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Ecological Belief in a Just World: A Cross-Validation Study in a Turkish Sample

Ekolojik Adil Dünya İnancı: Türkiye'deki Bir Örneklemde Bir Çapraz-Geçerleme Çalışması

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ABSTRACT

Examples of environmental injustice are widespread, and perceived injustice is an important predictor of environmental behaviour. However, the extent to which inequalities are perceived as just or unjust, as well as reactions towards the perception of injustice, vary among individuals. According to Lerner, individuals are motivated to believe in a just world in which people get what they deserve and deserve what they get. Ecological belief in a just world (EBJW) was developed as a construct that is in line with this general belief in a just world (BJW). This belief indicates that the world is basically an ecologically just place in which people get what they deserve as far as ecological resources and demands are concerned. The aim of the present study is to cross-validate EBJW in a Turkish sample. Another aim is to test the predictive power of EBJW on environmentally relevant commitments along with established other constructs. The sample consists of 245 participants (N_{female} = 160, N_{male} = 83, $N_{missing}$ = 2) aged from 15 to 69 years (M = 34.23; SD = 10.28). Overall, the variable pattern and the complex motivation structure involved in pro-environmental as well as environmentally risky commitment can be confirmed in the Turkish sample. The results reveal that EBJW qualifies as a predictor of pro-environmental as well as environmentally risky behavioural commitment. This successful cross-validation underpins the need to further investigate EBJW as a powerful and important construct within the field of environmental psychology. In line with the cross-validation of BJW, further validation studies of EBJW should be conducted in other countries. Moreover, as EBJW is a rather new construct, the mediating and moderating variables in its relations with environmental behaviour are waiting to be explored. Finally, its relations with other prominent constructs in environmental psychology such as social dominance orientation, value orientations, personality traits, and authoritarianism should be examined.

Keywords: Ecological belief in a just world, belief in a just world, environmental justice, environmental commitments, environmental behaviour

ÖZ

Çevresel adaletsizlik örnekleri çok yaygındır ve algılanan adaletsizlik çevre davranışının önemli bir yordayıcısıdır. Bununla birlikte, eşitsizliklerin ne derecede adil ya da adaletsiz algılanacağı ve adaletsizlik algısına verilen tepkiler bireyler arasında farklılıklar göstermektedir. Lerner'a göre bireyler ne hak ediyorlarsa onu aldıkları ve ne alıyorlarsa onu hak ettikleri adil bir dünyaya inanmaya güdülenmişlerdir. Ekolojik adil dünya inancı (EADİ), genel adil dünya inancı ile aynı doğrultuda bir yapı olarak geliştirilmiştir. Bu inanç, ekolojik kaynaklar ve talepler söz konusu olduğunda, dünyanın insanların hak ettiklerini aldıkları temelde ekolojik olarak adil bir yer olduğuna ilişkin inancı tanımlar. Bu çalışmanın amacı, EADİ'nin Türkiye'deki bir örneklemde çapraz geçerliğini gerçekleştirmektir. Bu çalışmanın bir diğer amacı ise, yazında yer alan ilişkili değişkenler ile birlikte EADİ'nin çevresel taahhütleri yordama gücünü test etmektir. Araştırmanın örneklemi yaşları 15 ile 69 arasında değişen (*Ort.* = 34.23; *SS* = 10.28) 245 katılımcıdan ($N_{kadın}$ = 160, N_{erkek} = 83, $N_{belirtilmemiş}$ = 2) oluşmaktadır. Genel olarak, değişken örüntüsü ile çevre yanlısı ve çevreye zarar veren taahhütlerin karmaşık motivasyonel yapısı Türkiye örnekleminde doğrulanabilmiştir. Bulgular, EADİ'nin çevre yanlısı ve çevreye zarar veren taahhütlerin bir yordayıcısı olduğunu göstermiştir. Bu başarılı çapraz geçerlik bulguları, çevre psikolojisi alanında güçlü ve önemli bir yapı olarak EADİ üzerine daha fazla araştırma yapılması gerektiğinin altını çizmektedir. Adil dünya inancının çapraz geçerlik çalışmaları ile aynı doğrultuda, EADİ'nin d başka ülkelerde geçerlik çalışmaları gerçekleştirilmelidir. Ayrıca, EADİ oldukça yeni bir yapı olduğu için, çevre davranışıyla ilişkisindeki aracı ve düzenleyici değişkenler keşfedilmeyi beklemektedir. Son olarak, EADİ'nin çevre psikolojisi yazınında öne çıkan, örneğin sosyal baskınlık yönelimi, değer yönelimleri, kişilik özellikleri ve yetkecilik gibi diğer değişkenler ile ilişkisi de incelenmelidir.

Anahtar Kelimeler: Ekolojik adil dünya inancı, adil dünya inancı, çevresel adalet, çevresel taahhütler, çevre davranışı

Turkey is an increasingly industrialized country with an area of 780,043 square kilometres where a dramatically rising number of the working population is employed in industry. The total CO_2 emissions for 2011-2013 were reported as 383.4 thousand tonnes (Turkish Statistical Institute, 2014). Turkey shows a rising pattern of CO_2 emissions, and in recent years, it has contributed more to global CO_2 emissions than other countries such as Azerbaijan, Armenia, and India (for all countries see Our World in Data; ourworldindata.org). The EJOLT-Turkey team and the Political Ecology Working Group in Istanbul have listed tens of environmental injustice cases, including industrial activities, mega-infrastructure projects, energy production of coal and nuclear reactions, etc. (Özkaynak & Bogazici University EJOLT Team, 2013). Day after day, many people engage in pro-environmental activities in order to prevent environmental destruction, and the history of the environmental movement in Turkey can be traced back several decades (See Paker, 2013).

In the context of necessary behavioural changes in Turkey and elsewhere, the *social trap* (Platt, 1973) needs to be overcome. It describes the dilemma between the current disadvantages for the individual to serve the natural environment and the long-term ecological benefits for society as a whole. Despite this conflict, many people are willing to sacrifice their habits and engage in pro-environmental behaviour. For years, this has aroused researchers' concern about the underlying factors of pro-environmental behavioural decisions (e.g., Clayton, Kals, & Feygina, 2016; Syme, 2011).

With regard to empirical environmental research in Turkey, studies can be seen mostly in the field of education, and there are very few in the field of psychology. The few research studies conducted in the field of psychology have analysed environmental concerns and attitudes. The aim of this study is to cross-validate the findings with ecological belief in a just world (EBJW) based on a Turkish sample. Following Baier, Kals, and Müller (2013), it is also aimed to test the predictive power of EBJW on environmentally relevant commitments along with other established constructs.

