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EVALUATING THE RELATIONSHIP BETWEEN MORAL INTELLIGENCE AND SOCIAL CAPITAL AND STUDENTS' ENVIRONMENTAL BEHAVIORS

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### ABSTRACT

Background: Environmental behaviors are one of the issues and challenges of today's communities to protect the environment. Hence, the present study was conducted to evaluate the relationship between moral intelligence and social capital and environmental behaviors.

Method: The research method is descriptive and the research design is correlational. The statistical population of the present study included all master and PhD students in human science fields of study in Islamic Azad University of Hamadan. In the present study, 336 students were selected as a statistical sample using stratified random sampling method appropriate to volume of each class. Three standard questionnaires, including moral intelligence questionnaire, social capital questionnaire and environmental behaviors questionnaire were used to collect research data. Research data were analyzed using LISREL and SPSS statistical software.

Results: The research results revealed a positive and significant relationship between moral intelligence and social capital and environmental behaviors.

Conclusion: It is concluded that university officials should pay attention to students' moral intelligence and social capital to improve environmental behaviors.

### INTRODUCTION

In the current century, human environmental behaviors, as one of the most important and influential factors on the environment, has been considered by many environmental researchers (1). Environmental behavior is one of the new concepts introduced nowadays in the environmental studies of modern communities. The design of this concept in many environmental approaches suggests important role of these behaviors in the natural environment (2). However, the importance of research on environmental behavior has increased only in recent decades (3). This issue has also attracted the attention of researchers active in a wide range of academic disciplines (4). Global environmental crisis, including climate change, ozone depletion, deforestation, and the food crisis have made human science disciplines to be considered a broader, more diverse, and more creative in environmental issues (5). Environmental behaviors are a set of actions of people of community towards the environment that include

a wide range of specific feelings, desires and preparations for behavior towards the environment. People in each community have a different attitude towards the environment based on specific social and cultural conditions and requirements. These attitudes and behaviors may be completely negative and against the environment or, conversely, completely positive and for the benefit of environment (6). Here it is necessary to define two concepts of responsible and irresponsible behavior towards the environment. Responsible behaviors towards environment include individual actions to protect nature, preserve natural resources, and commitment to collective actions on environmental issues and irresponsible behaviors towards the environment include individual actions to not protect nature, destruction of natural resources and non-commitment to collective actions in the face of environmental issues (7, 8).

Environmental actions and behaviors affect not only most environmental issues and threats but also are affected by some factors (9). Researchers have investigated factors affecting environmental behaviors, including demographic variables (age, gender, social class, residence, marital status, number of children and age of children), political orientation, political ideology, environmental performance of nations, awareness of environment and religious belief (6, 10, 11). Moral intelligence and social capital are among the factors, which can potentially affect environmental behaviors. Moral intelligence is the ability of having right understanding and strong moral beliefs and practicing them. Morality is defined as a system of values and do's and don'ts, according to which the good and bad of the organization are identified and a bad action is distinguished from a good action (12). Moral intelligence means paying attention to human life and nature, economic and social welfare, free and honest communication, and citizenship rights (13). Moral intelligence is considered a turning point for all intelligences. It is in fact avital intelligence for all human beings. Moral intelligence refers to the fact that human beings are not born morally or immorally, but they learn how to be good. Learning to be good involves communication, feedback, socialization, and education that never end (14). Moral intelligence is the ability to distinguish right from wrong, which is consistent with the principles of the world (15). Based on researchers, the following three dimensions of moral intelligence are essential for persistent success of a person.

**Honesty:** It means creating coordination between what we believe in and what we do. It involves doing what we know is right, and telling the truth at all times. A person with high moral intelligence acts in a way that is consistent with his or her principles and beliefs.

**Compassion:** Paying attention to others that has a reciprocal effect. If we are kind and compassionate to others, they will sympathize with us when needed and will be kind.

