will extend the theoretical literature of the phenomenon of whistleblowing in the field of behavioral accounting. On the other hand, the results of the study of demographic variables can also be used by institutions and organizations to review the role of demographic factors effective on moral behavior, so that these factors would be considered with an approach resulted from empirical findings for the attraction and promotion of individuals in organizations.

2. Literature Review

The growing recurrence of fraud in recent years, especially in large companies, made financial fraud a major concern for countries around the world. Fraud is not a new issue, since this phenomenon happened in different forms since the 1960s. It's interesting to know that due to the hidden and clever aspects of fraud, it also occurs in companies with efficient management and Fraud increases business costs, creates distrust, and results in system failure and loss of performance in organizations. It also has a negative effect on the encouragement, honesty and integrity of the managers and staff who oversee and control the implementation of the law. Fraud not only can impose financial losses, but also decrease the credibility and customer confidence in the system, and in general, it can be a huge disadvantage to investment in the community (Lotfi et al., 2018). Occupational fraud is an action taken by employees, from management level to lower level of employees, to deliberate misuse of the resources and assets of the organization (ACFE, 2018). In the Association of Certified Fraud Examiners report (2018), the strategies and whistleblowing percentages have been announced as follows: whistleblowers TIP (40%), internal auditing (15%), management reviews (13%), unintentional (7%), accounts reconciliation (5%), documentation review (4), independent audit (4%), monitoring (3%), declarations by legal authorities (2%), IT controls (1%), confession of the fraudulent person (1%) and other ways (6%). whistleblowing is the disclosure of wrongdoing in terms of misconduct or crime. wrongdoing is characterized by being negative and

undesirable at the organizational as well as at the community level (Gottschalk, 2019). Whistleblowing is an action and behavior for the rehabilitation of the organization based on a communication process focused on the potential reporting of fraud by an organization or its agent and whistleblowing includes three levels of conflict: the individual, organization, and society, that with a semantic approach it is associated with two paradigms of "network" and "stakeholders" and three concepts of "flexibility, decentralization and governance" and Whistleblowing functions include the realization of human rights, organizational social responsibility, personal accountability, integrity, organizational loyalty and efficiency (Vandekerckhove, 2006). In the structured motivation survey based on studies, two individual and contextual-organizational factors have been mentioned for whistleblowing (Greenberg and Weithoff, 2001). The factors influencing whistleblowing intentions at the individual level with the demographic approach are addressed in the present study.

Since fraud whistleblowing is a "prosocial" behavior (Miceli and Near, 1992; Miceli et al., 2008) and according to the theory of individual differences, the behavior of individuals is also affected by individual differences, in this research, factors affecting whistleblowing intentions are addressed at the individual level with a demographic approach based on the variables of gender, age, experience and level of education, the variables that play an important role in selection, assignment and promotion of individuals in organizations. In terms of gender, theoretical literature and the majority of research indicate a significant difference in moral behavior that is higher in women than in men (Kray and Haselhuhn, 2012, Atakan et al., 2008), and women have higher moral sensitivity than men (Fang and Foucart, 2013) and moral values are affected by gender (Callahan, 1990), however, some studies did not find any significant difference (Onyibuchi, 2013). According to Carol Gilligan's social theory and gender socialization theory, in the process of primary socialization, women and men enter the workplace with different values so that women consider ethical issues in the light of relationships, care, compassion and commitment, and men in the light of rules, justice and individual rights (Dowson, 1995, Gilligan, 1982). As female students are more sensitive to ethical issues and have more responsible educational orientation than men (Lam and

