



The interaction between personality traits, emotional intelligence and environmentally sensitive management: A research on central Anatolian companies

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Abstract

Businesses cannot act independent of their environment. The dynamic structure of interaction with the internal and external environment forces companies to act more sensitive to environmental issues. In recent years, the importance of environmental problems for economic progress has emerged. Sustainable development models have become directly relevant to environmental factors, and environmental consciousness has increased in all developed countries. Not only large, multinational production companies, but also all actors within the economy, have started to transform their structures in harmony with nature. Businesses are converting into organic structures, which are compatible with the ecosystem.

This research was inaugurated to determine the interaction between emotional intelligence and the understanding of environmental consciousness personality traits in businesses. In this study, it is researched the relationship between emotional intelligence and environmental consciousness of the managers in Central Anatolian companies. These companies are, according to the Istanbul Chamber of Commerce, were among the largest 500 companies in Turkey between 2008-2012. Personality traits, emotional intelligence and environmental consciousness are literally reviewed. Then whether similar studies done previously or not were investigated. The study suggests that today's managers should take into account that emotions are directly related to environmentally sensitive business applications. In this regard, environmentally sensitive personality traits should be identified and businesses take these traits into account while recruiting managers. This study also serves as initial research in Turkey on personality traits, emotional intelligence and environmental consciousness.

Keywords: Environmentally conscious management, emotional intelligence, personality traits, ecology, ecosystem, environmental awareness, the manager;

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1. Introduction

With the development of technology, people are taking more advantages from the world's wealth; but on the other hand, the existing ecosystem equilibrium is being destroyed. As the result of a growing imbalance that exceeds natural growth rates and creates waste, this waste cannot be cleaned naturally by the system itself. This cleaning requires human intervention. The world's population must develop solutions for the environmental problems, which are threatening humanity (Yılmaz etc., 2005: 26).

Every business is affected by economic conditions, so it is natural to compare and evaluate these economical factors against environmentally sensitive management. This concept refers to economic efficiencies and reacting and restoring with environmental relations, environment related strategies such as prediction and prevention, sustainable development, free market environmentalism and environmental factors arising from the green economy and green economy. However, the understanding of environmental awareness should not only be associated with external causes which are affecting individuals, but also with the person's connection with humanity.

Businesses are greatly affected by their economic conditions, which they function within their community, so it is natural to consider how businesses' economic activities and environmental relations are related to environmentally sensitive management. However, the understanding of environmental awareness should be associated with external causes that are affecting people and humanity's connection with the ontological reason.

The purpose of this study is to determine the interaction between emotional intelligence and environmental consciousness in business practices. The managers, in this study, are located among Central Anatolian companies. These companies are, according to the Istanbul Chamber of Commerce, among the largest 500 companies in Turkey between 2008-2012.

2. Personality

The concept of culture shows society's way of life. Likewise, the concept of personality refers to individuals' ways of life within their cultures. Many features, known and unknown dimensions exist in life. (Burger and Bass, 1979: 432).

The researchers have put different models forward to determine personality traits. For example, according to the model put forward by Eysenck, individuals' personalities are evaluated in horizontal and vertical dimensions on both ends. One end of the horizontal dimension is related with introverted personality traits, the other with extroverted personality traits. Introverts are quiet, cannot communicate easily, and are often isolated within their environment. However, extroverts are humane, friendly and easygoing people. In the vertical dimension of the model there are two ends: neurotic and normal. Traits in the neurotic end include, anxiety, restlessness and sensibility; while in the normal end, the dominant traits are faith and mindfulness (Zel, 2006: 40-42).

A five-factor personality model was used to determine the personality traits of participants in this study as indicated below: (McShane and Von Glinow, 2005: 58-59).

- **Responsibility:** Those individuals who are careful, self-disciplined and with a sense of success, have a high sense of responsibility. But the individuals with a low sense of responsibility are careless, erratic, and irresponsible. Additionally, they possess unplanned characteristics.
- **Compatibility:** Individuals with high compatibility traits are empathetic, insightful, and respectful to their environment. They also behave humanely. But those with low compatibility traits are angry, irritable and unwilling to collaborate.