**Forgiveness:** Awareness of one's own shortcomings and tolerating the mistakes of others (16).

In recent years, social capital has become a very common concept (17). Social capital is a multidimensional concept in the social sciences and influential in many areas of society, and has found a special place in the literature related to development, so that some consider it as a missing link in development, arguing that people who have high social capital and have

higher tendency to live healthier and happier and participate in social activities in communities (18). Teaching people how communicate with others, social capital has brought positive results for individuals and communities, including adaptation to the environment (19). Social capital has been considered as a cure for social pains (20). This capital has the characteristic of self-generation and self-productivity in the sense that if it is used properly, the conditions to produce and strengthen it are provided. It is in fact considered as a kind of manageable social production (21, 22). In the social capital management literature, there are two forms of horizontal and vertical social capital. Horizontal social capital is the result of relationships between individuals and groups, which is manifested in the form of participation in formal social networks and the level of interpersonal trust. It may improve health and provide social resources by creating networks of individuals and promoting well-being (23).

The vertical social capital results from the relationship of individuals and groups with different authorities, resources and social situations that primarily affect people health and includes behavioral indicators to describe the health of individuals (24). Some experts believe that in the absence of social capital, other capitals lose their effectiveness. Some also emphasize the importance of social capital enabling individuals to make the best use of their community resources and facilities (25). Based on researchers, social capital consists of three basic elements.

**Structural element:** The structural element of social capital refers to the general pattern of contacts among people. This element is introduced with aspects such as network relationships between people, network configuration and appropriate organization (26).

**Cognitive element:** The cognitive element refers to sources that provide manifestations, interpretations, and systems of common meanings among groups. This element is introduced with aspects such as language, common codes and common stories (27).

**Relational element:** The relational element refers to personal relationships between each member of the organization based on the assumptions they are in mind based on past interactions. This element is introduced with aspects such as trust, norms, expectations and requirements and identity (28).

It should be noted that mistakes made in human thoughts, attitudes and behavior as a result of their activities on land is one of the main causes of damage to environment. The emergence of environmental issues and problems has raised the question of whether the environment can withstand the continuation of current human behavior. It is growing recognized that world natural resources can no longer be consumed as in past and signs of environmental bottlenecks have become manifested around the world. Population growth, abundance of consumer products, increasing living standards and increasing demand of people, development of technology, weakness of governments' executive organizations in implementing ecological programs and projects to protect the environment, exploitative and unprincipled use of natural environment by capitalists and ultimately irresponsible human actions have resulted in unfavorable consequences and damages, and these consequences and damages are exacerbated increasingly. Some of them include destruction of the environment and

agricultural lands, global warming, air pollution, water and soil contamination, reduction of natural resources and destruction of forests and pastures, reduction of energy production sources and the occurrence of various diseases.

Hence, human beings with their behaviors in environment and the changes that they make in the environment, such as destruction of forests to build roads and dams, redirecting the rivers, pouring waste to natural environment, high energy consumption, excessive use of natural resources, etc., destroy the environment and pose a worrying threat to environment. Accordingly, trying to identify the factors affecting the improvement of environmental behaviors can be an effective step in the face of these threats. Considering what was stated, this study seeks to answer the question of whether moral intelligence and social impact can affect students' environmental behaviors.

## **METHODS**

The research method is descriptive-correlational. The statistical population of this study included all 2668 master and PhD students of human science disciplines in Islamic Azad University of Hamadan branch. Using stratified random sampling method proportional to volume, 336 people were randomly selected as sample. Cochran's formula was used to determine the sample size according to statistical population size.

Moral Intelligence Questionnaire: Standard Moral Intelligence Questionnaire was used to assess moral intelligence (29). This questionnaire has 40 items and three dimensions of honesty, forgiveness and compassion based on a five-point Likert scale. The reliability of this questionnaire using Cronbach's alpha coefficient was obtained at 0.91, which is a good reliability.

Social Capital Questionnaire: Standard Social Capital Questionnaire was used to assess social capital (30). This questionnaire has 20 items assessing three structural, cognitive and relational elements based on a five-point Likert scale. The reliability of the questionnaire using Cronbach's alpha coefficient was obtained at 0.89, indicating its good reliability.

Environmental Behavior Questionnaire: Standard Environmental Behavior Questionnaire was used to assess environmental behaviors (31). This questionnaire has 32 items and six behavioral indicators of gas consumption, water consumption, electricity consumption, the use of standard environmental products, protection of natural resources and use of recycled materials based on a five-point Likert scale. The reliability of the questionnaire using Cronbach's alpha coefficient was obtained at 0.81, indicating its good reliability.

Data were analyzed using SPSS19 and LISREL statistical software at both descriptive and inferential levels. At the descriptive level, statistics such as mean, standard deviation, skewness and kurtosis, and at the inferential level, Pearson correlation coefficient tests were used. Also, to evaluate the relationship between research variables, structural equations in LISREL statistical software were used.

