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Turn On and Tune In: Problematizing the Relationship between Soundscape and Tourist Mood

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ABSTRACT

This article aims to determine the effect of soundscape on tourist mood within the framework of sound pressure and sound types to provide a more effective destination experience. A theme park and a recreational area located in a central business district, which are important urban tourism attractions, were taken as research areas. For data collection, a Positive and Negative Affect Schedule was used. Furthermore, sound pressure measurements and environmental sound recordings were carried out through sound walks. At these locations, sound pressure levels and the types of sounds that make up the soundscape were identified. It was found that nature sounds, society, and human-induced sounds were predominantly heard in study areas. The results revealed that the sound types in soundscape, which have unique sound types in both study areas, produce a positive affect on tourists even if their pressure increases.

KEYWORDS

Soundscape, Tourism, Mood, Soundwalk, Tourist Satisfaction, Tourism Geography.

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1. Introduction

Multidimensional experiences contribute to a thorough understanding of the values and meanings of space. The sensory dimension of tourist experiences is therefore important for both practitioners and scientific researchers. The tourist experience has a complex structure, incorporating the sight, taste, touch, and hearing senses (He et al., 2018). Despite this complex structure, the visual dimension is more frequently addressed in scientific studies (Liu et al., 2018). Such dominance of visuality trivializes other emotions (Saldanha, 2009). In his study, questioning the dominance of visuality, Porteous (1990) underlines that sight alone is insufficient to perceive the world. Tourism researchers have recently focused on important aspects of tourists' other senses, emphasizing embodied activities to better comprehend tourist experiences (Kang & Gretzel, 2012).

Tourists' perception and interpretation of the space mature with site-specific sounds (Liu et al., 2018). Tourists who investigate the sound contextually learn about the culture and society of the place they are visiting from the sounds they hear and may envision the structure of that culture and society in their minds (LaBelle, 2010; Ay & Günay Aktaş, 2019). Auditory experiences are therefore part of the tourist experience, and Waitt and Duffy (2010) argue that tourism studies should pay closer attention to hearing and listening.

The term soundscape refers to sound ambience, which refers to the aggregate of perceptible sounds, their environment, their location, their interaction with each other and with the listener, and the listener's context (Truax 1984; Porteous & Mastin 1985; Yang & Kang 2005a; Dubois et al., 2006; Kang, 2007). Soundscape also encompasses an individual's or society's perception and understanding of the acoustic environment (Schafer, 1977; Axelsson et al., 2010; Brown et al., 2016). The soundscape can also trigger specific perceptions that cannot be experienced through visual stimuli and help people to understand their environment more comprehensively and act more rationally (Qiu et al., 2018a).

Soundscape is a component of tourist destination landscape. All landscape components correspond to existing and potential tourism attractions. The nature, culture and emotion of the destination are the elements consumed in tourism activities. While the landscape is consumed by tourists, it also determines what is to be consumed (Akgiş İlhan et al., 2022a). Tourists' perceptions and judgments are of great importance for many areas, including tourism planning and marketing (Akgiş İlhan et al., 2022b). This is because the spatial difference around the world is caused by the landscape, and the perception of everyday life is made up of emotions, sounds, and smells (Akgiş İlhan et al., 2022a). Tourists' perception of sounds is an important factor influencing their emotional experience of a destination (Waitt & Duffy, 2010). Therefore, listening to a soundscape involves a simultaneous physiological, psychological, and cultural process that differs considerably from just looking at the visual landscape. Opinions regarding a soundscape being affected by personal experiences, cultural background, environment, and other factors cause perceptual differences (Zuo et al., 2020). The perception of soundscape is therefore highly subjective, yet it can be perceived more directly and more quickly than visual landscape. Therefore, it can affect the tourists' moods more easily (Schafer, 1977; Qiu et al., 2018b).

Theoretically, mood refers to an individual's subjectively experienced transient internal state in a specific context. It is stated that mood produces similarly valued thoughts, and that this can affect behaviour (Peterson & Sauber, 1983). Mood is an extremely important concept for understanding human existence in the world (Kenaan & Ferber, 2011) and is an integral component of daily life. Negative and positive moods indicate how people evaluate their surroundings. This evaluation emerges as a result of information processing. Positive moods signal easy information processing and give the person a sense of safety. On the other hand, negative moods point to the presence of an unusual environment that requires attention and systematic information processing (Schwarz, 1990).

There is currently a scarcity of research on sound and human experience. These studies are mainly conducted on three themes. The first relates to noise pollution and its effects on tourists, the second concerns the value and significance of a natural, quiet soundscape, and the last is about the amphiboly experience and sonic interpretation (Merchan et al., 2014; Filipan et al., 2017; Liu et al., 2018; Chen et al., 2021). When the literature on tourism and soundscape is examined, it can be seen that studies have been carried out on various topics: soundscape expectation (Liu et al., 2013; Bernat, 2014; Liu et al., 2018; Ren

et al., 2018; Yang et al., 2020; Kankhuni & Ngwira 2021); satisfaction with soundscape (Kang & Gretzel, 2012; Jiang et al., 2018; Qiu et al., 2018b; Montazerolhodjah et al., 2019; To & Chung, 2019; Grguric, 2020; Jiang et al., 2020); perception of soundscape (Aletta et al., 2016; He et al., 2018; Qiu et al., 2018a; Grguric, 2020; Zuo et al., 2020; Gale et al., 2021; Gale & Ednie, 2021; Jiang, 2022); and the effect of soundscape perception on flow experience (Lu et al., 2021).