Guicheng, 2008) unethical behavior is less acceptable among female employees (Atakan et al., 2008). Therefore, the tendency toward moral behavior and organizational citizenship is caused by the inner factor of compassion in women, and if external factors such as justice are likely unfavorable, ethical behavior may occur and cause more tendency. According to theoretical foundations, with the increase of age, the ability to apply ethical standards is increased (Nikoomaram et al., 2013) and based on Kohlberg's theory of ethical development, the moral development can lead to a relationship between age and ethical behavior (Kohlberg, 1981), as senior managers have higher moral sensitivity (Deshpand, 1997) and those who work in business become more ethical with the increase of their age (Peterson et al., 2001). Therefore, aging can improve the understanding of ethical situations and ethical capacities in ethical decision making; as the studies of Costouros (2017), Walker et al. (2012), and Bateman and Valentine (2010) show a significant positive correlation between age and ethical decision making (Costouros, 2017); however, studies such as those conducted by Musbah et al. (2016), Couzens et al. (2013), and Marta et al. (2004) did not find a positive correlation in this regard (Musbah et al., 2016). Experience, which leads to the acquisition of knowledge in dealing with specific cases (Libby, 1985), and to a good understanding compared to the relative frequency of events and to a more complex classified information structure (Nonahal nahr et al., 2014), theoretically, increases socialization and ability to understand and apply ethical standards (Nikoomaram et al., 2013). Thus, experience improves the understanding of situations requiring moral action, so that by increasing experience, the detection of immoral behavior becomes easier (Larkin, 2000). In the study of Siriani et al. (2008) on professional judgment, there was a significant difference between experienced and non-experienced people in terms of unstructured tasks compared to structured tasks (Siriani, 2008). Therefore, experience can affect whistleblowing intentions as an unstructured prosocial task, and with increasing experience, job embeddedness and job security may increase, so that more potential alternative positions can be developed due to personal experience reducing the fear of whistleblowing possible retaliatory consequences (such as dismissal). In addition, according to Kohlberg's theory of ethical development (1981), it is

expected that higher education will lead to more sensitivity to different perspectives and improve moral judgment and reduce immoral behavior (Robertson, 1993), and thus with the increase of education more cognitive and ethical development is expected (Honeycutt, 2001) and higher education leads to more ethical sensitivity (Lam and Guicheng, 2008).

In the study of Andon et al. (2018), conducted among 80 accountants for external whistleblowing to examine the disclosure of fraudulent financial reporting, the results showed positive effects of age, gender (female) on whistleblowing. In the study of Muteia et al. (2018), conducted among internal auditors, the results suggested a significant positive effect of professional commitment, Ethical considerations on whistleblowing intentions and professional commitment moderated Locus of control does not affect desire do whistleblowing, and ethical considerations moderated locus of control does not affect the desire to do whistleblowing. In the study of Purwanto et al. (2018), conducted among internal auditors using multiple regression, the results suggested a significant positive effect of tenure, ethical judgment, locus of control and organizational commitment on whistleblowing intentions and gender had no significant effect and age had a significant negative effect on it. In the study of Nur et al. (2018), conducted among auditors using multiple regression, the results show that the level of professionalism and moral intensity has a positive effect on whistleblowing intentions. In the study of Alleyne et al. (2017), conducted among 282 accountants for internal and external whistleblowing to examine financial fraud disclosure (embezzlement, misuse of assets, corruption and bribe), the results showed the ineffectiveness of gender and experience on whistleblowing. In the study of Latan et al. (2017), the results of analysis found a significant relationship between the components of the whistleblowing triangle and the intention of blowing the whistle. We found that financial incentives are the most significant predictor of auditors' intention to blow the whistle in Indonesia. Other components, such as opportunity and rationalization, also play an important role in supporting auditors' intention to blow the whistle. In the study of Banimahd and Golmohammadi (2017), conducted to examine the ethical climate and fraud warning in the Iranian audit profession, the results showed that the ethical climate affects warning and two components out of three