Environmental Justice and Ecological Belief in a Just World as a Personality Trait with Dispositional Variations

Negative environmental consequences are not evenly distributed. People may experience natural disasters without any responsibility for causing them or without any chance of playing a role in decision making. The issue of fair distribution of costs and

risks or benefits derived from polluting processes also makes research on the perception of justice essential in the context of the environment (Clayton et al., 2016). Subjective appraisals of environmental justice have been found to constitute an important factor in understanding individual environmental behaviour (Montada & Kals, 2000). For example, studies reveal that whereas individuals who perceive environmental injustices tend to behave pro-environmentally to compensate for such injustices (Kals & Russell, 2001; Reese & Jacob, 2015), individuals who deny justice problems tend to engage in environmentally risky behaviour (Clayton et al., 2016). Besides, environmental justice is associated with participation, which is referred to as the roles of individuals affected in decision making, and subjects, which are referred to as individuals such as members of local populations and future generations deserving of decision makers' support (Sikor, Martin, Fisher, & He, 2014).

Examples of environmental injustice are widespread, and a sense of injustice is an important predictor of environmental behaviour. However, the extent to which inequality is perceived as just or unjust, as well as reactions towards the perception of injustice, vary among individuals. This leads to the question of what causes people to take action against environmental problems or, on the other hand, to deny their existence.

According to the Just World Theory (Lerner, 1980), individuals are motivated to believe in a just world in which people get what they deserve and deserve what they get. The belief in a just world (BJW) is often seen as a personality trait with dispositional variations (Furnham, 2003; Hafer & Sutton, 2016). Studies have shown that BJW serves vitally important functions; first, it supports individuals` belief they behave justly, and by acting justly they respect the terms of their personal contract (Lerner, 1977), which gives them the prospect of being justly rewarded. Indeed, a relationship between BJW and helping people in need has been observed (e.g., Bierhoff, Klein, & Kramp, 1991). Second, BJW provides individuals with the confidence that they will be treated justly by others. Accordingly, researchers have observed that strong BJW is associated with interpersonal trust (e.g., Zuckerman & Gerbasi, 1977). Third, when individuals with a strong BJW are confronted with an injustice which cannot be resolved in reality, they try to assimilate their experience to their BJW, for example, by blaming the victim (e.g., Hafer, 2000) or by playing down the unfairness (Dalbert, 1999; see also Dalbert, 2001). On the other hand, there is ample research that focuses on the link between the general BJW and harsh social attitudes (e.g., Kleinke & Meyer, 1990) and social inaction (e.g., Neufeind, Jiranek, & Wehner, 2014).

In line with a general BJW, Baier et al. (2013) developed the construct of a specific EBJW in order to ascertain whether there is a possible dispositional tendency that may lead to differences in individuals' evaluations of and reactions to ecological justice. EBJW indicates that the world is basically an ecologically just place in which people get what they deserve as far as ecological resources and demands are concerned. Although distributive justice is important for both BJW and EBJW, as opposed to BJW, EBJW does not imply a personal notion of the deserving concept but instead focuses on the distributive aspect of equality. In other words, everyone has the same opportunities and rights to access ecological resources. For example, individuals with a strong EBJW might get involved in promoting a high standard of living, in which more energy is consumed. They perceived the general situation as ecologically just, so there may be no reason for taking action to save energy (Baier et al., 2013).

Further, it was found that EBJW qualified as a predictor for environmental behaviour (Baier et al., 2013). For instance, EBJW predicted that the willingness to buy new, energy-saving equipment was linked to internal control beliefs, an indignation about insufficient support for economic and social interests, an indignation about insufficient energy protection, and existential guilt. EBJW also qualified as a predictor for environmentally risky behaviour. It predicted a commitment to goals that run counter to energy conservation targets, using arguments to justify this behaviour and expressing an indignation about the lack of support for economic and social interests. As expected, whereas EBJW had a negative influence on pro-environmental behaviour, it had a positive influence on environmentally risky behaviour (Baier et al., 2013). In sum, Baier et al.'s study (2013) showed that EBJW could be successfully operationalized and is a considerable construct in explaining environmental behaviour. The underlying model will be explained in the next sections.

Supplementary Moral and Value-Oriented Variables

All the predictors mentioned in the study of Baier et al. (2013) are moral variables. They are able to overcome the social trap. Ecological risks and burdens deriving from environmentally risky behaviour are not limited to a specific geographical area or time since people living in other regions and even the next generations are affected by ecological harms and risks in the long term. Sacrificing short-term individual advantage for the sake of those living in other countries or future generations would need a moral motivational basis to overcome this socioecological dilemma (Kals & Maes, 2002).

Indeed, as researchers have observed, moral cognitions such as environmental justice and responsibility appraisals but also denial of environmental needs and climate change constitute one of the most important group of predictors and serve as the moral basis of environmental behaviour (Jessani & Harris, 2018; Jylhä, Cantal, Akrami, & Milfont, 2016). The perception of environmental responsibility has been found to be a strong predictor of a wide range of behavioural outcomes (Syme, 2011). Responsibility appraisals are divided into external responsibility, which refers to the attribution of responsibility to other agents (e.g., the state or the government), and internal responsibility, which refers to the attribution of responsibility to oneself. Both types have been found among the most powerful predictors (e.g., Montada & Kals, 2000).

The few existing Turkish studies confirm the power of value orientation in the motivation to behave in an environmentally friendly manner. In a study with elementary school students, Onur, Sahin, and Tekkaya (2012) examined the links between value orientation, environmental attitudes, and concern for the environment. It was observed that students with higher levels of anthropocentric attitudes were more likely to show higher levels of environmental apathy. Further, biospheric and egoistic value orientations had a strong negative correlation.

Hasta and Sözen (2017) aimed to determine the links between negative attitudes towards Hydroelectric Power Plants (HEPPs) and system justification, locus of control, and attributional complexity. They found that system justification, political orientation, and internal locus of control significantly predicted negative attitudes towards HEPPs. The greater the participants' left-wing ideologies and the stronger their internal control were, the more negative their attitudes toward HEPPs became. By contrast, the higher the level of system justification of the participants, the less negative their attitudes toward HEPPs became. This is in line with other findings on ideological variables (Clayton et al., 2016).

A few studies on environmental collective action also exist. They were conducted in Istanbul after the 2013 Gezi Park protests, triggered by the destruction of a city park to build a shopping mall and which quickly spread to other cities. For example, Odağ, Uluğ, and Solak (2016) tested the social identity model of collective action in a large sample of 1,127 participants. They found that the link between offline/online action and protest motivations was related to perceived injustice, social identity, and perceived ef-

ficacy. The more the participants regarded developments in Turkey as unjust, the stronger they identified with the social group of protesters, and the more they perceived this group to be effective, the more likely they were to protest again.

In order to determine the motivations of protesters, Gezici-Yalçın and Uluğ (2017) carried out semi-structured interviews with 13 participants who had protested in Gezi Park. They observed that the participants defined themselves as sharing a common identity with other protesters and they argued that the protests brought them both personal and societal benefits. Further, participants believed that oppression by the government and injustice in society could only be diminished through protest.