Soundscape plays a key role in fostering a favourable tourist experience and elevating tourist satisfaction (Liu et al., 2018; He et al., 2018; Qiu et al., 2018a; Qiu et al., 2018b; Jiang et al., 2020; Kankhuni & Ngwira, 2021; Lu et al., 2021). More nuanced studies that provide a new perspective on how tourists interact with their environment would be beneficial to maximize tourist satisfaction and enjoyment. Investigating how tourists are sensually affected by soundscapes is therefore a worthwhile topic.

In urban areas, it is difficult to distinguish between tourism and recreation. This is because, despite several significant differences, they both involve the same facilities, resources and environments. Therefore, the most important attraction for urban tourists, other than historical and cultural sites, is recreational areas (Hall & Page, 2006). Most of the previous soundscape studies were conducted on natural areas (Jiang et al., 2020; Kankhuni & Ngwira 2021; Jiang, 2022), rural areas (Ren et al., 2018; Chen et al., 2021), and urban areas (Aletta et al., 2016; Montazerolhodjah et al., 2019; Grguric, 2020). This article focuses on urban tourists in urban recreational areas with two different attributes. This is because, according to the UNWTO (2020), rapid urbanization, affordable transportation, increased mobility, ease of travel, the emergence of new technologies (such as digital platforms for property rental and accommodation services), and a growing middle class have made cities increasingly popular tourism destinations. 90% of COVID-19 cases occurred in urban areas (CCSA, 2021). The urban tourism performance index reveals that urban areas have experienced a devastatingly negative impact due to the COVID-19 pandemic (Anguera-Torrell et al., 2021). Despite predictions that the COVID-19 pandemic would cause permanent attitudinal changes meaning that tourists would tend to natural areas (Villacé-Molinero et al., 2021; Vaishar & Šťastná, 2022; Moya Calderón et al., 2022) recent data shows that tourism movements around the world have tended to revert to pre-pandemic patterns (UNWTO, 2022). The purpose of this article is to explain how tourism stakeholders may handle soundscape by disclosing the effect of soundscape on tourists' moods in urban recreational areas, and to underline the importance of soundscape in tourism research.

In this regard, we sought to provide evidence that could contribute to answering the following questions: 'Is there any correlation between tourists' moods caused by the soundscape and the sound pressure?' and 'Is there any correlation between tourists' moods caused by the soundscape and the sound type which is most prominent to them and which they hear the most?'.

Unlike other studies, this article not only focuses on determining the effect of the pressure of sounds that make up the soundscape on the mood of tourists, but also on the types of these sounds. In this study, sound pressure measurements and sound recordings were carried out concurrently with the data collection process of tourists' moods. Evaluation of the tourist mood caused by the soundscape, from the perspective of sound pressure and sound type, is the theoretical contribution of this study. This study also extends the literature on tourist satisfaction. The importance of soundscape in destination and recreational area development is revealed in this study, and recommendations for soundscape management are produced, which is the research's key practical contribution.

2. Theoretical Background and Research Hypotheses

Studies on the correlation between the pressure of sounds that make up the soundscape and the moods of tourists are relatively scarce. Several studies focus on how sound pressure in urban or natural areas affects the perception of the soundscape (Yang & Kang, 2005b; Harold, 2007; Nilsson et al., 2007; Pilcher et al., 2009; Szeremeta & Zannin, 2009; Merchan et al., 2014; Sharma & Bhattacharya, 2014; Calleja et al., 2017; Liu et al., 2018). There are also studies that aim to determine the relationship between the types of sounds in the soundscape and the perception of the soundscape. In these studies, there is a common finding that natural sounds are preferred by tourists to artificial sounds, and that these sounds have a positive effect on tourist satisfaction (Yang & Kang, 2005a; Guastavino, 2006; Axelsson et al., 2010; Jeon et al., 2010; Pheasant et al., 2010; Jeon et al., 2011; Jeon et al., 2013; Soares & Coelho, 2016; Li et al., 2018).

Apart from these, Liu et al. (2013) found that the physical characteristics of the visual landscape influence the perception of the soundscape. On the other hand, Choy et al. (2014) found that recreational areas are influenced by users' perception of soundscape.

The Environmental Protection Agency (EPA, 1974) listed the possible effects of sound pressure on humans. The World Health Organization (WHO, 1999) emphasized the effect of outdoor sound pressure on individuals and revealed the effects of sound according to the levels of pressure. Yang and Kang (2005a) report that natural sounds in the city are generally more pleasing than artificial sounds; Çankaya and Yılmazer (2016) report that music and natural sound sources are mostly preferred over electronic-mechanical sound sources; Pheasant et al. (2010) report that natural tranquility is important for people to be satisfied with their surroundings; Axelsson et al. (2010) report that people relax in a place with natural sounds, while they do not feel comfortable in a place with electronic sounds. Guastavino (2006), Jeon et al. (2010), Jeon et al. (2011) and Jeon et al. (2013) conclude that natural sounds are pleasing to people. Nilsson et al. (2007) claim that the sound types that make up the soundscape in urban parks and green open spaces and that the informational properties of the sound are more prominent determinants of quality compared to sound pressure. Accordingly, it appears that there are individual differences in the perception of sound. At this point, Gestalt theory comes to the fore. The reasons for individual differences in soundscape perception can be explained within the framework of Gestalt theory, which reveals differences in visual perception (Schafer, 1977). Gestalt theory explains how the individual mind organises similar images and how images are perceived by combining sensory input, including sight, hearing and smell. Gestalt theorists argue that people always exist in a field organised by their perceptions of their own needs or interests at a particular time and place (Lin, 2009). Similar to physics, the central tenet of Gestalt psychology is that an object is perceived according to the overall context in which it exists. Elements within a visual field either attract (group) or repel (ungroup) each other (Suler & Zakia, 2017). Given that tourism activities basically aim to make people feel better, and in line with the information given above, it is a valuable question as to whether the sound pressure level and dominant sound type influence tourists' moods. Therefore, the following hypotheses are proposed:

H1. The pressure level of sounds in the soundscape influences the positive mood of tourists.
H2. The sound type that is dominant for tourists in the soundscape influences the positive mood of tourists.
H3. The pressure level of sounds in the soundscape influences the negative mood of tourists.
H4. The sound type that is dominant for tourists in the soundscape influences the negative mood of tourists.

3. Methodology

This article has been designed within the framework of the six-layered research onion developed by Saunders et al. (2007). Positivist philosophy was used in this study because the researchers were not biased by the case and the data acquired using a highly structured assessment. As the aim was to generalize the result obtained by working on a sample, induction was determined as the research approach, and the strategy in collecting the data was determined as a questionnaire. The type of method chosen in the analysis and the interpretation of the data obtained is quantitative, whereas the time horizon is cross-sectional as the data were collected between 5 June 2021, and 15 July 2021.

3.1 Study Area

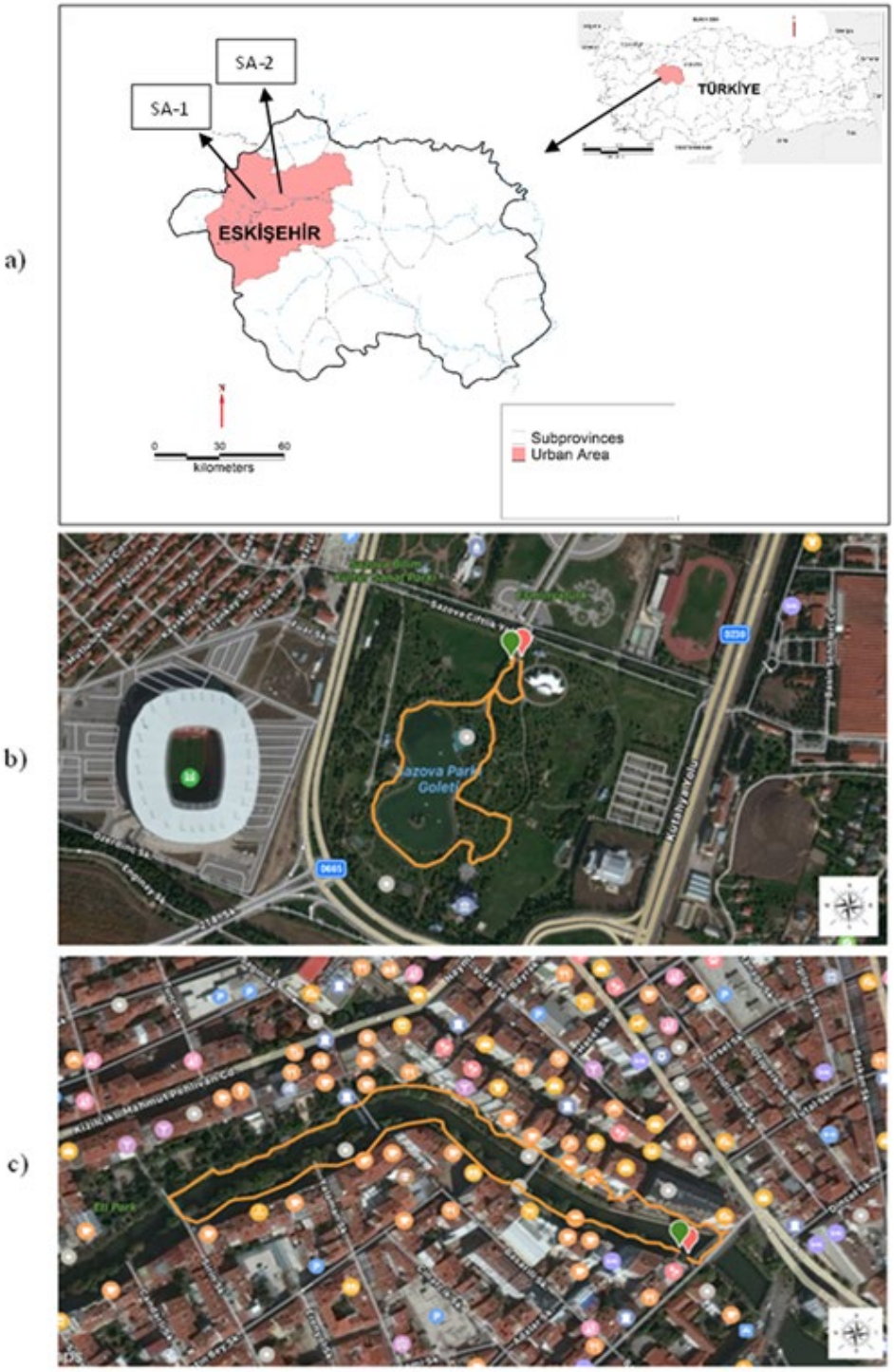
Eskişehir is set in a province located in the Central Anatolia Region of Turkey (Figure 1). The city is characterized by its specific nature and unique properties which differentiate it from other cities. Such differences originate from the city's natural landscapes, as well as human-made recreational areas that were made later, reinforcing the city's image and identity. Eskişehir attracts many visitors with its unique features (Tokay Argan, 2016). In 2020, 18,458 foreigners entered Turkey through Eskişehir Hasan Polatkan Airport. In addition, according to information received from the Ministry of Culture and Tourism, the

