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Guest-Editors: Saul Neves de Jesus, Margarida Pocinho and Juan Tobal

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Tourism and Wellbeing

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EXPLORING CREATIVITY AND WELLBEING CHARACTERISTICS OF PORTUGUESE TOURISTS

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Ester Câmara⁴

Patricia Martins⁵

ABSTRACT

The purpose of this study was to explore creativity and wellbeing characteristics in a sample of Portuguese tourists while simultaneously building a creative tourist profile. A sample of 857 Portuguese tourists with ages ranging from 17 to 76 years was used. The Creative Personality Scale short form and the Tourism Experience Scale were applied for data collection. The results indicated positive and significant correlations between wellbeing and creativity. Women showed higher levels of wellbeing. Older tourists performed better in creativity. Age had a significant influence only on creativity and not on tourists' overall wellbeing. Non-students obtained higher and significant scores for creativity, while overall wellbeing was not influenced by having a job (student vs non-student). A significant multiple linear regression model suggested that wellbeing and age are significant predictors of creativity in tourism settings. Wellbeing rankings showed positive emotions in first place, creativity in second place and meaning in third place. In conclusion, the results indicated that creativity and wellbeing are important factors for tourism experiences and that Portuguese tourists' psychological profile already shows evidence that unique and memorable experiences are essential in tourism destinations.

Keywords: Creativity, Wellbeing, Tourism.

JEL Classification: E71, I31, Z32, L83

1. INTRODUCTION

Tourism is one of the biggest sectors of the economy in many countries across the world. According to the European Travel Commission (ETC) (2019a), Europe is still the leading destination worldwide, with growth of 4% in international arrivals in 2019 compared with 2018. Tourism in Europe is therefore an important part of economic growth and employment but also of social and cultural development (ETC, 2018). Despite this fact, "Recent data indicate a slower expansion with only one third of reporting destinations surpassing growth levels registered over the same period a year ago" (ETC, 2019a 5).

The slogan "To boldly go where destination Europe has never gone before", part of the strategy for Horizon 2022 of the ETC (2019b), proposes a shift in the tourism system that brings new ways of studying it, working in it, and living in it. It envisions five objectives that

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imply changes to its marketing approach, segmentation, research, budget, and partnerships. Table 1 gives a glimpse of the main aims of each of these objectives and how to reach them by 2022.

Table 1. Horizon 2022 Tourism Strategy Objectives

Strategic objectives	How?
Change of marketing	From vertical (generic) to horizontal (thematic), in which product and experience are central.
Change of segmentation	Focus on cross-border passion grounded on specific themes rather than geography.
Change of research	From macroeconomics to human behaviours.
Change of budget	A substantial budget is important to attract worldwide partners.
Change of partnerships	Build platforms, become open, and attract new partners.

Source: Content adapted from the ETC (2019b) marketing strategy for tourism

These objectives are accompanied by an adaptation of Europe to the current shifts in societies and the new modern world, which are introducing new trends and travel patterns with many new challenges for the industry but simultaneously many opportunities for its competitiveness. A particular focus of the ETC (2019b) 2022 tourism strategy that is relevant to the current paper is its emphasis on a research change that implies a new and much-needed stand concerning how tourists perceive and are perceived. As tourism is an industry of people and for people, people should come first and what they want and desire are fundamental pieces of and for tourism strategies. As the ETC (2019b: 6) stated, “Giving visitors a memorable experience gives them something to tell their friends about”. In Portugal, the 2027 Strategy for Tourism considers people as a transversal asset for all activities. Beyond this crucial asset, others, such as climate, culture, sea, or nature, are important for the Portuguese strategy. However, Portugal recognizes wellbeing as an emergent asset (Turismo de Portugal, 2017) and has included it in its country strategy for the next few years.

Wellbeing is a key element today when thinking about and exploring tourism settings. The search for meaningful lives and authenticity also produces a new set of tourists who no longer want simply to sit and relax but who wish to interact and explore the new places that they visit. Wellbeing is a construct that holds intrigue over time and in many different fields (Smith & Diekmann, 2017). It can sometimes be considered as a cultural construct, since it may mean different things to different people. Of the multiple possibilities of understanding, two stand out: hedonic and eudemonic wellbeing. Hedonic wellbeing concerns a more “here and now” idea of feeling good and pleasure, whereas eudemonic wellbeing may come from less pleasant activities that in the end (possibly years later) lead to positive outcomes (Vada, Prentice, & Hsiao, 2019). According to Uysal, Sirgy, Woo, and Kim (2015), constructs such as wellbeing are integral to the core definition of tourism. Filep and Higham (2014) even recognized that tourism has the potential to be a setting for wellbeing experiences.

Wellbeing is the main study field of positive psychology. One of the founders of this field defined positive psychology as “the scientific study of the strengths, characteristics, and actions that enable individuals and communities to thrive” (Seligman, 2013: 2). While it may seem awkward to join psychological principles to tourism endeavours, Garcês, Pocinho, and Jesus (2019: 105) acknowledged that the “introduction of Positive Psychology as the study of wellbeing in Tourism is a very natural step that has the potential to contribute to the development of new products and, ultimately, improve the tourism experience and the competitiveness of the industry”. In this regard, in a systematic literature review, it was found that, globally speaking, tourism has the potential to increase happiness and wellbeing for locals and for tourists (Garcês, Pocinho, Jesus, & Rieber, 2018).

The growing theory building and studies in positive psychology have led to the first attempt to classify wellbeing, through what have been called character strengths and virtues (CVSs) (Peterson & Seligman, 2004). This classification aims to identify the human characteristics that allow people to flourish (Seligman, Steen, Park, & Peterson, 2005). One of the characteristics that has emerged is creativity. Creativity is identified in this classification as part of the wisdom and knowledge virtue (Peterson & Seligman, 2004). Despite the existence of different definitions of creativity, two major characteristics are commonly accepted by the scientific community: originality and usefulness (Bacon, 2005).

Beyond positive psychology, the study and relevance of creativity in many different contexts have been increasing for the last few years. This means that tourism itself has also been influenced by it. Richards (2011) recognized that this influence is present not only in the increased creative turn given to tourism products but also in the industry itself by becoming a creative environment for skills and performance progress. While many different theories exist about creativity, with different focuses from a unidimensional to a multidimensional view, one of the oldest perspectives was developed by Rhodes (1961). He described creativity as an interaction between four main aspects: person, process, product, and environment. Richards (2011) reflected that tourism encompasses all these four variables when, for example, people visit creative clusters (environment) or utilize tourism attractions (products) or when creative activities concern design (creative process) and tourists are involved in them (people). Thus, the application of creativity in tourism is a very diverse phenomenon. In this regard, in a systematic literature review in which creativity was researched in tourism settings, Garcês, Pocinho, and Jesus (2018: 5) concluded the following:

... it looks that creativity is being approached from a background perspective with an organizational/structural preoccupation, leading to the improvement of the tourist experience through place and culture. This is aligned and expresses the current trend of the 'experience economy' and what is understood as 'creative tourism'.

Creative tourism is one of the main subsets of tourism and refers to a type of tourism that involves a less tangible experience in which learning about and deep experience of locals' culture take a crucial part (Virfinija, 2016). According to the United Nations Educational, Scientific and Cultural Organization's (UNESCO) (2006) definition of creative tourism, it emphasizes the idea of interaction in which tourists interact with the local environment in an educational, emotional, social, and participative way as well as with the local culture and residents, leading them to feel like part of the place. Richards (2011) concluded that creative tourism can be seen as a blend of tourism and creativity and can work as an alternative to cultural tourism, offering more authenticity in tourists' experiences.

As positive outcomes of creativity in tourism, Horng, Tsai, and Chung (2016) acknowledged that promoting creativity in tourism settings is likely to increase behavioural changes and the awareness of its relevance in this economic sector. In this sense, Marujo, Serra, and do Rosário Borges (2019), in an exploratory study about the creative tourist experience in a Portuguese region, found that those who participated in creative activities looked for unique experiences and wanted to promote more creative behaviours. In another study, Tan, Tan, Luh, and Kung (2015) explored tourists' interactions in creative tourism sites in Taiwan and found three types of tourists who participated in creative activities: relaxers, sensation seekers, and the existential type.

Kiage (2018) acknowledged that creative tourists grow their creative potential by participating in activities that involve interaction with locals, in which they can learn about

the local culture. Creative tourists seek to be immersed in the culture and have authentic local experiences while simultaneously learning about the place. They consume experiences instead of products; it is an active and participatory activity that aims to achieve personal development through experiences. This means that creativity has an important place in tourism endeavours. Nonetheless, Garcês et al. (2018: 5) stated that:

... it looks that research is focusing more on developing the creativity of the destination and those who work (or will work) there and not necessarily directing efforts to explore creativity in those who visit. (...) more research about creativity from the tourist perspective is important to further aligned the tourist experience with the tourists themselves.

Thus, aligning creativity and wellbeing as part of the broader field of positive psychology will allow an understanding of tourists from a different viewpoint. As Garcês et al. (2019) stated, psychologically speaking, wellbeing can be an important variable for destination competitiveness while simultaneously being a creative resource for the industry. Hence, studying creative tourists can provide new insights into this subset of the industry and allow the customization of new services. Therefore, this paper aims to explore the creative personality and wellbeing characteristics of Portuguese tourists and analyse their creative profile when engaged in tourism activities both in the national territory (Portugal) and in international travel.

2. METHODOLOGY

2.1 Participants

The sample was composed of 857 Portuguese tourists, who were randomly sampled through social media and word of mouth. Their ages ranged from 17 to 76 years ($M=29.29$, $SD=11.89$). Women accounted for 68.9% of the sample ($n=589$) and men for 31.1% ($n=266$). The sample contained 53.1% of students ($n=448$) and 46.9% of non-students ($n=396$).

2.2 Measurement Scales

For this study, two instruments were used: the Creative Personality Scale – short form (CPS) (Pocinho, Garcês, Jesus, Viseu, & Tobal, *submitted*) and the Tourism Wellbeing Scale (TWS) (Garcês, Pocinho, & Jesus, *in press*).

The CPS evaluates people's perception of their own creative characteristics, meaning that it aims to measure creative personality. The short form of the scale contains nine items and is unidimensional. The CPS is a self-assessment measure of an individual's creative characteristics. Responses are given in a Likert format and range from completely disagree (1) to completely agree (5). Total scores are obtained through the sum of the items that compose this instrument. Validation studies, including exploratory and confirmatory factor analyses, have shown good psychometrics results: reliability of .86, significant and positive correlations between all CPS items, and explained variance of 48.08% (Pocinho et al., *submitted*). In the present study, the reliability was .83.

The TWS aims to evaluate tourists' wellbeing in a given destination. It measures positive variables such as wellbeing, creativity, optimism, and spirituality, the main concepts from positive psychology. The validation study, also involving exploratory and confirmatory factor analyses, showed adequate psychometric characteristics. The TWS is composed of

eight items and is unidimensional, but it is possible to analyse the items individually to uncover data about the underlying positive concepts. Responses are given in a Likert format and range from totally disagree (1) to totally agree (7). The reliability was .87 and the scale showed evidence of convergent validity (Garcês et al., *in press*). In the current research, the reliability was .85.

2.3 Procedures and Data Analysis

Data collection was accomplished mostly through social media with the dissemination of *Google Forms* and through *word of mouth* in social circles. The ethical standards regarding confidentiality and anonymity were explained to the participants. The inclusion criterion for the study was that the participants had to have had a tourism experience, either in their own country (Portugal) or abroad. After the data were collected, they were introduced into the statistical software *SPSS – Statistical Package for the Social Sciences*, version 25.0. The analysis focused on descriptive, correlational, and inferential statistics. We used Levene's test for equality of variances. This is a test that determines whether two conditions have about the same or different amounts of variability between their scores. The *p* values were greater than .05, which means that the variability in the two conditions is about the same, and we chose to assume equal variances.

3. RESULTS

3.1 Creativity and Wellbeing Correlations and Descriptive Statistics

A Pearson's *r* correlation coefficient was computed to assess the relationship between the total of the CPS (Creative Personality Scale) and the eight items of the TWS (Tourism Wellbeing Scale). There was a strong positive correlation between the CPS and all the items of the TWS ($.172 < r < .304$, $p < .001$). Increases in levels of tourism wellbeing were correlated with increases in creative personality scores.

Measures of central tendency were computed to summarize the data for the study variables. Measures of dispersion were computed to understand the variability of scores for these variables. The CPS mean was 36.50, with a minimum of 15 and a maximum of 45. This is a reasonable value for tourists' creativity (Pocinho et al., *submitted*). The participants mostly chose level 4 ('moderately agree') of the five Likert options. The TWS mean was 40.85, with a minimum of 14 and a maximum of 56. Table 2 summarizes the correlation results and descriptive statistics between the variables.

Table 2. TWS and CPS: Correlations and Descriptive Statistics (N=857)

Variables	CPS	6.	8.	10.	11.	13.	14.	19.	27.	Global TWS
Global CPS	1									
6. I was able to see the positive side of the less agreeable situations that occurred.	.240**	1								
8. I found out new ways of being that gave meaning to aspects of my life.	.220**	.498**	1							
10. I had lots of fun.	.172**	.418**	.340**	1						

11. I faced this experience as a unique/original opportunity.	.207**	.447**	.489**	.565**	1					
13. I engaged in the community activities (ex. cultural, events, etc).	.275**	.320**	.379**	.337**	.389**	1				
14. This experience was a dream come true.	.191**	.304**	.461**	.363**	.552**	.411**	1			
19. I experienced a connection/relationship with something higher than myself.	.187**	.332**	.491**	.257**	.387**	.419**	.504**	1		
27. I felt good in the relationship I developed with new people.	.230**	.420**	.504**	.398**	.420**	.437**	.434**	.444**	1	
Global TWS	.304**	.643**	.740**	.606**	.735**	.671**	.741**	.708**	.716**	1
<i>M</i>	36.50	5.04	5.36	6.27	5.71	4.55	4.36	3.98	5.19	40.85
<i>SD</i>	4.59	1.60	1.52	1.16	1.55	1.88	2.00	1.91	1.67	8.09
Range	15–45	1–7	1–7	1–7	1–7	1–7	1–7	1–7	1–7	14–56

Note. CPS – Creative Personality Scale; TWS – Tourism Wellbeing Scale.

** $p < .001$.

Source: Own Elaboration

3.2 Wellbeing Rankings

As a main part of the present study, a ranking analysis for the wellbeing construct was performed. In the TWS item responses, the majority of tourists opted for level 4 ('agree in part') in the range of seven Likert levels available for this measurement. The ranking of the eight items of the TWS scale are presented in Table 3 both in English and in Portuguese. As it is possible to observe in this table, the first chosen item was related to positive emotions, the second to creativity, and the third to meaning. The item chosen less frequently was related to spirituality.

Table 3. TWS Item Ranking

Rank	Items (EN)	Items (PT)	Variable	M
1	I had lots of fun.	10. Diverti-me imenso	Positive emotions	6.27
2	I faced this experience as a unique/original opportunity.	11. Encarei esta experiência como uma oportunidade única/original.	Creativity	5.71
3	I found new ways of being that gave meaning to aspects of my life.	8. Descobri novas formas de ser e estar que deram significado a aspetos da minha vida.	Meaning	5.36
4	I felt good in the relationship I developed with new people.	27. Senti-me bem na relação que desenvolvi com pessoas novas.	Relationships	5.19
5	I was able to see the positive side of the less agreeable situations that occurred.	6. Consegui ver o lado positivo das situações menos agradáveis que ocorreram.	Optimism	5.04
6	I engaged in community activities (culture, events, etc).	13. Envolvi-me nas atividades da comunidade (ex. culturais, eventos, etc).	Engagement	4.55
7	This experience was a dream come true.	14. Esta experiência foi a realização de um sonho.	Accomplishment	4.36
8	I experienced a connection/relationship with something higher than myself.	19. Experimentei uma ligação/relação com algo superior a mim própria/próprio.	Spirituality	3.98

Source: Own Elaboration

2.3 Creativity and Wellbeing Gender Differences

An independent-sample *t*-test was conducted to compare global creativity (CPS) and wellbeing (TWS) between men and women. In relation to creativity, the CPS results showed that there was no statistically significant difference between the male and the female gender ($t(853) = -.63, p > .05$). Regarding wellbeing (TWS), we found significant gender differences. In the global scores of the TWS, there was a significant difference in the scores for women ($M = 41.03, SD = 8.88$) and men ($M = 38.75, SD = 10.21$); $t(830) = 3.29, p = 0.001$. These results suggest that gender has an effect on tourism wellbeing. Specifically, our results suggest that the wellbeing of female tourists is higher than that of male tourists. However, the effect size, based on the means, standard deviation, sample size, Cohen *d*, and Hedges *g*, is small ($d/g = 0.24$).

Analysing the items of the TWS one by one, the results showed the existence of significant gender differences only in four variables – creativity, positive emotions, positive relationships, and achievement – with women performing better than men (Table 4).

Table 4. TWS Gender Differences

TWS items	Variables	Gender	n	M (SD)	Cohen <i>d</i> / Hedges <i>g</i>
2. I had lots of fun.	Positive emotions	Female	569	6.36 (1.05)	0.21/0.22
		Male	262	6.10 (1.36)	
4. I faced this experience as a unique/original opportunity.	Creativity	Female	570	5.83 (1.48)	0.23/0.24
		Male	262	5.45 (1.75)	
6. This experience was a dream come true.	Achievement	Female	570	4.51 (1.97)	0.23/0.23
		Male	260	4.05 (2.06)	
8. I felt good in the relationship I developed with new people.	Positive relationships	Female	566	5.28 (1.64)	0.16/0.17
		Male	260	5.00 (1.75)	

Source: Own Elaboration

3.3 Creativity and Wellbeing Age Differences

An independent-sample *t*-test was conducted to compare global creativity (CPS) and wellbeing (TWS) according to participants' age groups: the younger participants were under 30 years old and the older participants were 30 years old or older.