In a recent study, Acar (2018) examined the link between empowerment and politicization identity in one quantitative and one qualitative study. It was observed that participants who perceived the protests to be effective had higher levels of identification as protesters. Protester identification was important for joining a new political group following the Gezi Park protests. The results of the semi-structured interviews indicated that Gezi Park protests provided participants with an experience of empowerment.

The Power of Emotions

Empowerment already indicates that emotions also play an important role in explaining environmental behaviour (e.g., Carrus, Passafaro, & Bonnes, 2008; Harth, Leach, & Kessler, 2013). This is especially the case for moral emotions such as indignation at insufficient as well as excessive environmental protection. Both reactions have been found to be powerfully influential (e.g., Kals & Maes, 2002).

In addition, the sense of having a personal relationship with nature predicts environmental behaviour (Nisbet, Zelenski, & Murphy, 2009). This includes an emotional affinity for nature, which has been found to be just as powerful as moral emotions in explaining environmental behaviour (e.g., Müller, Kals, & Pansa, 2009).

Variable Model to Validate EBJW

The above considerations lead to the following knowledge in line with environmental behaviour models aiming to develop a coherent theory (See Montada & Kals, 2000; Montada, Kals, & Becker, 2007; Steg & De Groot, 2010; Stern, 2000). First, justice- and responsibility-related motivations matter. They are reflected in justice judgments and responsibility attributions as well as in moral emotions such as indignation. Second,

affinity-for-nature variables supplement the moral dimension in overcoming individual short-time and societal and ecological long-time interests (social trap). Finally, behavioural commitments to long-term aims such as climate protection are valid proxies of manifest behavioural categories. When it comes to actual behaviour, situational and social circumstances such as money, time, and social support have to be taken into account.

When cross-validating EBJW, only these basic assumptions are taken into account that focus upon behavioural commitments. They embrace pro-environmental as well as environmentally risky commitments (See Figure 1). The latter are commitments to goals that potentially interfere with environmental protection. In order to link pro-environmental and environmentally risky behaviour, both perspectives are also integrated on the level of predictor variables by taking into account goals and motives that activate environmental protection as well as interests that potentially compete with environmental protection, such as economic interests or a high standard of living (Baier et al., 2013). Thus, in the present study, the first group of variables comprises justice-related constructs: EBJW, general BJW as well as justification arguments which are against environmental protection. The second group of variables comprises responsibility appraisals for environmental protection, differentiating between an external and internal locus of control. They are supplemented by indignation about insufficient or excessive environmental protection as well as an emotional affinity for nature.

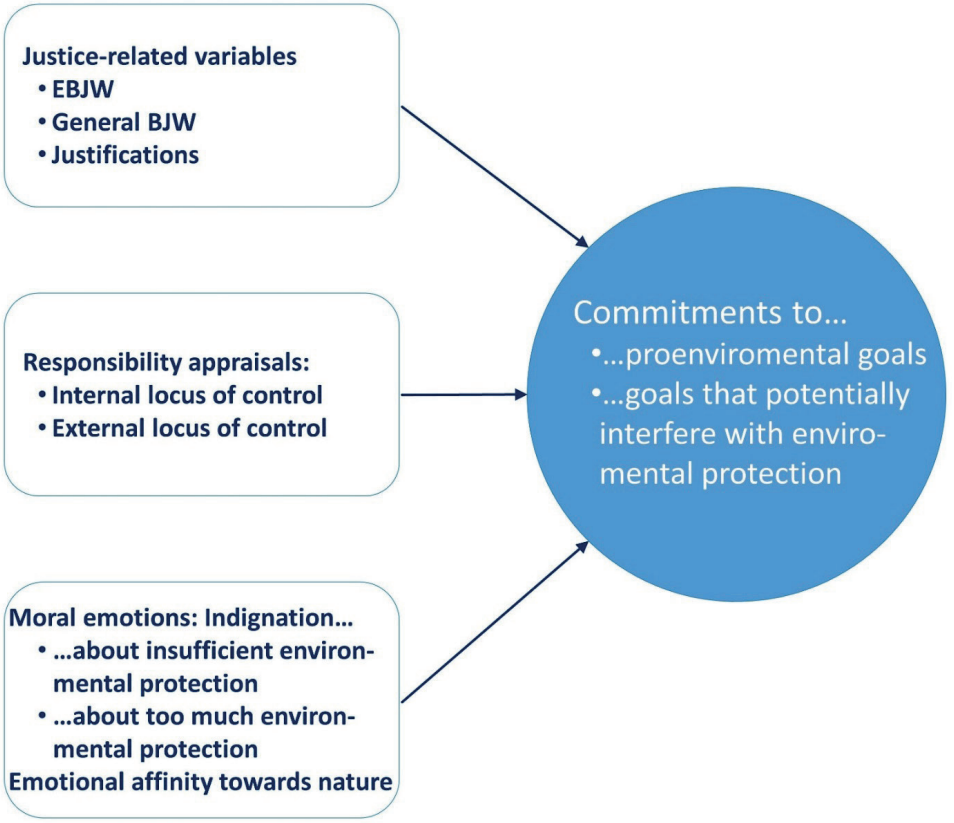

Figure 1. Integrative Variable Model to Validate EBJW

As seen above, little is known about the determinants of environmental decisions in Turkey, and more studies are needed in this field. In this study, as a first step in the cross-validation process of the new EBJW construct in different countries, it was aimed to apply the construct to Turkey. In addition, following the study of Baier and colleagues (2013), it was also aimed to test the predictive power of EBJW on environmentally relevant commitments along with other variables mentioned above. Based on the previous studies (e.g., Baier et al., 2013; Kals et al., 1999; Montada & Kals, 2000), the hypotheses of the present study are as follows:

H1: The factorial structure of EBJW can be replicated in the Turkish sample.

H2: a) There are positive correlations between EBJW/BJW and environmentally risky variables, and b) negative correlations with pro-environmental variables.

H3: In regression analyses EBJW qualifies as a valid predictor of both commitments with other model variables.

METHOD

Participants

The study encompasses participants from Turkey who were recruited online, the questionnaire being distributed by e-mail and in social media. 245 people with different backgrounds living in Turkey answered the questionnaire (N_{female}= 160, N_{male}= 83, $N_{missing}$= 2), aged from 15 to 69 years (M = 34.23; SD = 10.28). The participants' education ranged from primary school to postgraduate degrees. Since people with a higher education degree were more willing to take part in the survey, higher education degrees are more frequently represented in the study compared to the average population. 49.4% of the participants have a university degree, 20% of the participants indicated being a member of an environmental organisation, and 2% belonged to an automobile or motoring club.

