



Environmental Sciences Vol.17 / No.1 / Spring 2019

195-210

The role of media and environmental education components on the behavior of environmental NGOs members in Tehran Province

Roya Karami Darabkhani*², Seyed Yousef Hejazi and Abdolmotaleb Rezaei

Department of Agricultural Extension and Education, Faculty of Agricultural Economics and Development, University of Tehran, Tehran, Iran.

Received: 2017.10.12

Accepted: 2018.03.04

Karami Darabkhani, R., Hejazi, S.Y. and Rezaei, A., 2019. The role of media and environmental education components on the behavior of environmental NGOs members in Tehran Province. *Environmental Sciences*. 17(1): 195-210.

Introduction: Today, as environmental problems are escalating with the ever-increasing rise in population, there is an urgent need to protect the environment. Researchers have suggested various solutions for environmental problems, most of which are technological but nowadays due to the high cost of these projects, they are interested in changing people's lifestyles and behavior. They believe the solution for environmental issues should be searched in the change of human behavior and attitude. In this regard the media has a big role to play in making people aware of environment issues and taking actions to protect the environment. Media are known as very influential tools for widening and creating awareness, attitude and behavior about environmental issues. Media including social media apps, websites, TV& radio, print media, etc. play an important role in informing and engaging citizens in environmental issues. The great potential of the media in regard to the provision of information, the construction of knowledge and the cultivation of skills and attitudes, has been proved scientifically over the years. One of the important issues about environmental behavior and environmental conservation, is pay attention to environmental Non-governmental organizations education and training. Environmental education is a process that allows individuals to explore environmental issues, engage in problem solving, and take action to improve the environment. The main components of environmental education are: Awareness, sensitivity, Knowledge, Attitudes, Skills, intention, Participation and behavior. NGOs, according to their mission and goals, has appropriate facilities to increase public awareness through education and training of their members and other people and should support these organizations in order to achieving their goals. The main goal of this study is to investigating the role of media on some environmental education components including: knowledge, attitude, intention and environmental behavior of environmental NGOs members.

* Corresponding Author. *E-mail Address:* roya.karami@ut.ac.ir

Material and methods: The statistical population consisted of environmental NGOs members in Tehran Province. Sample size determined 148 person by using Krejcie and *Morgan* table and Sampling was done randomly. The main instrument for collecting data was questionnaire which its reliability Obtained based on Cronbach's alpha $\alpha=89\%$.

Results and discussion: The results of structural modeling based on partial least squares method shows a significant and positive relationship between the four components (media, knowledge, attitude and intention) with environmental behavior. The results showed that all four variables (media, environmental knowledge, environmental attitude and environmental intention), have a high mean in the environmental NGOs members in Tehran Province. The independent variable (environmental attitude), has the greatest effect on the mediator variable (environmental intention) and also the greatest impact on the dependent variable (environmental behavior), and then media is the most effective variable. Environmental intention as mediator variable 57.1 percent of the variance of the environmental behavior between environmental NGOs members in Tehran Province. Also 34.3 percent of the variance of the environmental behavior is explained by media, environmental knowledge, environmental attitude and environmental intention between environmental NGOs members in Tehran Province.

Conclusion: Environmental attitude has been identified as the most effective variable on environmental intention and environmental behavior in this study and Media has been identified as the second most effective variable on environmental intention and environmental behavior in this study. Media's role in order to increasing environmental knowledge and attitudes of the population is undeniable. Media should be used more to facilitate the transmission of environmental information and promote more positive environmental attitudes. In recent years internet and social networks are the main sources for environmental information. Since digital media are used widely by young people, new educational material should be created in order to meet the updated needs for information concerning environmental issues. So Different programs should be planned by NGOs in order to sharing environmental information through media especially internet and social networks.

Keywords: Media- Environmental knowledge- Environmental attitude- Environmental behavior- NGOs.

Introduction

The concerns about the environmental degradation of planet earth have increased significantly. These days, it is common to talk about the earth, the globe, and the global environment and also a lot of news and debates which can be labeled under the umbrella concept of global environmental change found in the media (Ingold, 2000). Environmental problems, such as the worsening of the greenhouse effects, diminishing ozone layer and to a lesser extent,

acid rainfalls are of global concern due to their amplitude as well as their consequences (e.g., environmental changes, desertification, and forest destruction). Due to these environmental problems, international conferences stressed the importance of promoting environmental awareness through education and media as means to reach sustainable development in the long run. The term 'media' refer to a range of diverse mediums from commercial television to

public broadcasting, from radio to the Internet. The mass media are known as very influential tools for widening and creating public opinion, awareness, attitude, and behavior through several kinds of programs about environmental issues. The power of media lays on the fact that they are widespread, or even wield, public opinion. Today, as environmental problems are escalating with the ever-increasing rise in population, there is an urgent need to preserve the environment and improve it qualitatively. The growing concerns for environmental issues are also evident from many national and international reports, conferences, campaigns, and organizations that have frequently come up with solutions to protect and ban activities that endanger the environment (Kushwaha, 2015). Having access to a healthy environment has been regarded as a human right just like the rights of living, individual freedom and political participation (Firoozi, 2005).