components. The two components affected by the ethical climate include the auditor's perception about individual responsibility for warning and auditors' perception about the consequences of warning for fraudulent action, and auditor's perception about the warning costs of fraud is the component not affected by the ethical climate. In the study of Beige et al. (2017), conducted on auditors' motivational values and ethical warning of wrongdoing, the results showed that as much as the motivational values that provide personal benefits to auditors are prioritized, they have less tendency to give warning, but when motivational values that provide benefits to the public are a priority for Iranian auditors, the results are the opposite. In the study of Kaffash and Imani (2017), conducted to examine the effects of organizational commitment and moral values on the intention of reporting violations using the intention of intra-organizational reporting violations, the results showed a positive and significant relationship between organizational commitment and organizational ethical values. In the study of Brown et al. (2016), conducted among 284 professional accountants to examine the disclosure of fraudulent accounting activities, the results showed positive effects of gender (female) and the high level of management on whistleblowing. In the study of Fracalanza and Buttigieg (2016), conducted among 330 official accountants to examine tax fraud whistleblowing, the results showed the ineffectiveness of age on whistleblowing. In the study of Beige et al. (2016), conducted to examine the effect of the personality trait of Machiavellianism on auditors' warning, the results showed that Machiavellianism has a negative and significant effect on auditors' warning. This effect is also increased due to the perception of auditors about the consequences of organizational wrongdoing and personal responsibility for exposing the wrongdoing, as well as their perception of the costs of the disclosure of wrongdoing. In the study of Namazi and Fahimi (2016), the results show a positive relationship between moral intensity, active personality traits, organizational justice, and attitudes toward fraud reporting and religiosity, and a negative relationship between experience, more tendency to report fraud by men and the ineffectiveness of educational level, field of study, personal costs and company size. The study of Soni et al. (2015), conducted among 157 accountants in South Africa for internal whistleblowing to examine the disclosure of

fraudulent financial reporting, the results showed the ineffectiveness of age, gender, and seniority on whistleblowing. In the study of Erkmen et al. (2014), conducted among 116 professional accountants for internal whistleblowing to examine the disclosure of fraudulent financial reporting, fake invoices, suspicious bank accounts, the results showed a positive effect of experience (older accountants) and women and the ineffectiveness of age and professional membership on whistleblowing. In the study of Curtis et al. (2012), conducted among 527 students from China, Japan, Mexico and the United States for internal whistleblowing to examine the disclosure of the breach of professional standards or professional code of ethics, the results showed a positive relationship between age and the ineffectiveness of gender and whistleblowing. In the study of Liyanarachchi and Adler (2011), conducted among 98 official accountants to examine the disclosure of fraudulent financial reporting and suspicious banking affairs, the results showed positive effects of gender (male), experience, and middle ages on whistleblowing intentions. In the study of Robertson et al. (2011), conducted among 190 auditors to examine the breach of professional code of ethics, the results showed positive effects of experience and the accounting reaction to the lack of whistleblowing on whistleblowing. In the study of Reckers and Lowe (2010), conducted among 65 professional people for internal whistleblowing to examine the disclosure of misuse of assets and fraudulent financial reporting, the results showed a positive effect of age on whistleblowing. In the study of Kaplan et al. (2009), conducted among 113 students for internal whistleblowing to examine the disclosure of fraudulent financial reporting, the results showed a positive effect of women (anonymous disclosure) and the ineffectiveness of occupation requirements, gender (disclosure by name) on whistleblowing.

According to the theoretical literature and the background, the research hypotheses included 4 main hypotheses and 8 sub-hypotheses, as follows:

Main hypothesis 1: Female accountants have higher whistleblowing intentions.

Hypothesis 1-1: Female accountants have higher whistleblowing intentions for account manipulation.

Hypothesis 1-2: Female accountants have higher whistleblowing intentions for embezzlement.

Main hypothesis 2: As accountants' age increases, they have higher whistleblowing intentions.

Hypothesis 2-1: As accountants' age increases, they have higher whistleblowing intentions for account manipulation.

Hypothesis 2-2: As accountants' age increases, they have higher whistleblowing intentions for embezzlement.