- Emotional Balance: Individuals with high emotional balance have reassuring, calm and balanced personality traits. On the contrary, those showing anxious, tense and distressed traits have low compatibility traits.
- Clarity: Personality traits, which are responsive, flexible, creative, curious, and adventurous, are related to clarity. Resistant to change, closed to new ideas, as well as identifying one's self as conservative.
- Extroversion: Extroverted people are social, innovative, sympathetic, dominant and talkative but introverted people are withdrawn, solitary, timid and offish.

This personality model has been accepted in sociology and psychology but also in many other fields. It is also widely used in management and organization fields. For example the model is used to analyze career and personality traits, management strategies, leader-follower relationship, effective leadership, organizational change and emotional intelligence, organizational citizenship, transformational leadership, employees' conflict management styles, relationship between personal traits and performance.

The main reason for the wide acceptance of this model is that it has been scientifically proven as valid and reliable (Hough and Önes, 2001: 233-277).

3. Emotional Intelligence

Psychologists have made inextricable links between the brain, body and behaviors (Yeung, 2009: 17). However, scientists lack a consensus on IQ's scale and management. Unlike IQ, emotional intelligence is an added a different dimension to the intelligence schema (Cherniss, 2006: 239). According to Goleman (1995: 10-11), emotional intelligence, determination and persistence are basic living skills that are contains self-fulfillment, empathy and self-control.

Perceiving, describing, and defining feelings are cultural. Emotion detection, which represents the force that processes emotional information, makes it possible to empathize. This is the emotional function of intelligence (Salovey and Grewal, 2005: 281), along with social interactions, and reasoning and sensitivity to social cues (Deidre etc., 2007: 1386).

Emotional intelligence and learning have an organizational pattern. Younger companies are more likely to learn than older organizations. Gaining flexibility with strategies provides a competitive advantage to experienced companies (Ladd and Chan, 2004: 102). Consistency and emotional intelligence is the very heart of the knowledge leader's success. Knowledge leaders are aware of promoting their companies with knowledge management techniques. Such leaders also take examples from other companies to convey and embrace the potential benefits of knowledge management practices (Drucker, 1999: 151).

The researches on emotional intelligence in the literature are: The relationship between emotional intelligence and conflict management strategies for (Özdemir and Özdemir; 2007), the role of emotional intelligence in career development (Aksaraylı and Özgen; 2008), emotional intelligence in working environment (Aksaraylı and Özgen; 2008), the relationship between emotional intelligence and organizational citizenship (Acar etc.; 2009), the relationship between emotional intelligence and anthropology (Drew and Henne, 2006: 34), the impact of emotional intelligence on customer orientation and sales performance (Varinli etc.; 2009), the role and the importance of emotional intelligence on the success of institutions (Doğan and Demiral; 2007), emotional intelligence and leadership (Acar; 2002), emotional intelligence and problem solving (İşmen; 2001), the relationship between emotional intelligence and fatigue (Aslan and Özata; 2008), the impact of emotional intelligence on transformational leadership (Erkuş and Günlü; 2008), emotional intelligence and emotional creativity (Averill; 2004), emotional intelligence in teacher candidates (Girgin; 2009) and the relationship between the level of social skills (Özabacı; 2004), emotional intelligence and ethical reasoning abilities in teacher candidates (Doğan Kılıç and Önen; 2009),

dimensions of emotional intelligence in health care managers (Aslan and Özata; 2006) and the use of emotional intelligence in the evaluation of managerial success (Arıcıoğlu; 2002).

4. Environmentally Sensitive Business Management

Social ecology of economics, as well as being both ideological and methodological (Spash, 2009: 23), as well as the written and visual media, technological and scientific development results, people caused by the ecological risks of genetically modified foods and they caused a chain of ecological damage us as almost every day out (Maris, 2009: 2328).