Measures

The General Belief in a Just World (BJW) Scale. The General BJW scale consists of six items ranging from 1 to 6, with a higher value indicating a stronger construct 1 = applies not at all to 6 = applies absolutely. The scale was developed by Dalbert, Montada, and Schmitt (1987; sample item: "I think basically the world is a just place"). Cronbach Alpha varies between α = .66 and α = .79 (Dalbert et al., 1987). It was adapted into Turkish by Göregenli (2003; α = .69). The reliability score for this study is α = .75.

The Ecological Belief in a Just World Scale. This scale consists of six items ranging from 1 to 6, with a higher value indicating a stronger construct 1 = applies not at all to 6 = applies absolutely. The scale was developed by Baier, Kals, and Müller (2013; α = .80; sample item: "Altogether, related to nature, everyone gets what he/she deserves"). The reliability score for this study it is α = .82.

Disregard of ecologically particularly exposed persons. This variable was measured with three items ranging from 1 to 6, with a higher value indicating a stronger construct 1 = applies not at all to 6 = applies absolutely. The scale was developed by Baier, Kals, and Müller (2013). Although it had very low reliability (α = .48) in the original study, the reliability score for this study is α = .82.

Justification. To measure participants' justification levels, eight items were included. These items were obtained from the previous studies (e.g., Baier et al., 2013; sample item: "I have little time to engage in environmentally protective activities"). The items were to be answered on 6-point answer scales ranging 1 to 6, with a higher value indicating a stronger construct 1 = applies not at all to 6 = applies absolutely. The reliability score for this study is α = .82.

Responsibility. In order to measure participants' responsibility levels, six items were used. These items were obtained from the previous studies (e.g., Montada & Kals, 1995; Montada & Kals, 2000). The items were to be answered on 6-point answer scales ranging 1 to 6, with a higher value indicating a stronger construct 1 = applies not at all to 6 = applies absolutely. This scale consists of two factors. One factor measures *internal locus of responsibility* consisting of three items (sample item: "I feel responsible to actively contribute to environmental protection"). The reliability score of this factor for the present study is α = .93. The other factor measures *external locus of responsibility* consisting of three items (sample item: "The state is responsible for protecting the environment"). The reliability score of this factor for the present study is α = .63.

Indignation. In order to measure participants' indignation levels, eight items were used. These items were obtained from the previous studies (e.g., Baier et al., 2013; Kals & Maes, 2002). The items were to be answered on 6-point answer scales ranging 1 to 6, with a higher value indicating a stronger construct 1 = applies not at all to 6 = applies absolutely. This scale consists of two factors. One factor measures *indignation about insufficient environmental protection* consisting of four items (sample item: "I am annoyed when politicians in charge do little to promote environmental protection effectively in Turkey"). The reliability score of this factor is α = .85. The other factor measures *indignation about too much environmental protection* consisting of four items (sample item: "I am angry when reduced energy consumption comes along with losses in living standards"). The reliability score of this factor is α = .82.

Emotional affinity toward nature. The original scale with eleven-items was developed by Kals, Schumacher, and Montada (1999; α = .86). In the present study, a six-item version used (sample item: "When I spend time in nature, I feel free and easy"). The items were to be answered on 6-point answer scales ranging 1 to 6, with a higher value indicating a stronger construct 1 = applies not at all to 6 = applies absolutely. The reliability score for this study is α = .95.

Commitment to goals. In order to measure participants' behavioural commitments, thirteen items were used. These items were obtained from the previous studies (e.g., Baier et al., 2013; Kals & Maes, 2002; Montada & Kals, 2000). The items were to be answered on 6-point answer scales ranging 1 to 6, with a higher value indicating a stronger construct 1 = applies not at all to 6 = applies absolutely. This scale consists of two factors. One factor measures c*ommitment to pro-environmental goals* consisting of nine items [sample item: "I am basically willing to get involved by obtaining information about environmental problems (for example: pollution of air, soil, water, and climate hazards)"]. The reliability score of this factor is α = .85. The other factor measures *commitment to goals that potentially interfere with environmental protection* consisting of four items [sample item: "I am basically willing to get involved in promoting a high standard of living in which more energy is consumed (air travel, private car etc.)"]. The reliability score of this factor is α = .82.

Social Desirability Scale. Questions on social desirability were asked using the short 6-items version by Kemper, Beierlein, Bensch, Kovaleva, and Rammstedt (2012). The items were to be answered on 6-point answer scales ranging 1 to 6, with a higher value indicating a stronger construct 1 = applies not at all to 6 = applies absolutely. It is a two-dimensional scale. Three items reflect the *exaggeration of negative qualities* (α = .78; sample item: "Sometimes I only help people if I expect to get something in return"). The reliability score of this factor for the present study is α = .60. Three items depict the *exaggeration of positive qualities* (α = .71; sample item: "In an argument, I always remain objective and stick to the facts"). The reliability score of this factor for the present study is α = .49.

Sociodemographic Form. Demographical data on gender, age, nationality, educational achievement, and membership of environmental organizations and motor clubs were collected.

Procedure

For the study, a questionnaire including previously validated scales was used. All the original scales were constructed in German. For the Turkish study, the scales were translated into Turkish by an expert. Then, the items were translated back into German by a bilingual speaker.

First, PCA was performed to examine the factor structure of the EBJW Scale. Further, by using the IBM AMOS 24 (IBM Corporation, 2016) and following Byrne (2010), a confirmatory factor analysis was performed. For the reliability check, Cronbach Alpha was used.

RESULTS

Psychometric Properties of the EBJW Scale

Validity. The Kaiser–Meyer–Olkin coefficient for this dataset was 0.81, and the Bartlett's test of Sphericity was statistically significant ($\chi 2(526.489) = 15$, $p < .001$). PCA was performed, followed by a varimax rotation. For this study, one main factor explains 54.2% of the variance (See Table 1).