Many believe that the solution of environmental issues is in the change of human behavior, attitude and lifestyle. Researchers have suggested various solutions for environmental problems, most of which are technological. But nowadays, due to the high cost of these projects, they are interested in changing people's lifestyle and behavior. Various studies have used different models and theories to explain the environmental behavior and the factors affecting it. Psychologists use different approaches to investigate human's environmental behavior, some of which are socio-psychological theories such as the theory of planned behavior (Ajzen, 1985; 1991). The basis of the theory of planned behavior is

attitude combined with perceived control and norms, which in fact predicts the intentions that are used to predict the behavior. The theory of planned behavior has been used in many works of literature to explain the range of pro-environmental behaviors (Heath and Gifford, 2002; Bamberg and Schmidt, 2003; de Groot and Steg, 2007; McDonald and Louis, 2008; Greaves *et al.*, 2013).

Furthermore, the media has a big role to play in people's awareness of environmental issues and taking actions to protect the environment. Media is effective in informing and persuading people to think or do something (Rowland, 1979). The role of media to raise the community's concerns for social and environmental issues is very critical. Raising awareness for the protection of the environment and sustainable use of finite resources are issues that directly concern each citizen. Media can play an active role in alerting people about environmental damages, corporates failure to meet the legal obligations, truthful analysis of new legislation, and taking steps to protect and preserve the environment. Some studies (Arcury *et al.*, 1987; Ostman and Parker, 1986; Brothers *et al.*, 1991; Hausbeck *et al.*, 1992; Chan, 1999; Prathap and Ponnusamy, 2006; Kappor, 2011) have emphasized on the importance of different types of media (e.g., newspapers, radio, and television) in creating environmental awareness among people of different communities belonging to either urban and rural areas (Kushwaha, 2015).

Media (electronic or print) may help people to get informed and then reflect upon the given information in order to understand the

origins and causes of the major environmental problems (Arlt *et al.*, 2011; Forno, 1999; Hansen, 2011). Many public opinion surveys in the developed countries have shown that media play an important role in shaping public opinion through television, radio, press, websites and etc. (Barrett and Kuroda, 2002; Said *et al.* 2007; Zhao 2009; Yel and Serarslan, 2011; Mohaghegh *et al.* 2012; Heidari and Heidari, 2015).

The potential of mass media for influencing knowledge gain, public attitude and behavior has been well recognized through several works of literature (Prathapa and Ponnusamy, 2006).

Hansen (2007) stated that media discourses help to shape and set the parameters of discussion and understanding of environmental issues and for resulting social and policy responses. Newspapers, books and magazines, general education at school, radio and TV are types of media that were previously the main and most effective sources of environmental information (Pawlowski, 1996; Ivy *et al.*, 1998). The study by Dorji (2007) was based on a primary survey of the respondents in terms of appraising their attitude towards mass media and its relation to the level of environmental awareness and shows that media could play an important role in raising environmental awareness and information.

The study by Aminrad *et al.* (2010) focused on environmental awareness and attitude among Iranian students in Malaysian universities, which showed that the media positively affected the level of environmental awareness and attitude among students. Lee

(2011) stated that exposure to environmental messages from traditional media and the web has positive effects on environmental behavior through environmental value, attitude, and intention.

Many researches showed that media and Internet, had the very important impact on environmental knowledge, attitude and behavior. (Foroutankia *et al.* 2011; Farrokhan and Sadeghi, 2014; Roshandel *et al.* (2016; Huang, 2016).

Based on many researchers' findings, political socialization approach can be used in citizens' involvement in everyday-life pro-environmental behavior. Political socialization is a lifelong process and family, educational system, groups, and the media all have a role. From the early work of sociologists, psychologists and philosophers, it has been consistently argued that the attitudes, beliefs, values, norms, and behaviors we learn during our childhood persist and influence our later perspective and behavior. Political socialization is defined as a process by which an individual acquires attitudes, beliefs, and values relating to the political system of which he is a member and of. Such a definition encompasses a wide range of approaches and theories without any commitment to anyone in particular (Greenberg, 2009). As a lot of voluntary work for youth is organized by NGOs, NGOs become an important form of institutional affiliation and connection to community (Flanagan *et al.*, 1998). NGOs are often mentioned in the literature when voluntary work and political campaigning are considered as important means of political socialization, especially in the literature about

NGOs as a means for youths to gain experience through voluntary work (Rosenthal *et al.*, 1998; Yates & Younis, 1998; Roker *et al.*, 1999).

People's behavior in dealing with the environment is an important factor in reducing environmental dangers. Identification of the effective factors on environmental behavior is the first step in order to investigate the environmental behaviors. Many factors affect a particular behavior. Given the undeniable influence of media on people, the role of media on environmental knowledge, attitude, intention, and behavior was reviewed in this study. For this purpose, according to the results of other research and Ajzen and Fishbein behavioral intentions model, the role of the media on the environmental behavior of environmental NGO members in Tehran Province (which are active in environmental education) was investigated in this study. The hypotheses of this research included:

H1: There is a significant relationship between the use of media and environmental knowledge.

H2: There is a significant relationship between the use of media and environmental attitude.

H3: There is a significant relationship between the use of media and environmental intention.

H4: There is a significant relationship between the use of media and environmental behavior.