When businesses are making production in the ecological environment they provide input like material and energy from the environment to use in the production process. There are two kinds of outputs after this process. One is the produced products and services itself and the other is environmentally damaging elements such as emissions and solid wastes. Within sustainable development concept, the business is required to destroy environmental damage in order to minimize these harmful effects (Nemli, 2000: 161). While information technology is changing the companies and forming new products which effect the whole process (Porter and Millar, 1985: 3), there is a need to increase the knowledge-based participation, individual environmental responsibility, motivation, sustainable development and local awareness to solve tis problem. The aim here is to create broad local awareness of values, actions, and attitudes, which are compatible with the continuous development (Chapman and Sharma, 2001: 265-272). If a problem is not resolved today to solve this problem in the future for both governments and the business world will be much more costly. On the other hand, uncontaminated and aesthetically pleasing environment means healthier, happier and more productive workers. On the other hand, there are profits to be gained from the production and sales of products to prevent and reduce the pollution (Dryzek, 1997: 142). The essential point of environmentally sensitive business concept is that carrying out business activities with this awareness.

To understand the environmental movement in a business, determining the point of view and attitude of managers is an important starting point. (Chan and Lau, 2000: 339).

Environmentally sensitive management is a perception of having environmental protection and sustainability in all business activities (Akdoğan, 2003: 133). Therefore, environment management related activities should be noted and organized at the same degree with the functions such as marketing, production, finance and human resources (Shrivastava, 1996: 34). The companies, who take the environment as one of their priorities, develop environment management systems and concordantly, they come up with eco-friendly practices (Nemli, 2000: 161).

The researches on emotional intelligence in the literature are: environmental attitude (Jemigan and Wiersch, 1978), environmental consciousness and elitism (Morisson and Dunlap, 1986), environmental consciousness attitudes of 12 grade students (Roth and Perez, 1989), rural and urban differences in environmental consciousness (Arcury and Christianson, 1993), environmental consciousness of Turkish university students: (EAS) factor analysis (Berberoğlu and Tosunoğlu, 1995), anthropocentric (human centered) characteristic of environmental problems (Özdemir, 1998), the relationship between the knowledge and attitudes of environmental consciousness in high school students(Bradley etc., 1999), environmental consciousness attitudes and behavior of high school students in Hong Kong(Kara and Chan, 1996), environmental consciousness knowledge level and attitudes of children in classroom activities(Leeming and Porter, 1997), environmental consciousness attitudes and behavior of Germany high school students(Kuhlemeier etc., 1999), environmentally conscious education and attitudes (Pooley and O'Connor, 2000), environmentally conscious management concept (Nemli, 2001), environmentally conscious consumers (Ay and Ecevit, 2005), attitudes of university students towards environmental problems (Özmen etc., 2005), rural environmental problems and social awareness in the development process of Turkey(Davran, 2007), Social trends relating to the environment in Turkey (Tuna, 2007), the effects of environmental awareness in

consumers' purchasing behavior (Tatlıdil and Aracıoğlu, 2009), examining the attitudes towards the environment from a gender perspective (Kaya etc., 2009).

In the literature, the majority of the researches on environmental consciousness (especially in Turkey), are on students and green marketing. There are very few researches on the managers' environmental consciousness and environmentally conscious management.

5. A Research on Central Anatolian Companies Which Are Amongst The Largest 500 in Turkey between 2008 – 2012

People mostly focus on the positions that they want to reach but being focused itself is not enough to make it happen. People need to strive in that direction and there is also a process. At this stage, people, especially the managers, are at a risk of emotional conflict (Garvin and Roberto, 2008: 155). Therefore, personality traits and the emotional intelligence of managers are critical in environmentally sensitive businesses.

In this research, it is aimed to find out the connection between personality traits, emotional intelligence and environmental awareness levels of 72 managers in Central Anatolian companies (development zone TR 71-72), which are amongst the largest 500 companies in Turkey between the years 2008 and 2012.

In accordance with this aim, the data gathered from this research will be useful both for these companies' environment related activities and also in academic terms.

TR 71 development zone cities are: Kırıkkale, Aksaray, Niğde, Nevşehir and Kırşehir.

TR 72 development zone cities are: Kayseri, Sivas and Yozgat

There are 81 cities in Turkey and 13 cities in Central Anatolia. Therefore, cities in these development zones represent %10 of Turkey and %60 of Central Anatolia.

5.1. Research Aims

Within this study, the relationship between emotional intelligence and environmental consciousness of the managers in Central Anatolian companies is researched. These companies are, according to Istanbul Chamber of Commerce, among the largest 500 companies in Turkey between 2008-2012.

As well as being an original research in its field and being a time-consuming study, the study can also be carried to many different fields with wide-time researches.