Table 1. Factor Loadings, Means, Standard Deviations, and Item-Total Correlations of the Ecological Belief in a Just World Scale

Items	*M*	*SD*	r_{it}	h^2	l_1
(2) When valuable environmental resources are distributed, everyone has the same chances to acquire them / Kıymetli doğal kaynaklar (örn., hammadde) dağıtılırken, herkes bu kaynakları elde etmede eşit şansa sahiptir.	1.92	1.32	.68	.67	.82
(5) By and large, everyone has the same opportunity to acquire natural assets (e.g. soil resources) / Genel olarak, doğal kaynakları elde etmede herkes eşit şansa sahiptir (örn., yeraltı kaynakları).	2.04	1.34	.63	.60	.78
(1) Altogether, related to nature, everyone gets what he/she deserves / Genelde doğayla ilgili olarak herkes hakkı olanı alır (örn., temiz içme suyu).	2.45	1.50	.60	.58	.76
(3) Overall, everyone can rely on having access to a healthy and hazard-free environment (e.g. unpolluted soils) / Genel olarak herkes sağlıklı ve güvenli bir çevreye sahip olduğuna güvenebilir (örn., temiz toprak).	1.91	1.14	.57	.54	.73
(6) Everyone has various possibilities to participate in the shaping of the natural environment (e.g. in decisions about the construction of a landfill site) / (Doğal çevrenin yapılandırılmasında herkes çeşitli olanaklara sahiptir (örn., atık toplama tesislerinin inşasındaki kararlara katılmak gibi).	2.81	1.56	.57	.46	.68
(4) Everyone can participate in the shaping of his/ her environment (e.g. in decisions about the siting of industrial facilities) / Herkes kendi çevresinin şekillendirilmesine katkıda bulunabilir (örn., endüstriyel tesislerin konumlandırılması hakkındaki kararlara katılmak gibi).	3.63	1.71	.53	.41	.64

Results of the CFA showed that the first-order factorial model with 6 items failed to match the data, $\chi 2(9)$ N = 245) = 77,203, $p < .001$, ($\chi 2$/df) = 8.578, GFI = .91, RMSEA = .18, SRMR = .20. Modification indices suggested that error terms of some items (item

1, 3, 4, and 6) should be allowed to correlate. The modified model did match the data ($\chi 2(7)$ N = 245) = 8,519, p = .289, ($\chi 2$/df) = 1.217, GFI=.99, RMSEA = .03, SRMR = .04) (See Table 2).

Table 2. CFA results of the Ecological Belief in a Just World Scale

Items	l_1
(2) When valuable environmental resources are distributed, everyone has the same chances to acquire them / Kıymetli doğal kaynaklar (örn., hammadde) dağıtılırken, herkes bu kaynakları elde etmede eşit şansa sahiptir.	.84
(5) By and large, everyone has the same opportunity to acquire natural assets (e.g. soil resources) / Genel olarak, doğal kaynakları elde etmede herkes eşit şansa sahiptir (örn., yeraltı kaynakları).	.75
(1) Altogether, related to nature, everyone gets what he/she deserves / Genelde doğayla ilgili olarak herkes hakkı olanı alır (örn., temiz içme suyu).	.66
(3) Overall, everyone can rely on having access to a healthy and hazard-free environment (e.g. unpolluted soils) / Genel olarak herkes sağlıklı ve güvenli bir çevreye sahip olduğuna güvenebilir (örn., temiz toprak).	.66
(6) Everyone has various possibilities to participate in the shaping of the natural environment (e.g. in decisions about the construction of a landfill site) / (Doğal çevrenin yapılandırılmasında herkes çeşitli olanaklara sahiptir (örn., atık toplama tesislerinin inşasındaki kararlara katılmak gibi).	.52
(4) Everyone can participate in the shaping of his/ her environment (e.g. in decisions about the siting of industrial facilities) / Herkes kendi çevresinin şekillendirilmesine katkıda bulunabilir (örn., endüstriyel tesislerin konumlandırılması hakkındaki kararlara katılmak gibi).	.46

Reliability. The reliability score for the original study was α = .80. The Cronbach Alpha obtained for this study is α = .82.

Overall, the present study confirmed that the EBJW Scale could be used in Turkish samples. Thus, *H1* was confirmed.

Descriptive Pattern

The results show that participants tend to disagree with the items of EBJW. Nevertheless, the scale mean value at 2.46 and the standard deviation (SD = 1.05) show that there are many different opinions. Item three receives most denials ['Overall, everyone can rely on having access to a healthy and hazard-free environment (e.g. unpolluted soils)'; M = 1.91; SD = 1.14] whereas item four scores the most agreement ["Everyone can participate in the shaping of his/ her environment (e.g. in decisions about the siting of industrial facilities)"; M = 3.63; SD = 1.71].

The results of the descriptive analyses (See Table 3) are in line with the overall findings in the German studies (Baier et al., 2013). Participants expressed significant levels

of internal (M = 5.57; SD = 0.72) and external locus of responsibility (M = 5.47; SD = 0.81), indignation about insufficient environmental protection (M = 5.36; SD = 1.09), and emotional affinity toward nature (M = 5.26; SD = 0.77). However, few expressed indignations about too much environmental protection (M = 2.99; SD = 1.59) and justification (M = 2.66; SD = 0.91).

The Associations of EBJW with Other Variables

As seen in Table 3, EBJW showed a moderate and positive relationship with BJW (r = .43; p < .01) and justification (r = .21; p < .01). Moreover, it was moderately and positively correlated with indignation about too much environmental protection (r = .27; p < .01) and with commitment to goals that contradict environmental protection (r = .32; p < .01). That is, people who believe that the world is an ecologically just place are also more likely to feel indignation about too much environmental protection, and the stronger their EBJW, the more likely they are to be committed to goals that preclude environmental protection *($H2_a$)*. This pattern of correlations remained unchanged when controlling for social desirability (See Table 4). On the other hand, EBJW showed a significant negative correlation with commitment to pro-environmental goals only when controlled for social desirability (r = -.15; p < .05) *($H2_b$)*.

Table 3. Descriptive Statistics and Inter-correlations ($N = 245$)

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13
(1) BJW	1												
(2) EBJW	.43**	1											
(3) Disregard of ecologically particularly exposed persons	.34**	.40**	1										
(4) Emotional affinity toward nature	.16*	.14*	.09	1									
(5) Indignation about insufficient environmental protection	-.19**	-.10	-.03	.09	1								
(6) Indignation about too much environmental protection	.26**	.27**	.30**	.08	.14*	1							
(7) Internal locus of responsibility	-.03	.04	.02	.44**	.24**	.02	1						
(8) External locus of responsibility	-.07	.03	-.03	.22**	.19**	.11	.45**	1					
(9) Commitment to pro-environmental goals	.02	-.11	.03	.31**	.22**	-.01	.48**	.17**	1				
(10) Commitment to goals that contradict environmental protection	.30**	.32**	.26**	.00	-.07	.45**	-.17**	-.10	-.16*	1			
(11) Exaggeration of negative qualities	.08	.06	.01	-.28**	-.12	.06	-.33**	-.05	-.17*	.10	1		
(12) Exaggeration of positive qualities	.12	.16*	.07	.31**	.08	.22**	.28**	.16*	.23**	.16*	-.22**	1	
(13) Justification	.26**	.21**	.19**	-.09	-.12	.24**	-.32**	-.07	-.23**	.37**	.23**	-.03	1
M	3.06	2.46	2.91	5.26	5.36	2.99	5.57	5.47	5.09	2.60	2.60	2.04	2.66
SD	0.91	1.05	1.41	0.77	1.09	1.59	0.72	0.81	0.70	1.31	0.94	0.68	0.91