Material and methods

This study is a descriptive research and the survey method was used to collect the data. The

statistical population consisted of environmental NGO members in Tehran Province that are active in environmental education and have about 250 active members. The sample size was determined 148 people using Krejcie and Morgan table and the sampling was done randomly. In order to collect the information, a questionnaire including two parts was used. The first part contained questions about the individual features and the second part contained questions related to four factors influencing environmental behavior including media, environmental knowledge, environmental attitude, and environmental intention. In order to collect information for the second part, a questionnaire consisting of 53 items was used. Items were designed with the adoption of new environmental paradigm questionnaire (Dunlap *et al.*, 2000), environmental knowledge questionnaire (Morrone *et al.*, 2001), Frick *et al.* (2004) questionnaire, and media questionnaire. Content validity was confirmed by experts and its reliability was obtained based on Cronbach's alpha $\alpha=0.89$. Data analysis was done using SPSS V.21 and Smart-PLS software. Partial least-squares regression (PLS) is a quick, efficient and optimal regression method based on covariance. It is recommended in cases of regression, where the sample size is low, causing proper predictive power and the development of theory. In descriptive statistics, we used mean, standard deviation, and coefficient of variation and in inference statistics, structural modeling based on partial least-squares approach was used. Results and discussion

Prioritize components among the NGOs members

As presented in Table 1, among the components of the media, knowledge, attitude, and intention, the environmental attitude, environmental intention, and media had the first, second, and third priority, respectively. The mean score of all four variables (media, environmental knowledge, environmental attitude, and environmental intention) was higher than the average score (2.5) indicating a very good level of components in the environmental NGO members in Tehran Province. These results support earlier findings (Ivy *et al.*, 1998; Kaplowitz and Levine, 2005; Korhonen and Lappalainen, 2004; Mifsud, 2011).

The factor loadings of each variable in connection with its latent variable were used for testing the reliability of components and ensuring the logical and convenient grouping of items. According to Table 2, the number of items has been reduced from 55 to 38 and items with less load factor than optimum were removed from the study. According to the average variance extracted, all of the variables (AVE) were higher than 0.5. Composite reliability was used to evaluate the reliability of research structural, all of which were higher than 0.6, which means they had appropriate reliability.

Table 1. Results of prioritize components

Variable	Mean	Standard deviation	CV	priority
Media	4.10	0.575	0.140	3
Environmental Knowledge	4.03	0.601	0.149	4
Environmental Attitude	4.36	0.340	0.077	1
Environmental Intention	4.67	0.612	0.131	2

According to Table 4, the independent variable (environmental attitude), has the greatest effect on the mediator variable (environmental intention) and also the greatest impact on the dependent variable (environmental behavior), and then the media is the most effective variable. Environmental intention as the mediator variable was responsible for 57.1 percent of the

variance of the environmental behavior between environmental NGO members in Tehran Province. Also, 34.3 percent of the variance of environmental behavior is explained by media, environmental knowledge, environmental attitude, and environmental intention. Additionally, the remaining percentages are related to the factors that have not been identified in this research

Table 2. Components and items and load factors

Component	Item	Symbol in model	Load factor	t	α	CR	AVE
Environmental knowledge	Importance of saving the endangered plants	K3	0.685	8.737	0.767	0.835	0.507
	Insects resistance after years of using the same pesticide	K5	0.532	7.250			
	Information about the greenhouse effect	K7	0.787	8.996			
	Information about renewable resources	K10	0.783	12.878			
	Information about the El Nino phenomenon	K11	0.741	9.345			
Environmental Attitude	Nearing to the number of people that earth can support	A1	0.497	8.525	0.890	0.911	0.513
	Severe abuse of the environment by humans	A4	0.548	12.219			
	The earth has abundant natural resources	A5	0.686	10.482			
	Plants and animals have the right to life as humans	A6	0.764	14.558			
	The probability of environmental disaster of current situation continues	A10	0.637	8.649			
	The importance of environmental education in schools and universities	A11	0.797	26.619			
	A cleared forest makes me miserable	A14	0.724	16.553			
	The necessity for government investments in clean alternatives for energy production	A16	0.881	44.883			
	More penalties for people who leave garbage in the environment	A17	0.847	22.336			
	Prevent the extinction of any living creature	A18	0.683	8.832			
Media	Obtaining Environmental information through books	M2	0.924	54.528	0.668	0.805	0.525
	Obtaining Environmental information through internet & social networks	M3	0.669	5.875			
	Obtaining Environmental information through scientific articles & newspapers	M5	0.791	18.524			
	The necessity for informing people about environmental issues through different kinds of media	M6	0.418	3.059			
Environmental intention	Tend to increase taxes in order to protect the environment	I2	0.579	5.818	0.819	0.874	0.586
	Tend to reallocate existing budget by the government for environment conservation	I3	0.710	15.194			
	Even one person can influencing on environmental problems resolving	I4	0.875	43.846			
	There is a lot I, as individual can do to protect the environment in my community	I5	0.816	36.848			
	The impact of teamwork to solve environmental problems	I6	0.812	33.559			
Environmental behavior	Turn off the lights when leaving the room as the last one	B2	0.638	18.404	0.894	0.913	0.517
	In the winter, I turn down the heat when I leave my room for more than 4 hours	B3	0.614	9.245			
	Taking part in clean up campaigns	B4	0.642	10.438			
	Contributed money to an environmental ngo	B5	0.591	8.945			
	Taking part in environmental NGO activities	B6	0.750	16.109			
	Attended an environmental meetings	B7	0.854	28.838			
	Complained to the company/person causing the damage	B8	0.702	17.304			
	Separating waste (wet/dry) at home	B10	0.742	14.189			
Reduce using of electrical appliances during peak hours	B11	0.779	26.656				
Buy drinks in recyclable packaging	B12	0.826	21.030				

The results in Table 3 showed that the selected indicators to measure components had the necessary diagnostic validity because all components had variance extracted higher than 0.4. Also, the square root of the average variance extracted for each construct (which is shown in Table 4 matrix diagonal) was higher than the entire correlations with other factors.

