

An Extended Decision-Making Model of Coastal Recreational Area Use During the COVID-19 Through Goal-Directed Behavior and Perceived Benefits Framework

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ABSTRACT

Recreational areas have gained significant importance regarding human activities during the COVID-19 pandemic, especially when citizens face challenges. This study aims to examine the behavioral intention of the decision-making approach of the visitors of coastal recreational areas to deal with this situation. The Extended Goal-directed Behavior Model (EGBM) was tested with confirmatory factor analysis (CFA) to examine visiting coastal recreational areas to understand how citizens modify their lifestyles. A survey with 41 questions was administered to 311 residents in Izmir province. The results showed that perceived benefits affected attitudes. Attitude, subjective norm, anticipated positive emotion and anticipated negative emotion influenced desire. Desire, past behavior, and perceived

behavioral control were also effective for coastal recreational visits. The present study contributes to the growing literature on decision-making processes of the uses of recreational areas and enables focusing on the significance of coastal recreational areas.

Keywords: Coastal recreational areas, decision-making process, Izmir province, the model of extended goal-directed behavior, visitors' intention

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INTRODUCTION

Following the first announcement of the COVID-19 case in Wuhan, China, on February 22, the first COVID-19 patient was detected in Turkey on March 11 (Republic of Turkey Ministry of Health, 2020). Starting partially on March 22, especially for people older than 65 and those with chronic diseases, restrictions and lockdowns were imposed, according to the Republic of Turkey Ministry of Interior (2020). Moreover, since then, partial restrictions, controlled normalizations, partial lockdowns, complete lockdowns, and gradual normalization processes have continued. With restrictions, lockdowns, and normalizations during this period, the importance of recreational areas in Turkey and worldwide was once more understood. Since Izmir is on the coastline and has many coastal recreational areas, studies on recreational areas are important in helping communities avoid catching COVID-19 and possible other pandemics in the future.

Coastal recreational areas provide outdoor activities for residents that contribute to their well-being and health. They also make it easy to benefit socially, economically, and environmentally, contributing to the lifestyle of people and supporting the development of communities. According to National Recreation and Park Association (2020), 83% of people worldwide found parks, trails, and open spaces necessary for mental health, and 59% also thought that exercising during a pandemic was essential for physical health. Thus, understanding people's behavioral

intention toward coastal recreational use is essential to provide comprehensive knowledge for citizens living in coastal areas to stay safe.

The Goal-directed Behavior model (GBM) is an important tool for measuring people's intentions over desires, intentions, and past behavior (Perugini & Bagozzi, 2001). The EGBM was also built by applying perceived benefits, including environmental, social, physical, and spiritual sections, to understand the attitudes (Park et al., 2017). Many studies have successfully applied EGBM in understanding the decision-making process across various areas, including tourism (Bui & Kiatkawsin, 2020; Jin et al., 2020; Kim & Preis, 2016; Kim et al., 2017, 2020), recreational visits (Park et al., 2017), online gaming (Holevova, 2018), online shopping (Ercis & Turk, 2019), and finance (Kim & Hall, 2019). However, the number of studies related to behavioral intentions to use coastal recreational areas, which are crucial parts of open and green spaces to perform many functions and provide many physical and mental health benefits, during the COVID-19 period is limited, and existing research has mostly focused on cities in Western countries (Hansen et al., 2022; Kane et al., 2021; Łapko et al., 2022). The lack of research in the current literature reinforces the need to measure the effects of the perceived benefits on attitudes and the influences of desire on coastal recreational area use during the COVID-19 period in different geographical and social contexts.

Given this, we aim to examine people's behavioral intentions regarding the use of coastal recreational areas during COVID-19 in Izmir and understand how citizens modify their lifestyles by EGBM. The research questions address the following: (1) what are the benefits and challenges of visiting coastal recreational areas regarding how citizens behave in society with a healthy or desperate mind in response to the threat of COVID-19 after the lockdown periods, and (2) how norms attitude, subjective, negative emotions, positive emotions, and perceived coastal recreation benefits affected their desires, and how desires, perceived behavioral control and the frequency of the past behaviors affected the behavioral intention to coastal recreational area use.

This study will contribute to the governments taking the required actions

and creating new places to make preferable and livelier open and green spaces and guide their citizens in using coastal recreational areas during COVID-19. The details of materials and methods to address the aim of this study are given in the next section.