## **RESULTS**

Table 1 presents the descriptive indices of the research variables. One of the assumptions that should be considered in using structural equation model is the normal distribution of variables. Accordingly, the absolute value of the skewness and kurtosis of the variables should not be more than 3 and 10, respectively. Based on Table 1, the absolute value of skewness and kurtosis of all variables is less than the mentioned values. Thus, this assumption of causal modeling (normality of univariate) is confirmed.

**Table 1:** Descriptive indices of research variables

Variables	mean	SD	Skewness	Kurtosis
Moral Intelligence	49.2	42.0	13.-0	22.-0
Social capital	04.3	48.0	09.-0	10.0
Environmental behaviors	11.3	62.0	006.0	29.-0

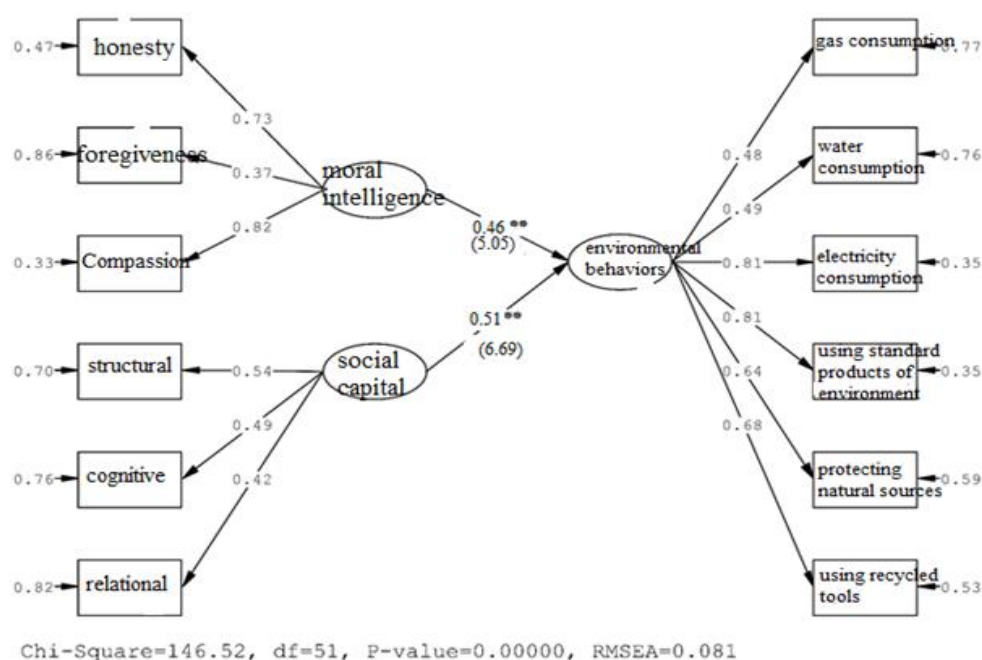
Table 2 presents the correlation matrices of the research variables.

**Table 2:** Correlation matrix between research variables

Variables	1	2	3
Moral Intelligence	1		
Social capital	49** .0	1	
Environmental behaviors	54** .0	62** .0	1

p<0.05                      \* p<0.01\*\*

Based on Table 2, the relationship between moral intelligence, social capital and environmental behaviors is positive and significant at the level of 0.01. Theoretical model of the research and its fit with the collected data was tested by the maximum probability method and using LISREL 8.8 software. Figure 1 presents the tested model of the present study.



**Figure 1:** Tested research model

Based on the information in Figure 1, the relationship between moral intelligence and environmental behaviors (0.46) with a t-statistic of 5.05 is positive and significant at a significance level of 0.01. The relationship between social capital and environmental behaviors (0.51) with a T-statistic of 6.69 is positive and significant at a significance level of 0.01.

**Table 3-** Characteristics of goodness of fit

AGFI	GFI	CFI	RMSEA	X <sup>2</sup> /df
Obtained value				
0.86	91.0	91.0	08.0	88.2
Acceptable value				
More than 0.80	More than 0.9	More than 0.9	Less than 0.1	Less than 3

Table 3 presents the values obtained in the present study and the acceptable value of each of the fit indices. Based on this table, all fit indices are in the desired range and it can be concluded that the tested model has a good fit with the collected data.