number using the accommodation facilities was 385,290, and the number of overnight stays was 545,645. It is known that there are many visitors to Eskişehir on daily tours, but there are no official statistics on this. Given the possibility of accommodation outside the facilities, the total number of visitors is expected to exceed 500,000. Eskişehir is also known to have numerous urban tourism assets (BEBKA, 2020). Given all this information, Eskişehir can be said to be one of the most important urban tourism destinations in Turkey and is assumed to represent all the urban tourism destinations through this feature.

Parks and streams in cities are important areas that provide recreational opportunities for people (Brown et al., 2014; Hong et al., 2019; Shan et al., 2020). Soundscape studies in tourism are intensively focused on nature-based tourism in urban areas (Yang & Kang, 2005b; Yang & Kang, 2005a; Nilsson et al., 2007; Liu et al., 2018; Jiang et al., 2020; Gale et al., 2021; Qiu et al., 2021; Wu et al., 2021; Jiang, 2022). Hong and Jeon (2015) studied soundscape in basic shopping districts, residential areas, central business districts and urban green spaces. In this study, two different study areas (SAs) were selected in a partially similar manner; an urban green space and a green space located in the central business district (CBD). These areas are Sazova Science, Culture and Art Park (SA-1) in Eskisehir, which attracts many tourists, and Adalar (SA-2) on the banks of the Porsuk river. Sazova Science, Culture, and Art Park, which is an urban green area, is the largest recreational area of the city, established on an area of 400,000 square meters. It is a theme park located ten minutes from the city centre. Adalar is located along a section of the Porsuk river that runs through the heart of Eskişehir, and is densely crowded with cafes, restaurants, patisseries, and hotels. This region is surrounded by buildings that range in height from one to seven floors. The lower levels of these buildings house cafes, restaurants, and patisseries. Adalar is also located in the central business district, where the population density is quite high, and is an important visiting area for tourists. Boarding points for gondola and boat cruises are also located in this area. Tourists can explore the Adalar locality by traveling along the Porsuk river on these cruises. It is thought that these areas with different attributes may have different soundscapes. In order to determine the effect of these different soundscapes on tourists' moods, two different study areas were studied.

In both study areas, fifteen-minute walking routes were constructed, based on the most popular and highly frequented tourist destinations (Figure 1).

Figure 1. a) Location of Study Areas, b) Study Area-1 Walking Route, c) Study Area-2 Walking Route



Source: Own Elaboration

3.2 Data Collection Tool

In this study, the Positive and Negative Affect Schedule (PANAS) was used to measure the mood of tourists induced by the soundscape. This is because Watson et al. (1988) propose the PANAS as a reliable, valid and effective tool to measure two key dimensions of mood; positive affect (PA) and negative affect (NA). The scale includes twenty mood descriptors, of which ten are positive and ten are negative. People given the PANAS were asked to reflect on how they felt, considering the soundscape they were in, and to rate how much they experienced each of these mood descriptors on a five-point Likert scale (1=very slightly

or not at all, 5=extremely). In addition, demographic questions providing information regarding the age, gender and educational status of the participants, and the question, 'Which sound is the most dominant sound for you among the sounds you hear now?', were also added to the survey.

The Cronbach α value of the scale was found to be 0.771 and, according to this value, it was understood that the scale is highly reliable. As a result of a confirmatory factor analysis (CFA) conducted to test the theoretical validity of the factor structure of the PANAS, the fit indices of the measurement model were found to be χ2/sd=3.98 IFI=0.904 CFI=0.903 GFI=0.921 RMSEA=0.061 AGFI=0900 NFI=0.875. Accordingly, it was found that each factor constituting the scale represented its constituent items with high fit values, and the structural validity of the two-dimensional PANAS was confirmed.

3.3 Sample

Purposive sampling, a non-random sampling technique, was used as the sampling method, taking into account time and financial constraints. Data were collected from a total of 794 tourists, of whom 397 visited SA-1 and 397 visited SA-2. Since data was collected during the period when travel restrictions were implemented due to the COVID-19 pandemic, data could only be collected from domestic tourists. 530 participants (66,8%) were female, and 264 (33,2%) were male. The participants were within the age ranges of 18-24 years (33.2%), 25-34 years (28.7%), and 35-44 years (20.8%). In terms of educational attainment, most of the participants (43.6%) held a bachelor's degree. According to the data on the place of residence of tourists, it was found that more than half of them, 72.4%, lived in the city centre, 24.7% in the district, 1.5% in the town and 1.4% in the village.

3.4 Data Collection and Analysis

Tourists visiting Eskişehir mostly prefer to walk around the city centre and mainly visit shopping, entertainment and recreational areas (BEBKA, 2020). To this end, data were collected from tourists who visited the study areas during weekends of high tourist mobility in June and July. The weekend days were chosen, when the tourist density is high. Due to COVID-19 pandemic restrictions, a Sunday curfew was imposed in Turkey during the month of June. For this reason, data could only be collected on Saturdays in this month. First, sound measurement and recordings were made, and then data were collected through face-to-face interviews.