MATERIALS AND METHODS

This research had a quantitative design approach to reveal the significant behavioral intentions of the residents to visit coastal recreational areas of Izmir Province during the COVID-19 partial lockdown. This study was conducted in coastal recreational areas of Izmir Province, on the coast of Izmir Bay, Turkey (Figure 1). The study area covering eight long coastal recreation areas within the urban region of Izmir was chosen as they were popular and the largest communal areas.

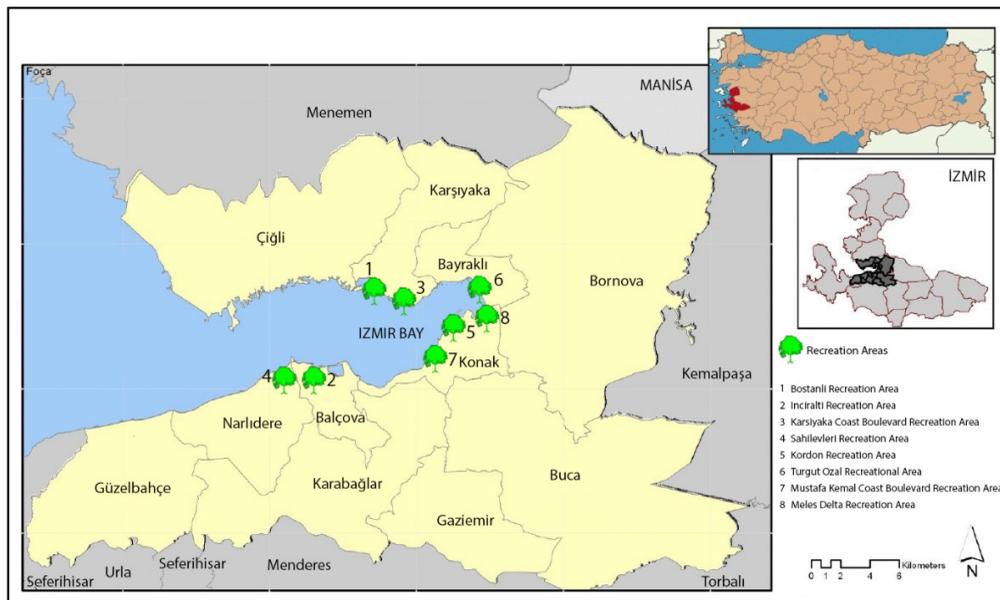


Figure 1. Study area

The EGBM investigates people's desires, intentions, and past behavior regarding coastal recreational area use. This model was applied because negative and positive emotions, were applied to, were effective for understanding people's instant and impulsive behaviors towards coastal recreational use during COVID-19. In this study, the EGBM was applied by incorporating the Perceived Benefits (PB; Park et al., 2017) variable with the Model of Goal-directed Behavior (MGB) (Perugini & Bagozzi, 2001) with variables such as Attitude (AT), Subjective Norm (SN), Positive Anticipated Emotion (PAE), Negative Anticipated Emotion (NAE), Desire (DE), and Perceived Behavioral Control (PBC), Frequency of Past Behavior (FPB), as the hypothesis illustrated in Figure 2. PB served to examine environmental, social, physical, and spiritual benefits. These benefits trigger residents' attitudes. AT and SN were applied to analyze the desire construct for MGB, as H2-a and H2-b. PAE (H2-c) and NAE (H2-d) were also constructed by exploring their emotions to examine whether they influence their desires. The FPB, which was declared as H2-e, was also examined by seeking the habits of respondents to check whether it affects their intentions. The H2-f hypothesis was created to measure DE for recreational area visits. PBC, which was deployed as H2-g, was applied from the Theory of Reasoned Action (TRA) (Fishbein & Ajzen, 1975) to determine people's intentions for the recreations visits.

H1 Perceived Benefits (PB) have a positive impact on Attitude (AT).

H2-a Attitude (AT) has a positive impact on Desire (DE).

H2-b Subjective Norm (SN) has a positive impact on Desire (DE).

H2-c Positive Anticipated Emotion (PAE) has a positive impact on Desire (DE).

H2-d Negative Anticipated Emotion (NAE) has a positive impact on Desire (DE).

H2-e The Frequency of Past Behavior (FPB) has a positive impact on Behavioral Intention (BI).