In the global scores of the CPS, there was a significant difference between the younger ($M = 36.01, SD = 4.55$) and the older ($M = 37.69, SD = 4.49$) participants; $t(846) = -5.204, p < .001$. These results suggest that older tourists (30 years old or over) performed better on the creativity scale than the younger tourists, who were under 30 years old. Regarding the TWS, the results showed that there were no statistically significant differences in participants' age with the exception of the creativity variable/item: "11. Encarei esta experiência como uma oportunidade única/original" (I faced this experience as a unique/original opportunity), ($t(825) = -.2488, p = .013$), for which the younger ($M = 5.81, SD = 1.559$) performed better than the older ($M = 5.53, SD = 1.55$) participants.

3.4 Creativity and Wellbeing Tourists' Job Differences

An independent-sample *t*-test was conducted to compare global creativity (CPS) and wellbeing (TWS) according to participants' job groups: student and non-student tourists. Analysing wellbeing, the TWS results showed that there is no statistically significant difference between student and non-student tourists (all items with $p > .05$). In the global

scores of the CPS, there was a significant difference between student ($M=35.94$, $SD=4.48$) and non-student ($M=37.27$, $SD=4.59$) participants; $t(842)=-4.251$, $p<.001$. These results suggest that non-students (tourists with a job or retired people) performed better on the creativity scale than the tourists who had never had a job (who had only been students).

3.5 Creativity and Wellbeing Linear Regression

A multiple linear regression analysis was performed as a complement to the study and to test whether wellbeing significantly predicted participants' ratings of creativity. A significant regression equation was found with two predictors (wellbeing and age) that explained 12.4% of the variance ($R^2=.124$, $F(1,814)=25.46$, $p<.01$). The participants' predicted creativity is equal to $28.17+.16$ (wellbeing) $+1.59$ (age).

Table 4. Regression Model Summary

R	R ²	Adjusted R ²	F	Sig.
.356 ^b	.127	.124	25.46	.000

Source: Output from SPSS

Table 5. Regression Model Coefficients

	Unstandardized coefficients		Standardized coefficients	<i>t</i>	Sig.
	B	Error	Beta		
Constant	28.166	.791		35.592	.000
Wellbeing	.155	.016	.312	9.511	.000
Age	1.585	.314	.165	5.046	.000

Dependent variable: creativity.

Source: Output from SPSS

4. CONCLUSION

The study presented here made the first attempt to build a creative profile of Portuguese tourists with wellbeing variables. The overall results are interesting. A strong and positive correlation was found between creativity and wellbeing, meaning that, when wellbeing is higher, it leads to higher creativity and vice versa. This result allowed the authors to hypothesize that creativity is an important factor for feeling well in tourism experiences, which implies that efforts should be made by stakeholders to promote creativity as a measure to increase wellbeing among tourists and therefore promote memorable experiences. Other studies have already shown the importance of creativity for workers' performance (Horng et al., 2016) and that tourism can be a promoter of creativity (de Bloom, Ritter, Kuhnel, Reinders, & Geurts, 2014). However, as Garcês et al. (2018) found in a systematic literature review, it appears that creativity is being focused on the development of the destination and the workers and not directly on tourists' own development. Thus, here is a niche that probably should be explored.

The exploratory study of the wellbeing variables' rankings also offered a different way of understanding tourists and their needs and wants regarding their own way of thinking. In first place came positive emotions, followed by creativity and then meaning. These overall results allowed the authors to believe that, in this sample, tourists still look for time away

from home that helps them to feel good and enjoy a good time. As the European Travel Commission (2016) acknowledged, the idea of fun and relaxation will always be part of tourism, although Smith and Diekmann (2017) recognized that people want meaning and authenticity too. However, creativity appeared in second place, confirming that something is changing: people are looking for unique experiences. The literature in the last few years has brought awareness of exactly this: that a shift is happening and therefore new tourism strategies are crucial. Third on the 'podium' was meaning, which only fortifies the idea that today a change is not only happening but has already happened: people are looking for true and authentic experiences that can bring meaning and personal development to their own lives. As the literature (Kirillova, Lehto, & Cai, 2016) has already recognized, tourism is moving to a stage of personal and transformative experiences, and, as Pine and Gilmore (2019) described in their new re-release of the 'Experience Economy', time is of the essence and transformative experiences are crucial to develop deep and unique relationships between customers and destinations. These rankings are also in accordance with other studies, like the study by Marujo et al. (2019), which found that those who engage in creative activities in destinations look for uniqueness. It is also aligned with the three types of tourists engaged in creative activities in Tan et al.'s (2015) study: the relaxers may be the ones who look for positive emotions, the sensation seekers are the ones who seek unique experiences, and the existential ones are those who look for meaning in their lives.

Another important result regards the gender, age, and job analysis, which also offered new reflections. First, creativity did not show any gender differences, which was expected, since other studies have reported this (Cashdan & Welsch, 1966; Charyton & Snelbecker, 2007; Baer & Kaufman, 2008; Ayyıldız-Potur & Barkul, 2009; Sayed & Mohamed, 2013), leading the authors to think that gender has no influence on perceptions of creativity. However, wellbeing showed gender differences, with women obtaining higher scores. It is also interesting that, when analysing each wellbeing item individually, significant differences were found only for creativity, positive emotions, relationships, and achievement. This leads to the hypothesis that women enjoy more positive emotions and relationships with the local community in their tourism experiences than men and see these same experiences as unique and as a kind of achievement in their lives.

Regarding age, older tourists showed more creativity than younger ones. When analysing wellbeing and its sub-variables, only creativity was significant again. However, here, younger people showed higher scores than older tourists. This difference between the two creativity variables used may be due to the different measures applied; despite aiming to understand creativity as a whole, the CPS is a composite measure to analyse creative personality characteristics, whereas, in the case of the TWS, creativity is assessed as only one item. This item measures the uniqueness and originality of the tourism experience, which may be more appealing for young people, who may have fewer tourism experiences than older tourists, who may already have travelled more and do not envision their tourism experience in such a new and unique way as younger tourists may perceive it.

In the analysis of the job variable, there were no significant differences in wellbeing, meaning that being a student, or not, does not matter for feeling good. However, in the creativity measure, significant differences emerged, and it was the non-students who performed better. This result is interesting and unfortunately aligns with the idea that schools still pose barriers to creativity, as was reported for example in the study by Banaji, Cranmer, and Perrotta (2014).

Finally, while testing the predictive models, as a complement to the study, just one model stood out as being psychometrically sound. In this model, wellbeing and age were creative predictors, explaining about 12.4% of the variance. These results allowed the authors to think again that, when people feel well, they tend to be more creative but also that age

is important for creativity. The latter result is curious, since it is commonly understood that children are creative, then school presents barriers to their creativity, which tends to diminish throughout their school years. However, here, ageing also increases their creativity or at least their recognition that they are creative. This may be explained by the fact that soft skills such as creativity are currently a major recruitment asset. Thus, while pursuing jobs after school, people need to develop these skills, which may lead to this result that age is a creative predictor.

This research is not without limitations, and here we provide suggestions for further studies. It is understood that a deeper analysis is needed to understand better how wellbeing can be a predictor of creativity but also whether creativity is otherwise a predictor of wellbeing or whether the two are mutually connected in such a way that they work symbiotically. Thus, more studies are necessary to comprehend these relationships. It would also be interesting to involve tourists from other countries and analyse possible cultural differences.

Overall, this study made an attempt to give a first glimpse of Portuguese creative tourists through psychological variables. Creativity is understood here as a major element of wellbeing, and therefore it should be recognized as an asset to promote wellbeing in tourism destinations. Nevertheless, the major conclusion that this study reached is that the results illustrate the presence of the much-talked-about shift in tourism experiences and that there is an urgent need for destinations and host communities to adapt to it. The fact that the ETC (2019) has recognized in its 2022 strategy that memorable experiences are important is thus a major step. The future of tourism is changing, so now is the time to make changes and look for something unique to give to tourists while simultaneously respecting locals' culture and heritage. Creative tourists are a group of tourists who want fun but also uniqueness and meaningful experiences. Consequently, stakeholders need to consider and deliver these if they want to ensure their sustainability and future 'experience economy'.

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SOCIAL SUPPORT AS A MODERATOR OF THE RELATIONSHIP BETWEEN FINANCIAL THREAT AND LIFE SATISFACTION

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ABSTRACT

Financial crises often lead to an increase of pathological symptoms which have a negative impact on life satisfaction. This study analysed the moderating role of social support on the relationship between perceived financial threat and life satisfaction, during austerity periods. Structural equation modelling (SEM) using multiple-group analysis was used to assess the obtained results. The collected sample was composed by 901 Portuguese individuals, 603 females and 298 males, with an average age of 37 years old. Overall, results indicated a model in which perceived financial threat and social support were negatively and positively associated with life satisfaction, respectively. The moderating effect of social support revealed that in the group with the highest level of support there was a significant decrease in the association between perceived financial threat and life satisfaction, i.e., social support mitigated the negative effects of perceived financial threat on life satisfaction. The implications of these results are discussed.

Keywords: Perceived Financial Threat, Life Satisfaction, Social Support, Well-Being.

JEL Classification: G01, I31

1. INTRODUCTION

The 2008-2009 financial crisis led to a long period of global recession with negative consequences for societies and individuals. Through the analysis of the data of the Organization for Economic Co-operation and Development (OECD, 2011), the World Health Organization (WHO) noticed an increase, during 2009, in the incidence of mental health problems in the countries affected by the economic downturn. Also, during this period it was observed a growth in unemployment, mainly youth unemployment, and bankruptcy rates (Cabral, 2013; Viseu et al., 2018; Viseu et al., 2019). Considering this deterioration of social conditions, it is expected a decrease in living standards, which may lead to a decrease in life satisfaction (Greve, 2012). The study of Clench-Aas and Holte (2017), using data from 26 European countries, demonstrated that the economic crisis led to a reduction in life satisfaction in two ways, (1) in the short-term this reduction was more severe and (2) in the long-term this decline was more progressive.

One of the countries most affected by the crisis was Portugal. Since the beginning of this period this country, along with Greece, Cyprus, and Spain, has faced an adverse economic

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and social environment, which has led to a financial emergency situation. (Eurofound, 2012). To face the crisis the Portuguese government adopted a package of severe austerity measures proposed by the *Troika*. These measures not only undermined the Portuguese economy, but also had a negative impact on peoples' lives.

A report by Almeida and Xavier (2013) registered an increase in the incidence of anxiety and depression during the financial crisis. The worsening of these disorders led Portugal to reach the second position, among the countries of the European Union, in the prevalence of mental health problems (Almeida & Xavier, 2013). These data are corroborated by a set of empirical studies conducted in Portugal that showed that perceived financial threat, economic hardship, and decreased financial well-being were positively related to stress, anxiety, and depression (Viseu et al., 2018; Viseu et al., 2019). In these studies the role of perceived financial threat must be emphasized, since this economic stress variable established a stronger association with the psychological ill-being variables considered.

In the economic context, the recession caused, for example, an increase in the unemployment rate and a decrease in wages and investments in health and education (Pezirkianidis, Stalikas, Efstathiou, & Karakasidou, 2016). Even though there was an ephemeral economic recovery in Portugal in 2010, its' population lost more than 6% of their purchase power (GDP) between 2011 and 2013. Currently, the economy is growing less than 2% per year, which is below the average of the European Union and Portuguese citizens are still facing great challenges related to the economic slowdown, such as unemployment, labour instability, economic uncertainty, emigration of young individuals, and decrease of financial assets (Gaspar, Barros, Reis, & Santos, 2014). According to the preliminary report of the Portuguese Observatory of Health Systems (2014), the wealth produced in Portugal fell 5.7% in 2012, due to the austerity measures implemented and caused a setback on the ability to create wealth for 12 years, i.e., until 2024.

The outcomes of these measures are negatively associated with life satisfaction, optimism, and psychological well-being, and are positively related with low self-esteem, decreased life expectancy, and suicide (Deiktakis, Pezirkianidis, & Stalikas, 2014). As such, financial austerity periods enhance social inequality processes. Thus, one of the major concerns of the member states of the European Union were the consequences of the financial crisis on individuals' health (Graham & Felton, 2006). Several studies performed in European countries (Aslund, Larm, Starrin, & Nilsson, 2014; Leal, Viseu, Jesus, Paixão, & Greenglass, 2014; Fernandez et al., 2015; Fiksenbaum, Marjanovic, Greenglass, & Garcia-Santos, 2017; Viseu et al., 2018; Viseu et al., 2019) between economic stress variables (e.g., financial threat, economic hardship, and financial well-being) and negative psychological outcomes (e.g., stress, anxiety, depression, suicidal ideation, and confusion).

In 2011, according to the WHO, problems related to mental health were linked to high mortality rates, especially suicide, which represented one of the ten leading causes of death. Studies by Marjanovic, Greenglass, Fiksenbaum, and Bell (2013) demonstrated that during periods of economic precariousness there was a decrease in life satisfaction and an increase in problems related to mental health, indicating an association between income levels and well-being. A study realized by Leal, Viseu, Jesus, Paixão, & Greenglass (2014) confirmed the negative association between economic stressors (i.e., financial threat, economic hardship, and financial well-being) and mental health, in particular, symptoms of distress, anxiety, and depression. As such, topics related to periods of economic insecurity are of major importance taking into consideration the negative effects of these periods on individuals' health, for example, the increase of: (a) symptoms of depression and stress; (b) psychotropic drugs and alcohol consumption; and (c) the suicide rate (MacFadyen, MacFadyen, & Prince, 1996; Gili, García, & Roca, 2014).

This study focused on the subjects' inherent positive mechanisms, in order to enhance them during economic turmoil periods. Social support was used as a moderator variable, since this mechanism enables the development of coping strategies, (e.g., if a subject feels that he is understood, beloved, and cherished, he will feel strengthened to cope with difficult times) (Greenglass, 1993; Cutrona, 1996). Huffman, Culbertson, Wayment, and Irving (2015) conducted a research on financial hardship in which they observed that the aforementioned variable was associated with psychological suffering and low life satisfaction, financial constraints (causing individuals to experience a shortening of goods and services), which resulted in a reduction of well-being perceptions. The social support's conceptual model has four distinct functions: the first is related to our empathetic internal processes, e.g., understanding other individuals struggles; the second is related to trust, hope, and support that we provide to one and other; the third is related to affection, e.g., physical affection as a hug or a shoulder to lean on; the fourth and final function is related to the importance of the collective, e.g., volunteering, involvement with the community (Braithwaite, Waldron, & Finn, 1999).

Therefore, we can infer that social support has a defining role on an individuals' psychological equilibrium, enhancing their life satisfaction. For instance, when an individual is confronted with financial constraints and is feeling afraid and insecure, his or her/s social support network will help to lessen his or her/s negative feelings (Marjanovic et al., 2013). This study was conducted with the purpose of trying to understand how financial threat and social support are related with life satisfaction. For this end, we propose the following hypotheses:

Hypothesis 1: Financial threat is negatively associated with life satisfaction.

Hypothesis 2: Social support is positively related with life satisfaction.

This research used social support as a coping mechanism acting as a social facilitator to promote the individuals' well-being during difficult periods (Yoo et al., 2014). Generally, an individual that experiences the feeling of belonging to a group (e.g., peer groups, family, work colleagues, etc.) tend to feel more cherished, loved, appreciated, and safe in stressful events (Cobb, 1976). According to Roberts, Cox, Shannon, and Wells (1994), and Slevin and colleagues (1996), social support is linked to higher levels of psychological well-being and to a better quality of life. As a moderator, social support and its positive effects on life satisfaction have been studied for more than 30 years (Dunkel-Schetter, Folkman, & Lazarus, 1987; Dunkel-Schetter & Brooks, 2009), underlining its moderator effect on the decrease of negative outcomes for individuals, such as mental illness. Social support also aids individuals on the recovery from physiological stress (Trepte, Dienlin, & Reinecke, 2015; Priem & Solomon 2015); it can also mitigate anguish by helping an individual to reassess a difficult situation. A study by Jones and Wirtz, (2006) shown that social support reduces stress, feelings of uncertainty, and improves an individual's psychological health. Thus, we can then infer that social support can dampen the negative impacts of economic stress on an individuals' well-being.

In sum, social support is integrated into the study of positive psychology variables and acts as a moderator on the prevention of illness. It is also a multifaceted construct which involves human interaction, in which the subject perceives, receives, and interacts emotionally, sharing problems and building positive cognitions to overcome adversities (Dunkel-Schetter & Brooks, 2009). We can assume that social support is a psychological resource that individuals have access through their relationships with others and implies a modification and transformation process (Siqueira, 2008). Only a handful of studies refer to social support, during financial crises, as a softening "tool". Therefore, social support was

tested as a moderator on the relationship between financial threat and life satisfaction. As such, we propose the following hypothesis:

Hypothesis 3: Social support moderates the relationship between financial threat and life satisfaction.

2. METHODOLOGY

2.1 Participants

The recruitment of participants was performed through a contact database created from a previous research conducted at a Portuguese Research Centre, meaning that our participants were part of a convenience sample. An email was sent to the respondents with a direct link for the answering of the questionnaire and with an explanation of the objectives of our study. The participation criterion was that participants had to be over 18 years old. The participants were asked to read an informed consent; the anonymity of the answers was guaranteed to all participants and there was no kind of remuneration or incentive.