Main hypothesis3: As accountants' experience increases, they have higher whistleblowing intentions.

Hypothesis 3-1: As accountants' experience increases, they have higher whistleblowing intentions for account manipulation.

Hypothesis 3-2: As accountants' experience increases, they have higher whistleblowing intentions for embezzlement.

Main hypothesis 4: Accountants with high-level education have higher whistleblowing intentions.

Hypothesis 4-1: Accountants with high-level education have higher whistleblowing intentions for account manipulation.

Hypothesis 4-2: Accountants with high-level education have higher whistleblowing intentions for embezzlement.

3. Methodology

The present study was an applied, descriptive-survey and cross-sectional research conducted to examine the difference between demographic variables in the whistleblowing intentions for fraud including false accounting and embezzlement.

The research community includes accountants in various private sectors (including listed and unlisted companies) and public sectors in a variety of activities (manufacturing, commercial, and service). The sample size, with the assumption that the research community was indeterminate, should have been 384 according to the Cochran formula at the level of 95%. In this research, (physical and virtual) questionnaires were distributed randomly to the target groups, finally, from 659 responses received, 596 questionnaires were accurately completed. In the analytical methods used in the present study, given the rank of whistleblowing variable, the Mann–Whitney U and the Kruskal-Wallis tests were used in the comparative analyses of two and three groups, respectively. The Kendall tau and Spearman tests were also used in the correlation analysis. Analysis tools were also a SPSS for

descriptive and inferential statistics and Excel for data mining.

The dependent variable of this research is the whistleblowing intentions, defined as the intention to disclose frauds committed by employees within the organization (Bjorkelo et al., 2010) to rectify the wrongdoing (Jubb, 2000), including two types of fraud: account manipulation and embezzlement. Whistleblowing measuring tools used in this study were adapted and expanded from accounting fraud exclusive scenarios (two scenarios for two issues of account manipulation and embezzlement) suggested by Siefert (2014) by using nine likert scale. The validity of tools, confirmed internally and externally by professors, was desirable and Cronbach's alpha was 1 for the two questions related to whistleblowing based on the scenario. Other variables of the research included gender, age, experience, educational level (from associate to doctorate degrees) and demographic data were collected by the questionnaire.

4. Results

The research sample consisted of the gender composition of male (57.4%) and female (42.6%), education composition of PhD (16.3%), Master's (54%), Bachelor's (29.4) and Associate (0.30%), in the private sector (54.4%) and the public sector (45.6%) with the age composition from 20 to 61 years old and the work experience composition from 1 to 30 years.

In the testing of gender-related hypotheses, as shown in Figure (3), the Mann–Whitney U statistics for account manipulation whistleblowing is 38354, and given that the significance of this statistics is 0.013, the research hypothesis is confirmed at the level of 95% (U=38354, Z=-2.481, P=0.013), suggesting that there is a significant difference in terms of gender in whistleblowing intentions for account manipulation, and given the superior rank of the female group (318.5) compared to the male group (283.65), women have significantly higher whistleblowing intentions. For embezzlement whistleblowing, as shown in Figure (3), the Mann–Whitney U statistics for embezzlement whistleblowing is 39415.5, and given that the significance of the statistics is 0.05, the research hypothesis is confirmed at the level of 95% (U=39415, Z=-1.96, P=0.05), suggesting that there is a significant difference in terms of gender in whistleblowing intentions for embezzlement, and given the superior rank of the female group (314.32) compared to the

male group (286.75), women have significantly higher whistleblowing intentions.