H2-f Desire (DE) has a positive impact on Behavioral Intention (BI).

H2-g Perceived Behavioral Control (PBC) has a positive impact on Behavioral Intention (BI).

In the present study, an online survey was administered to 311 coastal recreational area users in Izmir Province in the spring of 2021/between mid-March and mid-April 2021, during the last partial lockdown. The online questionnaire was prepared, including 41 questions on the behavioral intention of eight coastal recreational area visitors in Izmir Province and their demographic information via Google forms. Out of 41 questions, nine were gathered by descriptive analysis to specify the profile of the population sample via IBM SPSS 26.0. Thirty-two questions were applied for nine factors to the SmartPLS

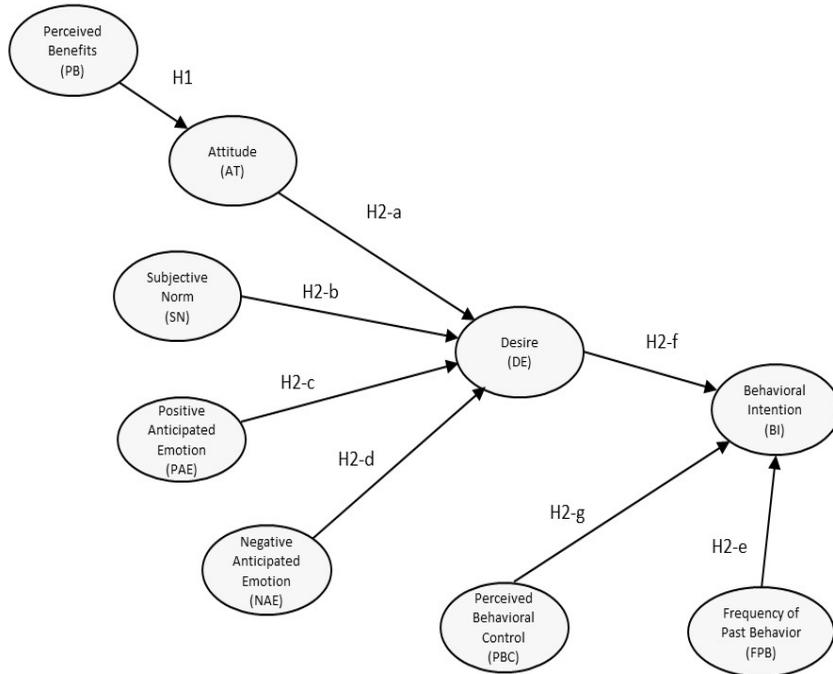


Figure 2. Proposed research model

3.0 to build a structural model for the study areas. Confirmatory Factor Analysis (CFA) was used to test the structural model. Structural Equation Modelling (SEM) was applied to test the hypothesis. From the MGB, the behavioral intention was selected as a dependent variable, including four items. AT, DE, FPB, NAE, PBC, PAE, and SN were chosen as independent variables, containing 3, 4, 2, 4, 4, 3, and 4 items, respectively. Perceived benefits were selected as independent variables, containing four items: environmental, social, physical, and mental aspects. Questions included respondents' coastal recreational area use patterns before the lockdowns, Table 2. The results and discussion of the descriptive data

and EGBM's factors were specified in the following sections.

RESULTS

The descriptive analysis of this study consisted of two main tables: The profile of respondents in the city of Izmir in Table 1 and a summary of responses to motivation for visits and frequency of visits items before COVID-19 and during COVID-19 in Table 2. Table 1 illustrates the proportions and majorities of respondents within the classes; females (74.5%), students (29.2%), people aged between 21 and 30 (29.2%), people with graduate-level (67.2%), and people that have been living in Izmir for more than 25 years (45.9%), respectively.