Our sample was composed of 901 participants, 603 females (66.9%) and 298 males (32.7%). Regarding the marital status, 466 (51.1%) of the respondents were married or living in a non-marital partnership and 435 (47.9%) were single, separated or divorced, and widow or widower. The participants were on average 37 years old ($SD = 12.86$).

2.2 Measures

Self-report questionnaires were used to gather information about the participants' life situation, containing information related to: economic stressors, financial threat (e.g., How much do you worry about it?); social-demographic data (e.g., How old are you? and What is your marital status?); psychological health (e.g., My life is, in almost everything, similar to what I would like it to be) and personality (e.g., How much advice or guidance do people give you that you find helpful?). The goal was to understand the individuals who participated in the research. Then, the questionnaire presented four sections with questions related to the variables we intend to investigate in this study. For the purpose of this study, the following instruments were applied:

Financial Threat Scale (FTS) was developed from previous researchers on health threats (Lee-Baggle, DeLongis, Voorhoeve, & Greenglass, 2004). According to Marjanovic and colleagues (2013), FTS assesses feelings of uncertainty and perceived threat in relation to an individual's financial situation. This scale was composed of five items with a five-point Likert scale (1 - *Not at all*; 5 - *Extremely uncertain*). Individuals' scoring higher on the FTS are considered as demonstrating high levels of perceived financial threat. In our study this scale presented a Cronbach's Alpha of .90 ($M = 3.47$; $SD = .92$).

Satisfaction with Life Scale (SWLS-5) is a short five-item self-filling instrument with a five-point Likert scale (1 - *Strongly Agree*; 5 - *Strongly Disagree*) proposed by Diener, Emmons, and Larsen (1985). The result this scale vary between five, twenty-five, a lower value corresponds to a decreased life satisfaction, and a higher value indicates a greater life satisfaction. This instrument measures global cognitive judgments of satisfaction with one's life. Its Cronbach's Alpha value in our study was .86 ($M = 3.11$; $SD = .88$).

Emotional Support (IPES) was developed by Greenglass, Fiksenbaum, and Burke, (1996) and adapted from the work of Caplan, Cobb, French, Harrison, and Pinneau (1975). This scale was composed of nine items ordered in a four-point scale (1 - *Not at all*; 4 - *Very much*) and presented three dimensions of emotional support, (a) practical support (3 items); (b) social support (3 items); and (c) informational support (3 items). In our study, this scale presented a Cronbach's Alpha of .82 ($M = 2.83$; $SD = .38$).

2.3 Data Analysis Procedures

Data analysis began with a confirmatory factor analysis (CFA) to assess the reliability and validity of the three research constructs, financial threat, life satisfaction, and emotional support. The software AMOS 21.0 was used to estimate the model and the maximum likelihood estimation (MLE) method was applied. Then a structural equation modelling procedure was applied to test the research hypotheses 1 and 2. Finally, the moderating effect of social support was tested using a multiple group analysis. Some of the indicators were excluded from the data analysis, the ones that were not eliminated were part of the reliability indicators. For this model, the items with a Corrected Item-Total Correlation (CI-TC) lower than .60 were excluded from the data analysis, since they revealed a weak correlation with the constructs selected (Marôco, 2014).

4. RESULTS

4.1 Confirmatory Factor Analysis

CFA was performed with the three constructs that composed the model, financial threat, emotional support, and life satisfaction, with the aim of examining their reliability and validity. The model reported an adequate absolute overall fit. As expected, given the large sample size, the Chi-squared statistics was high and statistically significant ($\chi^2 = 164.553$; $p < .01$), meaning a significant dissimilarity between the estimated and actual model. However, the other absolute fit indexes reported good values. Values for GFI (.97), RMR (.03), and RMSEA (.03) suggested a very good absolute fit ($GFI > .90$; $RMR < .08$; $RMSEA < .05$), according to Byrne (2010). Regarding the incremental and parsimonious adjustment, results also evidenced a very good model fit ($\chi^2/df = 2.13 < 5$) ($AGFI = .96$; $NFI = .97$; $GFI = .97$; $IFI = .98$; $TLI = 0.98$; $CFI = .98$; all $> .95$).

Table 1 presents the most important results for the measurement model. Notice that to accomplish adequate results of individual reliability and convergent validity, four items of the emotional support scale had to be eliminated from the model. Individual reliability was observed because all standardized factor loadings were above .60, being significant at a .01 level (Anderson & Gerbing, 1982). Moreover, high values for the coefficients Cronbach's Alpha and Composite Reliability (CR) suggested a good construct reliability (Kline, 1998). All CRs were higher than .70 (CRs) and the Cronbach's Alphas were higher than .80 (*Financial threat*: $\alpha = .90$, $CR = .89$; *Emotional support*: $\alpha = .82$, $CR = .83$; *Life satisfaction*: $\alpha = .86$; $CR = .87$).

Table 1. Results for the Measurement Model

	Constructs and Items	Loading	t-value	α^1	CR ²	AVE ³
	<i>Financial Threat</i>		15.26	..90	..89	..62
FFT1	How uncertain do you feel?	.79				
FFT2	How much do you feel at risk?	.94				
FFT3	How much do you feel threatened?	.91				
FFT4	How much do you worry about it?	.65				
FFT5	How much do you think about it?	.60				
	<i>Emotional Support</i>		12.52	..82	..83	..50
EES1	How much are people helpful to you	.70				
EES2	How much useful information do people	.84				

EES3	How much useful feedback do you get	.63				
EES4	How much are people willing to listen to	.68				
EES5	How much do people boost your spirits	.66				
	<i>Life Satisfaction</i>		14.04	..86	..87	..59
LLS1	My life is, in almost everything, similar to what I would like it to be.	.82				
LLS2	My life conditions are very good.	.73				
LLS3	I am pleased with my life.	.85				
SLS4	Until now I have achieved the important things in life, which I would want.	.73				
SLS5	If I could restart my life, I wouldn't change anything.	.60				

Note. Cronbach's Alpha (α)¹ Composite Reliability (CR)² Average Variance Extracted (AVE)³.

Source: Own Elaboration

As for convergent validity, the first evidence is that each indicator loaded significantly on the corresponding latent variable. Moreover, the Average Variance Extracted (AVE) for each construct met the criterion of being at least .50 (*Financial threat*: .62; *Emotional support*:.50; *Life satisfaction*:.59). In turn, discriminant validity was assessed by comparing the AVE of each factor with the squared correlation between each construct and the other (Fornell & Larcker, 1981), in which discriminant validity exists when the square root of the AVE of each factor is greater than the correlation values. Table 2 shows that this criterion was fulfilled for the three constructs.

Table 2. Correlations among Latent Variables

Constructs	1	2	3
1. Financial Threat	.79		
2. Life Satisfaction	-.41**	.76*	
3. Emotional Support	-.12**	.31**	.70*

Note. *Squared root of the AVE; ** $p < .01$

Source: Own Elaboration

4.2 Constructs' Relationships

The signal and significance of each path coefficient were observed in order to test the first two research hypotheses (table 3, first column). Hypothesis 1 posits that financial threat is directly and negatively associated with lower levels of life satisfaction (i.e., the higher the financial threat, the smaller the perception one has regarding his life satisfaction). This hypothesis was tested and validated by the analysis of the direct effect of financial threat on life satisfaction. The estimated coefficient was negative and statistically significant ($\beta_1 = -.40, p < .01$). Hypothesis 2 proposed that emotional support would be positively related to life satisfaction (i.e., the greater the emotional support, the greater the perception that the individual has about his life satisfaction). This hypothesis was tested through the analysis of the direct effect of emotional support on life satisfaction. The estimated coefficient was positive and statistically significant ($\beta_2 = .30, p < .01$), meaning that H2 is validated.

4.3 Moderating Effect of Social Support

To test the moderating effect of social support on the relationship between financial threat and life satisfaction a multiple-group analysis was performed. According to hypothesis 3, social support would mitigate the negative influence of financial threat on life satisfaction. Before implementing this analysis, the sum of the indicators used to measure social support was computed and afterwards, we obtained the mean of the total scale. The sample was then divided into two subgroups based on their levels of social support (low *versus* high). Those with a mean score lower or equal to the total mean sample were assigned to the low group ($n = 442$). Those with a mean score higher than the total mean sample were assigned to the high group ($n = 459$). The key principle of a moderating effect in our study is that the effect of financial threat on life satisfaction will depend on the level of social support. The multiple group analysis compares the unrestricted model, i.e., the model without considering the moderation between financial threat and life satisfaction, against another model where the measurement and structural coefficients are constrained to be equal across the two groups.

The model's invariance was tested using the $\Delta\chi^2$ statistics (the model is invariant when $\Delta\chi^2$ reports $p > .05$). AMOS allows testing for invariance in the measurement and structural weights (Marôco, 2014). The null hypothesis is that the measurement weights are equal across groups was not rejected ($\Delta\chi^2 = 11.51$; $p = .17$). However, the null hypothesis that the structural weight is equal across groups was rejected ($\Delta\chi^2 = 4.50$; $p = .03$). This last finding shows that the path estimates are statistically different between groups. In other words, emotional support moderated the effect of financial threat on life satisfaction. The model with invariant measurement weights, but unequal structural weight, presented a satisfactory fit ($\chi^2/df = 2.21 < 5$) (AGFI = .94; NFI = .97; GFI = .97; IFI = .98; TLI = .98; CFI = .98; all $> .95$; RMR = .04 $< .08$; RMSEA = .03 $< .05$).

Table 3 shows that, either in the low emotional support group or in the high emotional support group, the relationship between financial threat and life satisfaction is negative and statistically significant ($p < .01$). However, this effect is weaker within those in the high group ($\beta = -.39$ against $\beta = -.47$ in the low group). So, the effect of the financial crisis on life satisfaction was mitigated on the group that presented higher levels of emotional support. Moreover, the critical ratio for the group difference in the path coefficient shows that the difference, of magnitude .08, is significant, meaning that the level of emotional support moderates the effect of financial threat on life satisfaction ($p < .05$). In sum, H3 is supported.

Table 3. Path Estimates in the Initial Model and in the Model with Emotional Support as Moderator

Initial Model	Model with Emotional Support as moderator			
FT → LS: -.40**	High group	Low group	Estimates' absolute difference	t-value
ES → LS: .30**	FT → LS: -.39**	FT → LS: -.47**	.08	-2.12*

Note. FT: Financial Threat, ES: Emotional Support, LS: Life Satisfaction. * $p < .05$ ** $p < .01$

Source: Own Elaboration

5. CONCLUSION

The aim of this study was to assess the mechanisms that mitigate the impact of financial threat on the perceptions of life satisfaction of an individual. To this end, a positive psychology variable, social support, was used as a moderator. Social support was chosen as the moderator between financial threat and life satisfaction as, according to Hovey, Hurtado,

Morales, and Seligman (2014), the mechanism of emotional/social support is embedded in positive psychology through relationships, which cause human beings to evolve and create bonds between each other. This relationship strengthens and gives the Self-tools to overcome hardship times (e.g., financial threats caused by an economic crisis). It was expected that the psychological benefits of social support mitigated the perception of financial threat in relation to life satisfaction in the group of individuals with higher levels of emotional support, in detriment of the group with lower levels of emotional support.

The research hypotheses were supported. These results show that financial threat is negatively and strongly related to lower levels of life satisfaction (H1). On the other hand, social support is positively related to higher levels of life satisfaction (H2). Moreover, social support, as a moderating variable in the association between the financial threat and life satisfaction, mitigates the negative outcomes of that relationship (H3). The division of individuals into two groups showed that the group with higher levels of social support had a lower perception of financial threat in relation to life satisfaction, in detriment of the group with lower levels of social support. Our results are also in agreement with the existing literature on the negative relationship between financial threat and wellbeing (Paul & Moser, 2008; Marjanovic et al., 2013; Annink, Gorgievski, & Den Dulk, 2016). The results of this study underlined the benefits of using positive psychology mechanisms, as well as social support to mitigate the negative symptoms, such as stress, anxiety, and depression, that individuals have about their life satisfaction. Once these negative effects are mitigated, there is an improvement of subjective well-being, which contributes to a reduction of psychopathological discomfort.

From a theoretical perspective, countless authors have researched the benefits of social support as a mitigating variable in difficult situations, concluding that this variable has a protective effect on the individual's mental health and well-being (Bøen, Dalgard, & Bjertness, 2012; Huffman et al., 2015; Morelli, Lee, Arnn & Zaki, 2015). In particular, individuals who have to face with financial difficulties are more likely to overcome the strain by using social support as a buffering strategy than others who receive less social support (Whelan, 1993; Åslund, Larm, Starrin, & Nilsson, 2014). For example, it is supported that depression, which is arised from unemployment and underemployment, may become easier to cope with the help of receiving support from close ones (Crowe & Butterworth, 2016). As such, absence of any support can make it difficult to maintain well-being as much as enhancing life satisfaction.

One of the benefits shown by our results is that social support relieved the impact of financial threat on life satisfaction. The way in which we presented our results, through a multiple-group analysis, shows our ability to differentiate them in order to show that social support helped reducing symptoms of fear, anguish, and uncertainty related to personal finances and it increased life satisfaction in times of financial crisis. By the way of enriched life satisfaction, the likelihood of persisting life with hope in defiance of financial uncertainty becomes more available.

Positive psychology mechanisms act as protectors and allow the improvement of an individual's well-being. By using their own virtues, it amplifies them through the network of friends, family or group of peers and promotes encouragement to help the individual to cope with difficulties and hard times. Therefore, from the results of this study, in addition to the theoretical contributions, psychotherapeutic interventional programs can be created having positive psychology mechanisms as its main focus (e.g., social support).

This study is not free of limitations. The first one is that the sampling method was of convenience. In future studies, the sample should be more diversified and consider the financial situation of the participants. On the other hand, a comparative study could be performed in countries that face a similar economic situation, such as Spain. Future research

should also focus on other positive psychology indicators, such as: (a) optimism - authors like Bandeira, Natividade, and Giacomoni (2015) indicated that this variable strengthens the individuals' capacities and it is associated with higher levels of life satisfaction, acting as a moderator in adverse periods (people who are more optimistic are less likely to develop depression and anxiety); (b) spirituality - according to authors such as Melo, Sampaio, Souza, and Pinto (2015), a higher religious involvement is positively associated with indicators that contribute to psychological well-being, increasing happiness and life satisfaction; (c) coping – a study carried out by Compas, Connor-Smith, Saltzman, Thomsen, and Wadsworth (2001) suggest that, as a regulator of emotions and behaviour, adaptive coping can promote resilience in times of economic difficulties by improving the cognitive and behavioural responses to the stressors.

Positive psychology mechanisms can mitigate the effect of financial threat on life satisfaction. Understanding these variables can also help providing intervention programs, in times of crisis, in order to increase populations' well-being and, consequently, help to reduce psychopathological problems. Despite these limitations, it is worth mentioning that this study provides further evidence of the psychological benefits and the importance of social support as a moderator on the relationship between financial threat and life satisfaction. In the future, contingency plans for the affected populations may be developed as they will contribute to the strengthening of personal mechanisms that will lead to increased general well-being and to a decrease of psychopathological problems, especially stress, anxiety, depression, and suicide.

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A NEW THEORETICAL FRAMEWORK FOR THERAPEUTIC LANDSCAPES: COASTAL (BLUE), FOREST (GREEN), SPIRITUAL “POWER SPOTS” (GOLD) AND WILDERNESS (DARK/WHITE)

António Azevedo¹

ABSTRACT

This paper aims to discuss the healing and wellbeing effects induced by places and landscapes such as coastal (blue) areas and green spaces. Adopting a holistic approach, the paper fills a gap by exploring the therapeutic benefits of other short-term experiences such as: spiritual/introspective (gold), sensation seeking/excitement, achievement-oriented, symbolic and transformative experiences. “Dark” and “white” sceneries such as risk recreation and pilgrimage to “land’s ends”, dystopian places and (white) extreme wilderness were also analyzed. The negative externalities caused by neighborhood social and physical disorder (grey zones) complete the “pallet of colors”. This conceptual paper fills a gap providing a new tool to map place brands according to two positioning axis: 1) Physical Health (passive absorption/ residential exposure) (positive versus negative impact); 2) Spiritual versus Excitement/Self-achievement (active way/ short exposure). Furthermore, it proposes also a new theoretical framework for the “salutogenic health system” and for the “governance support system”. The paper’s contributions will help place brand managers, public decision makers and tourism operators to develop innovative place based policies using those health benefits as a driver for place branding positioning.

Keywords: Therapeutic Landscapes, Green Areas, Coastal Blue Areas, Psychological Wellbeing, Spiritual Experiences, Self-Achievement Experiences.

JEL Classification: Z32

1. INTRODUCTION

Acknowledging the contributions of literature from Social/ Preventive Medicine and Environmental Psychology, this conceptual paper aims to fill a gap in the literature. It discusses the healing and wellbeing effects induced by landscapes, such as green spaces (Hansen-Ketchum et al., 2011; Finlay et al., 2015; De Bell et al., 2017) and coastal (blue) areas (White et al., 2010; Völker & Kistemann, 2011; White et al., 2014; Bell et al., 2015; Foley & Kistemann, 2015; De Bell et al., 2017; White et al., 2017).

The term “therapeutic landscape” has traditionally been used to describe landscapes with “enduring reputation for achieving physical, mental and spiritual healing” (Gesler, 1993, quoted by Velarde, Fry & Tveit, 2007: 200).

