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Towards Participation in Pro-Environmental Activities: Application of Dual-Pathway Model of Collective Action

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ABSTRACT

Participation in collective actions refers to an individual's behavioral, mental, and emotional engagement in group-situations that motivates him or her to achieve group goals, including environmental protection. The present study aimed at analyzing the intention of members of environmental NGOs to participate in collective pro-environmental activities. To do this, the psychological Dual-pathway Model of Collective Action (DMCA) was used. The research method was descriptive-correlational and was done using survey technique. The statistical population included members of the pro-environmental NGOs in Tehran Province, Iran (N= 680). Out of the population, 248 cases were selected as a sample using stratified random sampling method with proportional assignment. The research instrument was a researcher-made questionnaire and its validity was verified using a panel of case experts and AVE index. Besides, the reliability was confirmed using Cronbach's alpha coefficients, principal component analysis, and composite reliability indices. According to the DMCA, the effects of Perceived Behavioral Control variables about Collective Pro-Environmental Activities (PBCCPEA), Attitude towards Participation in Collective Pro-Environmental Activities (APCPEA), Subjective Norms about Participation in Collective Pro-Environmental Activities (SNPCPEA), Social Identity about Participation in Collective Pro-Environmental Activities (SIPCPEA) were tested on Intention towards Participation in Collective Pro-Environmental Activities (IPCPEA). The results show that this model is able to explain 66% of the variance of IPCPEA changes. The results of this study indicate the need for special attention from the perspective of collective action to make significant changes in the creation of IPCPEA.

Keywords: Environmental psychology, Intentions, NGOs, Social identity.

INTRODUCTION

The inappropriate use of nature and its resources by human being has caused many environmental problems in many countries around the world. The current environmental crises, along with population increase, poverty, and the spread of fatal diseases are threatening the human societies. Ozone depletion, acid rains, climate change, droughts, radioactivity contamination, uncontrolled deforestation, soil erosion, animal habitat destruction, biodiversity destruction, biodiversity reduction, flood, global warming, chemical pollution, vegetation loss, desertification, and water scarcity are among the most important environmental crises (Hejazi *et al*., 2017; Savari *et al*., 2021). In the past, humankind had an increasing dominance over nature, but in the present era, people have realized the limitations of natural resources. Therefore, environment protection is considered a moral issue, and in some

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countries, it is prosecuted. Although contamination is continued as long as we have consumption, it can be kept at acceptable level (Mohammadian and Khataei, 2011; Naz *et al*., 2021). Some scientists believe that the solution to the environmental crisis should be sought in human behaviors, attitudes, and lifestyles on earth (Panth *et al*., 2015; Su and Swanson, 2017; Bhuian and Kumar Sharma, 2017). Studies have shown that there is considerable ignorance about human behavior and the relationship between human activities and the environment (Hoang and Kato, 2016; Kaida and Kaida, 2017; Rudow, 2020).

Indeed, environmental crises are rooted in materialist and developmentalist ideas, poor economic management, self-centeredness, and human ignorance that cannot be addressed by relying on the role of governments (Wang and Tong, 2009). In addition, there is no specific policy in environmental protection, especially in developing countries, and the scope of performance and duties of each actor (government, NGOs, market, citizens) has not been determined well. Also, in most cases, it is only the governments that have the right of precedence in the field of policy-making and law-making. This has intensified the environmental challenges (Mashhadi, 2017). Most importantly, it is possible to control the various environmental problems and dilemmas based on creative and efficient collective (not individual) thinking. Inevitably, governments must recognize the key role of community members and NGOs and give them the opportunity to construct their community with a strong emphasis on the natural resource conservation and collective action. Here, governments can only play a guiding and facilitating role (Ghanizadeh and Langerodi, 2014). That is, not only should they play their role well as a facilitator, but they should also pave the way for the role of civil society groups (Berny and Rootes, 2018). In other words, environmental monitoring and management is a complex, dynamic, diverse, and multi-sectoral phenomenon. Therefore, environmental protection and management, due to its complex nature, requires collective actions that are carried out with the participation of all stakeholders. The agreement of different actors (governmental and non-governmental) on laws and practices, conflict resolution, information exchange and reaching common understanding are the positive consequences of these collective pro-environmental actions. Paying attention to collective actions is necessary from the perspective of continuous acquisition of new knowledge about environmental management, monitoring of environmental changes, and attention to networks in environmental management and natural resources (Folke *et al*., 2005). Thus, engagement of individuals in such collective actions is one of the key steps in achieving sustainable development (Ghanizadeh and Langerodi, 2014). Participation in collective actions refers to an individual's behavioral, subjective, and emotional engagement in group-situations that motivates him/her to work for group goals such as environmental protection and ecology, and to share the responsibilities (Lubell, 2002; Furlong and Vignoles, 2021).