Table 1
Profile of respondents in the city of Izmir

	TOTAL	
(1) GENDER	N	%
Female	232	4.5
Male	79	5.5
(2) STATUS	N	%
Housework	9	2.8
Retired	47	15.1
Student	91	29.2
Public sector	72	23.1
Academician	12	3.8
Private sector	54	17.3
Independent business	15	4.8
Employee	2	0.6
Tourism	4	1.2
Architect	5	1.6
(3) AGE	N	%
Below 20	21	6.7
21–30	91	29.2
31–40	58	18.6
41–50	41	13.1
51–60	69	22.1
61–70	30	9.6
Above 70	1	0.03
(4) EDUCATION LEVEL	N	%
Literate	0	0
Primary school	1	0.03
Elementary school	2	0.06
High school	16	5.1
Graduate	209	67.2
Postgraduate	83	26.6
(5) THE DURATION OF LIVING IN IZMIR	N	%
I live in another city	26	8.3
0–5 years	38	12.2
6–10 years	21	6.7
11–15 years	15	4.8
16–20 years	34	10.9
21–25 years	34	10.9
Above 25 years	143	45.9

As shown in Table 2, most respondents preferred to walk at Bostanli Recreational Area 79.4%; the second preference was Kordon Recreational Area 64.3%. They were followed by Karsiyaka Coastal Boulevard Recreation Area, which was chosen by 40.8% during the lockdown. Among the thirteen motivations to relax during the lockdown, taking a walk, spending time

with friends, and sitting at benches and cafes were the most preferred activities by 92.9%, 71%, and 68.1%, respectively. Apart from these motivations, the highest frequency of visiting recreational areas before COVID-19 and during COVID-19 was a couple of times a week and never by 40.6% and 23.2%, respectively.

Table 2
Summary of responses for motivation for visits and frequency of visits items

	TOTAL	
	N	%
(6) RECREATION AREAS IN IZMIR		
Bostanli Recreation Area (Karsiyaka)	247	79.4
Inciralti Recreation Area (Balçova)	122	39.2
Karsiyaka Coast Boulevard Recreation Area	127	40.8
Sahilevleri Recreation Area (Narlidere)	79	25.4
Kordon Recreation Area (Konak)	200	64.3
Turgut Ozal Recreation Area (Bayrakli),	28	9.0
Mustafa Kemal Pasa Coast Boulevard Recreation Area (Konak)	125	40.1
Meles Delta Recreation Area (Bayrakli)	26	8.3
(7) MOTIVATIONS FOR VISITING IZMIR RECREATIONAL AREAS		
Taking a walk	289	92.9
Sitting (such as sitting bench, cafe)	212	68.1
Walking around with a child	44	14.1
Cycling	85	27.3
Running	41	14.1
Spending time with friends	221	71.0
Using sports facilities (such as basketball, volleyball, and tennis)	42	13.5
Riding scooters, skates, skateboards	16	5.1
Walking a pet	19	6.1
Fishing	6	1.9
Flying a kite	10	3.2
Doing yoga and Pilates	17	5.4
Using outdoor sports exercise equipment	39	12.5

Table 2 (Continue)

(8) VISITING FREQUENCY BEFORE COVID-19	TOTAL	
	N	%
Once a month	29	9.5
A couple of times a month	58	58.0
Once a week	48	15.6
A couple of times a week	126	40.6
Every day	25	8.1
Never	2	0.06
First time	1	0.03
A couple of times a year	22	7.11
(9) VISITING FREQUENCY DURING COVID-19	N	%
Once a month	50	16.0
A couple of times a month	43	13.8
Once a week	30	9.6
A couple of times a week	45	14.5
Every day	11	3.6
Never	72	23.2
First time	4	1.3
A couple of times a year	56	18.0

As shown in Table 3, the model was reliable and valid. For the model fit, the SRMR value, which should be below 0.08, declared by Hu and Bentler (1999), was 0.057, which was a good fit.

Composite Reliability (CR), which exceeded 0.7 as stated by Hair et al. (2010), was satisfactory for reliability measurement. For GDB constructs, AT (3 items), BI (4 items), DE (4 items), FP (2 items), NAE (4 items), PBC (4 items), PAE (3 items), and SN (4 items) were valid, which were between 0.798 and 0.959. PB (4 items) was also valid for PB constructs, which was 0.887.

The Average Variances Extracted (AVE) score, which was above 0.5, clarified by Hair

et al. (2010), was valid. These constructs with the chosen items of the GDB revealed that the AVE scores were between 0.656 and 0.886, which were satisfactory. The construct of PB was also valid by 0.663.