Table 3. Discriminant validity of the components (knowledge, attitude, intention, environmental behavior and media)

Variable	Attitude	Behavior	Intention	Knowledge	Media
Environmental Attitude	0.716				
Environmental behavior	0.449	0.719			
Environmental intention	0.673	0.585	0.765		
Environmental Knowledge	0.086	0.313	0.401	0.712	
Media	0.51	0.791	0.617	0.582	0.725

Table 4. Results of direct and indirect effects

Dependent Variable	Independent Variable	Direct effect	Indirect effect	T Value	P Value	R ²	R ² Adj
Environmental Knowledge	Media	0.582	-	6.003	0.000	0.339	0.335
Environmental Attitude	Media	0.51	-	7.137	0.000	0.260	0.255
	Environmental Knowledge	0.346	-	6.449	0.000		
Environmental Intention	Environmental Attitude	0.643	-	17.313	0.000	0.571	0.565
	Media	-	0.529	14.204	0.000		
	Environmental Knowledge	-	0.202	5.794	0.000		
Environmental Behavior	Environmental Attitude	-	0.376	8.319	0.000	0.343	0.338
	Media	-	0.31	6.972	0.000		
	Environmental Intention	0.585	-	11.572	0.000		

The results of the research hypotheses testing (Table 5) showed that all hypotheses were confirmed. According to Table 5, there is a positive and significant relationship between media and environmental attitude, which is in line with previous findings (Ivy *et al.*, 1998; Prathap and Ponnusamy, 2006; Dorji, 2007; Aminrad *et al.*, 2010; Foroutankia *et al.*, 2011; Farrokhian and Sadeghi, 2014; Roshandel *et al.*, 2016). Also, there is a positive and significant relationship between media and environmental knowledge, which supports other findings (Pawlowski, 1996; Morgan, 1997; Ivy *et al.*, 1998; Barrett and Kuroda, 2002; Prathap and

Ponnusamy, 2006; Dorji, 2007; Hansen, 2007; Said *et al.*, 2007; Zhao, 2009; Aminrad *et al.*, 2010; Mohaghegh *et al.*, 2012; Heidari and Heidari, 2015; Huang, 2016). TV, newspaper, and books were the most important tools for achieving environmental information and knowledge in the past, whereas the Internet and social networks are the main sources of environmental information in recent years. Also, there was a positive and significant relationship between media and environmental behavior that supports earlier findings (Ivy *et al.*, 1998; Prathap and Ponnusamy, 2006; Foroutankia *et al.*, 2011; Lee, 2011; Roshandel *et al.*, 2016).

Table 5. Results of research hypotheses testing

Hypotheses	Beta	T Value	Result
There is a significant relationship between the use of media and environmental knowledge.	0.582	6.003	confirmed
There is a significant relationship between the use of media and environmental attitude.	0.51	7.137	confirmed
There is a significant relationship between the use of media and environmental intention.	0.529	14.204	confirmed
There is a significant relationship between the use of media and environmental behavior.	0.31	6.972	confirmed