Today, people's participation in collective actions is a method to achieve the main goals of sustainable environmental and ecological development, and the integrated development of the communities depends on it (Ghai and Vivian, 2014). In addition, the plans that are formed in the context of collective actions often respect environmental systems. In addition, they are more concerned with meeting the basic needs of the future generations than meeting the un-necessary needs of current community. The justification of these environment-centered programs is that, due to our over-exploitation, future generation may be deprived of the benefits of non-renewable natural resources (Gharani Arani, 2014). Other benefits of collective actions in the field of environment include public satisfaction by reducing inconsistencies in

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decisions, increasing public awareness of the society, providing local solutions in accordance to the conditions and facilities of the region, and reducing governments' costs arising from making wrong decisions (Ratnam and Verma, 2004).

In recent decades, the development of community-based and non-governmental organizations has received much attention in many communities, since they are considered as one of the major strategies for operationalizing participation in collective activities. These environmental Community-Based Organizations (CBOs) are defined as the organized democratic social bodies for rapid and extensive government programs in the field of environment construction and protection (Alalhesabi, 2011). The key role and importance of such organizations in sustainable environmental development has been verified in many studies (see Baloui Jamkhaneh *et al*., 2011; Foo, 2018; Karami *et al*., 2019). However, in many countries, especially in developing countries such as Iran, little attention is paid to them, and the level of importance is at the level of notifications and letters from top to down, which are not necessarily executive and operational (Gharani Arani, 2014). In some cases, ignoring such organizations leads to reduced performance and even failure of macro-plans (Milfont *et al*., 2020). As a result, many of these community-based pro-environmental organizations dissolve over the time or do not engage in tangible activities due to problems such as reducing personnel (Meaux *et al*., 2021). Lack of government support for the collective activities of such organizations is another factor in reducing the willingness of their members to participate actively in environmental protection (Jepson, 2005). In most studies (Frick *et al*., 2004; Otto and Kaiser., 2014; Budak *et al*., 2005; Hejazi *et al*., 2017), the effect of various variables such as awareness, sensitivity, concern, environmental beliefs and feeling, environmental perception, etc. have been studied on the tendency to participate in individual pro-environmental behaviors. In other words, in these studies, the tendency of individuals to pro-environmental behaviors has been investigated from an individualistic perspective (Scherrer, 2009; Jalali *et al*., 2015). However, not many studies have been carried out on the willingness to participate in collective environmental activities.

In order to fill this research gap, analyzing the willingness of the members of environmental NGOs to participate in collective pro-environmental activities in Iran was selected as the main purpose of this study. In fact, analyzing the intention of the members of environmental NGOs to participate in collective environmental activities is the main novelty of this research. To this end, we used the "dual path-pathway model of collective action".

MATERIALS AND METHODS

Theoretical Framework

The Dual-pathway Model of Collective Action (DMCA) was proposed by Stürmer and Simon (2004) and developed by van Zomeren *et al*. (2012) (Figure 1). This model is based on the social-psychological mechanisms of the collective action in which many theoretical perspectives such as the relative deprivation (Walker and Smith, 2002; Smith *et al*., 2012), resource mobilization (McCarthy and Zald), 1977), and social identity (van Zomeren *et al*., 2012) have been used. Each of the theories serves as a key link in the comprehensive DMCA forecasting chain. The key innovation of this model is in theorizing collective action as an approach coping with group disadvantage (Tausch *et al*., 2011; van Zomeren *et al*., 2012). The development of Lazarus' theory of evaluation (Lazarus, 1991) provided new insights for much development of the DMCA. The main element of Lazarus' theory is based on "individual coping with collective perceptions and actions." Therefore, this theory proposes two completely separate

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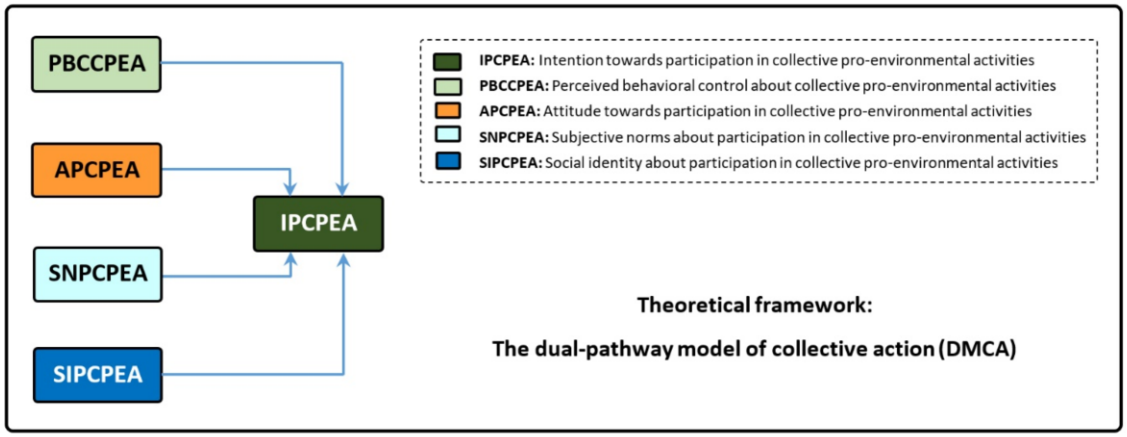