For Cronbach's alpha, according to Hinton et al. (2014), the validity coefficients were categorized into four-level: excellent (0.9-1), high (0.7-0.9), moderate (0.5-0.7), and low (0.5 and below). For GDB constructs, the excellent validity coefficients were PAE, BI, DE, NAE, and SN with the values of 0.936, 0.928, 0.923, 0.903, and 0.900, respectively. The high validity coefficients were AT with the value of 0.848 and PBC with the value of 0.824. The moderate coefficient was also FP with

the value of 0.523. For the PB construct, the high validity coefficient was PB, with a value of 0.830.

According to Hair et al. (2017), the coefficient of factor loadings is considered above 0.7. Therefore, the interval coefficients

of GDB constructs' items were between 0.751 and 0.950. The PB constructs' items were also revealed between 0.776 and 0.866, which was fit.

Table 3

Factor loadings, Cronbach's alpha, CR, AVE, and structural model fit of the behavior of recreational area variables

GDB constructs	Items	Loadings	Cronbach's Alpha	CR	AVE
AT	AT1	0.843	.848	0.907	0.766
	AT2	0.893			
	AT3	0.888			
BI	BI1	0.932	.928	0.949	0.823
	BI2	0.932			
	BI3	0.939			
	BI4	0.821			
DE	DE1	0.891	.923	0.945	0.812
	DE2	0.920			
	DE3	0.928			
	DE4	0.864			
FPB	FPB1	0.907	.523	0.798	0.667
	FPB2	0.715			
NAE	NAE1	0.871	.903	0.932	0.774
	NAE2	0.910			
	NAE3	0.874			
	NAE4	0.865			
PBC	PBC1	0.845	.824	0.884	0.656
	PBC2	0.863			
	PBC3	0.776			
	PBC4	0.751			
PAE	PAE1	0.928	.936	0.959	0.886
	PAE2	0.950			
	PAE3	0.946			

Table 3 (Continue)

GDB constructs	Items	Loadings	Cronbach's Alpha	CR	AVE
SN	SN1	0.869	.900	0.930	0.770
	SN2	0.906			
	SN3	0.886			
	SN4	0.848			
PB construct	Items	Loadings	Cronbach's Alpha	CR	AVE
PB	PB1	0.776	.830	0.887	0.663
	PB2	0.790			
	PB3	0.821			
	PB4	0.866			
Structural model fit					
SRMR (0.057)					

The correlation table was placed to show the relationship between constructs (Table 4). There was a correlation between SN and DE of 0.685. SN and PAE also

correlated with the value of 0.671. PAE and DE and PAE and PB had correlations with the value of 0.668 and 0.601, respectively.

Table 4
Correlation matrix

Constructs	AT	BI	DE	FPB	NAE	PBC	PB	PAE	SN
AT	1.0								
BI	.316	1.0							
DE	.592	.392	1.0						
FPB	.029	.265	.061	1.0					
NAE	.366	.338	.364	.087	1.0				
PBC	.368	.493	.442	.143	.113	1.0			
PB	.468	.364	.511	.066	.111	.404	1.0		
PAE	.624	.274	.668	.048	.249	.404	.601	1.0	
SN	.528	.366	.685	.099	.267	.476	.582	.671	1.0

The structural model results, the path coefficients, similarity existence by T value, and coefficient of determination by R square are shown in Table 5. The T value, which exceeded 1.96, supported the hypotheses (Hair et al., 2014). For PB construct, the present study indicated that PB positively influenced AT with a strong effect size ($\beta = .468, p = .000$), with a T value of 8.559, thus supporting H1. For GDB constructs, the study exhibited that AT positively affected DE with a strong effect size ($\beta = .174, p = .001$), with the T value of 3.215, thus supporting H2-a. The findings showed that SN negatively affected DE with a strong effect size ($\beta = .373, p = .000$), with the T value of 6.219, supporting H2-b. PAE had a positive impact on DE with a strong effect size ($\beta = .276, p = .000$), with the T value of 4.411, supporting H2-c. In addition, this

research showed that NAE had a positive impact on DE with a strong effect size ($\beta = .132, p = .000$), with the T value of 3.918, supporting H2-d. This study showed that FBP positively affected BI with a strong effect size ($\beta = .199, p = .000$), with the T value of 4.619, supporting H2-e. DE positively affected BI with a strong effect size ($\beta = .218, p = .000$), with a T value of 4.410, thus supporting H2-f. PBC positively influenced BI with a strong effect size ($\beta = .368, p = .000$), with the T value of 8.551, supporting H2-g.