In the testing of age-related hypotheses, as shown in Figure (4), in the correlation analysis between age and account manipulation whistleblowing based on the correlation coefficient of the Kendall tau, Spearman and Pearson there is a correlation of 0.147, 0.201 and 0.209, respectively, at the significance level of 99.9% between these two variables, and with the increase of accountants' age, their whistleblowing intentions for

account manipulation are enhanced. For embezzlement whistleblowing, in the correlation analysis between age and embezzlement whistleblowing based on the correlation coefficient of the Kendall tau, Spearman and Pearson there is a correlation of 0.150, 0.205 and 0.210, respectively, at the significance level of 99.9% between these two variables, and with the increase of accountants' age, their whistleblowing intentions for embezzlement are enhanced.

Demographic Dimensions		Frequency Total=596	Percent	Cumulative Percent
Gender	male	342.00	57.40	57.40
	female	254.00	42.60	100.00
Education	AA	2.00	0.30	0.30
	BA	175.00	29.40	29.70
	MA	322.00	54.00	83.00
	PhD	97.00	16.30	100.00
Organization types	Private	324.00	54.40	54.40
	Public	272.00	45.60	100.00

Figure (1): Descriptive statistics of demographic variables

	Variables	Average	Std. Deviation	Kolmogorov-Smirnov Test	Sig
Whistleblowing	Manipulation	6.18	1.804	0.149	0
	Embezzlement	6.52	2.036	0.132	0

Figure (2): Descriptive statistics of whistleblowing variables

whistleblowing	Gender	N	Mean Rank	Sum of Ranks	Mann-Whitney U	Wilcoxon W	Z	Sig
Manipulation	Male	342	283.65	97007	38354	97007	-2.481	0.013
	Female	254	318.5	80899				
Embezzlement	Male	342	286.75	98068.5	39415.5	98068.5	-1.961	0.05
	Female	254	314.32	79837.5				

Figure (3): Testing gender hypotheses

Whistleblowing	Manipulation				Embezzlement			
	Value	Standard Error	t	Sig	Value	Standard Error	t	Sig
Kendall's tau-c	0.147	0.028	5.255	0	0.15	0.028	5.414	0
Spearman Correlation	0.201	0.038	4.988	0	0.205	0.038	5.116	0
Pearson's R	0.209	0.033	5.201	0	0.21	0.034	5.224	0

Figure (4): Testing age hypotheses

In the testing of experience-related hypotheses, as shown in Figure (5), in the correlation analysis between experience and account manipulation whistleblowing based on the correlation coefficient of the Kendall tau, Spearman and Pearson there is a

correlation of 0.231, 0.315 and 0.298, respectively, at the significance level of 99.9% between these two variables, and with the increase of accountants' experience, their whistleblowing intentions for account manipulation are enhanced. For embezzlement

whistleblowing, in the correlation analysis between experience as a continuous variable and embezzlement whistleblowing based on the correlation coefficient of the Kendall tau, Spearman and Pearson there is a correlation of 0.297, 0.328 and 0.240, respectively, at the significance level of 99.9% between these two variables, and with the increase of accountants' experience, their whistleblowing intentions for embezzlement are enhanced.

In the testing of the level of education-related hypotheses, as shown in Figure (6), Kruskal-Wallis statistics is 0.193 for account manipulation whistleblowing and given that the significance for the

statistic is 0.979, the research hypothesis is not confirmed at the level of 95%, suggesting that there is no significant difference in terms of educational level in whistleblowing intentions for account manipulation.

In the embezzlement whistleblowing, as shown in Figure (7), Kruskal-Wallis statistics is 0.382 for embezzlement whistleblowing and given that the significance for the statistic is 0.944, the research hypothesis is not confirmed at the level of 95%, suggesting that there is no significant difference in terms of educational level in whistleblowing intentions for embezzlement.