Figure 1. The Dual-pathway Model of Collective Action (DMCA) (van Zomeren *et al*., 2012).

paths including "emotion-focused coping approach and problem-focused coping approach" to analyze people's behavior. In accordance with the traditional research of the social movements, one path is related to the costs and benefits of participation. Another path is related to the processes of social recognition proposed by the social identity approach. The path to cost-benefit analysis can be interpreted in terms of the instrumental engagement of group members in achieving specific external rewards. This is while the recognition pathway is considered as a genuine participation that is based on the internalization of group's behavioral standards. It is worth to mention that both paths can operate independently. That is, group members can be encouraged to act collectively by the expected external rewards, or by an internal and collective obligation based on group identity. This model has been applied more for altruistic collective action analysis (Stürmer and Simon, 2004).

The collective nature of large-scale environmental crises indicates the need to expand theorization on how people evaluate and respond collectively to these crises (Fritsche *et al*., 2018). The DMCA predicts the time and possibility of collective actions. According to this model, the intention to perform a behavior is predicted by four factors: attitude, subjective norms, perceived behavioral control, and social identity. Attitude is the positive or negative evaluation of a behavior that consists of two constructs: behavioral beliefs and evaluating the results of behavior (Aoyagi-Usui *et al*., 2003). Subjective norms refer to the social pressure of the acquaintance of individual/community to do or not to do the target behavior (Hejazi and Eshaghi, 2014). Perceived behavioral control is one's perception of how much control he/she has over doing or not doing a behavior. Control factors include internal factors and external factors. Internal factors are personal and include skills, abilities, information, and emotions. In the investigation of external motives, factors such as environmental or occupational factors are mentioned (Tavousi *et al*., 2012). Social identity is the human capacity to define the term "we" instead of "I", which allows individuals to think and act collectively. Given the individual's inability to effectively evaluate and respond to environmental crises, this perspective is of great importance (Islam, 2014; Fritsche *et al*., 2018).

Figure 1 shows the general framework of DMCA that was used in this study to analyze the intention of members of pro-environmental NGOs to participate in collective environmental activities. Accordingly, the four main hypotheses of the research include the following:

- There is a positive and significant relationship between Attitude towards

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Participation in Collective Pro-Environmental Activities (APCPEA) and Intention towards Participation in Collective Pro-Environmental Activities (IPCPEA).

- There is a positive and significant relationship between Subjective Norms about Participation in Collective Pro-Environmental Activities (SNPCPEA) and IPCPEA.
- There is a positive and significant relationship between Perceived Behavioral Control in the field of Collective Pro-environmental Activities (PBCCPEA) and IPCPEA.
- There is a positive and significant relationship between Social Identity about Participation in Collective Pro-Environmental Activities (SIPCPEA) and IPCPEA.

Statistical Population and Sampling Method

The present quantitative research is descriptive-correlational. Cross-sectional survey method was used for data collection. The statistical population was the main and active members of 23 non-governmental/informal environmental associations (Iran's Department of Environment, 2021) in Tehran Province, Iran (Figure 2) (N= 680). The sample size was determined using Krejcie and Morgan table (Krejcie and Morgan, 1970) as 248 cases. The sampling method was stratified random with proportional assignment (each association was considered as a stratum).

Instrument, Measurement of Variables, Validity and Reliability of the Instrument and Data Collection

The research instrument was a researcher-made and closed-ended questionnaire in which a five-point Likert scale (1: Strongly disagree, 2: Disagree, 3: No idea, 4: Agree, and 5: Strongly agree) was used to measure the theoretical framework variables. The measuring method of each of these variables is presented in Table 1. The content and face validity of the questionnaire were evaluated and confirmed using the opinions of experts in the field of environmental psychology. Then, in order to confirm the reliability using Cronbach's Alpha coefficients, a pilot study was performed in a non-governmental pro-environmental association in Fars Province. The results of reviewing the data