The results showed that the variance of PB explained 21.9% of the variance of AT. AT, SN, PAE, and NAE variance explained 59.1% of DE. The FP, DE, and PBC variance explained 31.9% of the structural model, as shown in Figure 3.

Table 5

The structural model results, the path coefficients, T values, and the R square of the behavior of recreational area use variables

Structural Model	Path Coefficients	T Values	Results	p value
Perceived Behavior				
H1: PB->AT	0.468	8.559	SUPPORTED	0.000 (***)
AT Explained as %: (21.9)				
Goal-directed Behavior				
H2-a: AT->DS	0.174	3.215	SUPPORTED	0.001 (***)
H2-b: SN->DS	0.373	6.219	SUPPORTED	0.000 (***)
H2-c: PAE->DS	0.276	4.411	SUPPORTED	0.000 (***)
H2-d: NAE->DS	0.132	3.918	SUPPORTED	0.000 (***)

Table 5 (Continue)

Structural Model	Path Coefficients	T Values	Results	p value
DS Explained as %: (59.1)				
H2-e: FPB->BI	0.199	4.619	SUPPORTED	0.000 (***)
H2-f: DS->BI	0.218	4.410	SUPPORTED	0.000 (***)
H2-g: PBC->BI	0.368	8.551	SUPPORTED	0.000 (***)
Structural Model: BI Explained as %: (31.9)				

Note. significance at p<.10 (*), significance at p<.05 (**), significance at p<.01(***)

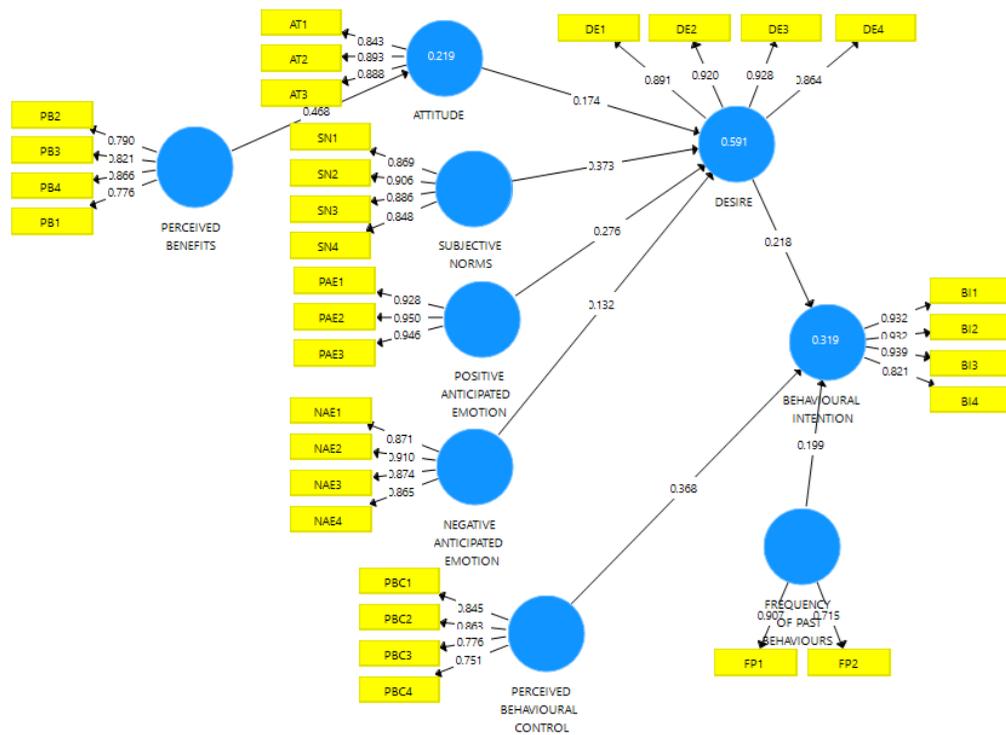


Figure 3. Structural model path diagram

DISCUSSION

COVID-19 lockdown at the weekends and on weekdays between 9 pm and 5 am affected Turkish citizens drastically as the social life of Izmir is of Mediterranean culture, whose citizens like spending time outside. Therefore, during COVID-19, the citizens of Izmir were more likely to get bored and spend their time relaxing and comforting themselves in relaxing activities, such as walking, spending time with friends, and sitting on benches or at a café, keeping the imposed social distance.