Firstly, it is important to stress that this is a complex, multidimensional and multidisciplinary research topic, because of many overlapping causal relationships influencing human health outcomes. Therefore, this paper encompasses the following goals: 1) it confirms the existence of scientific evidences of direct and indirect therapeutic effects of different types

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of landscapes; 2) it identifies the most relevant first-order moderators and mediators; 3) it expands the analysis to non-residential short-term experiences, acknowledging the role of different motivators; 4) it expands the analysis to dystopian places that have harmful effects on human health; 5) it proposes a new positioning map for therapeutic place brands; 6) it extracts the most relevant recommendations for policy makers and decision-makers from place development and place branding optics; 7) it illustrates those recommendations with best-practices case-studies.

Since 2000, when the philosopher Glenn Albrecht coined the term “psychoterratica”, (<https://glennaalbrecht.com/>), in several areas of our society, there is an increasing trend to discuss the relationship between physical/ mental health, environment and human lifestyles. Furthermore, there are several examples showing medicine is validating the benefits of the exposure to nature. For example on 2019, doctors in Scotland start to prescribe “spending time nature” to their patients while the NHS Forest project (<http://nhsforest.org/>) provide information about several “forest routes”.

Moreover, several scholars dedicated to landscape research also claim that Landscape Aesthetic Quality (LAQ) can be regarded as an important cultural ecosystem service that positively affects humans’ health and well-being (Bratman, Hamilton & Daily, 2012; Hermes, Albert & von Haaren, 2018). Evidence from various studies suggests that (direct or indirect) contact with high LAQ landscapes can increase cognitive performance, enhance people’s mood, foster the mental and motoric development of children, support recovering from stress and mental fatigue, trigger positive emotions, and promote physical activity and social interactions (Abraham, Sommerhalder & Abel, 2010; Russell et al., 2013).

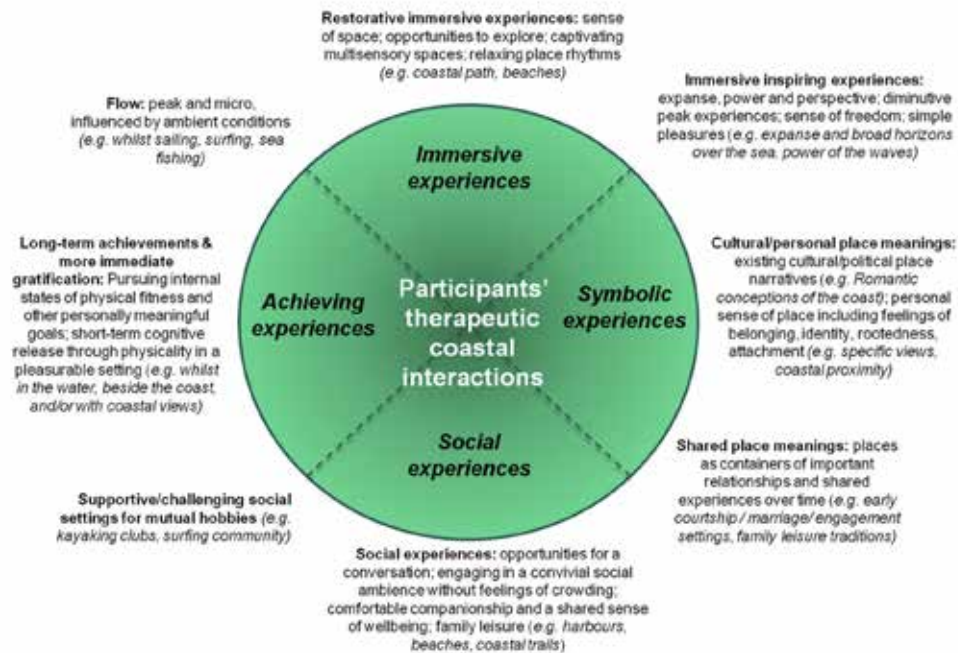
Inspired by the effect of colors on perception of places examined by Lengen (2015) and “palettes of places” (including the spiritual dimension) proposed by Bell et al. (2018), the major contribution of this paper is the exploration of the therapeutic role of other categories of places and experiences less explored by researchers.

This paper proposes a holistic approach by highlighting new research avenues, focusing firstly in the sensation seeking (excitement experiences) and lastly the spiritual/introspective experiences (Bell et al., 2018), including the absorption of Earth’s “energy” exemplified by Japanese “power spots” (Kato & Prozano, 2017; Carter, 2018) or Irish “holy wells” (Foley, 2011).

The paper also analyzes the achievement-oriented, immersive, symbolic and transformative experiences (see Figure 1), their implicit meanings, the gaze and emotions evoked by other “dark” and “white” sceneries, fueled by the risk recreation associated to danger (fear) sensations: lighthouses and “land’s ends” pilgrimage (Azevedo, 2018); attraction for abandoned buildings and other dystopic (dark) places (Podoshen, 2013; Podoshen et al., 2015); the isolated remote islands, the (white) extreme wilderness such as Iceland, Alaska or Scandinavia (Ólafsdóttir & Runnström, 2011; Vidon, Rickly & Knudsen, 2018).

On other hand, this paper also acknowledges the influence of the time of exposure in the landscape. While residents have a long exposure to landscape’s therapeutic effects, tourists and participants of short-term experiences must have a minimum level of exposure in order to receive the therapeutic benefits (White et al., 2017). Nevertheless, Velarde, Fry and Tveit (2007) found evidences of those benefits in experiments in which individuals only saw a photo or watched a video.

Figure 1. Four Overlapping (blue) Therapeutic Experience Dimensions



Source: Völker and Kistemann (2015), quoted by Bell et al., (2015: 65)

This paper will propose a theoretical framework that applies to all kinds of places focusing in meso and micro geographic scales, in urban or rural contexts. Nevertheless, this topic is especially relevant for waterfront cities, city marine parks and nature-oriented cities. Those cities may benefit from a place branding positioning, based on high standards of health indicators, as consequence of premium quality of life conditions, place based health promoting policies, and healthy lifestyles. The launch of journals such as *Cities & Health* or *Health & Place* is a sign of increasing spotlights on this research topic (Grant et al., 2017).

What is a healthy city? It is one that “continually creates and improves its physical and social environments and expands the community resources that enable people to mutually support each other in performing all the functions of life and developing to their maximum potential” (WHO Healthy Cities Project, Tsouros, 2015, quoted by Pittman et al., 2019: 102). According to Kenzer (1999), the Healthy Cities approach includes a strong focus on empowerment and participation, being concerned with individuals’ ability and autonomy to live a healthy life.

The literature review section will demonstrate that the overall result will depend of several moderating factors which are related to: 1) users (psychographic and demographic variables, motivations etc); 2) places (landscape aesthetic quality, other quality of life drivers, climate conditions, quality of ecosystem services and infrastructures, etc); 3) and place-based policies (urban planning and development strategies) thus highlighting the role of policy-makers and other stakeholders.

2. LITERATURE REVIEW

2.1 Influence of Green Spaces on Individuals’ Health

The UK Department for Communities and Local Government has defined a range of green spaces: 1) *parks and gardens*; 2) *natural and semi-natural urban green spaces* – including woodlands, urban forestry, grasslands, common land, wetlands, area of open and running

water, wastelands, derelict open land and rock areas; 3) *green corridors* – including canal and river banks, cycle ways and rights of way; 4) *outdoors sports facilities*; 5) *amenity green space around housing*; 6) *playgrounds for children and teenagers*; 7) *allotments*, (community gardens and farms); 8) *cemeteries and churchyards*; 9) *accessible countryside* in urban fringe areas; 10) *civic spaces*; 11) *landscape around buildings* – including street trees.

Green space multi-functionality has often been emphasised as relating to recreation, social interaction, aesthetics, cultural heritage and ecological functions (Haaland & van den Bosch, 2015). The concept of ecosystem services (Millenium Ecosystem Assessment, 2003), has also been applied to urban green spaces (Kabisch, Qureshi & Haase, 2015) and their regulating services include: air purification, water and climate regulation, carbon storage and stormwater regulation and biodiversity conservation (Haaland & van den Bosch, 2015).

The physiological or self-reported therapeutic effects of different types of exposure to green visual landscapes/stimulus (images, videos, physical presence, etc.) are reported in dozens of studies identified in several systematic literature reviews (Velarde et al., 2007; Gascon et al., 2015; Kabisch, Qureshi & Haase, 2015). More recently, for example, Engemann et al. (2018) concluded that childhood exposure to green spaces reduces the risk of schizophrenia and other mental disorders.

The most common measures of therapeutic effects are: Health-related Quality of Life assessed with Medical Outcomes Study Short Form 12 (SF-12v2) (Jenkinson et al., 2001; Völker et al., 2018), Warwick-Edinburgh Mental Wellbeing Scale (WEMWBS) or The World Health Organization Quality of Life (WHOQOL), mental health related measures like post-traumatic stress disorder (PTSD) or even Satisfaction with Life (SWL).

On 2013, Public Health England (PHE) set up “The Healthy Places” programme in recognition of the fact that where we live (and the homes we live in) has a big impact on our health and wellbeing. PHE also developed “The Environment and Health Atlas for England and Wales” which informs researchers, policy-makers and the public on the geographic patterns of disease and potential exposure to various environmental agents. Moreover, in 2014, the UCL Institute of Health Equity (IHE) released a report “*Improving Access to Green Spaces*” providing evidences that people living in the most deprived areas are ten times less likely to live in the greenest areas compared to people living in the least deprived areas.

Access to good quality green space (which should be closer than 400m/ 9min walking) is associated with positive health outcomes (Lee & Maheswaran, 2010), including: improvements in mental health and wellbeing (Krekel, Kolbe & Wüstemann, 2016), such as depression, stress, dementia (Grahn & Stigsdotter, 2010; White et al., 2013); increased longevity in older people; lower body mass index (BMI) scores, overweight and obesity levels and higher levels of physical activity (Takano, Nakamura & Watanabe, 2002); better self-rated health.

However, Gascon et al. (2017) revealed a lack of studies supporting the existence of direct effects of those therapeutic landscapes on human physiological and biological health indicators (example: obesity, cardiovascular diseases and diabetes). One exception is the study conducted by Li et al. (2009) who found evidences of effect of phytoncide from trees on human natural killer cell function, thus giving scientific support to the practice of “forest baths” in Japan.

However, the efficiency of green areas as a health driver is facing several challenges and threats: a) the densification of cities reduces the private green areas and the quality of public areas (Haaland & van den Bosch, 2015); b) low quality green spaces may affect negatively user health indicators (Van den Berg et al., 2015); c) other factors such as the level of biodiversity are also important driver (Carrus et al., 2015).

We may conclude that the role of green areas as leisure and health driver has already received a lot of attention from urban management and planning researchers. Therefore, this paper will give more space to other less explored landscapes such as the seascapes.

2.2 Influence of Blue/Coastal Areas

Pittman et al. (2019: 103) defined *city seascape* as “the marine and coastal space (above and below water) that most influences the city and is most influenced by the city. The size and shape of this seascape space will be unique to each coastal city. The attributes that define a city seascape will likely be holistic and include places and features with cultural, social, economic, geological and biological significance and may extend inland from the coast to encompass the tidal reaches of rivers and wetlands”.

On other hand, *blue space* was defined by Pittman et al. (2019) as “all ‘health-enabling places and spaces, where water is at the centre of a range of environments with identifiable potential for the promotion of human well-being’ (Foley & Kistemann, 2015). Blue space is a component of the city seascape with therapeutic benefits varying through multi-dimensional space”.

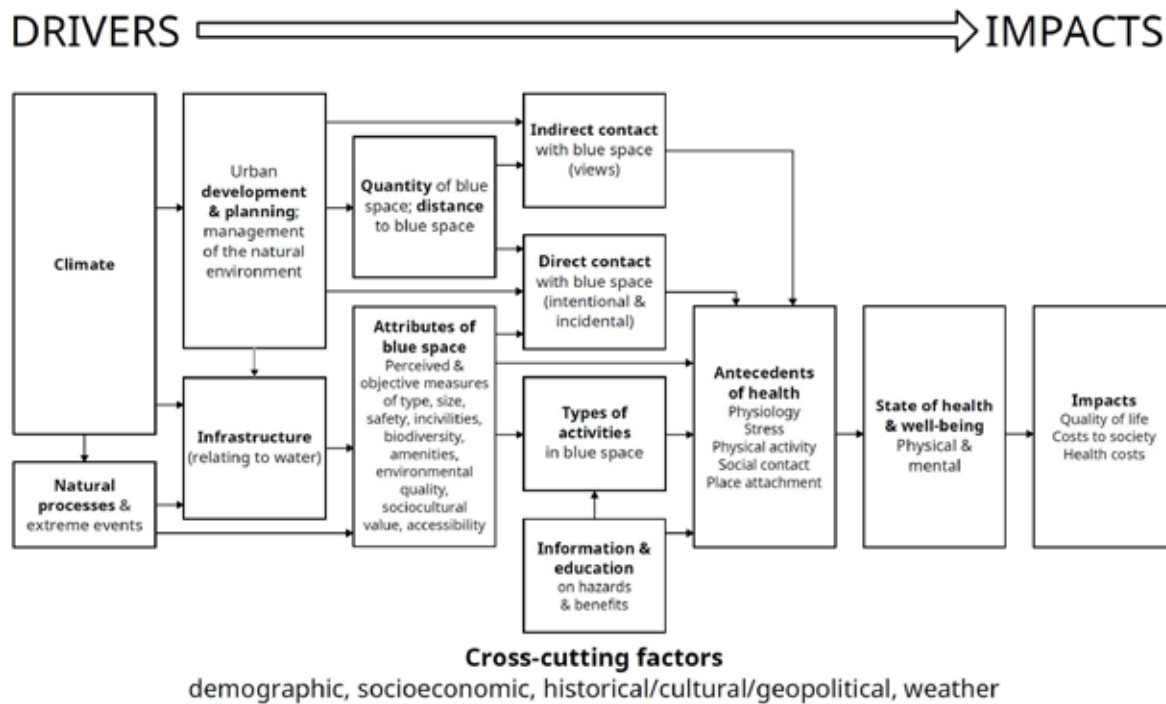
Considering a non-exhaustive approach, this paper analyzed several systematic reviews supporting the therapeutic benefits of the exposure to coastal landscape: Gascon et al. (2015), Gascon et al. (2017) and Britton et al. (2018). Those benefits fall into the following categories: emotional, restoration and recreational, direct health, psychologic and wellbeing (*stress reducers*), such as contemplation, emotional bonding, social interaction or participation (Völker & Kistemann, 2011, 2013, 2015; Pearson et al., 2017).

In order to explain those benefits some theories have emerged. Brooks, Wallace, and Williams (2006) amongst others suggested the Symbolic Interactionism (SI) theory, claiming that relationships with place were fostered by “being at and engaging with a place and one’s companions, extended stays, ritualized behaviors, family history in the outdoors, childhood socialization, and informal training and social learning”. Alternatively, Rose (2012) and Lengen (2015) suggested the psychoanalytic theory of ‘mentalising’ to explain the therapeutic effects based on the role of the significance of prior familiarity with representations of specific landscapes, their contribution to imaginative or projective reconstructions and the importance of cultural resources.

Moreover Bell et al. (2015) analyzed the geo-located narratives of 33 participants that deeply described their insights, emotions and cultural symbolisms elicited during their activities for six months along the coast of two towns in Cornwall (England). *Figure 1* presents the four overlapping (blue) therapeutic experience dimensions proposed by Völker and Kistemann (2015). According to Bell et al. (2015) research, blue spaces provide the ideal conditions for: 1) restorative immersive experiences, such as aesthetic contemplation of beaches and coastal landscapes; 2) immersive inspiring experiences, such as introspective admiration of the power of waves; 3) symbolic experiences, exploring cultural/personal sense of place meanings, the sense of belonging, and place attachment resulting from place identity building (Anton & Lawrence, 2014; Scannell & Gilford, 2017; Townsend et al., 2018); 4) social experiences, exploring shared place meanings with the significant others; 5) social experiences as opportunities to engage community and family activities; 6) supportive/challenging activities (for example in bad weather conditions); 7) long-term achievement (and more immediate gratification) experiences.

This research topic got the attention of public decision makers, so Grellier et al. (2017) conducted the European project Blue Health 2020 aiming to map and quantify the public health impacts of changes to both natural blue spaces and associated urban infrastructure in Europe. The researchers of the Blue Health 2020 developed a theoretical framework (see *Figure 2*) describing the causal chain between drivers and impacts.

Figure 2. BlueHealth Conceptual Framework: An Influence Diagram Describing the Causal Chain between Drivers and Impacts under Investigation in the BlueHealth Project



Source: Grellier et al. (2017, p.3)

The BlueHealth framework summarizes the findings of this section postulating that the attributes of blue space and its activities have a significant influence promoting physical activity, stress reduction, socialization and place attachment. Ultimately, the contact with blue space has a positive impact in quality of life and public expense with health. One important contribution of the BlueHealth is the identification of major drivers: climate, natural processes, urban development and planning, infrastructures, access to blue space and their attributes including safety and incivilities. There are other individual factors, such as education or health antecedents, that have direct influence on health. The next sections will explore some short-term experiences that may produce the same type of effects on residents or tourists' mental health and wellbeing.

2.3 Non-residential Short-Term Experiences

Acknowledging the role of different motivators, this paper aimed to expand the analysis to non-residential short-term experiences, as framed by the theory of therapeutic experience dimensions described at Figure 1 (Bell et al., 2015; Völker & Kistemann, 2015).