During data collection, sound pressure measurements were made and the sounds in the soundscape were recorded simultaneously. These recordings were made with sound walks on the routes created in the study area. The sound recordings were listened to by the researcher daily, and the sounds were classified. In this research, the sounds that make up the soundscape are classified according to the referential aspects identified by Schafer. Schafer (1977) classified sounds by their 'physical characteristics' and 'referential aspects'. The classification, according to the physical characteristics, is a classification based on the physical characteristics of the sounds, attack, body, decay, duration, frequency, and dynamics. The classification, according to referential aspects, is the classification made according to the functions and meanings of sounds; natural sounds, human sounds, sounds and society, mechanical sounds, quiet and silence, and sounds as indicators (Table 1).

Table 1. Schafer's Classification of Sound by Referential Aspects

I. Natural Sounds	II. Human Sounds	III. Sounds and Society
Sounds of creation	Sounds of the voice	General descriptions of rural soundscapes
Sounds of apocalypse	Sounds of the body	Town soundscapes
Sounds of water	Sounds of clothing	City soundscapes
Sounds of air		Maritime soundscapes
Sounds of earth		Domestic soundscapes
Sounds of fire		Sounds of trades, professions and livelihoods
Sounds of birds		Sounds of factories and offices
Sounds of animals		Sounds of entertainments
Sounds of insects		Music
Sounds of fish and sea creatures		Ceremonies and festivals
Sounds of seasons		Parks and gardens
		Religious festivals
IV. Mechanical Sounds	**V. Quiet and Silence**	**VI. Sounds as Indicators**
Machines		Bells and gongs
Industrial and factory equipment		Horns and whistles
Transportation machines		Sounds of time
Warfare machines		Telephones
Trains and trolleys		Warning systems
Internal combustion engines		Signals of pleasure
Aircraft		Indicators of future occurrences
Construction and demolition equipment		
Mechanical tools		
Ventilators and air-conditioners		
Instruments of war and destruction		
Farm machinery		

Source: Schafer (1977)

For sound pressure measurements, a PCE-432 Type 1 sonometer, which can measure A-weighted and C-weighted sound pressure, was used to determine the A-weighted equivalent sound pressure level (LAeq) within the scope of this study. Recordings were made with a Zoom H6 audio recorder.

Background noise levels of the study areas were also determined in order to determine whether there was noise in these areas. For this, sound pressure measurements were made between 6.00 am and 7.00 am on weekdays when there were no crowds in the study areas. According to the measurements, the SA-1 background noise level was 49.7 dBA and the SA-2 background noise level was 48.9 dBA. You can listen to a sample background noise record of SA-1: https://soundcloud.com/e-ref-ay/sazova-background-noisewav, and a sample background noise record of SA-2: https://soundcloud.com/e-ref-ay/adalar-background-noisewav).

Image 1. Adalar Locality

Source: Own Elaboration

Image 2. Sazova Science, Culture, and Art Park

Source: Own Elaboration

An IBM SPSS 23.0 was used for data analysis and AMOS 23.00 statistical software was used for the confirmatory factor analysis of the scale. To test the effect of decibel levels and dominant sound types in the soundscape on the mood of visitors, multiple regression analysis was conducted. However, since the difference between the groups of the sound type variable here was not mathematically equal for the dominant sound variable to be subjected to regression analysis, that is, since the data were categorical, a dummy variable was created by re-coding. During the data collection phase of the study, no data could be obtained in the 'quiet and silence' group. In the multiple regression analysis to be applied, 'mechanical sounds' for SA-1 and 'sounds as indicators' for SA-2 were taken as reference variables, with four (D1, D2, D3, D4) dummy variables being formed. These dummy variables are presented in Table 2.

Table 2. Definition of Dummy Variables

Main variable: Mechanical sounds				
	D1	D2	D3	D4
Natural sounds	1	0	0	0
Human sounds	0	1	0	0
Sounds and society	0	0	1	0
Sounds as indicators	0	0	0	1
Main variable: Sounds as indicators				
	D1	D2	D3	D4
Natural sounds	1	0	0	0
Human sounds	0	1	0	0
Sounds and society	0	0	1	0
Mechanical sounds	0	0	0	1

Source: Own Elaboration

As the sample size was larger than 100 (n=794) in this study, the assumption of the central limit theorem was considered. According to the theorem, the number of samples must be at least thirty in order to apply parametric tests (Chang et al., 2008). Therefore, normality assumption was adopted.

4. Findings

An attempt was made to define the soundscape of the study areas using sound pressure measurements and sound recording analysis as part of the research.

Table 3. Sound Pressure Level of Study Areas

	Date	LAeq (dbA)		Date	LAeq (dbA)
	05.06.2021	58,3		12.06.2021	68,3
	12.06.2021	54,7		19.06.2021	64,3
	19.06.2021	56,1		26.06.2021	66,0
SA-1	26.06.2021	64,9	**SA-2**	03.07.2021	59,6
	03.07.2021	60,5		04.07.2021	60,5
	04.07.2021	55,2		10.07.2021	61,6
	11.07.2021	56,6		11.07.2021	62,8
	15.07.2021	55,2		15.07.2021	60,7
Average		**57,6**			**62,9**

Source: Own Elaboration

According to Table 3, the highest LAeq level for SA-1 was measured as 64.9 dbA on 26 June, 2021. The lowest LAeq level was measured as 54.7 dbA on 12 June, 2021. The highest LAeq level measured for SA-2 was 68.3 dbA on 12 June, 2021, and the lowest LAeq level was 59.6 dbA on 3 July, 2021.