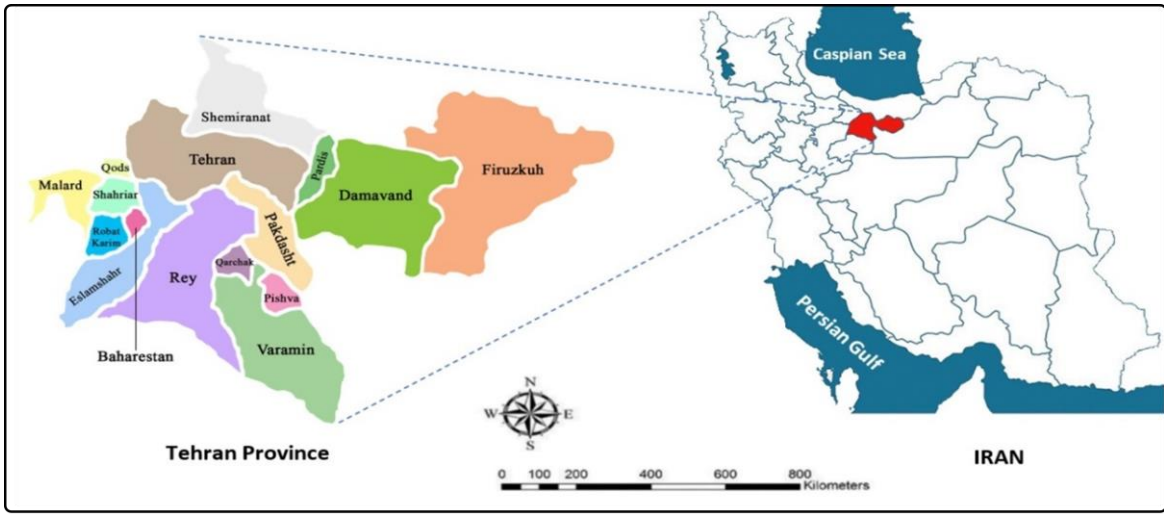

Figure 2. The site of the study area.

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Table 1. Survey items and Cronbach's Alpha coefficients.

Variable	No	Items	Source
IPCPEA		Intention towards Participation in Collective Pro-Environmental Activities (IPCPEA): (α= 0. 76)	
	1	I intent to participate in environment and nature conservation.	Bamberg *et al*. (2015)
	2	I intend to cooperate with the government, experts and stakeholders engaged in environment and nature conservation.	
	3	I intend to pay for environment and nature conservation.	
	4	I intend to learn the required skills for environment and nature conservation.	
PBCCPEA		Perceived Behavioral Control about Collective Pro-Environmental Activities (PBCCPEA): (α= 0.78)	
	1	I believe that participation in environment and nature conservation activities is easy.	Fritsche *et al*. (2018); Researcher made
	2	I have the required time and skill for engagement in environment and nature conservation activities.	
	3	I enjoy the required economic capability (affordability) for participation in environment and nature conservation.	
	4	Participation in environment and nature conservation is feasible.	
APCPEA		Attitude towards Participation in Collective Pro-Environmental Activities (APCPEA): (α= 0.81)	
	1	I think, participation in environment and nature conservation is a desirable activity.	Aoyagi-Usui *et al* (2003)
	2	Participation in environment conservation and nature is wise.	
	3	Participation and engagement in environment and nature conservation has economic, social and environment benefits.	
	4	Individual's participation in environment and nature conservation in the current crisis is a necessity.	
	5	The effects of collective environmental actions on nature and environment should be evaluated in long-term	
	6	Participation in pro-environmental collective activities should be prevalent in society.	
SNPCPEA		Subjective Norms about Participation in Collective Pro-Environmental Activities (SNPCPEA): (α=0.75)	
	1	My acquaintances believe that I should participate in environment and nature conservation activities.	Hejazi and Eshaghi (2014)
	2	My commitment to participation in environment and nature conservation leads to confirming me by friends and acquaintance.	
	3	Because of my confirmation by acquaintances, I should participate in environment and nature conservation activities.	
SIPCPEA		Social Identity about Participation in Collective Pro-Environmental Activities (SIPCPEA): (α=0.73)	
	1	I am happy to participate as a member of a group or non-governmental pro-environmental association in environment and nature conservation.	Fritsche *et al*. (2018); Islam (2014)
	2	Participation in environment and nature conservation is an important part of my self-concept.	
	3	I think that empathy is the good characterization of individuals participating in environment and nature conservation	

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collected in the pilot phase showed that all research variables had acceptable alpha coefficients (greater than 0.7). Also, the results of the pilot showed that some items reduce the value of Cronbach's alpha. As a result, these items were removed from the final questionnaire. After this process, the questionnaire was finalized and entered the final field phase of data collection. After data collection, Principal Component Analysis (PCA), corrected item-total correlation coefficients, and factor loading in Structural Equation Modeling (SEM) were used to evaluate the final reliability of the questionnaire. Corrected item-total correlation coefficients were greater than the acceptable value of 0.3. In addition, at this stage, Composite Reliability (CR) and Convergent Validity (CV) or Average Variance Extracted (AVE) were used. To assess the divergent validity, we used MSV and ASV indices. In normal data set, these two indices should be smaller than the corresponding AVE values. Face-to-face interviews and/or online surveys (using email) were used for data collection. Out of 248 distributed questionnaires, 241 items were completed. Therefore, the return rate of the questionnaires was 97%.