The research has three hypotheses:

H₁: There is a correlation between personality traits and environmentally sensitive management.

H₂: There is a correlation between subscale of emotional intelligence and environmentally sensitive management.

H₃: Both emotional intelligence and personality traits have an effect on environmentally sensitive management.

5.2. Research Model

In accordance with the aim of exploring the interaction between "Personality Traits", "Emotional Intelligence" and "Environmentally Sensitive Management", the research model has been hypothesized as shown in Figure 1.

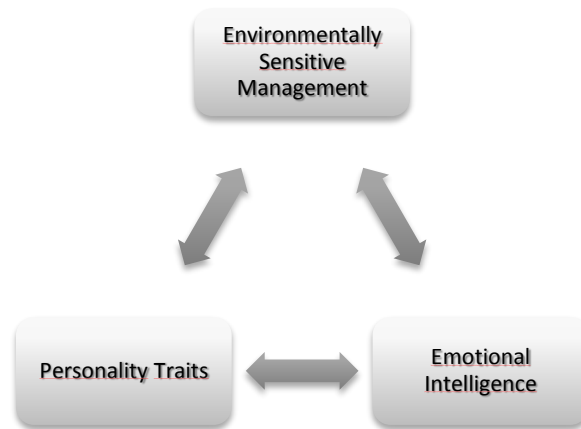


Figure1. The hypothesized model

6. Methodology and Scales

To be able to understand the environmental movement in a business, it is required to determine the perspectives and attitudes of managers who have the biggest effect on the works (Ricky and Lorett, 2000: 339).

In this research, it is analyzed the personality traits, emotional intelligence and environmental awareness attitudes of the mid-level and senior managers of Central Anatolian companies which are amongst the largest 500 companies in Turkey between 2008-2012. The survey is on 17 companies, which are based in TR 71 and TR 72 development zones. Surveys are conducted face to face by allocating a working day to each manager between 2009-2013.

Ten-Item Personality Inventory (TIPI) and Goleman's emotional intelligence scales are used. As there is no other widely accepted scale on environmental consciousness, self-developed environmental consciousness scale was used.

The questionnaire consists of two parts: the first part consists of personality traits (10 items), environmentally sensitive management (22 items) and emotional intelligence (26 items); and the second part consists of participants' demographic information, which are 58 statements on a five-point likert scale (1=strongly disagree and 5=strongly agree).

When forming the questions, mainly referenced two books are: "*Environmentally Conscious Management*" by Prof. Dr. Asuman Akdoğan and "*Environmentally Sensitive Management and Environmental Management System Applications in Turkey Industry*" by Prof. Dr. Esra Nemli Çalışkan. The scale consists of these subscales: the role of management in industry, work and motivation tools, environment consciousness, environment friendly production, environment management."

"Environmentally Sensitive Management" survey sample questions are as follows:

- Is there a written environment policy?
- Is there an environmental planning?
- Is there a budget for environmental activities?
- Is your company a member of any environmental organization?
- Does your company have a certificate of Environmental Management System - ISO 14001?
- It can be said that environmental topics are not understood enough in our company. (The role of management in environmentally sensitive management)
- Workers' environmental consciousness is raised by regular trainings and in-house activities. (Business and motivational tools)

- Environmental issues influence our company's product-market-technology decisions. (Environment consciousness)
- Our company economizes by reducing the waste of resources and using renewable resources. (Environment friendly production)
- Recycling or reusing projects are put into effect in our company. (Environmental management-related business results)

7. Findings

Multivariate statistical analysis is used to be able to test the research hypothesis in accordance with the aim of this study. However, before starting a multivariate statistical analysis, the data should be evaluated in terms of reliability and validity. In this study, the reliability of the scales was determined by internal consistency method. One of the practices of internal consistency method is "alpha coefficient" and alpha coefficient is the most common way of testing the reliability of scales. Alpha coefficient figures are between zero and one. The reliability of the scales, used in a study, considered reliable if the alpha coefficient is 0.70 or over (Hair vd., 1998: 118). Frequency distribution, mean, standard deviation, frequency, percentages, anova, correlation and regression analysis are done by "Statistical Package for the Social Sciences (SPSS) 20" software.