2.3.1 Nature, Eco, and Adventure Therapies

According to Buckley and Brough (2017) there is a wide range of such programs do exist, under names such as ecotherapies, adventure therapies, outdoor adventure interventions, ecopsychosocial interventions, lifestyle therapies, and green prescriptions, but currently, at rather small scale in global terms. We refer to them here, in aggregate, as nature, eco, and adventure therapies (NEATs). Alternatively, Reese et al. (2018) introduced the notion of EcoWellness: "one's appreciation, respect for, and awe of nature that contributes to greater connection with one's self and nature and resulting in holistic wellness". This construct can be measured using the EcoWellness Inventory (Reese et al., 2015).

2.3.2 Spiritual/ Transformative Experiences

On other hand, the NewAge movement sees Earth as containing many power spots and energy sites that facilitate the transformation of individual consciousness (Attix, 2015; Horie, 2017). The concept of “power spot” generally refers to “specific places where energy gathers and can bestow good fortune, healing or other practical benefits on visitors” (Kato & Prozano, 2017: 246).

On other hand, places can inspire feelings of spiritual enlightenment. Spirituality and spiritual healing were core components of Gesler’s (1993) initial concept of therapeutic landscapes, which has since been employed to understand several different types of pilgrimages, formal and informal, religious and secular (Bell et al., 2018). For Willson, McIntosh and Zahra (2013), spirituality is the seeking of a harmonious relationship or ‘oneness’ with self, ‘other’ (including other people, animals, the earth, nature) and/or God/Higher Power. People who undertake spiritual tourism usually feel ‘energised’, ‘inspired’ and ‘uplifted’ after their trips and feel a sense of ‘connectivity’ with people from other parts of the world (Kujawa, 2017; van Laer & Izberk-Bilgin, 2018).

According to Powell et al. (2012: 147) there is an awe caused by the interplay of a range of experiences comprising five possible sub dimensions: spiritual connection; transformative experience; goal clarification; refinement of human-nature relationship; sense of feeling humbled. That is the case of pilgrimage to “land’s ends” or “ends of earth” (in latin *Finis Terrae*) such as Finisterra (Spain) or Finistère (Brest-France). Since the ancient times, pre historic men and women used to pilgrim to those “power spots” to celebrate or perform rituals (Dunkley, Morgan & Westwood, 2007). Moreover, the physical exercise associated to walking/pilgrimage improves the self-reported health and the willing to pursuit a healthier life (Kim, Kim & King, 2016).

2.3.3 Self-achievement Experiences: Sensation Seeking, Wilderness Therapies, Risk Recreation, and Euphoria

Finally, this last section fills a gap in the literature because it gives an innovative contribution to the discussion. Although some self-achievement experiences involve potential physical risks, they may awake the *euphoria* related to heroic overcoming of challenges and the encounter with natural primitiveness. From tourism literature, we know that some individuals are addicted to adrenalin and strong sensations and, therefore, they are prone to engage in escape self-achievement experiences with high levels of co-creation and personalization. These experiences usually involve physical and financial risks.

Zuckerman (1994: 27) defined the *sensation seeking* construct as: “a personality trait defined by the seeking of varied, novel, complex and intense sensations and experiences, and the willingness to take physical, social, legal and financial risks for the sake of such experience”. Zuckerman (1978), quoted by Xu et al. (2012), also developed the Sensation Seeking Scale (SSS-V) comprising four subscales, Thrill and Adventure Seeking, Experience Seeking, Boredom Susceptibility, and Disinhibition.

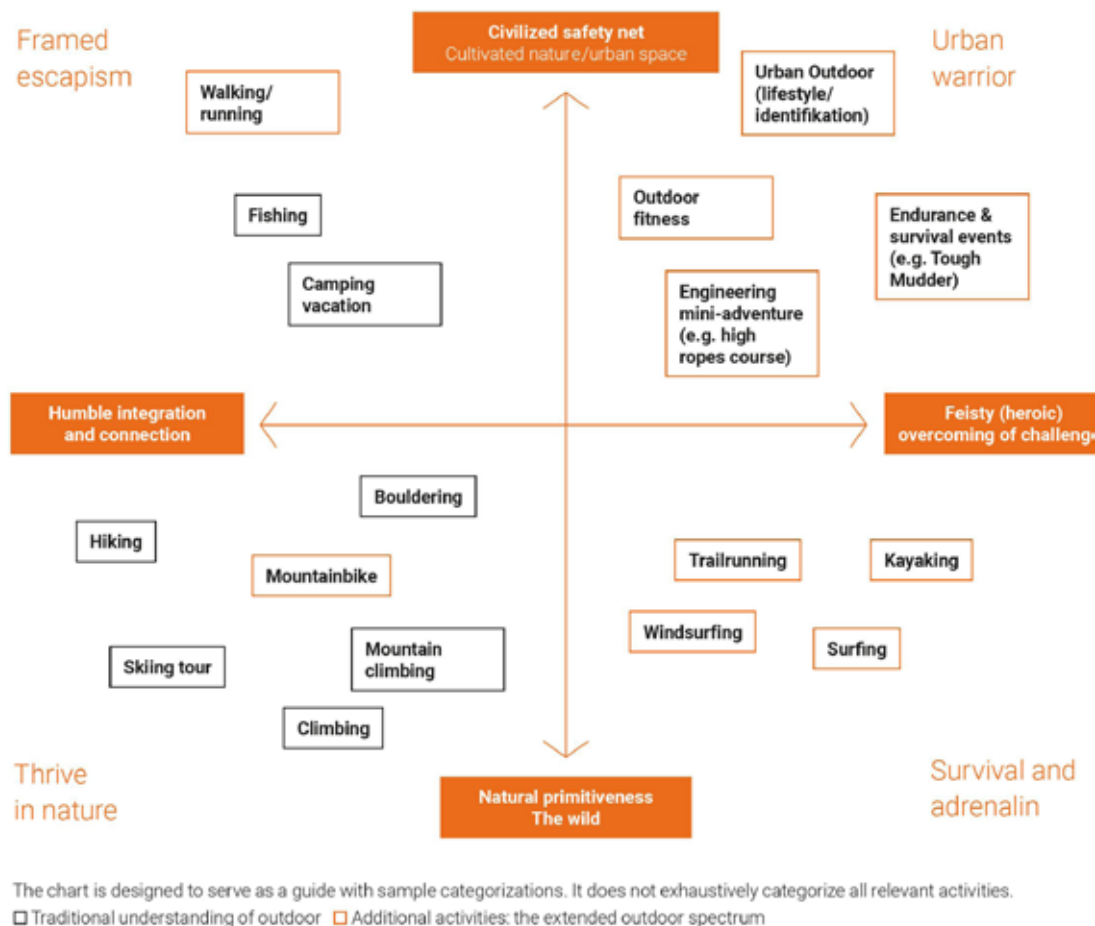
Clough et al. (2016) and Buckley (2018) have demonstrated that even the extreme adventurous physical activities are linked to enhanced psychological health and well-being outcomes. Moreover, Buckley (2018) argues that the key benefit of adventurous outdoor nature sports, not provided either by non-adventurous exercise or by nature exposure, is that it can create euphoria, which can temporarily override chronic pain and psychological stress associated with other aspects of ageing.

According to the qualitative research “Outdoor as human need” made by Rheingold Institute in collaboration with OutdoorbyISPO (www.ispo.com), outdoor activities can be mapped using two axis (see *Figure 3*): X- Humble integration and connection versus Feist

(heroic) overcoming of challenges; Y-civilized safety net versus Natural primitiveness-the wild. The map of *Figure 3* inspired the proposal of a new tool for helping the place brand positioning based on health driver attributes (see *Figure 4*).

Therefore, long-term self-achievement experiences such as surviving events in isolated remote islands may motivate people to travel to hostile places or engage in wilderness therapies. According to Hagan (2002) quoted by Bettmann et al. (2016) there are three types of *wilderness therapy* (WT) programs: continuous trekking also known as expedition model, short term residential, and long term residential. Bettmann et al. (2016) made a meta-analysis based on 36 studies, totalizing 2399 participants receiving wilderness therapy. Russell (2000: 170) defined WT as “[t]he use of traditional therapy techniques, especially group therapy techniques, in a wilderness setting, when the wilderness is approached with therapeutic intent” and it is designed to “reveal and address problem behaviors, foster personal and social responsibility, and enhance the emotional growth of clients” (Russell & Phillips-Miller 2002: 415).

Figure 3. Map of the Outdoor Activities According to the Psychological Dimensions



Source: OutdoorbyISPO, White Paper nr.2

2.3.4 Grey Zones: Neighborhood Social Disorder, Dark Tourism and Recreational Attraction for Dystopian Places

This paper proposes an holistic theoretical framework, which besides the blue and green areas, also accommodates the “grey” zones with negative health indicators caused by long-term exposure to negative place’s characteristics such as air pollution, soil and

water contamination levels, demographic pressure, deprived deindustrialized economies or stressful urban rhythm (Riva et al., 2011). Scholars from different disciplines like sociology, criminology, social psychology or epidemiology, use the notion of *neighborhood disorder* to describe this problematic (Marco et al., 2015).

Neighborhood (social/physical) disorder can be defined as “observed or perceived physical and social features of neighborhoods that may signal the breakdown of order and social control, and that can undermine the quality of life” (Gracia, 2014: 4325). Examples of neighborhood disorder may include behaviors such as prostitution, drug dealing, and fighting in the streets, or physical characteristics such as abandoned cars, vandalized/abandoned buildings (such as warehouses and industrial factories), graffiti streets or dumpsters (Sampson & Raudenbush, 1999) or simply the “broken windows” effect (Wilson & Kelling, 1982).

More recently, research on social disorder has also examined its influences on individual well-being indicators like subjective well-being, psychological distress, anxiety, or depression (García-Ramírez, Balcázar, & de Freitas, 2014; Marco et al., 2015), and how this may affect negative health behaviours, such as low physical activity, heavy drinking, smoking, or obesity (Echeverría et al., 2008). Research has also examined the association between neighbourhood disorder and different public health issues such as health service usage, low body weight at birth in children, injuries, sexually transmitted diseases, loss of physical function in older adults, and mortality risk (Martin-Storey et al., 2012).

However, a different situation occurs when people visit dystopian places for a short period due to recreational motives (Podoshen et al., 2015). Dystopia, as opposed to a utopia (which creates an ideal future world, often without borders) presents “an image of future societies, pointing fearfully at the way the world is supposedly going, in order to provide urgent propaganda for a change in direction” (Podoshen et al., 2015). Some people may think their lives are miserable and they would rather escape from the cruel reality than escape into a more troublesome world.

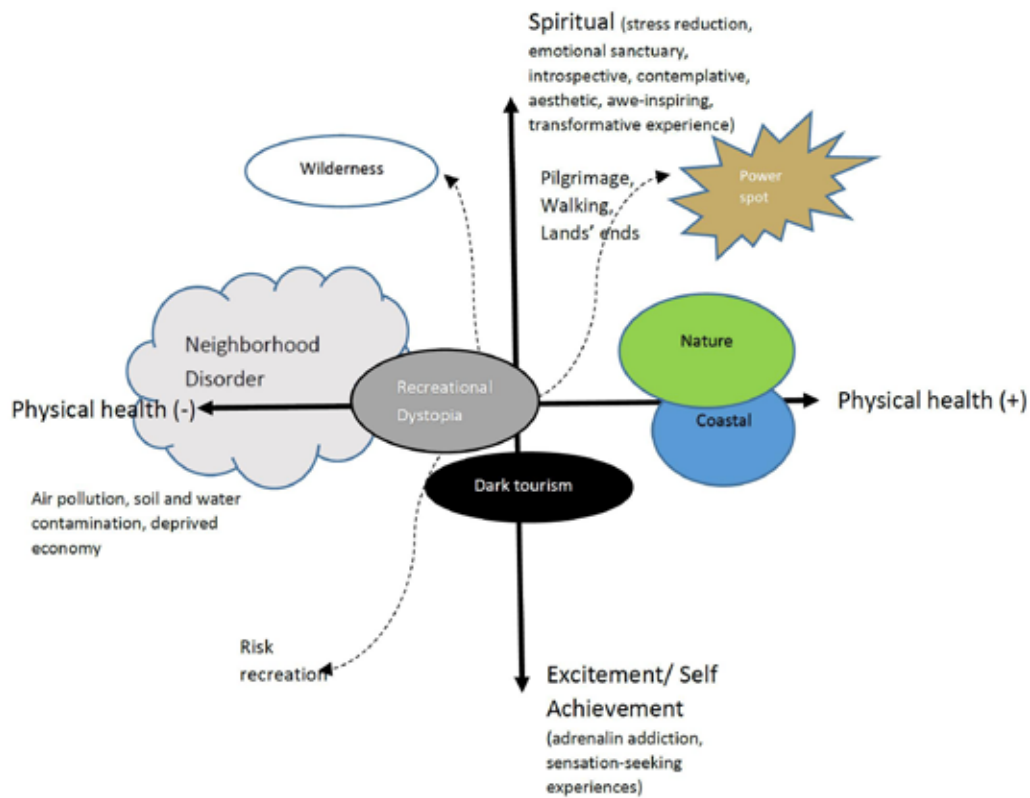
According to Laing and Frost (2016) and Martini and Buda (2018) there are potential psychologic benefits resulting from the engagement in dark tourism experiences: fulfilment of an obligation, memory development, resilience, escape, relaxation (Zheng et al., 2016), accessing the death drive in order to confront personal fears of death to negotiate personal memories and past traumas (Light, 2017).

3. A NEW TOOL: THERAPEUTIC PLACE BRANDS POSITIONING MAP

This conceptual paper aims to propose a place brands’ positioning map and inspire researchers to design qualitative and quantitative studies in order to validate our propositions. Authors, besides an extensive literature review, also analyzed articles recently published in several social media and magazines webpages, which cover the intersection between health and places (Kozinets, 2010).

The grid proposed in *Figure 4* applies to meso and micro geographic scales, inland or outland considering that the level of “exposure” of the residents versus tourists is long enough (Nutsford et al., 2016; De Bell et al., 2017). Adopting the “pallet of colors” approach, author proposes and discusses a new theoretical framework to map places according to two positioning axis: 1) Physical Health (passive absorption way/ long exposure) (positive versus negative impact); 2) Spiritual versus Excitement/Self-achievement (active way/ short exposure).

Figure 4. A Proposed Therapeutic Place Brands Positioning Map



Source: Own Elaboration

The choice for the positioning of the green versus blue areas was based on significant differences, which were identified in previous studies about Landscape Aesthetic Quality (LAQ):

a) Völker and Kistemann (2015) made a comparative study in German assessing the health responses to blue versus green urban areas. They found that some health-enhancing effects (enhanced contemplation, emotional bonding, participation, and physical activity) turned out to be prominent for urban blue in the four conceptual therapeutic landscape dimensions: experiential, symbolic, social and activity space. b) Hermes, Albert and von Haaren (2018) and Walz and Stein, (2014) found in their surveys that participants rated higher scores in naturalness and uniqueness for coastal blue areas compared to green areas;

c) Komossa et al., (2018) built the spatial maps of landscapes' outdoor recreation potential throughout the EU based on different landscape preferences of five archetypical outdoor recreation user groups (convenience recreationist, day tripper, education recreationist, nature trekker and spiritual recreationist). While convenience recreationists are attracted by water proximity, spiritual recreationists prefer inland old forests and high mountains.

The framework of *Figure 4* proposes the inclusion of two new dimensions. Firstly, it acknowledges the role of spirituality and mindfulness ("gold") comprising the immersive, symbolic, introspective or transformative experiences such as pilgrimage or the absorption of Earth's "energy" in Japanese "power spots". Secondly, it also analyzes the sensation seeking and excitement caused by achievement-oriented experiences, their implicit meanings, the gaze and emotions evoked by other "dark" and "white" sceneries such as: lighthouses and "land's ends" pilgrimage, dystopian (dark-grey) places, the isolated remote islands, the (white) extreme wilderness (eg. Iceland, Alaska or Scandinavia); or the risk recreation associated to danger (fear) sensations.

4. CONCLUSION

4.1 Research Implications and the Proposed “Salutogenic Health System”

The literature review supports the claim that living in blue and green spaces have a positive impact on individuals’ physical and mental health. As research output, this paper proposes a new “Salutogenic Health System” theoretical framework (see *Figure 5*), which aims to accommodate all antecedents:

- a) Controllable policies- 1) Place planning, development, and conservation policies, 2) Destination branding and marketing strategies, 3) Other quality of life factors;
- b) Uncontrollable factors- 4) Climate and natural processes;
- c) Individual users moderating variables (5);
- d) Therapeutic landscape attributes (A) and their access opportunities (A1)
- e) Short-term experiences (B)

The framework also encompasses the behavioural consequences (C) and the indirect and direct effects on psychologic health (D1), physical health (D2), life satisfaction (D3), perceived overall quality of life (D4), public health expenditures (D5), active (environmental) stewardship and citizenship (D6).

This perspective essay also proposes several research propositions, which translate the relationships between antecedents and consequences:

P1- The long-term exposure of individuals to green spaces (parks, gardens or forests) has a positive impact on physical and mental health.

P2- The long-term exposure of individuals to blue (rivers, lakes or seascapes) has a positive impact on physical and mental health.

This conceptual paper also found theoretical evidences that two other dimensions could be added to the framework, highlighting the short-exposure spiritual and sensation seeking experiences and considering a more active approach from individuals.

P3- The short-term exposure of individuals to spiritual, introspective and transformative experiences has a positive impact on physical and mental health.

P4- The short-term exposure of individuals to sensation seeking and self-achievement experiences has a positive impact on mental health but may also imply some risks to physical health.

The influence of landscape is only one factor among other environmental conditions. Other causal pathways resulting from poor environmental conditions also influence the population health (Pineo et al., 2018). Throughout the literature review, several user-related variables were identified as important moderators (see Table 1).