Data Analysis Methods

Data analysis was analyzed using $SPSS_{26}$ and $AMOS_{24}$ software. SEM was used to test the presented hypotheses. In this regard, measurement models and structural model were used by the Maximum Likelihood Method. The structural model used in this study was a total structural model. The reason for using this type of structural method was that DMCA did not have a mediating variable. In other words, according to the DMCA, no variable mediates the relationship between SIPCPEA, APCPEA, SNPCPEA, and PBCCPEA with IPCPEA. In general, there were four main reasons for employing SEM in the present study. First, traditional statistical methods consider only a limited number of (latent) variables simultaneously that are incapable of dealing with more advanced and complex theories. Using a small number of variables to understand complex phenomena is limiting. Second, in classical statistical methods, measurement error and statistical analysis of data are performed separately. When analyzing data statistically, SEM techniques also took into account measurement errors. Third, these advanced models and techniques increase the ability of researchers to analyze more complex theoretical models for complex phenomena and reduce the need for their dependence on basic statistical models. Fourth, SEM software programs are now easier to use and have features similar to other software packages under Windows.

SEM was performed in two stages. In the first stage, five research measurement models were implemented using first-order confirmatory factor analysis. First-order measurement models examine the relationship of latent variables to their measuring items. In this process, items with very low factor loadings were removed from the measurement model of the variables. Also, the values of fitness indices for all five first-order measurement models were evaluated and approved. In the next step, the general SEM model, which included both measurement models and structural model, was implemented. The structural model in SEM examines the relationship between latent variables. However, in addition to measurement models, due to the fact that the general model of the research included the structural model, the structural model was not implemented separately. The results of the implementation of the general research model are presented in Figure 3.

RESULTS AND DISCUSSION

Correlation between Variables

Pearson correlation coefficient was used to determine the relationships between variables (Table 2). The results of

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Table 2. Correlation matrix of the theoretical framework variables.

	IPCPEA	SIPCPEA	APCPEA	SNPCPEA	PBCCPEA
IPCPEA	1				
SIPCPEA	0.749**	1			
APCPEA	0.674**	0.634**	1		
SNPCPEA	0.743**	0.724**	0.664**	1	
PBCCPEA	0.746**	0.798**	0.672**	0.794**	1

Abbreviations: Intention towards Participation in Collective Pro-Environmental Activities (IPCPEA), Social Identity about Participation in Collective Pro-Environmental Activities (SIPCPEA), Attitude towards Participation in Collective Pro-Environmental Activities (APCPEA), Subjective Norms about Participation in Collective Pro-Environmental Activities (SNPCPEA), Perceived Behavioral Control about Collective Pro-Environmental Activities (PBCCPEA). * Sig level: 0.05 error, ** Sig level: 0.01 error

correlation analysis showed that four variables SIPCPEA (r= 0.749; P< 0.01), APCPEA (r= 0.674, P< 0.01), SNPCPEA (r= 0.743, P< 0.01) and PBCCPEA (r= 0.746, P< 0.01) have a positive and significant correlation with IPCPEA. Among them, SIPCPEA, PBCCPEA, SNPCPEA, APCPEA had the highest correlation with IPCPEA, respectively, which was also confirmed by Bamberg *et al*. (2015). The SNPCPEA had a positive and significant relationship with IPCPEA. In other words, promoting subjective norm leads to a greater willingness to do collective environmental works. This research finding is consistent with the results of research by García-Valiñas *et al*. (2012) and Ajibade *et al*. (2021). APCPEA was another variable showing positive and significant impact on IPCPEA. This result was consistent with the findings of research by Stren *et al*. (1993), Kaiser *et al*. (1999), Mifsud (2012), and Roczen *et al*. (2013). The PBCCPEA also had a positive and significant relationship with IPCPEA in non-governmental organizations, which is in line with the results of Kasapoglu and Ecevit (2002). Also, the SIPCPEA had a positive and significant effect on IPCPEA, which has been supported by the results of Bruner *et al*. (2020) and Jans (2021).