The questionnaire was prepared in line with the research aims, including various types of questions. In order to prepare an optimum questionnaire; first the literature was reviewed, and then an interview was conducted with those managers. A pilot study was also carried out before the research itself.

The survey aimed to reach 116 managers but only 72 managers returned the usable questionnaires. The return rate is approximately %62.

Table 1. Scales & Cronbach's alpha

Scales	Cronbach's alpha
Personality Traits	,900
Emotional Intelligence	,897
Environmentally Sensitive Management	,801
Survey (all scales)	,804

Alpha coefficients are; Personality Traits 0,900; Emotional Intelligence 0,897; Environmentally Sensitive Management 0,801 and Survey (all scales) 0,804. Alpha coefficients of all scales pass 0,700.

Table 2. Participants' demographic information

Educational Level	n	%	Educational Background	n	%
High School or Collage	27	37,5	Technical	18	25
Bachelor's Degrees	45	62,5	Social	54	75
TOTAL	72	100	TOTAL	72	100
Experience In Sector	n	%	Position	n	%
11-20 years	27	37,5	Middle level manager	45	62,5
21-30 years	27	37,5	Senior manager	27	37,5
21+ years	18	25	TOTAL	72	100
TOTAL	72	100	Company Size	n	%
Marital Status	n	%	501-1000 staff	54	75

Married	72	100	>1000 staff	18	25
Single	0	0	TOTAL	72	100
TOTAL	72	100			

Table 3. Written environment policy & Memberships to environment organizations

Do you have a written environment policy?	n	%
Yes	63	87,5
No	9	12,5
TOTAL	72	100
Do you have a budget for environmental activities?	n	%
Yes	63	87,5
No	9	12,5
TOTAL	72	100
Is your company a member of an environmental organization?	n	%
Yes	36	50
No	36	50
TOTAL	72	100

Table 3 shows that %87,5 of all managers' express that they have a written environment policy. Although they have a written policy and budget, memberships to environmental organizations are only limited to %50. The possible reason for companies avoiding to be a member of an environmental organization is that they do not have an established environment policy.

When the tale above analyzed, it is seen that the companies, which has a written environment policy, also have budgets for environment. Whereas having a written environment policy has no effect on being a member of environmental organizations.

Table 4. Mean, standard deviation and correlation value of variables

Variables	Mean	Std. Dev.	1	2	3
1-Personality traits	2,9375	0,39305	1		
2-Emotional intelligence	3,7500	0,43605	,462**	1	
3-Environmentally sensitive management	3,4375	0,53033	,323**	,206	1

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

According to the Table 4, Correlation analysis results show relatively high positive correlation between emotional intelligence and personality traits (.462**), and a positive correlation between personality traits and environmentally sensitive management (.323**) and environmentally sensitive management and emotional intelligence (.206) have no correlation.

H₁: There is a correlation between personality traits and environmentally sensitive management – accepted.

In order to determine the relationships between variables, correlation analysis was conducted. Correlation analyze, used to determine the strength of the relationship between two variable, ranges from -1,00 to +1,00.

Table 5. Interaction between personality traits and subscales of environmentally sensitive management

Variables	1	2	3	4	5	6	7
1-Personality traits	1						
2-Environmentally sensitive management	-,323**	1					
3-Self awareness	,441**	,056	1				
4-Self correction	-,086	,190	,812**	1			
5-Motivation	,612**	-,396**	,595**	,348**	1		
6-Empathy	-,174	,665**	,516**	,626**	,075	1	
7-Social awareness	-,113	,294*	,503**	,661**	,575**	,650**	1

** . Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

According to Table 5, there is a two-way negative relationship (-0,396**) between Environmentally sensitive management and Motivation; there is a two-way positive and strong (0,665**) relationship between Environmentally sensitive management and Empathy; there is a one-way positive but weak (0,294*) relationship between Environmentally sensitive management and Social awareness. However, there is no relationship between Environmentally sensitive management and Self-awareness or Self-correction.

H2: There is a correlation between subscales of emotional intelligence and environmentally sensitive management – relatively accepted.