P5a,b - This positive impact is a) directly or b) indirectly moderated by several socio-demographic and psychographic individual variables (gender, age, income, personality, etc.)

Van Cauwenberg et al. (2011) made a systematic literature search with 31 articles. Results were inconsistent but most of the studied environmental characteristics were reported not to be related to physical activity (PA).

P6a,b- This positive impact of therapeutic landscapes is mediated by behavioral individual variables such as: a) physical activity (related with the propensity for outdoor activities) or b) the time of exposure/ frequency of visit.

There are also contradictory evidences about the correlation of physical activity of older adults with place related moderators, such as urban walkability, aesthetics, safety or access to services and others listed on Table 2 (Van Cauwenberg et al., 2011).

P7a,b,c- Other quality-of-life areas (eg. health infrastructures, walkability, seascape area, green space area or leisure and cultural activities) can: a) directly influence health; indirectly influence health by moderating b) the access to blue and green spaces or c) the physical activity.

P8a,b,c- The scenic quality or beauty of those landscapes (green or blue) moderates the impact of places on physical and mental health. (Poor quality green and blue spaces have a reverse effect) through a direct effect (a), or an indirect effect on frequency of visit (b) or on the behavioral outcomes (c).

P9a,b,c- This positive impact of therapeutic landscapes is moderated by place climate characteristics (eg. temperature, humidity, altitude, etc) through a direct effect (a), or an indirect effect on frequency of visit (b) or on the behavioral outcomes (c).

P10- The attributes of therapeutic landscapes are influenced by climate change and other uncontrollable natural processes.

P11- The therapeutic benefits of blue and green areas on psychological wellbeing also impact positively physical health and satisfaction with life.

P12- The positive community/user health related outcomes also have a positive impact on perceived overall quality of life and the reduction of public health expenditures.

However, the analysis does not consider other issues such as the influence of other socio-demographic variables such as the benefits of thermal springs (Serbulea & Payyappallimana, 2012) or the benefits of travelling for the increase of life expectancy.

Table 1. User Related Moderators and Control Variables

User-related Moderator/ Controls	Green & Blue Spaces	Moderating Effect
Gender	De Bell et al. (2017) Nutsford et al.(2016)	Women were more likely to select physical activity than psychological benefits as the single most important benefit.
Age Group	De Bell et al. (2017) Finlay et al., (2015) Nutsford et al.(2016)	Benefits were relatively greater for older people compared with younger people
Socioeconomic status	De Bell et al. (2017) White et al. (2017)	Predictor of both frequency and location of visits and was also associated with identifying social interaction as the most important benefit.
Number of dependent children	De Bell et al. (2017) White et al. (2013)	Users without children were less likely to report social interaction than psychological benefits
Education	Wheeler et al. (2012) White et al. (2013)	
Income	Nutsford et al.(2016) Wheeler et al. (2012) White et al. (2013)	Negatively associated in Kessler Psychological Distress Scale (k10)
Employment status	White et al. (2013,2017) Wheeler et al. (2012) Van den Berg et al., 2015	Associated with life satisfaction
Personality	White et al. (2013)	
Ethnicity	White et al. (2017) Pearson et al. (2017)	Associated with life satisfaction Not significant correlation with blue exposure
Neighborhood population density	Nutsford et al.(2016)	Negatively associated in Kessler Psychological Distress Scale (k10)

Deprivation	Nutsford et al.(2016) White et al. (2017)	Not significant
School Deprivation	Pearson et al. (2017)	Children from the most deprived schools had significantly higher rates of blue space exposure
Housing Quality	Nutsford et al.(2016) White et al. (2013)	Negatively associated in Kessler Psychological Distress Scale (k10)
Cohabiting/marital status	De Bell et al. (2017) White et al. (2013)	Single respondents were less likely to report exercise than psychological benefits
Dog ownership	White et al. (2017)	Associated with life satisfaction
Frequency of visit	De Bell et al. (2017)	Positively correlated
Coastal proximity	Gascon et al. (2017) Pearson et al. (2017) Wheeler et al. (2012)	Positively correlated with frequency of visit Not significant correlation with blue exposure
Perceived walking distance to fresh water blue space	Völker et al. (2018)	Negatively correlated with frequency of visit
Car ownership	De Bell et al. (2017)	Correlated with frequency of visit
Commuting time	White et al. (2013)	
Health status Disability status	De Bell et al. (2017)	Respondents who did not have a limiting long term illness were more likely to report physical activity than psychological benefits
Weight Status/ Obesity	Pearson et al. (2017)	Not significant correlated with blue exposure
Stress level	Gascon et al. (2017)	Positively correlated with frequency of visit
Place attachment	Gascon et al. (2017)	Positively correlated with frequency of visit
Urbanity/ Location	De Bell et al. (2017)	Predictor of both the frequency and location of visits to blue space

Source: Own Elaboration

4.2 Recommendations for Place Managers and Developers: The Proposed “Governance Support System”

Ng (2016) claimed for the “right to healthy place-making and well-being”. According to this author (p.3) “human settlements should “grow” naturally out of the ecosystem, providing their residents with plenty of opportunities to contact nature through a network of blue-green (water and open space) infrastructure”. Armed with a better understanding of factors promoting a healthy ageing, local governments are positioned to make infrastructure changes and public policies that prioritizes creating and maintaining blue and green spaces would serve to facilitate everyday access to these nurturing spaces.

Table 2. Place-related Moderators and Control Variables

Place related Moderator/ Controls	Reference	Effects
Climate conditions (reduction of extreme temperature)	Gascon et al. (2017)	Positively correlated with frequency of visit
Crime Safety	Nutsford et al.(2016) Van Cauwenberg et al. (2011) Wheeler et al. (2012)	Positively correlated with frequency of visit Negatively associated in Kessler Psychological Distress Scale (k10)
Physical Activity (PA)	Van Cauwenberg et al. (2011)	Correlation Not significant
Walkability x PA	Van Cauwenberg et al. (2011)	Correlation Not significant
Residential density x PA	Van Cauwenberg et al. (2011)	Correlation Not significant
Land use mix x PA	Van Cauwenberg et al. (2011)	Correlation Not significant

Access to services x PA	Van Cauwenberg et al. (2011)	Correlation Not significant
Access to public transport x PA	Van Cauwenberg et al. (2011)	Correlation Not significant
Access to recreational services x PA	Van Cauwenberg et al. (2011)	Positively correlated

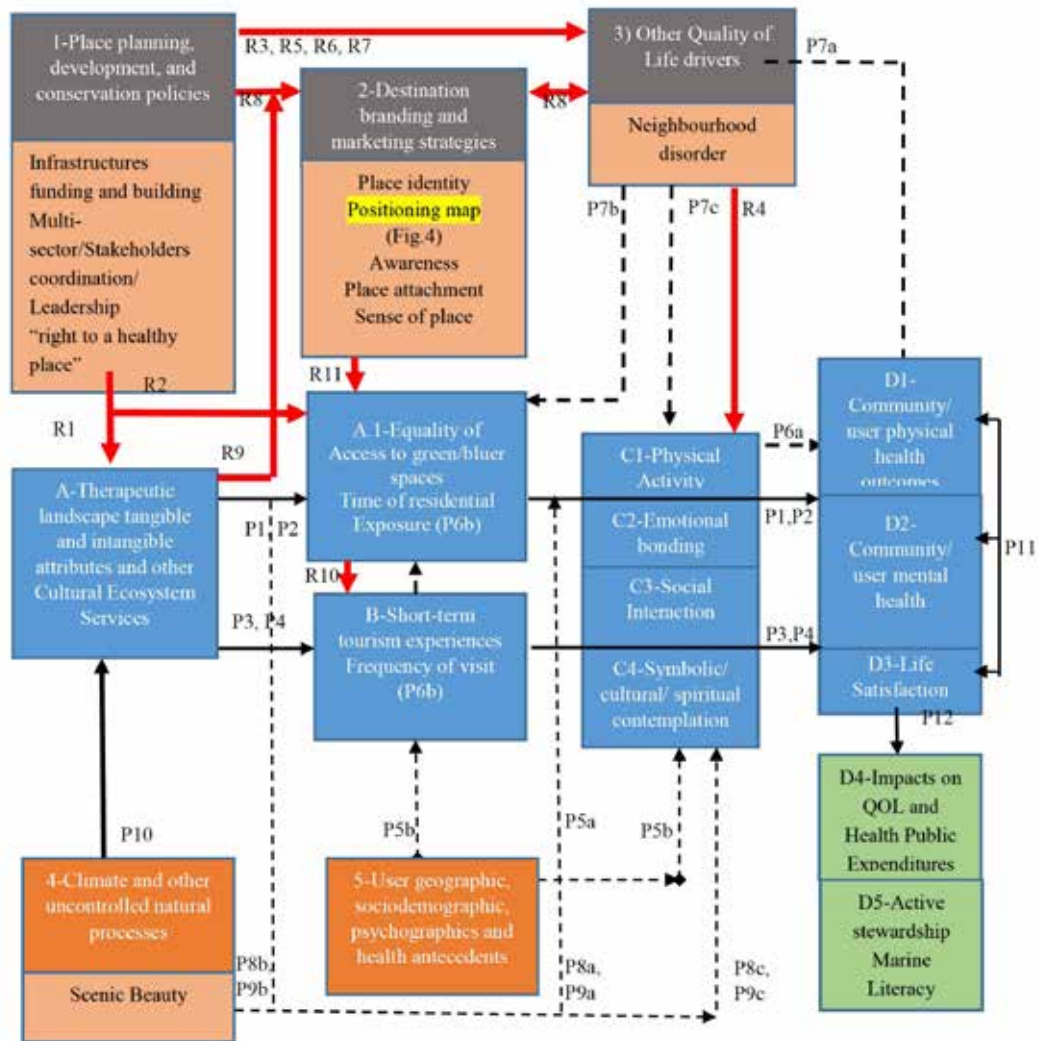
Source: Own Elaboration

Urban planners, architects, maritime authorities and other built environment professionals face a number of challenges when seeking to address health objectives through urban policy and development (Grant et al., 2017). This paper provides a list of recommendations and an agenda oriented to place managers/developers and policy makers that are graphically represented in *Figure 5* as R-arrows:

Recommendation R1- Infrastructure building plan: There are several examples of cities that have built infrastructures such as artificial lakes (e.g. Tuzla Pannonian Sea, or Palm Jumeirah Island in Dubai), beaches (e.g. Barceloneta) or promenades (Völker & Kistemann, 2013) as innovative solutions to requalify deprived or polluted areas and provide cities with new leisure and recreational zones. Interventions do not need to be large-scale, installing smaller features, such as a small garden plot or courtyard fountain, can also positively influence adults' quality of life (Finlay et al., 2015); The quality of the water must be assured (De Bell et al., 2017);

- a) *Recommendation R2- Equal access to green/blue spaces:* Social inequalities and physical barriers that inhibit the access to green and blue areas must be removed by improving public transports alternatives, safety and walkability (Hansen-Ketchum et al., 2011; Wüstemann, Kalisch & Kolbe, 2017); or by increasing the proportion of affordable homes in locations with oceanic views (Nutsford et al., 2016)
- b) *Recommendation R3- Assure the quality of health infrastructures and services;*
- c) *Recommendation R4- Promote the quality of the social interactions between users and nature,* through design and organization of recreational and cultural activities.
- d) *Recommendation R5- Promote the ecological and marine literacy and citizenship* (Hansen-Ketchum et al., 2011);
- e) *Recommendation R6- Adopt inter-sector governance* in order to increase synergies and opportunities: a walking path along a river could provide opportunities to walk to school or work while experiencing the restorative qualities of the natural world, a community vegetable garden could enable people of all incomes to secure healthy food, and a transportation infrastructure project could support the creation of a safe biking path along a rural highway (Hansen-Ketchum et al., 2011);

Figure 5. Proposed Theoretical Framework for the Salutogenic Health System (black arrows) and the Governance Support System (red arrows)

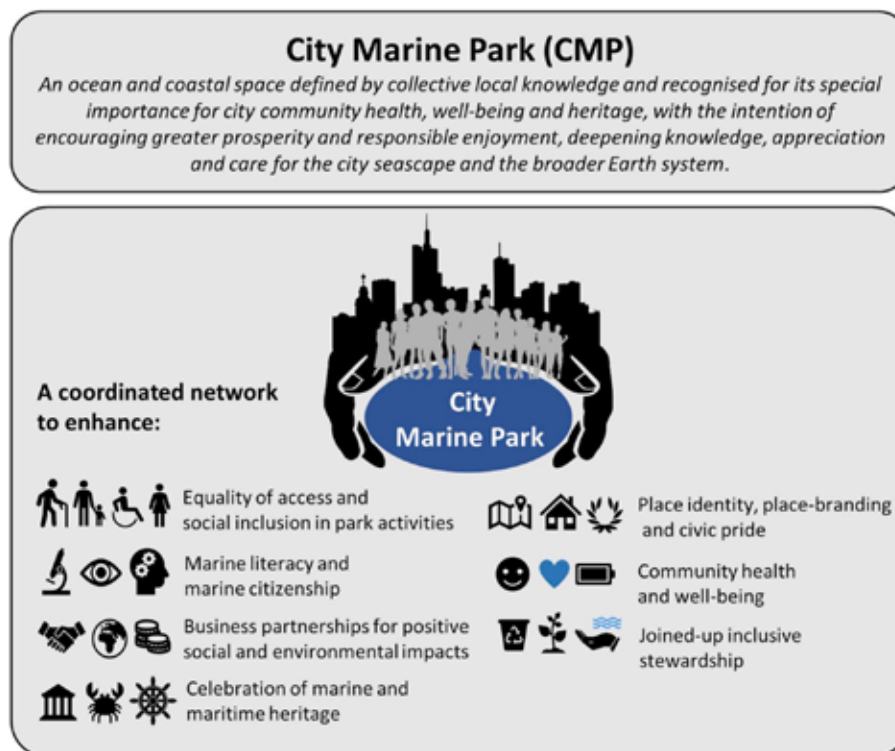


Source: Own Elaboration

More recently, Pittman et al. (2019: 102) expressed that the “growing concern over human impacts upon coastal waters and global strategic goals for healthier cities requires that coastal cities develop innovative ways to inspire and empower communities to embrace and cherish city seascapes”. Their paper proposes a collaborative *community-led marine park* (CMP) concept (see Figure 6) that “celebrates a city’s connection to the marine environment, enhances sustainable economic prosperity and enables communities to participate in activities that deepen understanding, value, care and enjoyment of the city seascape”.

The CMP is a coordinated network that aims to enhance several goals: equality of access and social inclusion in park activities; marine literacy and marine citizenship; business partnerships for positive social and environmental impacts; celebration of marine and maritime heritage; place identity, place branding and civic pride; joined-up inclusive stewardship. Thus, CMP aims to enhance the community health and wellbeing, by increasing the physical activity and reduce the stress of their inhabitants.

Figure 6. CMP Collaborative Community-Led Marine Park Framework



Source: Pittman et al., (2019:162)

4.3 Recommendations for Place Branding and Marketing Organizations

Place brands provide a framework for local citizens and visitors to experience a place as well as an agenda for politicians to allocate resources. Place brands function not only as a marketing slogan but also as a strategic political vision, shaping the framework in which local citizens and visitors experience a place (Gulsrud, Gooding & van den Bosch, 2013).

Place identity usually embodies the unique attributes and competitive advantages of places and aims to meet the strategic needs of the place stakeholders (*Recommendation R8*). The place identity must be aligned with brand positioning (*Recommendation 9*) (see Positioning Map of *Figure 4*) and translate a narrative of positive nature-based sensory experiences into a single-minded, compelling and unique visual communication (Porter, 2013):

1. The health benefits from therapeutic landscapes (Valls et al., 2017) thus generating new business opportunities like wellness/medical tourism (Tooman, 2013);
2. The therapeutic landscape quality (green or blue), especially exploring the scenic attributes; 3) innovation in designing tourism experiences appealing for spiritual or self-achievement motives (*Recommendation R10*).

Moreover, some case-studies of destination branding and place identity building were found, representing the exploration of market niches for the therapeutic destinations proposed on the positioning map of *Figure 4*.

- a) Brand positioning in wilderness of Iceland (Ólafsdóttir & Runnström, 2011), or the Kimberley coast in Western Australia (Pearce, Strickland-Munro & Moore, 2017);
- b) The pilgrimage route of “Camino de Santiago” (Kim, King & Kim, 2016) or Kumano-kodo in Wakayama, Japan (Kato & Prozano, 2017);
- c) The dark tourism destinations such as Memorial of the Victims of the Nanjing Massacre in China (Zheng et al., 2016);

Furthermore, as a last *Recommendation (R11)*, place marketing decision-makers should develop innovative target-oriented communication strategies (for residents, tourists and other stakeholders) aiming to increase the awareness of therapeutic landscapes and the marine literacy and consequently the exposure and frequency of visit.

However, Tobias and Wahl (2013) concluded that place branding can hardly support landscape conservation in city-regions. Landscape can only become a brand of a place, if it is abundant, unique and the only real strength of the place. These authors argued that landscape and green spaces play the same role as the streetscapes of a city. Unattractive landscape or green spaces are strongly perceived in the negative way; contrariwise, their attractiveness is not appreciated as strength of the place. In the same year, Gulsrud, Gooding, van Den Bosch (2013) also concluded that biophysical assets such as green spaces were not in focus in Danish municipalities place branding campaigns.