Results of Measurement Models

The results of the measurement models showed that the values of the factor loading of the indicators were greater than or equal to 0.4. Only the fourth indicator of the measurement model of intention was 0.38. However, considering that this value was also close to 0.4, we did not remove it (Table 3). The calculated values for CR and AVE were also acceptable. CR and AVE were greater than or equal to 0.7 and 0.5, respectively. In addition, the values of corrected item-total correlation coefficients for all items were greater than the acceptable value of 0.3. Component matrix results also demonstrated that items had a high correlation with structures. Therefore, it can be concluded that the questionnaire had acceptable validity and reliability. It should also be mentioned that MSV and ASV indices were applied to assess the divergent validity. The calculated values for these indices revealed that all values were within the acceptable range. Therefore, the discriminant validity of the variables was confirmed.

Testing Research Hypotheses Using SEM

Estimation of the total/direct structural model based on the theoretical framework (Figure 1) showed that SIPCPEA (β= 0.300; P< 0.01), APCPEA (β= 0.203; P< 0.01), SNPCPEA (β= 0.259; P< 0.01), PBCCPEA (β= 0.162; P< 0.01) had positive and significant effects on IPCPEA (Table 4; Figure 3). By comparing the effects of these four variables, it can be seen that SIPCPEA

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Table 3. Measurement models' estimations and validity and reliability results.

Items/Variables	IPCPEA	APCPEA	SNPCPEA	PBCCPEA	SIPCPEA	Item-total correlation	Component matrix result
IPCPEA1	0.73*					0.50	0.77
IPCPEA2	0.71					0.49	0.76
IPCPEA3	0.42					0.39	0.65
IPCPEA4	0.38					0.35	0.60
APCPEA1		0.49*				0.42	0.59
APCPEA1		0.51				0.46	0.64
APCPEA3		0.59				0.51	0.68
APCPEA4		0.79				0.65	0.80
APCPEA5		0.70				0.59	0.76
APCPEA6		0.46				0.37	0.54
SNPCPEA1			0.47*			0.34	0.70
SNPCPEA2			0.75			0.44	0.79
SNPCPEA3			0.44			0.33	0.68
PBCCPEA1				0.67*		0.46	0.75
PBCCPEA2				0.57		0.40	0.69
PBCCPEA3				0.46		0.37	0.65
PBCCPEA4				0.44		0.34	0.62
SIPCPEA1					0.46*	0.32	0.68
SIPCPEA2					0.65	0.39	0.76
SIPCPEA3					0.49	0.33	0.71
CR	0.90	0.93	0.89	0.92	0.90	-	-
AVE	0.69	0.70	0.70	0.82	0.60	-	-
ASV	0.53	0.43	0.53	0.57	0.53	-	-
MSV	0.56	0.45	0.63	0.63	0.59	-	-

* Fixed item in the CFA.

Table 4. Calculation of direct effects on IPCPEA.

Direct effect on	Independent variable(s)	B	Beta (β)	t	Sig t
IPCPEA	Constant	-0.337	----	-0.780	0.436
	SIPCPEA	0.402	0.300	4.574	0.000
	APCPEA	0.150	0.203	3.694	0.000
	SNPCPEA	0.353	0.259	3.873	0.000
	PBCCPEA	0.175	0.162	2.130	0.034
	F=114.43	Sig F= 0.00	R= 0.81	R^2= 0.67	R^2_{Adj}= 0.66

Abbreviations: As mentioned under Table 2.

and SNPCPEA have the strongest standardized effects, respectively. This means that these two variables can predict IPCPEA more than other variables. However, it should be kept in mind that APCPEA and PBCCPEA can also play crucial role in expressing the intentions and then the collective pro-environmental behaviors of the members of NGOs. Generally, the results of the combined structural model analysis showed that the four dependent variables could explain 66% of the variance in IPCPEA.

DMCA Fit Evaluation

Comparative Fit Index (CFI), Normed Fit Index (NFI), Incremental Fit Index (IFI), Root Mean Square Error of Approximation