Note. All variables are ranging from 1 to 6 with a higher value indicating a stronger construct. BJW: Belief in a just world, EBJW: Ecological belief in a just world. *$p < .05$; **$p < .01$

Table 4. Partial Correlations

Variable	1	2	3	4	5	6	7	8	9	10	11
(1) BJW	1	.43**	.34**	.20**	-.18**	.25**	-.00	-.06	.03	.29**	.25**
(2) EBJW	.42**	1	.40**	.16**	-.10	.26**	.06	.03	-.10	.31**	.20**
(3) Disregard of ecologically particularly exposed persons	.34**	.40**	1	.10	-.02	.30**	.03	-.03	.04	.26**	.20**
(4) Emotional affinity toward nature	.14*	.09	.07	1	.06	.10	.39**	.22**	.28**	.03	-.03
(5) Indignation about insufficient environmental protection	-.20**	-.12	-.03	.07	1	.14*	.22**	.18**	.20**	-.07	-.10
(6) Indignation about too much environmental protection	.23**	.24**	.30**	.01	.12	1	.03	.11	.01	.44**	.23**
(7) Internal locus of responsibility	-.06	-.01	.00	.39**	.23**	-.05	1	.45**	.45**	-.14*	-.27**
(8) External locus of responsibility	-.09	.01	-.04	.18**	.17**	.08	.42**	1	.17**	-.10	-.06
(9) Commitment to pro-environmental goals	-.01	-.15*	.02	.26**	.20**	-.06	.44**	.14*	1	-.15*	-.20**
(10) Commitment to goals that contradict environmental protection	.29**	.30**	.26**	-.05	-.09	.43**	-.22**	-.13*	-20**.	1	.36**
(11) Justification	.27**	.22**	.20**	-.08	-.12	.25**	-.33**	-.07	-.23**	.38**	1

Note. All variables are ranging from 1 to 6 with a higher value indicating a stronger construct. Upper diagonal: Exaggeration of negative qualities; lower diagonal: Exaggeration of positive qualities; $N = 245$. BJW: Belief in a just world, EBJW: Ecological belief in a just world. *$p < .05$; **$p < .01$

In order to test if EBJW qualifies, besides other variables, for the prediction of pro-environmental and environmentally risky commitments, multiple regression analyses including the full range of independent variables were conducted.

Results reveal that the stronger the participants' internal locus of responsibility, emotional affinity toward nature, and indignation about insufficient environmental protection, the stronger their commitment to pro-environmental goals was. However, the stronger their endorsement of EBJW, the weaker this pro-environmental commitment becomes. As seen in Table 5, the combination of internal locus of responsibility ($\beta = .38$, $p < .001$), EBJW, ($\beta = -.19$, $p < .01$), emotional affinity toward nature ($\beta = .12$, $p = .06$), and indignation about insufficient environmental protection ($\beta = .11$, $p = .06$) accounts for 30% of the variance in commitment to pro-environmental goals *(H3)*.

Table 5. Multiple Regression of Commitment to Pro-Environmental Goals ($N = 245$)

Predictor	*B*	*β*
BJW	.08	.10
EBJW	-.13*	-.19
Disregard of ecologically particularly exposed persons	.04	.08
Emotional affinity toward nature	.11[i]	.12
Indignation about insufficient environmental protection	.07[i]	.11
Indignation about too much environmental protection	-.02	-.03
Internal locus of responsibility	.37**	.38
External locus of responsibility	-.04	-.05
Exaggeration of negative qualities	.04	.06
Exaggeration of positive qualities	.11	.11
Justification	-.07	-.09

Note. BJW: Belief in a just world, EBJW: Ecological belief in a just world. $F_{total}(11/243) = 8.93$**. $R = .54$; $R^2 = .30$**.
**$p < .001$, *$p < .01$, [i]$p = .06$

As for environmentally risky commitments, our results indicate that the stronger the participants' indignation about excessive environmental protection, their concurrence with justification arguments, and EBJW, the stronger their commitment to goals that potentially interfere with environmental protection was. The combined EBJW ($\beta = .13$, $p < .05$), indignation about too much environmental protection ($\beta = .33$, $p < .001$), and justification ($\beta = .20$, $p = .001$) accounts for 34% of the variance in commitment to goals that potentially preclude environmental protection *(H3)* (See Table 6).

In sum, in both regression equations, EBJW qualifies with an expected regression weight together with the predictors' responsibility attribution, indignation, justification, and emotional affinity. Thus at least one variable of each variable group (justice-related variables, responsibilities, and emotions) qualifies in the equations.

Table 6. Multiple Regression of Commitment to Goals That Potentially Preclude Environmental Protection ($N = 245$)

Predictor	*B*	*β*
BJW	.10	.07
EBJW	.17*	.13
Disregard of ecologically particularly exposed persons	.04	.04
Emotional affinity toward nature	-.02	-.02
Indignation about insufficient environmental protection	-.04	-.04
Indignation about too much environmental protection	.27**	.33
Internal locus of responsibility	-.15	-.08
External locus of responsibility	-.15	-.09
Exaggeration of negative qualities	-.00	-.00
Exaggeration of positive qualities	.20	.10
Justification	.29**	.20

Note. BJW: Belief in a just world, EBJW: Ecological belief in a just world. $F_{total}(11/243) = 10.77^{**}$. R= .58; $R^2 = .34^{**}$. $^{**}p \leq .001$, $^{*}p < .05$

DISCUSSION

Over the last century, multiple observations on the atmosphere, soils, oceans, and ice masses have shown a significant increase in the release of greenhouse gases such as carbon dioxide, methane, and nitrogen as a result of human activity. This also applies to Turkey, where environmental psychological research is seldom conducted. In the present study, it was aimed to explore the validity of the new EBJW construct with reference to Turkey, by testing its unique contribution in explaining environmental commitments along with other structures.

The results confirm that the EBJW scale is suitable for use with Turkish participants *(H1)*. Similarly, the results of the study by Baier and colleagues (2013) reveal a one-factor solution with satisfactory internal consistency. The EBJW construct shows meaningful descriptive results as well as links to other constructs. As expected, stronger EBJW is associated with greater indignation about excessive environmental protection and justification arguments *(H2)* (Baier et al., 2013). EBJW predicts a commitment to pro-environmental goals as well as to goals that potentially preclude environmental protection. EBJW decreases a commitment to pro-environmental goals including the wearing of political symbols, buying or boycotting certain products for pro-environmental reasons, etc. whereas it increases a commitment to goals that potentially run counter to environmental protection, including support for automobile and other motor sports and high standards of living, which leads to increased energy consumption (*H3*).