Table 6. Regression analysis among environmentally sensitive management, personality traits and emotional intelligence

Coefficients ^a					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	4,261	,937		4,547	,000
Personality traits	-,391	,173	-,290	-2,262	,027
Emotional intelligence	,087	,156	,071	,558	,579

a. Dependent Variable: environmentally sensitive management

R= ,329 R²= ,108 F= 4,194 Sig.f= ,000

Regression Model₁ (environmentally sensitive management) = 4,261+,290 (personality traits)

Regression model according to Table 6 is: Regression Model₁ (environmentally sensitive management) = 4,261+,290 (personality traits). As the sigma of emotional intelligence (0,579) above 0,05, it is not possible to say that emotional intelligence has an effect on environmentally sensitive management.

H₃: Both emotional intelligence and personality traits have an effect on environmentally sensitive management – rejected.

When the emotional intelligence scale in Table 6 is replaced with subscales of emotional intelligence, the regression analyse results in table 7 are obtained.

Table 7. Regression analysis among environmentally sensitive management, personality traits and subscales of emotional intelligence

Coefficients ^a					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	3,468	,622		5,580	,000
Personality traits	,911	,179	,675	5,078	,000
Self-consciousness	,439	,224	,366	1,959	,054
Self-correction	-,616	,231	-,437	-2,668	,010
Motivation	-2,867	,260	-1,673	-1,673	,000
Empathy	,175	,181	,100	,968	,337
Social skills	2,045	,225	1,373	9,079	,000

a. Dependent Variable: environmentally sensitive management

R= ,922 R²= ,851 F= 61,846 Sig.f= ,000

Regression Model₂ (environmentally sensitive management) = 3,468+ ,911 (personality traits) -,616 (self-correction) -2,867 (motivation) +2,045 (social skills)

Comparison of basic regression parameters in Table 6, Table 7 and Table 8

	Table 6	Table 7	Change
(Constant) B	4,261	3,468	↓
(Constant) Std. Error	,937	,622	↓
(Constant) Sig.	,000	,000	=
Personality traits (B)	-,391	,911	↑
Personality traits (Std. Error)	,173	,179	↑
Personality traits (Beta)	-,290	,675	↑
Personality traits (t)	-2,262	5,078	↑
Personality traits (Sig.)	,027	,000	↓
R	,329	,922	↑
R ²	,108	,851	↑
F	4,194	61,846	↑
Sig.f	,000	,000	=

Regression Model₁ (environmentally sensitive management) = 4,261+ ,290 (personality traits)

Regression Model₂ (environmentally sensitive management) = 3,468+ ,911 (personality traits) -,616 (self-correction) -2,867 (motivation) +2,045 (social skills)

If emotional intelligence is put in a regression analyze with all its scales, it is seen that self-consciousness and motivation, which are related to personal character, have no effect (Model₂). If emotional intelligence itself is put in a regression analyze, then, it can be seen in Model₁ that there is no fully impact. Accordingly, environmental management is shaped more by the outside interactions.

Discussion

Emotional intelligence is not the only determinant in administrative processes. Emotional intelligence shows its effect when it is interacted with factors like the subscales of this research. Environmental sensitivity incorporates

with the concept of sustainability, for this reason, it needs to be considered with the organizational factors. On one other hand, depletion of natural resources, environmental pollution, global warming and recycling systems covers more and more space in our lives; and on the other hand our dynamic interaction with our environment is increasing day by day. This dynamic interaction takes place in physical as well as emotional.

Environmentally sensitive business practices are in interaction with emotions. For this reason, environmentally sensitive business manager traits need to be defined and when companies are choosing managers they should take these traits into consideration.

In this research the regression model is founded as: Regression Model₁ (environmental sensitive management) = 4,261+,29 (personality traits).

According to this reason, emotional intelligence has no direct effect on environmentally sensitive management.

As a result, it is found that when the emotional intelligence is considered as a whole, it seems it has no effect on environmental conscious management but its subscales, empathy and social-awareness has an effect on environmental conscious management unlike motivation, self-correction and self-awareness.

Along with the study's major findings, when the constraints and limitations of the research are taken into consideration, the other researchers can eliminate the shortcomings and they can also enrich the study.

According to its content and scope, this study is the first research in Turkey on emotional intelligence's effect on environmentally sensitive management.

Considering the research findings, today's managers should take into account that emotions are directly related to environmentally sensitive business applications. In this regard, environmentally sensitive personality traits should be identified and businesses take these traits into account while recruiting managers.

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