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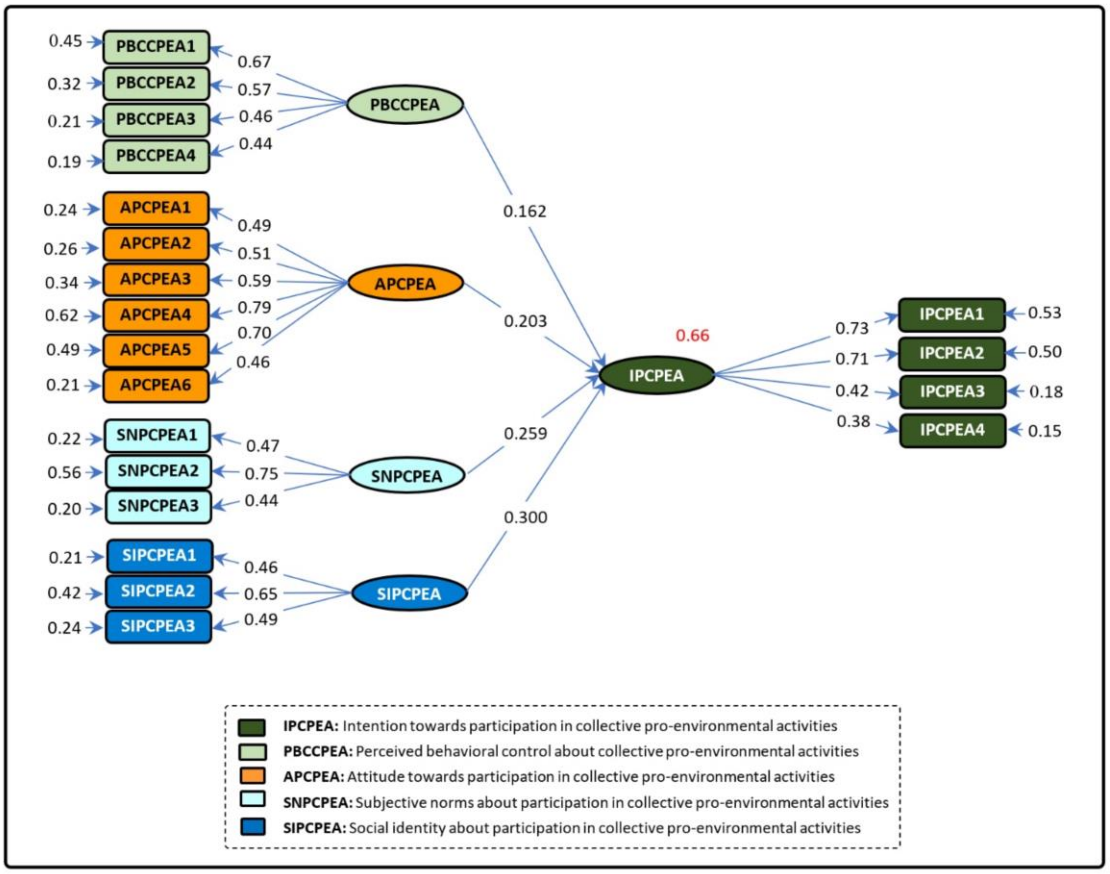

Figure 3. Testing total structural model of DMCA

Table 5. Cut-offs and results for fit indices.

Fit index	Cut-off	Results
Comparative Fit Index (CFI)	≥ 0.90	0.999
Incremental Fit Index (IFI)	≥ 0.90	0.999
Normed Fit Index (NFI)	≥ 0.90	0.999
Root Mean Square Error of Approximation (RMSEA)	≤ 0.08	0.01
Chi-square normalized by Degrees of Freedom (CMIN/DF)	≤3	0.10

(RMSEA) and chi-square normalized by degrees of freedom were used to evaluate the model fit. As Table 5 results show, all fit indices are within the acceptable range. Therefore, it can be concluded that the validity of DMCA was verified.

CONCLUSIONS

Studies on environmental intentions and behaviors, especially in the current situation where the global community is facing many challenges of climate change, are highly diversified. Accumulation of the results indicate that the current environmental management policies need to be revised. Therefore, appropriate strategies for environmental sustainability should be adopted. Policy-making, planning, implementation, and monitoring of environmentally friendly activities is one of the strategies that should be adopted in this context. In this regard, analyzing intention towards participation in collective pro-

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environmental activities through the lens of DMCA was determined as the main purpose of present study.

The results of the study are useful in conceptualizing and perception of IPCPEA. In this study, the effect of four variables APCPEA, SNPCPEA, PBCCPEA and SIPCPEA on IPCPEA in NGOs was investigated. The results showed a positive and significant effect of all four variables on IPCPEA. Also, the results of SEM showed that these four variables can explain 66% of the variance changes of IPCPEA, which indicates their high importance in promoting IPCPEA and, ultimately, the occurrence of collective environmental behaviors. Indeed, other variables and factors are also influential in promoting IPCPEA. However, measuring their effects on IPCPEA requires performing other studies.

According to the findings of the present research, the reinforcement of the variables of the theoretical framework (Figure 1) is the most important point that can strengthen the IPCPEA.

In order to promote the effectiveness of SNPCPEA, it is suggested that the access of the members of pro-environmental NGOs to each other be facilitated and the morale of interaction and collectivism (against individualism) be strengthened. These strategies can increase knowledge, awareness, and literacy about collective pro-environmental activities and then contribute to the favorable subjective norm and intention towards collective pro-environmental activities.