Whistleblowing	Manipulation				Embezzlement			
	Correlation	Value	Standard Error	t	Sig	Value	Standard Error	t
Kendall's tau-c	0.231	0.027	8.473	0	0.24	0.027	8.975	0
Spearman Correlation	0.315	0.036	8.085	0	0.328	0.036	8.459	0
Pearson's R	0.298	0.031	7.598	0	0.297	0.031	7.572	0

Figure (5): Testing experience hypothesis

Whistleblowing	Education	N	Mean Rank	Kruskal-Wallis H	df	Sig
Manipulation	AA	2	270.75	0.193	3	0.98
	BA	175	296.43			
	MA	322	298.06			
	PhD	97	304.25			

Figure (6): Testing the level of education-related hypotheses-account manipulation whistleblowing

Whistleblowing	Education	N	Mean Rank	Kruskal-Wallis H	df	Sig
Embezzlement	AA	2	283.25	0.382	3	0.94
	BA	175	293.67			
	MA	322	298.77			
	PhD	97	306.63			

Figure (7): Testing the level of education-related hypotheses-embezzlement whistleblowing

5. Discussion and Conclusions

Given that whistleblowing is a moral and prosocial behavior (Miceli et al., 2008) and several factors affect moral behavior, which is one of the demographic characteristics (Rahmanseresht et al., 2018), the purpose of this study was to investigate the effects of individual differences with a demographic approach on the whistleblowing intentions for two types of frauds: account manipulation and embezzlement. According to the results, there is a significant difference in terms of gender for the whistleblowing intentions for fraud, based on which women have higher rank and therefore, women have higher whistleblowing

intentions for account manipulation and embezzlement. Thus, according to Carol Gilligan's gender socialization theory that, in moral behavior intentions, women act in the light of relationships, care and compassion, and men in the light of rules, justice, and individual rights (Dawson, 1995), the importance of an approach based on compassion, which is intrapersonal, compared to justice, which is interpersonal becomes more evident. The results of this study are consistent with the results of Andon et al. (2018), Brown et al. (2016), Erkmen (2014), Kaplan et al. (2009) and Mesmer-Magnus and Viswesvaran (2005) and were inconsistent with the

studies in which men had higher whistleblowing intentions, such as the studies of Liyanarachchi and Adler (2011), Near and Miceli (1985) and the studies in which there was no significant relationship between the two genders, such as the studies of Alleyne et al. (2017), Fracalanza and Buttigieg (2016), Soni et al. (2015) and Curtis et al. (2012). Therefore, the results of this research that women intend to show more ethical behaviors for whistleblowing intentions are consistent with the theoretical foundations of Gilligan's social theory (1982), in which women consider ethical issues based on caring for others, understanding the relationship and taking responsibility for overall commitment. It is observed that women show higher intentions to ethical and extra-role behavior based on compassion and self-care, so that beyond the disutility of external factors, such as organizational factors and the issue of justice and law considered by men, the occurrence of ethical behavior is likely in women and will lead to their greater intention. From the perspective of age, this research shows that there is a significant positive correlation between age and the whistleblowing intentions for frauds, so that with the increase of age, the whistleblowing intentions for account manipulation and embezzlement are enhanced, which according to the theoretical literature, with the increase of age the application of ethical standards is increased (Nikoomaram et al., 2013), so the results of this study are consistent with the results of Andon et al. (2018), Curtis et al. (2012), Reckers and Lowe (2010), and Mesmer-Magnus and Viswesvaran (2005), and are inconsistent with the results of Erkmen et al. (2014), Soni et al. (2015), Fracalanza and Buttigieg (2016), in which age is ineffective. The results of this study are also inconsistent with the results of the study of Purwanto (2018), in which the negative effect of age was shown. Therefore, the result of this research that age has a positive effect on whistleblowing is consistent with the theoretical foundations. According to cognitive psychologists, age has a high correlation with moral development and increases moral perception and intellectual growth and maturity in moral decision-making (Rahimi Kakolaki et al., 2017). According to Doubinsky (2004), age has an important role on moral perception as older people act morally more often than young people because of less compromise in moral decision-making. In addition, according to Robertson and Anderson (1998), older people are better able to match themselves to job