Table 4. Frequencies of Foreground Sounds for Participants

	Study Area-1		Study Area-2	
Sound Type	n	%	n	%
Natural sounds	172	43,3	79	19,9
Human sounds	152	38,3	123	31,0
Sounds and society	37	9,3	161	40,6
Mechanical sounds	4	1,0	32	8,0
Sounds as indicators	32	8,1	2	,5
Total	**397**	**100,0**	**397**	**100,0**

Source: Own Elaboration

Sound recordings made in the study areas were listened to, analysed, and classified by the researchers (Table 4). The most prominent sound types for the tourists in the SA-1 were natural sounds (n=172) and human sounds (n=152). The most prominent sound types for the tourists in the SA-2 were sounds and society (n=161) and human sounds (n=123).

Table 5. Descriptive Statistics for the PANAS Dimensions of the Study Areas

	Dimensions	Mean	Std. Deviation
SA-1	PA	3,49	,918
	NA	1,30	,483
	n=397		
SA-2	PA	3,46	,925
	NA	1,43	,543
	n=397		

Source: Own Elaboration

To determine the soundscape-induced moods of the participants, the weights of the PA and NA averages, which are two aspects of the PANAS, were examined (Table 5). In line with the data obtained, the soundscapes in the SA-1 and SA-2 evoke more positive emotions (respectively $\bar{x}$ =3,49; $\bar{x}$ =3,46) in the tourists, while on the other hand, they evoke fewer negative emotions (respectively $\bar{x}$ =1,30; $\bar{x}$ =1,43).

The results of the multiple regression analysis are given in Table 6 and Table 7.

Table 6. The Effect of Independent Variables on Positive Mood

	Variables	Mean	Std. Deviation	St. Error	*B*	*β*	*p*
SA-1	Constant	-	-	,967	1,690	-	,081
	LAeq	57,423	3,2449	,014	,034	,120	,017*
	Natural sounds	,4332	,49615	,451	-,006	-,003	,989
	Human sounds	,3829	,48670	,453	-,146	-,077	,748
	Sounds and society	,0932	,29108	,469	-,208	-,066	,657
	Sounds as indicators	,0806	,27257	,476	-,805	-,239	,092
	Dependent variable: PA Reference variable: Mechanical sounds R^2 = ,075; *F* (5,391) = 6,365, *p*<0,05 **p*<0,05						
	Variables	**Mean**	**Std. Deviation**	**St. Error**	*B*	*β*	*p*
SA-2	Constant	-	-	1,569	1,167	-	,458
	LAeq	62,496	2,0593	,023	,016	,035	,491
	Natural sounds	,1990	,39975	,661	1,462	,631	,028
	Human sounds	,3098	,46300	,659	1,335	,667	,043
	Sounds and society	,4055	,49162	,657	1,273	,676	,054
	Mechanical sounds	,0806	,27257	,673	1,306	,384	,053
	Dependent variable: PA Reference variable: Sounds as indicators R^2 = ,018; *F* (5,391) = 1,400, *p*>0,05						

Source: Own Elaboration

According to the SA-1 analysis results, the regression equation for predicting positive mood (Y) is as follows:

Y=1,690 + 0,34 * LAeq-0,006 * Natural sounds - 0,146 * Human sounds - 0,208 * Sounds and society - 0,805 * Sounds as indicators

For SA-1, the results of the analysis are statistically significant [(F 5,391) =6.365, p<0.05). The corrected R^2 value for SA-1 is 0,063. This shows that the 6% variance in the PA is explained by the variables. When the β coefficients of the variables are analysed, the decibel level of the sound (β=0.120, p<0.05) is found to have a significant contribution in explaining the PA. The correlation between them is positive. The dominant sound type variables have no significant contribution in explaining the variance in the PA (p>0.05).

The regression analysis for SA-2 shows that p>0.05 in the ANOVA table. Accordingly, it is understood that the independent variables do not have a significant effect on the dependent variable. According to the results of the analysis, hypothesis H_1 was accepted for SA-1 and rejected for SA-2. Hypothesis H_2 was rejected for both study areas.

Table 7. The Effect of Independent Variables on Negative Mood

	Variables	**Mean**	**Std. Deviation**	**St. Error**	*B*	*β*	*p*
SA-1	Constant	**-**	**-**	,515	2,056	-	,000
	LAeq	57,423	3,2449	,008	,000	,002	,968
	Natural sounds	,4332	,49615	,241	-,856	-,879	,000*
	Human sounds	,3829	,48670	,242	-,752	-,758	,002*
	Sounds and society	,0932	,29108	,250	-,699	-,421	,005*
	Sounds as indicators	,0806	,27257	,254	-,608	-,343	,017*
	Dependent variable: NA Reference variable: Mechanical sounds R^2 = ,051; F (5,391) = 4,206, p<0,05 *p<0,05						
	Variables	**Mean**	**Std. Deviation**	**St. Error**	*B*	*β*	*p*
SA-2	Constant	-	-	,904	2,762	-	,002
	LAeq	62,496	2,0593	,013	,002	,008	,867
	Natural sounds	,1990	,39975	,381	-1,580	-1,161	,000*
	Human sounds	,3098	,46300	,379	-1,377	-1,172	,000*
	Sounds and society	,4055	,49162	,378	-1,495	-1,352	,000*
	Mechanical sounds	,0806	,27257	,388	-1,427	-,716	,000*
	Dependent variable: NA Reference variable: Sounds as indicators R^2 = ,055; F (5,391) = 4,576, p<0,05 *p<0,05						