Guzel et al. (2020) stated that exploring new things with family and spending happy and quality time lessened the negative effects of being in home isolation. As shown in Table 2, the frequency of going out before COVID-19 was higher than the partial lockdown (lockdown at the weekends and lockdown after 9 pm in the week). Thus, the reason for the citizens to go out during the lockdown was not their desire and passion but necessity and efforts to sustain their quality of life. People tried to sustain their quality of life through relaxation, walking with their dogs, and shopping at the closest distance. Park et al.'s hypothesis that "perceived control behavior directly affects the desire" (2017, p. 68) was proved similar to our study that perceived control behavior directly affects the intention to go out for coastal recreation. Since free times of those who went to work and those who worked from home coincided with the lockdown hours, they were less efficient at work, and their quality of life decreased.

These recreational areas on the coastal areas of Izmir Bay, where the climate is the moderate Mediterranean, facilitate various important activities for the citizens of Izmir. Generations of Izmir have preferred coastal areas to get rest and relax. The coastal areas are preferred during the COVID-19 epidemic also confirmed that the tradition goes on within the "subjective norm" (Chiu et al., 2018, p. 335).

The hypothesis that NBE directly affects DE was confirmed by the people's anxiety about ending up COVID positive. Therefore, these negative feelings make people introverted or change their activities to more individual ones, affecting their intentions to spend time in coastal recreational areas. For positive emotions construct, COVID-19 has changed respondents' lives from being intensive and busy to nature-oriented and individualistic, causing a desire to spend time in coastal recreational areas. For the perceived benefit construct, residents were more likely to prefer physical activities (92.9% preferred walking) than social (71% friends meeting) and spiritual (5.4% yoga and Pilates) activities.

The model provides coastal recreation users' intentions for environmental policymakers. Government should especially create environmental policies for extending green areas and open spaces in coastal recreational areas. Landscape planners should also create citizen-oriented procedures for applying these policies to the coastal recreational outdoor facilities, such as local parks, playground areas, and

walking or cycling lanes. In addition, staff, who work at municipalities, should track citizens' behaviors over obeying the policies during spending time in coastal recreational areas and inform the police if any penalty is witnessed. Finally, guidelines should be well-written and concise to the citizens of all different ages to remind them of the liabilities and move them together. National Recreation and Park Association (2020) concluded that the citizens' requirements should be taken as feedback to respond to society's rapid requests and keep policies up to date by informing landscape planners to sustain well-being in society.

CONCLUSION

The present study's most important finding is that the decision-making process for using coastal recreational areas has changed drastically during the pandemic. While factors affecting the decisions are mostly due to self-desire and social needs, they become the perceived benefits and health concerns for most people. Coastal recreational visits are relaxing activities for the citizens of Izmir in general. However, these activities are not what people desire during COVID-19. They became obligatory for citizens as lockdowns brought severe pressure, transforming those visits into norms. Citizens also intend to visit coastal recreational areas because of their desires, perceived behavioral control, and the frequency of past behaviors. Their attitude has also been formed by the perceived benefits of the coastal recreational visits.

The pandemic is expected to finish soon, depending on the success of the vaccination programs. However, still, residents must spend most of their time working at home. Fun activities, self-development, deferred tasks, or procrastinated responsibilities should be a priority for them to fill the time to avoid any mental or physical breakdowns. They can register for language courses and occupational training for self-development. Although it is subjective, some people, especially introverts, but hardworking students, might benefit from online education because they can manage their time better when they have full control of their daily logs. Therefore, they could study and do their leisure activities more appropriately. Staying in for more than one need may cause pressure, but people can sometimes organize themselves better, such as eating, sleeping, and working habits. Doing light exercises and meditation at home can be a relaxing activity for residents to stay comfortable. Trying to find ways to comfort themselves is essential. However, it is strongly advised that residents should quickly adopt a new normal life with new norms—for example, social distancing, new eating habits to avoid obesity since obese people suffer more when they catch COVID-19, and quality time at home.

As the COVID-19 pandemic continues, the survey will first and periodically be conducted to monitor citizens' modifying coastal recreational areas' use in Izmir. Lastly, the survey will be operated across the cities with coastal areas worldwide to compare the people's intentions in different cultures at a separate time.

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