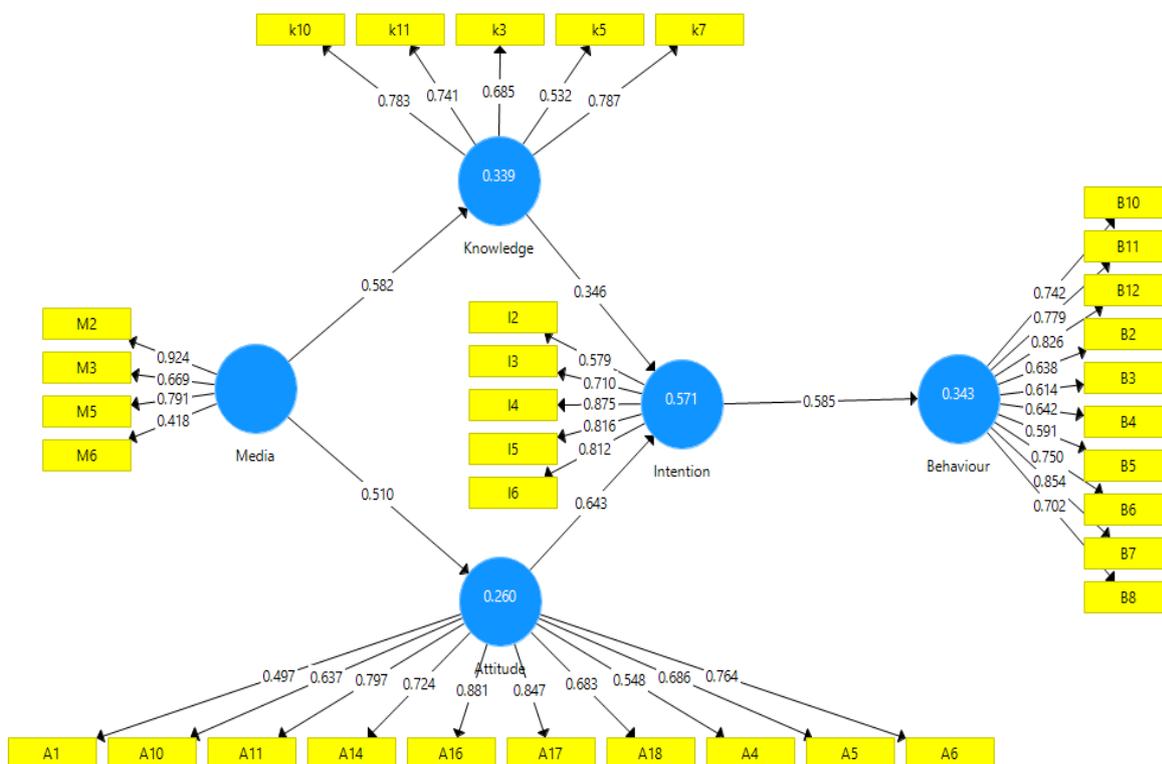


Fig. 1- The final research model

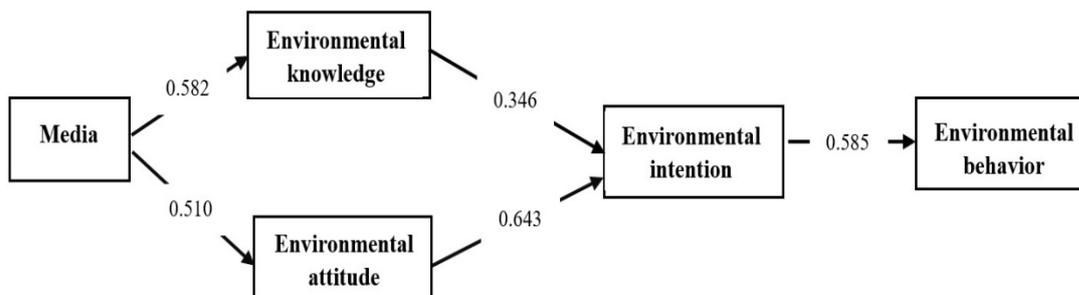


Fig. 2- The final framework of the research

According to the structural equation modeling based on partial least-square method, the final framework of the research is as follows:

Conclusion

Over the past few decades, global warming, climate change, hurricanes, tornados, melting of icebergs, aridity, floods, greenhouse effect, acid rain, and the extinction of flora and fauna are becoming common concerns among people. Air, water, soil, and food quality are deteriorating day by day, especially in developing countries (Aminrad *et al.*, 2013; Sharma, 2012).

Political socialization is an individual's learning of social patterns corresponding to his societal position as mediated through various agencies of society. It is a process of largely informal learning that almost everyone experiences throughout life as a consequence of interactions with parents, family, friends, neighbors, peers, colleagues, and so forth. Many agents are involved in political socialization, and non-government organizations (NGOs) are emerging as actors in the process, particularly as the scope and meaning of political socialization has now been expanded. In this regard, paying attention to environmental NGOs is an important issue. Political socialization remains an important task in every political system, as nowadays younger generations are expected to play an active role in social and political participation. Many agents that involve in political socialization and NGOs

are emerging as actors in the process, particularly as the scope and meaning of political socialization have now been expanded. As a lot of voluntary works are being organized by NGOs for the youth, they became an important form of institutional affiliation and connection to the community (Flanagan *et al.*, 1998). NGOs are often mentioned in the literature when voluntary work and political campaigning are considered as important means of political socialization, especially in the literature about NGOs as a means for youths to gain experience through voluntary work (Rosenthal *et al.*, 1998; Yates and Younis, 1998; Roker *et al.*, 1999). According to their missions and goals, NGOs have appropriate facilities to increase public awareness through education and training of their members and other people of all ages. The environmental emergency that we are facing needs to be addressed and analyzed within a social frame of reference (Arlt *et al.*, 2011). Media seems to be an interesting approach towards such a direction and plays an important part in order to inform and engage citizens in environmental issues. The great potential of the media in regard to the provision of information, the construction of knowledge, and the cultivation of skills and attitudes, have been proven scientifically over the years (Suoranta, 2003; Prathap and Ponnusamy, 2006; Tisdell and Thompson, 2007; Sharma, 2012). In this study, the environmental attitude has been identified as the most effective variable in environmental intention and environmental behavior. So, awareness

programs should be implemented for changing people's attitude and to create a proper environmental behavior culture. To create a positive attitude towards the environment in people, organizational goals should be clarified and explained to all members. For this purpose, NGOs can use seminars, question and answer sessions, and periodic meetings for their members. Environmental education programs have to be considered because knowledge and information about environmental issues are the necessary factors for creating positive and responsible environmental attitudes and behavior. Environmental education is the most fundamental method for environmental protection that aims at finding the best systems for presenting contents and practices in order to promote environmental awareness and knowledge and finally creating a positive attitude in society.

Media has been identified as the second most effective variable on environmental intention and environmental behavior in this study. Experts believe that changing the knowledge and attitudes of people towards the environment will lead to responsible environmental behavior and reducing damages to the environment. One of the most important tools for making changes in environmental knowledge and attitudes is the media. Media has a significant impact on people attitudes and values (Yel and Serarslan, 2011). Today, the media's role in increasing the environmental knowledge and attitudes of the population is undeniable. According to various studies, TV, newspaper, and books were important tools for achieving environmental information and

knowledge in the past, but in recent years the Internet and social networks are the main sources of environmental information. In this research, TV item, because of its low load factor in testing the reliability of components, was eliminated. This can be explained according to the statistical population situation; NGO members have a high level of academic education and they use professional resources for obtaining their required knowledge and information such as books, scientific articles, and new media especially the Internet. The Internet's broad accessibility makes it one of the best resources for people to find environmental information all over the world. The Internet is nowadays used more frequently to encourage environmental awareness as it provides an opportunity for people to respond and participate immediately. Social networks such as Twitter, Facebook, and Instagram are excellent tools for sharing news, information, and articles and thus, are useful for staying up-to-date on environmental topics. The Internet has converged traditional media with new media, which has produced an eclectic and multifaceted resource for users to get content about environmentalism (Roshandel *et al.*, 2016).