The health-based branding strategies can be extended larger geographic scales like Blue Mountains region of New South Wales, Australia (Porter, 2013) or beach towns (Valls et al., 2017). The literature provides already some case-studies of cities such as Vancouver – “Healthy city for all” (Veal, 2017) linked to green leadership (Affolderbach & Schulz, 2017), Cologne/Dusseldorf (Völker & Kistemann, 2013), or cities’ networks such as Portuguese Health Cities Network comprising 57 cities, that use health as corner stone of their marketing and positioning strategy.

Furthermore, there are some research organizations that measure and compare cities’ health status: US Healthiest cities and counties, (<http://www.healthiestcities.org/>) or the WHO European Cities Network. Several other instruments were developed to measure the level of cities health (Lowe et al., 2015), selecting green space area (hectares per 100.000 population) or green land use as a core indicator: the WHO European Healthy Cities Network comprising a set of 32 healthy city indicators (Webster and Sanderson, 2013); the Green City Index (www.siemens.com/greencityindex); or the Building Research Establishments Healthy Cities Index (BRE- HCI) with 58 indicators (Pineo et al., 2018).

This conceptual paper provided two theoretical frameworks for mapping and branding places, adding the place management and marketing perspectives to a research topic usually explored by social medicine and environmental psychology disciplines. Author hopes they will inspire place brand managers, public decision makers, tourism operators and researchers involved in this complex research topic.

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STUDY OF THE RECREATIONAL CARRYING CAPACITY OF THE CAÍDA DO MORRO TRAIL (ILHA GRANDE, PIAUÍ STATE, BRAZIL)

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ABSTRACT

This paper sought to reflect on the methodologies of the carrying capacity assessment in ecotourism trails. After analyzing and defining the methodology presented by Cifuentes (1992) it was possible to estimate the Recreational Carrying Capacity for the “Caída do Morro Trail” in the Tatus community, in the Ilha Grande municipality, state of Piauí, in the Brazilian northeast. For the evaluation of the Recreational Carrying Capacity the specific characteristics of the limiting or correction factors (dune height, trail length and temperature) applied to the control and data collection were used. The method used showed that once an adequate management plan has been implemented with the construction of more support points and acquisition of more equipment by the agencies involved in this activity, the number of visits may increase, but it is also important that visits do not exceed the rate stipulated by the Real Carrying Capacity.

Keywords: Recreational Carrying Capacity, Ecotourism Trail, Tourism, Recreation, Caída do Morro Trail (PI).

JEL Classification: Z32

1. INTRODUCTION

Different motivations lead people to practice diversified forms of ecotourism and recreational activities, especially in natural environments, which have a greater number of followers. According to the World Tourism Organization (UNWTO, 2011), ecotourism presents a growth rate of 20% a year, while other segments presents a rate of 7.5% a year (Araújo & Silva, 2006). According to Teixeira & Oliveira (2015), these data, associated with the science of the fragility of natural ecosystems, encourage the care in relation to the practice of this segment of tourism, since this and other anthropic actions are, in many cases, responsible for the degradation of the natural environments.

Tourism, as an economic activity, can generate employment and income for certain localities. With the structuring of new tourism products and services, it tends to increase the number of jobs and, consequently, to leverage the generation of income. Beyond the economic aspect “tourism is an international human activity that serves as a means of communication and as a link between peoples both inside and outside a country” (Trigo,

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2004: 12). In this way, tourism is a complex activity that unites several actors and sectors of society.

In this context, one of the possible activities to be developed in the Parnaíba Delta region is Ecotourism. This activity seeks a greater involvement of man with the environment, considering environmental and economic sustainability in a place that has a biological importance and, at the same time, it is fragile. According to Swarbooke (2000), "Ecotourism" is a widely used term by scholars, but is rarely defined. It is often used interchangeably with other terms such as "soft" tourism, alternative tourism, responsible tourism and nature tourism.

There is a great demand for people interested in visiting natural areas and Conservation Units (CU) to carry out tourism and recreational activities with a wide range of purposes such as the contact with nature on ecological trails. In this way, public use in the areas with trails must be observed and calculated to avoid, or at least minimize, the impacts of the visitation. That is, analyze the flow of visitors their practices so as not to harm the environment. Passos & Costa (2018) highlight that authors such as Sinay, Sinay & Pena (2014), Silva, Melo & Lucena (2017) and Pistorello, Conto & Zaro (2015), already address in their studies the environmental issue in the tourist activity.

As an example of an emerging tourist attraction and suitable for actions to control the impacts of the visitation, there is the Caída do Morro Trail, the target point of this research, located in the municipality of Ilha Grande, in the state of Piauí, in the Tatus community. It is an area where it is possible to observe several animal species, such as birds and primates, as well as a beautiful landscape. This trail was used only by natives as a route to fishing areas and it was used for the first time as a tourist attraction in the year of 2012, in one of the editions of the event named Walks in Nature (ANDA BRASIL, 2012).

To this end, there are several methods to propose a strategy for managing the impacts of visitation. Among them is the study of the Recreational Carrying Capacity (RECCC) of a tourist attraction. According to Sardinha et al. (2007) the use of methods to evaluate and quantify the impacts of tourism activities on natural attractions and cites started in the 1970s, as references: "LAC - Limits of Acceptable Change (Stankey et al. (1998), VIM - Visitor Impact Management (Graefe et al., 1990), Carrying Capacity (Cifuentes, 1992), Pressure-State-Response (OECD, 1994) and VERP - Visitor Experience and Resource Protection (NPS, 1995)" (Sardinha et al., 2007: 162).

From the cited methods, the most applied in Brazil is the study of carrying capacity (Sardinha et al., 2007). The greatest exponent of this method was Cifuentes (1992), who proposed a method composed of six sequential and interrelated steps, namely: analysis of policies on tourism and management of protected areas; analysis of the objectives of protected areas; analysis of the situations of the places destined to visit; definitions, strengthening and changes of policies and decisions regarding the category of management and zoning; identification of the factors/characteristics that influence in each place of public use and the determination of the carrying capacity for each place of public use. In addition, Cifuentes defined that the parameters for calculating the RECCC are the following: trail length, area occupied by each person, time for site visit, time required for those visits, and accessibility.

In this way, this work sought to understand how the Recreational Carrying Capacity can contribute to the ecotourism planning in the Caída do Morro Trail. Faced with this questioning, this research proposes that the adoption of a recreational carrying capacity rate will reconcile the tourist use with the conservation of the environmental heritage of the Caída do Morro Trail. The choice of this investigation theme was based on the perception of the fragility of the ecosystems existing in the path of the Caída do Morro Ecological Trail. It was proposed in this work the need to measure the carrying capacity in order to have a greater control of the activity.

For the theoretical basis of this study it was used the ideas of some relevant authors that conducted investigations in the research area of ecotourism, such as: Cifuentes (1992), being one of the main theoreticians to study the tourism carrying capacity in protected areas; Ruschmann (1997), who addresses the planning and tourism sustainability in Environmental Protection Areas; Guzzi (2012), that deals with the various ecosystems and biodiversity of the Parnaíba Delta, as well as local fauna and flora; Drumm (2003), who conducts studies on the development of ecotourism as well as its sustainable planning; and Lindberg & Hawkins (2002), who address principles and bases for planning linking environmental education and ecotourism. In this perspective, this article aims to estimate the recreational carrying capacity for an ecological trail in the municipality of Ilha Grande (Piauí), and its contribution to the promotion of the sustainable use of local natural resources.

2. RECREATIONAL CARRYING CAPACITY IN ECOLOGICAL TRAILS

Ecological trails have become one of the most sought-after tourist products by ecotourists. Trails that used to be used only for cargo transport or hunting activities are now important elements of tourism, promoting economic and cultural development, according to Carvalho & Bócon (2004) and Maciei et al. (2011). In this sense, Campos and Filletto (2011) reinforce that ecological trails are fundamental elements to develop a sustainable tourism concept. This kind of trail has central importance to develop the ecotourism practices, leading to the preservation of the environment and, thus, to minimizing future impacts. In this way, a greater study and preparation of tour guides and visitors conductors are necessary, for the development of sustainable and lasting environmental practice.

Since the Caída do Morro Trail is located in a permanent preservation area the displacement of large numbers of people could directly impact the environment, deteriorating the trails and, consequently, affect the local fauna and flora. Because of this scenario it is necessary to plan and control the activities and people that use the trail, that is, determine its carrying capacity. The term “carrying capacity” had its first concept applied in the 1920s and was directed to agricultural issues (Newsome et al., 2002; Limberger & Pires, 2014). In 1992, the same concept was remodeled for tourism purposes by the Center for Environmental and Political Studies of the Costa Rican Neotropics Foundation (Seabra, 1999; Lazzarotto et al., 2006). In this sense, carrying capacity is a method for the preservation and minimization of the environmental impacts caused by the visitation. However, often these impacts are not the result of the excess of visitors, but of the activities developed by them (Zilioli, 2008 apud Teixeira et al., 2015).

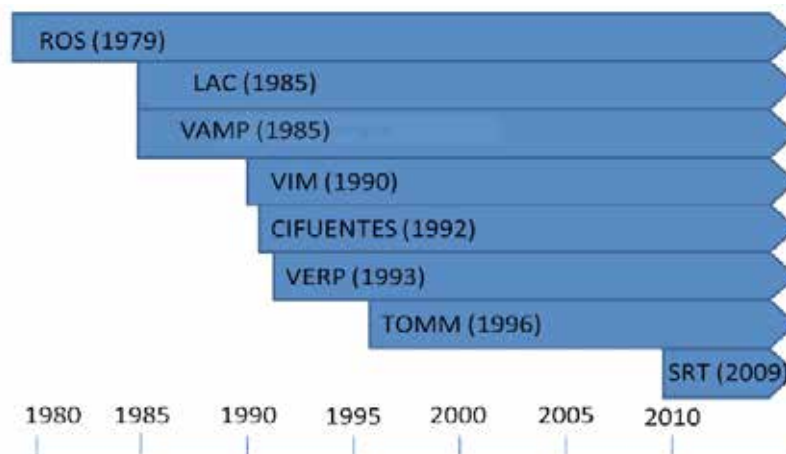
According to Ruschmann (1997), the concept of carrying capacity must be applied to tourism planning, since both natural and man-made resources have a limit to absorb visitors and this limit, when overcome, causes deterioration. Developing activities in a natural environment without previous planning can cause impacts in the region where the activity is being carried out, since the massification of the tourist activity requires an increase in the use of the tourist product, and with this, also comes the need to create new ventures aimed at greater comfort to tourists.

In general, the measurement and adoption of the carrying capacity seeks to minimize these impacts by pursuing a way to harmonize all these areas aiming at a balance, even knowing the existing limitations. However, this technique has its critical points, because it cannot present a specific number of visitors in a natural area. The carrying capacity is a highly criticized method, being described as “unrealistic” and “non-scientific” (Stigliano, 2004, apud Delgado, 2007). Several authors affirm that it is not possible to establish a number, which expresses the limit from which the impacts caused by the visitation would

degrade the area that receives the visitation. The Recreational Carrying Capacity defines the maximum number of users that a given recreational site can support without significant impacts being generated in the natural environment (Stankey & Manning, 1986).

The approaches of the carrying capacity method can be very different, being able to receive the following theoretical classification: ecological; perceptive/psychological/social; landscaped; materials; physicists; economic; and environmental (Pires, 2005). The method introduced by Miguel Cifuentes is one of the most known and widespread one for working the carrying capacity in protected areas aiming at a greater applicability of the methods directing the diverse resources of the locality in the practices of recreation putting in charge the reduction of impacts to the environment. The three fundamental aspects that are the basis of the Cifuentes methodology are: physical carrying capacity (PCC), real carrying capacity (RCC) and effective carrying capacity (ECC). According to Limberger & Pires (2014), the main models of recreation planning and management in natural areas are: Recreational Opportunity Spectrum (ROS); Limits of Acceptable Change (LAC); Visitor Impact Management (VIM); Visitor Activity Management Process (VAMP); Tourism Optimization Management Model (TOMM); Visitor Experience and Resource Protection (VERP); Cifuentes method; and Sustainable Recreation and Tourism (SRT) (Cifuentes, 1992, Newsom et al., 2002, Pires, 2005 and Slider, 2009). Thus, a methodological synthesis of the carrying capacity was formulated through the several models presented, since ROS in 1979 coming up to 2009 with SRT, in a chronological scale presented in the Figure 1 below.

Figure 1. Chronology of Methods for Managing the Impacts of Visitation



Source: Adapted from Cifuentes (1992), Limberger and Pires (2014)

The following text is a summary of the main characteristics of the various systems used:

Recreation Opportunity Spectrum (ROS) (1979), the recreational opportunities spectrum was developed by the United States Forest Service and the United States Territorial Agency, designed at the time as a way to identify and determine the various recreational opportunities, with the aim of diversifying their offerings and giving tourists and visitors the opportunity to choose the activities best suited to their desires. Because of its flexibility, the ROS has a planning process divided into six stages where the strong point is a guarantee of greater opportunity to take advantage of the areas in use for both tourist and recreational purposes, as well as for activities other than these.

Limits of Acceptable Change (LAC) (1985), was created from the analyzes and improvements of the initial concept of carrying capacity initially used in grazing cattle management. It was also developed by the United States Forest Service and is an extension of the ROS. This model specifically addresses the conditions and changes acceptable in the

biophysical environment as well as in ecosystems, and thus differs from the older models that cared about the amount of people that could use a particular recreational area without causing damage. The LAC is divided into ten planning stages and, like the ROS, is very flexible, with its main strength being the norms of the amount of changes acceptable for a specific area.

Visitor Activity Management Process (VAMP) (1985), was a model developed in Canada, in the field of the Parks Planning and Management System (Pires, 2005). This system seeks to integrate the wishes of the visitors with the opportunities provided in certain areas, through marketing approaches. As a positive point, this system identifies both the producers and the demand for natural areas. Its downside lies in its inability to identify and determine changes in the natural environment and its impacts.

Visitor Impact Management (VIM) (1990), originated from the principles of the LAC. Its applicability becomes simpler when used as an alternative to carrying capacity management. It was used and developed in the United States National Parks Service, by the conservation associations. In its process, the VIM follows eight steps divided into two monitoring phases. The main differential of this model is the precision based on the trust in judging the scientific and subjective facts, being used in small natural areas. Its limiting point is linked to the non-use of the ROS and the lack of vision of the potential impacts through visits.

Cifuentes (1992), the method proposed by Cifuentes is divided into six steps in a related sequence: policy analyzes on tourism and protected areas at national, regional and local level; analyze the objectives of the protected areas in question which have close links with management categories; analyze the conditions of the places of public use, and their zoning; definition, strengthening and changes of policies and decisions regarding the management and zoning categories of the area; identification of factors/characteristics that influence in each place of public use; determination of the carrying capacity and the use of a certain place of public use. For the determination of the carrying capacity and the use of a certain place of public use we can cite the three levels of carrying capacity proposed by Cifuentes, which are: physical carrying capacity (PCC), real carrying capacity (RCC) and effective carrying capacity (ECC).

Visitor Experience and Resource Protection (VERP) (1993), is another model developed by the United States National Parks Service. Its main use was to provide a set of experiences to the visitors, taking into account the different areas to receive them. Its purpose is to zonate the existing natural resources in a given area of visitation. Its versatility is linked in a model where there is an existing management. Its limit point is the dependence of monitoring on the determination of impacts.

Tourism Optimization Mode (TOMM) (1996), was created in Australia by a consulting firm and its employment is directed not only to the national parks service, but to any nature tourism destination. This model took as reference the LAC, especially when it comes to monitoring steps. Its main focus is economic sustainability and only secondarily the carrying capacity. Its main feature is the use of stakeholders in great diversity of areas for its planning process. Its great differential lies in the explicit inclusion in the spheres of economics and politics through projects involving stakeholders. Its limitation lies in the fact that it needs a lot of information coming from data manipulation and management, thus requiring large investments.

Sustainable Recreation and Tourism (STR) (2009), this new concept has been suggested by Slider (2009). In a joint vision, he recognizes that there are multiple values and perspectives for the various systems, which entails cautious use of social, environmental, and economic influences on management processes. It seeks opportunities for recreation and tourism that can be achieved by all society. Thus, this new vision becomes more a principle than an operational model itself.

3. METHODOLOGY

3.1 Study Area Characterization

The Caída do Morro Trail is located in the community of the Tatus, inserted in the Delta of the Parnaíba Environment Protection Area, located in the city of Ilha Grande of Piauí. The city has an area of 130.08 km² and a population of approximately 8914 inhabitants and it is 349 km away from Teresina, which is the state capital (Figure 2).

Figure 2. Location of the Ilha Grande Municipality, State of Piauí, Brazil



Source: Borges, 2017, p. 200

The trail begins in the Tatus community, latitude -2.8311975114, longitude -41.8266895786 and altitude of 4460 m. It takes a 6.7 km route between the place of departure and arrival. The first part of the trail passes through a set of mobile dunes, which means that you always have a new landscape with each tour. The dunes at the beginning of the trail are between 7 and 9 meters high, followed by others between 20 and 80 meters high. The highest altitude sand dunes are used for the practice of sandboarding, a very popular sport in adventure tourism in this region (Figure 3). While sandboarding the tourists have a greater contact with nature and can understand the need to preserve the natural environment for future practices.

Figure 3. Dunes where People can Practice Sandboarding



Source: Silva, 2016

During the rainy season it is possible to stop in the lagoons formed amidst the dunes and thus enjoy the scenic beauty (Figure 4). The second part of the trail is done almost entirely on flat terrain amidst native vegetation, where the trail narrows further and participants will have greater contact with the local flora and fauna (Figure 5). They can thus contemplate the various species of animals, such as birds and reptiles, which seek these places for reproduction.