Source: Own Elaboration

According to the SA-1 analysis results, the regression equation for predicting negative mood (Y) is as follows:

Y = 2,056 + 0 * LAeq – 0,856 * Natural sounds – 0,752 * Human sounds – 0,699 * Sounds and society – 0,608 * Sounds as indicators

According to the SA-2 analysis results, the regression equation for predicting positive mood (Y) is as follows:

Y = 2,762 + 0,002 * LAeq – 1,580 * Natural sounds – 1,377 * Human sounds – 1,495 * Sounds and society – 1,427 * Mechanical sounds

The multiple regression analysis results are statistically significant for both of the study areas; (F 5,391) =4,206 p<0,05) and (F 5,391) =4,576, p<0,05). The corrected R^2 value for SA-1 is found to be 0,039. 3% of the

variance in the NA is explained by the variables. The corrected R^2 value for SA-2 is 0,043. This indicates that the 4% variance in the NA is explained by the variables. It was found that all the dominant sound types in these areas contribute significantly to explaining the NA, and that they are negatively correlated with the NA. For both areas, the decibel level of sound (LAeq) variable does not have a significant contribution in explaining the variance in NA (p>0.05). According to the results of the analysis, hypothesis H_3 was rejected for both study areas. Hypothesis H_4 was accepted for both study areas.

5. Discussion

This study was conducted to determine the effect of soundscape on tourists' moods in urban recreational areas. Auditory experiences are part of the tourism experience (Waitt & Duffy, 2010). Sound may contain deep information about a culture (LaBelle, 2010). Therefore, a significant part of the tourist experience is associated with the sounds around them (Qiu et al., 2018b). Soundscape can trigger certain special perceptions that cannot be experienced with visual stimuli and help people act more rationally by understanding their environment more comprehensively (Qiu et al., 2018a). According to 'selective perception', which is considered within the framework of Gestalt theory, in an environment with multiple stimuli, the individual perceives several of them. This is because individuals make unconscious choices between stimuli based on differences in factors such as past experience, culture, motivation, and expectations. When considering selective perception in the context of tourism, tourists' inability to respond to all stimuli in destinations can only be explained by perceiving certain stimuli in the foreground and others in the background (Wu et al., 2013). From this perspective, tourists were first asked which sound was dominant for them.

The senses belong to the body and are affected by the state of our bodies (Shusterman, 2000). Whether a sound is a figure, or a ground is partly related to acculturation (habits), partly to the individual's mental state (mood, interest), and partly to the individual's relationship with the space (local, foreign) (Schafer, 1977). Bruce and Davis (2014) argue that individuals learn what kind of soundscape a place should have through experience, and this affects their perceptions of that space. As the place they live in affects the senses, tourists were asked about their moods based on their surroundings.

The tourists stated that they heard natural sounds, such as birds, water and wind, most often in the SA-1 theme park, with human sounds coming second (*Sample record of SA-1 may listen via that link: https://soundcloud.com/e-ref-ay/sazova-ses-atmosferiwav*). The average PA of the theme park arising from soundscape is higher than the average NA. It has been determined that as the decibel level of the soundscape consisting of natural sounds, which is the dominant sound type, increases, the average PA of the tourists increases and the average NA decreases. It seems that the research hypothesis regarding the effect of the pressure level of sounds in the soundscape on the positive mood of tourists is accepted for the Theme Park. Jiang et al. (2018), Yang et al. (2020), Gale and Ednie (2021), Kankhuni and Ngwira (2021) and Jiang (2022) also conclude that the same types of sounds are heard intensely in parks, similar to the SA-1, and that satisfaction with the soundscape is high. It can be said that visitors to the theme park enjoy hearing the naturals sound and human sounds that dominate these areas, and that the increase in the pressure of these sounds does not negatively affect them and that, as the natural sounds and human sounds increase, the tourists' NA decreases. It was observed that the research hypothesis regarding the effect of the dominant sound type for tourists in the soundscape on the negative mood of tourists was confirmed. This can be explained by the conclusion of Nilsson et al. (2007) that 'sound types in urban parks and green open spaces are more important than sound pressure among the determining factors of the soundscape'. Additionally, Montazerolhodjah et al. (2019) state that human sounds increase acoustic comfort. On the other hand, Filipan et. al. (2017) also state that individuals' feeling of peacefulness in such park areas is related to the decibel level of the soundscape and that low decibel sounds are more peaceful. From this point of view, satisfaction in SA-1 may also be due to the fact that the sound pressure in the theme park is not at disturbing levels that may cause hearing loss according to EPA (1974).

When the SA-2 in the CBD was put under the spotlight, it was found that in this recreational area, sounds and society, such as the sounds of business centres, the sounds of vehicles in the city and the sounds of music, are more prominent and dominant, and the second dominant sound is human sounds

(*Sample record of SA-2 may listen via that link: https://soundcloud.com/e-ref-ay/adalar-ses-atmosferiwav*). In this study area, it can be said that the soundscape originating the PA average is higher than the NA average, as Yang and Kang, (2005a) and Montazerolhodjah et al (2019) state, it can be said that the sounds of natural sounds and society and human sounds are related to the welcome by people. As the average of sounds and society and human sounds, which are the dominant sound types in the CBD, increases, the average of the NA decreases. As this area is located in the CBD, it can be said that human sounds and sounds and society are sounds specific to this field, and tourists are aware of this. It can be seen that hearing the sounds specific to this field, regardless of their type, reduces negative emotions in tourists. This finding supports Hong and Jeon's (2015) conclusion that individuals tend to think that live acoustic environments created by human activities may be suitable for the function of urban recreational areas. Hong and Jeon also reveal that the soundscape of visually pleasing urban spaces is also perceived as pleasant by people. Xu and Wu (2021) state that visual stimuli affect the perception of the soundscape, and that sounds that match the visuals are perceived positively. Considering that the study areas in this article are places with visually pleasing elements, it can be said that the result obtained supports the results of other researchers.