People clearly differ in their environmentally related behavioural decisions. As previously mentioned, overcoming the socioecological dilemma (Platt, 1973) calls for a moral motivational basis to help individuals handle the conflict between their own short-term goals and the long-term interests of their contemporaries and future generations. Thus, they are prepared to make a behavioural decision for the sake of society. Research (e.g., Clayton et al., 2016) shows that environmentally related responsibility and justice appraisals provide the moral basis for pro-environmental decision making.

In accordance with the model proposed by Montada and Kals (2000), the set of predictors in the present study accounts for a substantial amount of variance in both criterion variables. Consistent with previous studies (e.g. Montada & Kals, 2000), attributions of responsibility play a central role in the model of commitment to pro-environmental goals. Emotions are also an important factor in the variance observed in pro-environmental and environmentally risky commitment (e.g., Carrus et al., 2008; Kals & Maes, 2002). That is, the stronger the participants' emotional affinity toward nature, the stronger their commitment to pro-environmental goals are. However, the stronger the participants' indignation about excessive environmental protection, the stronger their commitment to goals that hinder environmental protection will be. Justification arguments such as having little time and finding measures very expensive explain the variance in commitment to pro-environmental goals as opposed to targets that potentially preclude environmental protection (Baier et al., 2013).

Some limitations must be noted in this study. The sample size ($N = 245$) is relatively small and females are overrepresented (65.3%), meaning that no conclusions can be drawn for the general population. Therefore, studies with more representative samples are needed. Further, the study used cross-sectional data only, and cross-sectional correlational studies can barely reveal anything about causal processes. That is to say, there are simply too many alternative (causal and non-causal) interpretations for a given correlation. For instance, *ecological belief in a just world* may be a causal predictor of environmental commitments, or it may simply be a post-hoc justification for failing to commit to pro-environmental norms (i.e., a dissonance reduction strategy). In order to observe long-term associations between environment-related cognitions and emotions, EBJW, and environmental behaviour, longitudinal data is needed. Although longitudinal studies (e.g., Montada, Kals, & Becker, 2007) are available that test the model for manifest signs of behaviour, no study to date has examined the long-term impact of the new EBJW construct.

Overall, the variable pattern and the complex motivation structure involved in pro-environmental as well as environmentally risky commitment can be confirmed in the Turkish sample. EBJW qualifies as a predictor of environmental commitments. This successful cross-validation underpins the need to further investigate EBJW as a powerful and important construct within the field of environmental psychology. In line with the cross-validation of BJW, further validation studies of EBJW should be conducted in other countries. As EBJW is a rather new construct, the mediating and moderating variables in its relations with environmental behaviour are waiting to be explored. Finally, its relations with other prominent constructs in environmental psychology, such as social dominance orientation (e.g., Jylhä et al., 2016) and value orientations (e.g., Kıral Uçar, 2020), should be examined.

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References/Kaynakça

Acar, Y. G. (2018). Gezi'den sonra ne oldu? Güçlenmenin, politikleşmenin ve örgütlenmenin kolektif eylemlerdeki rolü [What happened after Gezi? The role of empowerment, politicization, and organizing in collective action]. *Türk Psikoloji Yazıları, 21,* 62-78.

Baier, M., Kals, E., & Müller, M. (2013). Ecological belief in a just world. *Social Justice Research, 26*, 272-300. doi: 10.1007/s11211-013-0192-0

Bierhoff, H. W., Klein, R., & Kramp, P. (1991). Evidence for the altruistic personality from data on accident research. *Journal of Personality, 59*(2), 263-280. doi: 10.1111/j.1467-6494.1991.tb00776.x

Byrne, B. M. (2010). *Structural equation modeling with AMOS: Basic concepts, applications, and programming.* New York: Routledge. doi: 10.4324/9780203805534

Carrus, G., Passafaro, P., & Bonnes, M. (2008). Emotions, habits, and rational choices in ecological behaviors: The case of recycling and use of public transportation. *Journal of Environmental Psychology, 28,* 51–62. doi: 10.1016/j.jenvp.2007.09.003

Clayton, S., Kals, E., & Feygina, I. (2016). Justice and environmental sustainability. In C. Sabbagh & M. Schmitt (Eds.), *Handbook of social justice theory and research* (pp. 369–386). New York: Springer. doi: 10.1007/978-1-4939-3216-0_20

Dalbert, C. (1999). The world is more just for me than generally: About the personal belief in a just world scale's validity. *Social Justice Research, 12*, 79-98. doi: 10.1023/A:1022091609047

Dalbert, C. (2001). *The justice motive as a personal resource: Dealing with challenges and critical life events.* Boston: Springer. doi: 10.1007/978-1-4757-3383-9

Dalbert, C., Montada, L., & Schmitt, M. (1987). Glaube an eine gerechte Welt als Motiv: Validierungskorrelate zweier Skalen [The belief in a just world as a motive: Validity correlates of two scales]. *Psychologische Beiträge, 29*, 596-615.

Furnham, A. (2003). Belief in a just world: Research progress over the past decade. *Personality and Individual Differences*, *34*(5), 795-817. doi: 10.1016/s0191-8869(02)00072-7

Gezici-Yalçın, M., & Uluğ, Ö. M. (2017). "Gezi, bardağı taşıran son damlaydı": Sosyal psikolojik bir perspektifle Gezi Parkı isyanını anlamak ["Gezi was the last drop!": Understanding the Gezi Park protests from a social-psychological perspective]. *Türk Psikoloji Yazıları, 20*, 96-109.

Göregenli, M. (2003). *Şiddet, kötü muamele ve işkenceye ilişkin değerlendirmeler, tutumlar ve deneyimler* [Assessments, attitudes, and experiences related to violence, maltreatment, and torture]. İzmir: İzmir Barosu Yayınları.

Hafer, C. L. (2000). Do innocent victims threaten the belief in a just world? Evidence from a modified Stroop task. *Journal of Personality and Social Psychology, 79*(2), 165-173. doi:10.1037/0022-3514.79.2.165

Hafer, C. L., & Sutton, R. (2016). Belief in a just world. In K. Sabag, & M. Schmitt (Eds.), *Handbook of social justice theory and research* (pp. 145-160). New York: Springer. doi:10.1007/978-1-4939-3216-0_8

Harth, N. S., Leach, C. W., & Kessler, T. (2013). Guilt, anger, and pride about in-group environmental behavior: Different emotions predict distinct intentions. *Journal of Environmental Psychology*, *34*, 18-26. doi:10.1016/j.jenvp.2012.12.005

Hasta, D., & Sözen, A. I. (2017). Hidroelektrik santrallerine ilişkin tutumlar: Sistemi meşrulaştırma, kontrol odağı ve yükleme karmaşıklığı açısından bir değerlendirme [Attitudes towards Hydroelectric Power Plants: An evaluation in terms of system justification, locus of control, and attributional complexity]. *Türk Psikoloji Dergisi, 32*(79), 36-47.

IBM Corporation (2016). *SPSS for Windows, version 24.0.* Armonk, New York: IBM Corp.