Media should be used more to facilitate the transmission of environmental information and promote more positive environmental attitudes (Aminrad *et al.*, 2010). Since digital media are used widely by young people, new educational material should be created in order to meet the updated need for information concerning environmental issues. Therefore, different programs should be planned by NGOs in order to share environmental information through

media especially the Internet and social networks.

Dispersal and irregularities about environmental issues have caused public opinion not to be adequately informed about environmental issues. We can use the agenda-setting theory for more efficiency in people because it creates public awareness and concern of salient issues by the media. Agenda-setting

posits the media to influence what the public thinks about and how they think about particular topics (McCombs, 2005). Mass media play an important role in highlighting environmental issues and addressing the issues in this area. If environmental education programs and news are covered frequently and prominently, the audience will regard the issues as significant.

References

- Ajzen, I., 1991. The theory of planned behavior. *Organizational Behavior and Human Decision Processes*. 50, 179-211.
- Aminrad, Z., Azizi, M., Wahab, M., Huron, R. and Nawawi, M., 2010. Environmental Awareness and Attitude among Iranian Students in Malaysian Universities. *Environment Asia*. 3, 1-10.
- Aminrad, Z., Zakaria S.Z.S., Hadi, S. and Sakari, M., 2013. Relationship between Awareness, Knowledge and Attitudes Towards Environmental Education Among Secondary School Students in Malaysia. *World Applied Sciences Journal*. 22(9), 1326-1333.
- Arlt, D., Hoppe, I. and Wolling, J., 2011. Climate change and media usage: Effects on problem awareness and behavioural intentions. *The International Communication Gazette*. 73(1-2), 45-63.
- Barrett, B.F.D. and Kuroda, A., 2002. Ecological modernisation, environmental knowledge and societal change: Attitude and behavior of young people in Japan. *International Research in Geographical and Environmental Education*. 11, 237-261.
- Dorji, T., 2007. Attitude towards Mass Media and its role in promoting Environmental Consciousness: An Empirical Investigation. *Media and public culture: proceedings of the Second International Seminar on Bhutan Studies*. Centre for Bhutan Studies, 382-438.
- Farrokhan, F. and Sadeghi, A., 2014. Investigate the role of the Internet in environmental attitude and behavior (Case Study: PNU students in Ramhormoz). In *Proceedings 1st National Conference of Environmental Science and Engineering*, 17th-19th February, Ahvaz, Iran. pp435-414.
- Firoozi, M., 2005. Principles' rights in healthy environment in the Quran. *Journal of Philosophy, Theology and Mysticism/ Reflection of Idea*. 34, 65-78.
- Flanagan, C., Bowes, M., Jonsson, B., Csapo, B. and Sheblanova, E., 1998. Ties that Bind: correlates of adolescents' civic commitments in seven countries. *Journal of Social Issues*. 54(3), 457-475.
- Forno, D.A., 1999. Sustainable development starts with agriculture. In: *Sustainable agriculture solutions: The action report of the sustainable*

- agriculture initiative. London: Novello Press Ltd. 8–11.
- Foroutan Kia, S.H., Rezadoost, K. Karony, M. and Heidari, A., 2011. Investigate the role of media in shaping environmental attitudes and behaviors of citizens. *Media and Citizenship Education Seminar*, Tehran, Iran.
- Greaves, M., Zibarras, L.D. and Stride, C., 2013. Using the theory of planned behavior to explore environmental behavioral intentions in the workplace. *Journal of Environmental Psychology*. [34](#), 109-120.
- Greenberg, E. S., 2009. *Political Socialization*. New Brunswick: Aldine Transaction.
- Hansen, A., 2007. *Introduction: The mass media and environmental issues*. London: Leicester University Press.
- Heidari, F. and Heidari, M., 2015. Effectiveness of management of environmental education on improving knowledge for environmental protection (Case study: teachers at Tehran's elementary school). *International Journal of Environmental Research*. [9\(4\)](#), 1225-1232.
- Huang, [H.](#), 2016. Media use, environmental beliefs, self-efficacy, and pro-environmental behavior. *Journal of Business Research*. [69\(6\)](#), 2206-2212
- Ingold, I., 2000. *Culture and the perception of the environment*. London: Rutledge.
- Ivy, T.G.C., Lee, C.K. and Chuan, G.K., 1998. A survey of environmental knowledge, attitudes and behavior of students in Singapore. *International Research in Geographical and Environmental Education*. [3\(7\)](#), 181-202.
- Kaplowitz, M.D. and Levine, R., 2005. How environmental knowledge measures up at a big ten university. *Environmental Education Research*. [11\(2\)](#), 143-160.
- Korhonen, K. and Lappalainen, A., 2004. Examining the environmental awareness of children and adolescents in the Ranomafana region, Madagascar. *Environmental Education Research*. [2\(10\)](#), 197-216.
- Kushwaha, V.S., 2015. Mass media in disseminating environmental awareness. *Social Issues and Environmental Problems*. [3](#), 1-4.
- Lee, K., 2011. The role media exposure, social exposure and biospheric value orientation in the environmental attitude-intention-behavior model in adolescents. *Journal of Environmental Psychology*. [31\(4\)](#), 301-308.
- McCombs, M.E., 2005. A Look at Agenda-Setting: Past, Present and Future. *Journalism Studies*. [6\(4\)](#), 543–547.
- Mohaghegh, S., Bahrebar, M., Bahrebar, M. and Bahrebar, A., 2013. Strategies to increase environmental awareness in different groups of people. In *Proceedings 1st National Conference on Agricultural Engineering and Management, Environment and Sustainable Natural Resources, 13th March, Hamedan, Iran*. pp. 2746-2758.
- Morgan, J., 1997. *Geo-graphing: writing the world in geography classrooms*. London: Institution of Education.
- Pawlowski, A., 1996. Perception of environmental problems by young people in Poland. *Environmental Education Research*. [3\(2\)](#), 279-285.
- Prathap, D.P. and Ponnusamy, K.A., 2006. Effectiveness of four mass media channels on the knowledge gain of rural women. *Journal of International Agricultural and Extension*