When the two study areas were compared, it was clear that the average PA was lower in the CBD than in the theme park. It can be said that the reason for this is that the sounds coming from music and places of business are more prominent in the CBD, and that mechanical sounds are heard more than in the theme park. This is because To and Chung (2019) found that mechanical sounds are not welcomed by people. Grguric (2020) also concludes that music broadcast in tourism destinations disrupts the soundscape structure of the city, and argues that the music broadcast in public spaces should be kept under control.

6. Conclusion

In this article, unlike previous studies on soundscape in tourism, two recreational areas with different characteristics located in the city were studied, and the effects of both types of sounds that make up their soundscapes and the pressure levels of these sounds on the mood of tourists were examined. Therefore, how tourists are sensually affected by the soundscape is revealed. It is understood that the decibel level of the sounds that make up the soundscape for the theme park has a positive effect on the tourists' PA average. This can be explained by the fact that the sounds that make up the soundscape here are natural sounds that are pleasing to people, such as birdsong, water sounds and wind sounds. These sounds are also the dominant sound types heard by tourists in this area. It can be seen that the perception of sounds in the soundscape of the theme park is independent of the pressure levels of these sounds. The pressure level of the sounds here is not at a level that poses a threat to human health according to the EPA (1974) and the WHO (1999). This suggests that such sounds are unlikely to cause disturbance in similar recreational areas. In addition, the dominant sound types for tourists in the soundscape of this area were found to have a negative effect on the average NA. Yet again, this can be explained by the fact that the sounds that make up the soundscape here are mostly natural sounds that people like to hear.

Human and society-generated sounds, such as business centre sounds, human voices and music are more prominent and dominant for tourists in the CBD. It was determined that the dominant sound types for tourists here have a negative effect on their NA average. In other words, as the sounds here increase, the NA of the tourists decreases. This can be explained by the fact that these sounds are unique to this region. The sounds in the soundscape of this area are human-induced sounds, such as the sound of engines, music, bicycles, trams, and so on. On the other hand, mechanical sounds, such as engine noises and tram sounds are heard more in the CBD compared to the theme park. Mechanical sounds cause discomfort in people. Therefore, the average PA in the CBD is lower than that in the theme park. In addition, it was found that the mean PA in both areas was higher than the mean NA in general. Again, this can be explained by the fact that the soundscape in these areas contains unique sound types, that tourists visit these areas knowing the sound types they are likely to encounter, and that these areas contain sound types (such as sounds of nature, human voices, music) that are pleasant to people. In line with all these data, it has been confirmed that there is a correlation between tourists' moods caused by the soundscape and the sound pressure. It has also

been confirmed that there is a correlation between tourists' moods caused by the soundscape and the sound type which is most prominent to them and which they hear the most.

The first key contribution of this study is to extend the literature on the presence of a correlation between the pressure and types of sounds in the soundscape and tourists' moods in urban recreational areas. The effect of soundscape on the tourist experience (He et al., 2018) and the importance of a multidimensional approach to ensure a better tourist experience have been confirmed. In this research, it has been found that the soundscape of the spaces examined is perceived positively by the tourists visiting there, because it contains the space's unique sounds. Furthermore, the tourists' positive perception of the soundscape has not changed, even though it contains sound pressure levels or sound types that are anticipated to be disturbing. The fact that certain sound types, such as birdsong, water sounds, wind sounds, human voices and human community sounds, increase PA and decrease NA regardless of their pressure in theme parks is an issue that tourism planners and city administrations should pay attention to. In line with this finding, the article serves as a tool to draw the attention of both local and national stakeholders in the practitioner position to the soundscape, which is another contribution of this article. In addition, for the sustainability of these areas, noise inspections must be carried out by sound pressure measurement and appropriate sanctions applied. In general, it can be seen that activities are carried out to plan and design the physical conditions of recreation areas. It is known that there are shortcomings in the planning and design practices with regard to the soundscape of places. For the landscape planning of destinations and recreational areas, it is recommended that the original soundscape of these places be preserved, and that studies be carried out in this direction. A lack of sustainability and consumption of destinations through unconscious destruction are among the main problems of tourism. This article emphasizes the importance of the soundscape they have for the sustainability of destinations.

6.1 Limitations and Future Direction

This study was conducted in two urban recreation areas, one located in the CBD and the other a theme park, which also has high visual attraction. Although the soundscapes are intensively visited by tourists, in order to determine the effect of soundscape on the emotional state of tourists, studies should also be conducted in areas with soundscapes consisting of mechanical sounds or sounds as indicators that are likely to cause discomfort and sound pressure at levels that may pose a risk to hearing. This is because, conducting studies to measure how such a soundscape will be perceived by tourists is important in terms of extending the results of this article. Moreover, as emotions are important in tourist satisfaction, conducting studies in which senses such as smell and taste, which are other components of landscape in destinations, are measured and analysed, will contribute to the literature. In order to measure emotions in this study, the quantitative method was preferred. Future studies to be conducted using different research methods will likely provide a more in-depth understanding of the subject.

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