requirements and pressures, which allow them to solve ethical dilemmas without violating social norms (Hamidizadeh and Nekooei, 2010). According to the findings of this study, in terms of experience, there is a positive correlation between an increased experience and whistleblowing intentions and therefore, those with higher experience have higher whistleblowing intentions for account manipulation and embezzlement, and thus, according to the theoretical literature, experience increases sociability and more ability to understand and apply ethical standards (Nikoomaram et al., 2013), so the results of this study are consistent with the results of Erkmen (2014), Liyanarachchi and Adler (2011), Robertson et al. (2011) and Vadera et al. (2009) and inconsistent with the results of the study of Namazi, in which experience had a negative effect, and with the results of the study of Alleyne et al. (2017), in which experience was ineffective. Therefore, the result of the present research that experience can affect whistleblowing intentions as a moral and prosocial behavior is consistent with the theoretical foundations. The acquisition of knowledge in dealing with specific cases (Libby, 1985), and experience is the process of acquiring knowledge or skill and an individual with more experience has more knowledge and understands more the relative frequency of events, and, moreover, it further complicates the classification structure (Nonahal Nahr et al., 2014), and therefore, more experienced people can better detect violations in their field of work. Given the correlation between experience and socialization and the ability to understand ethical standards (Nikoomaram et al., 2013), experience will facilitate the application of ethical standards in situations requiring ethical action, so that situations requiring ethical decision-making can be identified by experience, and ethical behavior is developed due to the higher socialization of experienced people. According to the results, in terms of educational level, there was no significant difference between educational levels from associate to doctorate degrees; however, whistleblowing intentions were insignificantly enhanced with increased educational level. However, increased education is expected to cause more sensitivity to different perspectives and improve moral judgment and reduce immoral behavior (Robertson, 1993), thus, with increased education, more cognitive and ethical development is expected (Honeycutt, 2001). But in

this study, such an effect was not observed, perhaps because there are no specific training programs for training and increasing moral capacities in university-based professional education such as accounting. However, the results are consistent with the findings of Miceli and Near (1992) and Graham (1989). In addition, according to the results of this research, the inconsistency of education with ethical behavior intentions is consistent with the research of Doubinsky (2004). Therefore, the result of the present study that the increase of education does not necessarily lead to an increase in ethical capacities and ethical behaviors may be due to the fact that there are no specific training programs for training and increasing moral capacities in university-based professional education such as accounting and with increasing academic levels in accounting there is no more focus on ethics and no specific courses have been determined for ethics in accounting, which can enhance the recognition of ethical dilemmas and increase the power of ethical decision-making. On the other hand, as ethical decision-making is dependent on other individual variables, such as experience, which is the finding of this study, and the increase in education is not necessarily associated with an increase in experience in Iran due to the problem of employment and individuals are not trained by the more ethical education as a result of higher education and cannot obtain this recognition from experience, simply increasing the education in Iran cannot lead to a significant difference in ethical behavior intentions. Given the role and importance of demographic differences in whistleblowing intentions, and the higher whistleblowing intentions in women, it is suggested that "prosocial" moral functions and capacities of women be considered more seriously and gendered discrimination be eliminated in selection, assignment and promotion. And given the effect of experience on whistleblowing intentions, it is suggested that assignment and promotion in occupational posts especially in supervisory posts be considered based on experiences and competencies, and given that there is no difference between educational levels in whistleblowing intentions, it is recommended that assignment and promotion in organizations be not merely based on the level of education and other requirements be considered such as experience and other personal and ethical competencies in sensitive posts, and with the increase

of the level of education ethical training and increasing students' ethical capacities be paid attention. Finally, this study had some limitations including the lack of information and academic resources on the topic (in Iran), the weak interest in responding to questionnaires and time-consuming data collection, and the study of whistleblowing intentions with scenarios instead of reviewing the real disclosed frauds, which are not practically and reliably available.

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Notes

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