Education. 13(1), 73-81.

Roker, D., Player, K. and Coleman, J., 1999. Young people's voluntary and campaigning activities as sources of political education. *Oxford Review of Education*. 25(1&2), 185-198.

Rosenthal, S., Feiring, C. and Lewis, M., 1998. Political Volunteering from Late Adolescence to Young Adulthood: patterns and predictors. *Journal of Social Issues*. 54(3), 477-493.

Roshandel Arbatani, T., Labafi, S. and Robati, M., 2016. Effects of Social Media on the Environmental Protection Behaviour of the Public (Case Study: Protecting Zayandeh-Rood River Environment). *Int. J. Environ. Res*, 10(2), 237-244.

Rowland, H.R., 1979. Evaluating the use of mass media: Using the mass media for institutional development. U.S.A.: Josselyn-Brass Inc. Publishers.

Said, A.M., Yahaya, N. and Ahmadun, F., 2007. Environmental comprehension and participation of Malaysian secondary school students. *Environmental Education Research*. 1(13), 17-31.

Sharma, A., 2012. Media coverage on bio-diversity and conservation strategies. *The Clarion*, 1(2): 250-254.

Suoranta, J., 2003. The world divided in two: Digital divide, Information and communication technologies and the youth question. *Journal for*

Critical Education Policy Studies. 1(2), 142-184.

Thompson, P., 2007. Seeing "from a different angle": The role of pop culture in teaching for diversity and critical media literacy in adult education. *International Journal of Lifelong Education*. 26, 651-673.

Yates, M. & Younis, J. (1998) Community Service and Political Identity Development in Adolescence, *Journal of Social Issues*, 54(3), 495-512.

Yel, E. and Serarslan, M., 2011. Powerful force of the media to environmental issues and its contribution to environmental engineers. *Journalism and Mass Columniation*. 1(1), 57-67.

Zhao, X., 2009. Media use and global warming perceptions: A snapshot of the reinforcing spirals. *Communication Research*. 36(5), 698-723.





فصلنامه علوم محیطی، دوره هفدهم، شماره ۱، بهار ۱۳۹۸

۲۱۰-۱۹۵

نقش رسانه و مولفه‌های آموزش محیط‌زیست بر رفتار محیط‌زیستی اعضای سازمان‌های مردم‌نهاد محیط‌زیستی استان تهران

رؤیا کرمی دارابخانی*، سید یوسف حجازی و عبدالمطلب رضایی

گروه ترویج کشاورزی، دانشکده اقتصاد و توسعه کشاورزی، دانشگاه تهران، تهران، ایران

تاریخ دریافت: ۱۳۹۶/۰۷/۲۰ تاریخ پذیرش: ۱۳۹۶/۱۲/۱۳

کرمی دارابخانی، ر.، س.ی. حجازی و ع. رضایی. ۱۳۹۸. نقش رسانه و مولفه‌های آموزش محیط‌زیست بر رفتار محیط‌زیستی اعضای سازمان‌های مردم‌نهاد محیط‌زیستی استان تهران. فصلنامه علوم محیطی. ۲۱۰-۱۹۵ (۱)۱۷.