Jessani, Z., & Harris, P. B. (2018). Personality, politics, and denial: Tolerance of ambiguity, political orientation and disbelief in climate change. *Personality and Individual Differences*, *131*, 121-123.

Jylhä, K. M., Cantal, C., Akrami, N., & Milfont, T. L. (2016). Denial of anthropogenic climate change: Social dominance orientation helps explain the conservative male effect in Brazil and Sweden. *Personality and Individual Differences*, *98*, 184-187. doi:10.1016/j.paid.2016.04.020

Kals, E., & Maes, J. (2002). Sustainable development and emotions. In P. Schmuck & W. P. Schultz (Eds.), *Psychology of sustainable development* (pp. 97-122). New York: Springer. doi: 10.1007/978-1-4615-0995-0_6

Kals, E., & Russell, Y. (2001). Individual conceptions of justice and their potential for explaining pro-environmental decision making. *Social Justice Research, 14*(4), 367–403. doi: 10.1023/A:1014698528132

Kals, E., Schumacher, D., & Montada, L. (1999). Emotional affinity toward nature as a motivational basis to protect nature. *Environment and Behavior, 31*(2), 178-202. https://doi.org/10.1177/00139169921972056

Kemper, C. J., Beierlein, C., Bensch, D., Kovaleva, A., & Rammstedt, B. (2012). *Eine Kurzskala zur Erfassung des Gamma-Faktors sozial erwünschten Antwortverhaltens: Die Kurzskala Soziale Erwünschtheit-Gamma (KSE-G)* (GESIS Working Papers 2012|25). Köln: GESIS.

Kıral Uçar, G. (2020). Değer yönelimleri ve çevre yanlısı davranışlar (Value orientations and pro-environmental behaviour). *Uludağ Üniversitesi Fen-Edebiyat Fakültesi Sosyal Bilimler Dergisi/ Uludağ University Faculty of Arts and Sciences Journal of Social Sciences, 21*(39), 801-822. https://doi.org/10.21550/sosbilder.654035

Kleinke, C. L., & Meyer, C. (1990). Evaluation of rape victim by men and women with high and low belief in a just world. *Psychology of Women Quarterly, 14*(3), 343-353. doi:10.1111/j.1471-6402.1990.tb00024.x

Lerner, M. J. (1977). The justice motive: Some hypotheses as to its origins and forms. *Journal of Personality, 45*, 1-52. doi: 10.1111/j.1467-6494.1977.tb00591.x

Lerner, M. J. (1980). *The belief in a just world: A fundamental delusion.* New York: Plenum Press. doi: 10.1007/978-1-4899-0448-5

Montada, L., & Kals, E. (1995). Perceived justice of ecological policy and proenvironmental commitments. *Social Justice Research, 8*(4), 305-327. https://doi.org/10.1007/BF02334710

Montada, L., & Kals, E. (2000). Political implications of psychological research on ecological justice and pro-environmental behavior. *International Journal of Psychology, 35*(2), 168–176. doi:10.1080/002075900399466

Montada, L., Kals, E., & Becker, R. (2007). Willingness for continued social commitment: A new concept in environmental research. *Environment & Behavior, 39*(3), 287–316. doi:10.1177/0013916506290953

Müller, M. M., Kals, E., & Pansa, R. (2009). Adolescents' emotional affinity toward nature: A cross-societal study. *Journal of Developmental Processes, 4*(1), 59-69.

Neufeind, M., Jiranek, P., & Wehner, T. (2014). Beyond skills and structure: Justice dispositions as antecedents of young citizens' volunteering and political participation. *Journal of Community & Applied Social Psychology, 24*, 278-295. doi: 10.1002/casp.2166

Nisbet, E. K., Zelenski, J. M., & Murphy, S. A. (2009). The nature relatedness scale: Linking individuals` connections with nature to environmental concern and behavior. *Environment & Behavior, 41*(5), 715-740. doi:10.1177/0013916508318748

Odağ, Ö., Uluğ, Ö. M., & Solak, N. (2016). "Everyday I'm Çapuling": Identity and collective action through social network sites in the Gezi Park protests in Turkey. *Journal of Media Psychology, 28*(3), 148-159. doi:10.1027/1864-1105/a000202

Onur, A., Sahin, E., & Tekkaya, C. (2012). An investigation on value orientations, attitudes and concern towards the environment: The case of Turkish elementary school students. *Environmental Education Research, 18*(2), 271-297. doi:10.1080/13504622.2011.614690

Our World in Data (n.d.). CO_2 emissions per capita, 1800 to 2017. Retrieved from: https://ourworldindata.org/grapher/co-emissions-per-capita?tab=chart&country=AZE+IND+TUR+ARM

Özkaynak, B., & Bogazici University EJOLT Team (December 9th, 2013). Turkey's map of environmental injustices is now online! Retrieved from: http://www.ejolt.org/2013/12/turkeys-map-of-environmental-injustices-is-now-online/

Paker, H. (2013). The involvement of the green movement in the political space. In U. Dufner, (Ed.). *Perspectives – Political analyses and commentary from Turkey: The green movement in Turkey* (pp. 12-15). Istanbul, Heinrich Böll Stiftung Turkey Representation. Retrieved from: https://www.boell.de/en/content/green-movement-turkey

Platt, J. (1973). Social traps. *American Psychologist, 28*(8), 641-651. doi:10.1037/h0035723

Reese, G., & Jacob, L. (2015). Principles of environmental justice and pro-environmental action: A two-step process model of moral anger and responsibility to act. *Environmental Science & Policy, 51*, 88–94. doi:10.1016/j.envsci.2015.03.011

Sikor, T., Martin, A., Fisher, J., & He, J. (2014). Toward an empirical analysis of justice in ecosystem governance. *Conservation Letters, 7*(6), 524-532. doi:10.1111/conl.12142

Syme, G. (2011). Justice and environmental decision making. In E. Kals, & J. Maes (Eds.), *Justice and conflicts* (pp. 283-295). Heidelberg: Springer. doi:10.1007/978-3-642-19035-3_17

Steg, L., & De Groot J. (2010). Explaining prosocial intentions: Testing causal relationships in the norm activation model. *British Journal of Social Psychology, 49*, 725-743. doi:10.1348/014466609x477745

Stern, P. C. (2000). New Environmental Theories: Toward a Coherent Theory of Environmentally Significant Behavior. *Journal of Social Issues, 56*(3), 407–424. doi:10.1111/0022-4537.00175

Turkish Statistical Institute (2014). *Turkey in Statistics*. Ankara: Türkiye İstatistik Kurumu Matbaası.

Zuckerman, M., & Gerbasi, K. C. (1977). Belief in a just world and trust. *Journal of Research in Personality, 11,* 306-317. doi: 10.1016/0092-6566(77)90039-3