## DISCUSSION

Analysis of research hypotheses revealed a positive and significant relationship between moral intelligence and environmental behaviors. One research reported that the relationship between moral intelligence and the ecological citizen is positive and significant (32). It also reported that moral performance has a positive and significant impact on students' environmental performance (33). These results are in line with those of the present study. Accordingly, it can be stated that students with high moral intelligence express their principles, values, and beliefs that can guide their action, often disagree with someone who is doing something wrong. They tell the truth unless important moral reasons prevent it. When they agree to do something, they pursue it to the end. They often accept responsibility for their mistakes and failures and using their mistakes as an opportunity to improve their performance. They forgive and forget even when a person has made a serious mistake. In making an important decision, they consciously align it with their principles, values and beliefs. Their dominant approach is to serve others and pay attention to the growth needs and progress of their classmates. They take responsibility for their actions and their consequences and accept their mistakes and failures. They care for and respect others compassionately, and this has a reciprocal effect because others sympathize with him or her in social interactions. As a result, they show positive and responsible behavior in interaction with environment.

Results of other research revealed that there is a positive and significant relationship between social capital and environmental behaviors. Studies suggest that the role of social capital in environmental behaviors is positive and significant (6, 34). These results are in line with those of the present study. Accordingly, the cognitive element of social capital creates a reference framework for people to observe and interpret the environment. This element can create appropriate conditions for the exchange of experience in discussions and exchange of ideas among members. In

addition, the structural element as the basis of social capital refers to factors such as conscientiousness, sense of cooperation, ability and attitude of individuals and the relational element causes the community to rely strongly on the ability and responsibility of individuals to create interaction and growth. Therefore, social capital focuses on action among human beings, an action that exists in all moments of human life and affects his or her behavior and attitudes. Environmental behaviors and actions form a part of human life, so it can be expected that social capital affect human behaviors, especially in a community where environmental threats are increasing rapidly. It should be noted that addressing students' environmental behaviors in the light of moral intelligence and social capital is less considered by researchers and efforts in this area can be an effective step towards recognizing and creating theoretical and experimental knowledge in this area. Hence, future researchers are recommended to conduct similar research in other universities and with other samples to increase the generalizability of the results. It is also recommended to identify the factors affecting environmental behaviors based on the characteristics.

It is also recommended to design an environmental entrepreneurship model to use the capacities and potentials of the environment for productivity and development. According to the obtained results, it is recommended to use group education methods and strengthen group learning in the form of teaching processes for the creation and development of social capital in the higher education system. In the educational programs of universities and higher education centers, special attention should be paid to the category of moral intelligence and its dimensions. In addition to teaching the specialized contents of the courses, professors should also pay attention to the growth and promotion of students' moral and human dimensions. The university, including the student and cultural vice chancellors, should implement special programs in the field of developing and teaching human and moral values among students. It is necessary to focus on courses such as Islamic education on the growth and promotion of moral intelligence and cultivate a spirit of responsibility among students. In the educational programs of universities and higher education centers, special attention should be paid to moral intelligence and its dimensions. In addition to teaching the specialized contents of the courses, professors should pay attention to the growth and promotion of students' moral and human dimensions. Cultural institutions in universities, including cultural and student deputies, should implement special programs in the area of developing and teaching human and moral values among students. It is necessary to focus on courses such as Islamic education on the growth and promotion of moral intelligence and enhancing students' sense of responsibility.

## CONCLUSION

General results of the present study revealed moral intelligence and social capital play a positive and significant role in promoting environmental behaviors. Development and growth of students' moral intelligence, social capital, and environmental behaviors is an important issue. Moral and social characteristics cannot be limited to teaching them in

the classroom. It is necessary to create an encouraging environment to create a greater awareness of these concepts and practice them. High moral intelligence and social capital improve responsible and moral environmental behaviors and ultimately a moral and responsible community towards the environment. In recent years, environmental issues and changes have been considered by many thinkers, so it can be stated that these issues and changes have affected the life of modern man more than ever.

### **Ethical considerations**

To comply with ethical considerations, the subjects were coded and the confidentiality of information and the principle of confidentiality were observed. Also, ethical issues such as plagiarism, informed consent, multiple publications, etc. were considered in the present study.

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