سابقه و هدف: امروزه با توجه به رشد روزافزون جمعیت و در نتیجه افزایش مشکلات محیط‌زیستی، الزام فوری به منظور حفظ محیط‌زیست وجود دارد. پژوهشگران برای حل معضلات محیط‌زیستی، راه‌حل‌های گوناگونی مطرح می‌کنند که اغلب این راه‌حل‌ها، تکنولوژیکی هستند اما امروزه به دلیل هزینه‌های زیاد این روش‌ها، به دگرگونی سبک زندگی و رفتارهای مردم علاقه‌مند شده‌اند. آن‌ها معتقدند که راه‌حل مسائل محیط‌زیستی باید در تغییر رفتار و نگرش انسان موردبررسی قرار گیرد. در این راستا رسانه نقش مهمی در ایجاد آگاهی مردم نسبت به مسائل محیط‌زیستی و اقدام برای محافظت از محیط‌زیست ایفا می‌کند. رسانه به‌عنوان ابزار بسیار مؤثری برای گسترش و ایجاد آگاهی، نگرش و رفتار نسبت به مسائل محیط‌زیستی شناخته‌شده است. رسانه دارای نقش مهمی در اطلاع‌رسانی و مشارکت شهروندان در مسائل محیط‌زیستی است. پتانسیل فوق‌العاده رسانه‌ها در زمینه تهیه اطلاعات، ساخت دانش، پرورش مهارت‌ها و نگرش‌ها، در طول سال‌ها به‌طور علمی ثابت شده است. یکی از موضوعات مهم در رابطه با رفتار محیط‌زیستی و حفاظت از محیط‌زیست، توجه به آموزش سازمان‌های مردم‌نهاد محیط‌زیستی است. آموزش محیط‌زیست فرایندیست که به افراد امکان بررسی مسائل محیط‌زیستی، مشارکت در حل مسائل و اقدام برای بهبود محیط‌زیست را می‌دهد. مولفه‌های اصلی آموزش محیط‌زیست عبارتند از: آگاهی، حساسیت، دانش، نگرش، مهارت، نیت، مشارکت و رفتار. سازمان‌های مردم‌نهاد محیط‌زیستی با توجه به اهداف و رسالت خود، دارای امکانات مناسبی برای افزایش سطح آگاهی عمومی از طریق آموزش و تعلیم اعضای خود و همچنین آموزش سایر افراد جامعه می‌باشند و باید حمایت‌های لازم از این سازمان‌ها در راستای تحقق اهدافشان صورت گیرد. هدف اصلی پژوهش حاضر، بررسی تأثیر رسانه بر برخی از مؤلفه‌های آموزش محیط‌زیست شامل: دانش محیط‌زیستی، محیط‌زیستی، نیت محیط‌زیستی و رفتار محیط‌زیستی اعضای سازمان‌های مردم‌نهاد محیط‌زیستی است.

مواد و روش‌ها: جامعه آماری تحقیق، سازمان‌های مردم‌نهاد محیط‌زیستی استان تهران می‌باشند که با استفاده از جدول کرجسی و مورگان و به روش نمونه‌گیری تصادفی ۱۴۸ نفر به‌عنوان اعضای نمونه تعیین شدند. ابزار جمع‌آوری داده‌ها پرسشنامه انتخاب گردید که پایایی آن از طریق آزمون آلفای کرونباخ ۸۹٪ درصد به‌دست آمد.

* Corresponding Author. E-mail Address: roya.karami@ut.ac.ir

نتایج و بحث: نتایج به دست آمده از مدل سازی معادلات ساختاری مبتنی بر روش حداقل مربعات جزئی بیانگر رابطه مثبت و معنی دار چهار مؤلفه رسانه، دانش محیط زیستی، نگرش محیط زیستی و نیت محیط زیستی با رفتار محیط زیستی بودند. نتایج نشان داد که هر چهار متغیر (رسانه، دانش محیط زیستی، نگرش محیط زیستی و نیت محیط زیستی) دارای میانگین بالایی در بین اعضای سازمان های مردم نهاد محیط زیستی استان تهران می باشند. متغیر مستقل (نگرش محیط زیستی) بیشترین تأثیر را بر متغیر میانجی (نیت محیط زیستی) و همچنین بیشترین تأثیر را بر متغیر وابسته (رفتار محیط زیستی) دارد و بعد از آن، رسانه مؤثرترین متغیر است. نیت محیط زیستی به عنوان متغیر میانجی ۵۷/۱ درصد از واریانس رفتار محیط زیستی در بین اعضا سازمان های مردم نهاد محیط زیستی استان تهران را تبیین می کند. همچنین ۳۴/۳ درصد از واریانس رفتار محیط زیستی در بین اعضا سازمان های مردم نهاد محیط زیستی استان تهران توسط متغیرهای رسانه، دانش محیط زیستی، نگرش محیط زیستی و نیت محیط زیستی تبیین گردید.

نتیجه گیری: نگرش محیط زیستی به عنوان مهم ترین متغیر تأثیرگذار در نیت محیط زیستی و رفتار محیط زیستی و رسانه به عنوان دومین متغیر تأثیرگذار در نیت محیط زیستی و رفتار محیط زیستی در این مطالعه شناخته شده است. نقش رسانه به منظور افزایش دانش و نگرش محیط زیستی افراد جامعه غیر قابل انکار است. رسانه باید بیشتر از قبل به منظور تسهیل انتقال اطلاعات محیط زیستی و ترویج نگرش مثبت محیط زیستی مورد استفاده قرار گیرد. در سال های اخیر اینترنت و شبکه های اجتماعی منبع اصلی اطلاعات محیط زیستی هستند. از آنجایی که رسانه های دیجیتال به طور گسترده ای توسط جوانان مورد استفاده قرار می گیرند، باید مواد و روش های آموزشی جدیدی برای پاسخگویی به روز نیازهای اطلاعاتی مسائل محیط زیستی، ایجاد شود. بنابراین باید برنامه های مختلفی توسط سازمان های مردم نهاد محیط زیستی برنامه ریزی شود تا اطلاعات محیط زیستی را از طریق رسانه ها به ویژه اینترنت و شبکه های اجتماعی به اشتراک بگذارند.

واژه های کلیدی: رسانه، دانش محیط زیستی، نگرش محیط زیستی، رفتار محیط زیستی، سازمان های مردم نهاد محیط زیستی.