To strengthen APCPEA, it is necessary to implement enlightening programs to change and establish attitudes in NGOs members and create a proper environmental behavior culture. In this regard, the goals of the pro-environmental NGOs for all members should be well clarified and explained and their active participation should be considered as a precondition. In particular, more attention should be paid to environmental education to create a positive environmental attitude, because having a real knowledge and understanding of environmental challenges is necessary for positive attitude and collective pro-environmental behavior.

PBCCPEA and SIPCPEA can be strengthened by promoting environmental education on the impact of collective actions on the sustainability of the environment. Trainings that focus on the effects of collective action on the environment can enhance the sense of collective self-efficacy (PBCCPEA) in NGOs members and highlight the role of “we thinking” in resolving major and large-scale environmental crises. All of this together will ultimately increase the willingness of NGO members to participate in collective environmental activities.

Given the specific circumstances of Iran, which has encountered numerous environmental problems in recent decades and has been strongly affected by climate change, sustainable environmental development should be considered in the national policies. Indeed, the approach of government institutions to change the orientation from productivity to sustainability and the implementation of policies based on public participation and non-governmental organizations in order to decrease the environmental policies should be considered on the agenda.

The present study achieved the findings that could be very useful in conceptualizing and understanding IPCPEA. However, it has some limitations that should be highlighted. First, it should be accepted that other influential variables such as diverse individual and professional characteristics of the respondents and spatial characteristics of the society have not been considered in this study. Second, quantitative analysis research method has its limitations. In the future, this topic can be investigated by other methods such as qualitative content analysis or mixed method. Third, in order to analyze the reliability of DMCA and to evaluate its applicability at different times, it is suggested that future researchers repeat this research in other geographical locations.

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Accordingly, the stability of the index can be examined and approved.

Abbreviations

The Dual-pathway Model of Collective Action (DMCA), Intention towards Participation in Collective Pro-Environmental Activities (IPCPEA), Perceived Behavioral Control variables about Collective Pro-Environmental Activities (PBCCPEA), Attitude towards Participation in Collective Pro-Environmental Activities (APCPEA), Subjective Norms about Participation in Collective Pro-Environmental Activities (SNPCPEA), Social Identity about Participation in Collective Pro-Environmental Activities (SIPCPEA).

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به سوی مشارکت در فعالیت‌های محیط‌زیست‌گرایانه: کاربرد الگوی دومسیری اقدام جمعی

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چکیده

مشارکت در اقدامات جمعی به درگیری رفتاری، ذهنی و عاطفی فرد در موقعیت‌های گروهی اشاره دارد که او را برای دستیابی به هدف‌های گروهی از جمله حفاظت از محیط‌زیست بر می‌انگیزاند. هدف این مطالعه، تحلیل نیت اعضای تعاونی‌های مردم‌نهاد محیط‌زیستی به مشارکت در فعالیت‌های محیط‌زیست‌گرایانه جمعی بود. برای این منظور از مدل روانشناختی مسیر دوگانه اقدام جمعی (DMCA) استفاده گردید. روش پژوهش از نوع توصیفی- همبستگی بود که با استفاده از فن پیمایش انجام شد. جامعه آماری، اعضای انجمن محیط‌زیستی غیردولتی در استان تهران در ایران بودند (N=۱۴۵۳). که ۲۴۸ نفر از آنها با روش نمونه‌گیری تصادفی طبقه‌ای با انتساب متناسب به عنوان نمونه انتخاب شدند. ابزار پژوهش، پرسشنامه‌ای محقق‌ساخته بود که روایی آن با استفاده از پانل متخصصان مورد و شاخص AVE مورد تأیید قرار گرفت و پایایی آن نیز با استفاده از ضرایب آلفای کرونباخ، تحلیل مؤلفه‌های اصلی و روایی ترکیبی مورد تأیید قرار گرفت. بر اساس DMCA، اثر متغیرهاي، کنترل رفتاری درک شده در مورد فعالیت‌های جمعی رفتار محیط‌زیست‌گرایانه (PBCCPEA)، نگرش نسبت به مشارکت در فعالیت‌های جمعی رفتار محیط‌زیست‌گرایانه (APCPEA)، هنجارهای ذهنی در مورد مشارکت در فعالیت‌های جمعی رفتار محیط‌زیست‌گرایانه (SNPCPEA)، هویت اجتماعی در مورد مشارکت در فعالیت‌های جمعی رفتار محیط‌زیست‌گرایانه (SIPCPEA) بر قصد مشارکت در فعالیت‌های جمعی رفتار محیط‌زیست‌گرایانه(IPCPEA) آزمون گردید. نتایج نشان داد که این مدل قادر است تا 66% از تغییرات IPCPEA را تبیین کند. نتایج این پژوهش، لزوم توجه خاص از منظر کنش جمعی برای ایجاد تغییرات اساسی در ایجاد IPCPEA را بیش از پیش آشکار می‌سازد.

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