Figure 4. Swimming Spots



Source: Silva, 2016

Figure 5. Group in the Midst of Native Vegetation



Source: Silva, 2016

3.2 Methodological Procedures

In order to analyze the possible direct impacts, the methodology of Cifuentes (1992) that addresses the calculations of the Recreational Carrying Capacity (RECCC) was adopted. This calculation is divided into three stages: Physical Carrying Capacity (PCC), Real Carrying Capacity (RCC) and Effective Carrying Capacity (ECC), and mathematical formulas are used to calculate each step.

The Physical Carrying Capacity (PCC) will be defined based on the maximum number of visits made, based on the relation between the space available for visitation and the time. For this calculation the following formula is used:

$$PCC = S/s.v \times T/t.v$$

Where:

PCC= Physical Carrying Capacity

S= Total surface area of the attractive, used for public use.

s.v.= surface area occupied by a visitor.

T= Total period of time in which the recreational area is open for public visitation.

t.v.= time needed to visit the place.

The Real Carrying Capacity (RCC) is defined starting from the maximum permissible number of visits of a locality, observing limiting or correction factors originating from particular characteristics applied to each location. For this calculation the following formula is used:

$$RCC = PCC \times LF_1 \times LF_2 \times LF_n$$

Where:

RCC= Real Carrying Capacity

PCC = Physical Carrying Capacity

LF_1 to LF_n = Limiting or correcting factors of PCC, that is, factors that will limit the number of people who will have access to a certain recreational area. In order to calculate the limiting or attractive correction factors, the following formula is used:

$$LF_n = 1 - l.a./T.A.$$

Where:

l.a.= Limiting amount of factor considered.

T.A.= Total amount in which the limiting factor is considered.

The Effective Carrying Capacity (ECC) uses factors related to human resources, infrastructure and equipment available locally to support visitation and achieve management objectives. In this way, it reduces the RCC according to the local management capacity. Therefore, it is calculated:

$$ECC = RCC \times MC/100$$

Where:

ECC= Effective Carrying Capacity

RCC= Real Carrying Capacity

MC = Management capacity of the area. This number is obtained through the elaboration of two specific checklists: the first is directly related to human resources, equipment used in the existing local infrastructure and infrastructure to support the visitation and activities carried out, the so called installed capacity; the second is related to the resources needed to better serve visitors, the so called adequate capacity. The MC shall be defined according to the percentage of installed capacity in relation to the appropriate capacity, according to this formula:

$$MC = \text{installed capacity (IC)} / \text{adequate capacity (AC)} \times 100$$

4. RESULTS

As previously described, the process for defining the Caída do Morro Trail RECCC was derived from data collection regarding the physical and environmental characteristics of the route currently performed by tour operators to compose the calculation proposed by Cifuentes (1992). Therefore, the RECCC was defined in the Caída do Morro Trail as it follows:

Physical Carrying Capacity (PCC)

$$PCC = S/s.v \times T/t.v$$

Where:

$$S = 6,7 \text{ km}$$

$$s.v. = 1 \text{ m}^2 \text{ (UNWTO standart)}$$

$$T = 7 \text{ h (from 7 AM to noon and 4 PM to 6 PM)}$$

$$t.v. = 5 \text{ h}$$

$$PCC = 6700\text{m}/1 \times 7/5 = 9380$$

$$PCC = 6700 \times 1.4 = 9380$$

Real Carrying Capacity (RCC)

$$RCC = PCC \times LF1 \times LF2 \times LF3$$

LF1 – It was considered the drought period of the region, from July to December, when all the temporary lagoons are dry, making the course of the trail more rigorous because of the dry sand.

$$LF1 = 1 - l.a./T.A.$$

$$l.a. = 180 \text{ days}$$

$$T.A. = 365 \text{ days}$$

$$LF1 = 1 - 180 \text{ days} / 365 \text{ days} = 0,49$$

LF2 – In this correction factor we can mention accessibility, taking into account that the trail is mostly considered of medium and high difficulty due to the height of the dunes that can vary from 7 to 9 meters (the lowest) and from 20 to 80 meters (the highest).

$$LF2 = 1 - l.a./T.A.$$

$$l.a. = 3500 \text{ m}^2$$

$$T.A. = 6700 \text{ m}^2$$

$$LF2 = 1 - 3500/6700 = 0,48 \text{ m}^2$$

LF3 – From 11 AM temperatures can vary between 38° to 40°C, making the walk more exhausting. Therefore, it is not feasible to walk the trail after 12 o'clock, especially during the summer.

$$LF3 = 1 - l.a./T.A.$$

$$l.a. = 5 \text{ h}$$

$$T.A. = 7\text{h}$$

$$LF3 = 1 - 5\text{h} / 7\text{h} = 0,29$$

$$RCC = 9380 \times 0,49 \times 0,48 \times 0,29 = 639 \text{ visits/day}$$

Effective Carrying Capacity (ECC)

$$ECC = RCC \times MC/100$$

Based on the limit established in the calculation of the Real Carrying Capacity (RCC), which was 639 visits per day, the calculation of the Effective Carrying Capacity was sought

to answer if there are real conditions to receive the established number of visits. From this result it is possible to identify the number of visits that can occur with safety and quality, professional support and recreational excellence, aiming at minimizing environmental impacts.

Due to the lack of adequate infrastructure and few equipment, and because it was a new trail to support visitation, the MC was estimated using the reports of the local guides on what they had and what was desirable to have regarding security, comfort and an also other aspects to improve the visitors experience. Thus, a list was created with the main components installed and the adequate capacity for the best use of the Caída do Morro Trail, as can be seen in Table 1.

Table 1. General Description of the Installed Capacity (IC) and the Adequate Capacity (AC) for the Caída do Morro Trail

Installed Capacity (IC)	Adequate Capacity (AC)
Staff = 4	Staff = 10
Equipments = 11	Equipments = 241
Facilities = 1	Facilities = 4
TOTAL = 16	TOTAL = 255

Source: Own Elaboration

Staff = here defined as the guides who conduct the visitation. For 639 visits/day, defined in the RCC, an average of 1 guide per group of 12 people was calculated. Visits will take place in the morning from 7 AM to 12 PM. There will be 53 visits (groups) with the need of approximately 54 guides. The fifty-fourth guide would be responsible for a sweep to determine if no person or equipment was missing at the end of the trail course.

Equipment = trekking poles, ropes, Sandboarding boards, first aid kits and GPS receptor were listed as needed equipment. Table 2 lists the items distributed in the Installed Capacity (IC) and Adequate Capacity (AC) categories.

Facilities = it was considered the construction of three more support points where the local community could market artisanal products, coconut and mineral water, as well as food produced from fruits and vegetables found in the region. In addition, there is a need for the implementation of a tourist signaling system indicating the distance traveled, as well as information about the local fauna and flora. With this, there will be four facilities in total to better serve and receive the visitor, since the existing conditions are precarious.

**Table 2. Description of the Equipment in the Installed Capacity (IC) and the Adequate Capacity (AC)
Categories for the Caída do Morro Trail**

Equipment	Installed Capacity (IC)	Adequate Capacity (AC)
Trekking poles	1	128(per group)
Ropes	5	10
Sandboarding boards	4	50
First aid kits	1	53(per group)
Total	11	241

Source: Own Elaboration

After taking in consideration all the factors above, the MC and the ECC were calculated:

MC = installed capacity (IC)/ adequate capacity (AC) x 100

MC = $16/255 \times 100 = 6,2\%$

ECC = $639 \times 6,2/100 = 39,6$ visits/day (approximately 39 visits per day).

Each visit lasts 5 hours on average with a stop for bathing in the lagoons and in the river, in addition to time for photos. The total opening hours of the attraction is 7 hours. It could be stipulated the visit of 4 groups of 12 people, that must be accompanied by 1 guide or local conductor. Given the installed capacity in place and according to the calculations above, it is possible to occur only 39 visits per day, however, once implemented the necessary improvements, the number of visitors could be increased (Table 3). It is important to emphasize that the limit established by the RCC is 639 visits/day, aiming at the harmony between the visitors and the environment, so that there is no imbalance in the local ecosystems. Thus, the recreational carrying capacity of the Caída do Morro Trail was estimated at 39 visits/day or 7020 visits/year, in which 180 days per year were considered, excluding the dry season.

Table 3. Variations in the Effective Carrying Capacity (ECC) as a Result of Improvements in the Management Capacity (MC) in the Caída do Morro Trail

Management Capacity (MC) (%)	Effective Carrying Capacity (ECC) (visits/day)
6,2% (Present)	39
25%	159
50%	319
75%	479
100%	639

Source: Own Elaboration

For a better visualization of the trail path, the map below is shown (Figure 6). According to the legend, it is possible to locate the starting point, where is the concentration of the dunes called Lençóis Piauienses; the return trail that passes through the Vereda Grande stream, where native vegetation is exploited for environmental interpretation practices; besides the main points of support and the stops made for resting and bathing in the lagoons and in the river Parnaíba.

Figure 6. Map of the Caída do Morro Trail



Source: Google Earth Adapted by Silva & Nascimento, 2017

According to Cooper et al. (2011), at the moment that the tourist activity happens, the environment is inevitably modified. In the region where the trail is located there are several animal species, especially birds that use the place during the breeding season. In the period between January and June the vegetation becomes denser and the process of inflorescence begins, and it is exactly this period the one with the greatest flow of visitors. Disordered visitation causes major impacts on the ecosystem, damaging local flora and fauna, such as solid waste accumulation along the trail discarded by visitors as well as constructions that cause visual pollution (Figure 7).

Figure 7. Accumulation of Solid Waste and Constructions along the Trail



Source: Silva, 2016

5. CONCLUSION

This article sought to estimate the Recreational Carrying Capacity aiming at the sustainable use of the Caída do Morro Trail, located in the Ilha Grande municipality, in the state of Piauí, Brazil. For this calculation the methodology proposed by Cifuentes (1992) was used, which showed a Real Carrying Capacity of 639 visits per day, taking into account three limiting factors: the dry season, dune height and averages temperatures. After analyzing the installed capacity on site, it was defined that the Effective Carrying Capacity is 39 visits per day, representing 6.2% of the actual capacity. However, based on the methodology used, the indexes showed that after applying an adequate management plan with the construction of more points of support and acquisition of a greater number of equipment the number of visits could increase without, however, harming the local ecosystem.

During the years of use of the trail some initiatives have already been taken to reduce the impacts caused by the tourist activity, such as the attempt to direct visitors to a single path, from the installation of cement columns and barbed wire, which caused great visual pollution. However, due to the natural movement of the dunes, the fence was covered by sand, generating a greater visual impact and increasing the risk for local residents and visitors who may be injured with the vestigial materials.

In order to guarantee the Recreational Carrying Capacity in the Caída do Morro Trail, it is necessary to understand the results obtained from the methodology adopted. For this, tourists, guides and conductors of tourism must keep control of their activities, from the development of environmental education actions and equity awareness of the other actors involved and local community. In this way, it is expected that this work may contribute as a research source for future studies, both in the process of environmental and sustainable development of the trails of the region, as well as in the elaboration of a management plan, with a view to promoting local tourism and economy.

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EXPLORING THE BEHAVIOURAL APPROACH FOR SUSTAINABLE TOURISM

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ABSTRACT

The behavioural approach to sustainable tourism has received considerable attention and interest from the academic community within various fields of study. It has particular value for developing sustainable social practices. In this article, we investigate the contributions of the behavioural approach in the economic sciences, psychology, and adult education. Our objective is to reinforce the notion that individuals have the capacity to alter their behaviour to achieve active participation in unity with nature that firmly favours both their own well-being and environmental protection. We distinguish the term *tourism* as not only as a leisure activity, but also as *a turning or changing point* (while individuals adapt their performance in tune with nature to find the ways to achieve physical, mental, and spiritual equilibrium). Thereby, we make a further step to discussions on how exploration of the behavioural approach can support initiatives that promote environmental protection, and innovative tourism education programmes.

Keywords: Behaviour al Approach, Behaviour al Codes, Adult Education, Environmental Protection, Tourism Education Programmes, Tourism as a Turning or Changing Point, Well-Being, Sustainable Tourism.

JEL Classification: E70, E71

1. INTRODUCTION

The behavioural approach has an important role for developing sustainable social practices, including the practices in the tourism field. In fact, the behavioural approach to sustainable tourism has received considerable attention and interest from the scientific community within various fields of study.

This paper aims to analyse the contributions of the behavioural approach in the economic sciences, psychology, and adult education. Our main goal is to reinforce the notion that people can alter their behaviour to achieve active participation in unity with nature that firmly favours both their well-being and environmental protection.

In this context, the concept of tourism is not only related with a leisure activity, but also as a turning or changing point, while individuals adapt their performance in tune with nature to find the ways to achieve physical, mental, and spiritual equilibrium.

Thus, this article presents a further step to discussions on how the exploration of the behavioural approach can support initiatives that promote environmental protection, and

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innovative tourism education programmes. Firstly, it explores the outcomes from economic, psychological and adult education theories. Secondly, it presents the relation between well-being and sustainable tourism. Thirdly, some examples of developing sustainable practices are presented. Finally, the conclusion section presents the relevance of exploring the outcomes of the behavioural approach as methodological support for the development of sustainable tourism practices.

2. THE OUTCOMES FROM ECONOMIC, PSYCHOLOGICAL AND ADULT EDUCATION THEORIES

The concept of the behavioural approach has been used in different branches of sciences for examination of *stimuli and responses* – the mechanisms that drive human choice. Prominent economic and psychological theories focus on the research on behavioural predispositions when making decisions, which can be caused by internal and external stimuli. Until the 1940s (e.g. von Neumann & Morgenstern, 1944), the assumption of complete rationality, well-known as the rational choice theory (Bentham, 1789), was among primary attempts to find the answers on how people make decisions. According to Simon (1955, 1982), rationality is bounded by cognitive restrictions, the data that an individual can access and analyse, and the time that available for decision-making. Jolls, Sunstein and Thaler (1998: 1471) reflected on the empirical evidence that ‘people exhibit bounded rationality, bounded self-interest, and bounded willpower’ (Jolls et al., 1998: 1471). In the present century, Kahneman (2003) explored the systematic biases that separate the beliefs people have and the choices they would make if they were completely rational. In fact, the key issue is that agents (individuals or groups), in most cases, take decisions based on their intuition and act in accordance with what happens at the moment instead of evaluating objectively past information. In their own studies, Simon (1982) and Kahneman (2003) outlined that our mental processes depend on the background that influences their development. It means that the restrictions to information, as the result of limited knowledge and capacities, render our choices far from the most advantageous ones.

Bounded rationality is well-illustrated through the idea of excessive choice. It happens in case individuals are faced with an excessively high number of alternatives. Iyengar and Lepper (2000) associate this process with decision exhaustion, choice deferment, and demotivation, while Schwartz (2004) connects it with unhappiness. Such a situation can be perceived by an individual as a state of excessive choice when he/she has a high number of alternatives, a short period of time for making decisions and, with that, a feeling of not knowing what to do or giving preference to what (Chernev et al., 2015).

Glasser (1999) emphasises that human choices are made to satisfy five needs: survival, love and belonging, power, freedom, and fun. Based on this theory, the decision-making process is determined by the following conditions: (1) establishing of a goal and its value; (2) examination of the options available to reach them; (3) determination of the likelihood of each option to meet the goal; and (4) making the decision by choosing the option with the highest likelihood for meeting the goal (Mellers et al., 1999). However, decision-making is more emotional than logical (Bechara et al., 2000). Even though our decisions are guided by emotions, most people like to think we are still capable of making rational decisions. On the other hand, the concept of excessive choice is a cognitive process in which individuals are overcoming difficult times while making decisions when faced with several options (Iyengar & Lepper, 2000).

Some psychological theories include the ideas of naturalistic and spiritual intelligence (Gardner, 1999; Garcês, Pocinho, & Jesus, 2017; Garcês, Pocinho, Jesus, & Rieber, 2018) as

well as emotional intelligence (Damasio, 1999; Bechara, Damasio, & Damasio, 2000). That affect key life choices. In recent years, creativity has been also considered as one of the most powerful psychological concepts to problem solving and decision making.

Since 1982 the EGPROC, a European group of researchers, has held annual meetings to discuss studies on human decision-making processes. The group members published a collection of papers about the psychological processes involved in decision making (Svenson & Gonzalez, 2014; Svenson & Tyszka, 2014). The EGPROC group studies show that the probability of making good decisions depends on the following psychological factors: (1) the critical realist perspective, that relies on decisions involving risk and uncertainty (Raynard, 2014); (2) the influence of format-dependent probabilities and additivity neglect (Riege et al., 2014); (3) the biased judgements of asset accumulation and investment decisions [Svenson & Gonzalez, 2014]; (4) the confidence-frequency effect (Dida & Kahey, 2014); and (5) belief in others' trustworthiness and trusting behaviour (Macko et al., 2014).

In the present world, the urgent environmental matters (*Before the Flood*, 2016) are determined by the findings on the level of behavioural human codes that intensify the environmental damage. Psychology has repeatedly raised the issues of environmental discourse (as we can see with the recent creation of a new psychology field - environmental psychology). For instance, Hill and Johnston (2003) draw attention to the emotional manifestations of human alienation from the earth. From an ecological and eco-spiritual perspective, they encourage a critique of socially-constructed meanings on human-environment relations and promote actions that restore human and the earth well-being as a spiritual act. In fact, the exploration of the decision-making determinants at physical, mental, and spiritual levels make possible identification of key factors for the modelling of future scenarios. It is important to refer to 'the significance and urgency of our present constellation, in which the Earth system itself is being mobilised towards (and not only through) humanity', and to the importance 'to become attuned to find one's way within the Anthropocene' (Decuyper, Hoet et al., 2019: 3).

The above-mentioned outcomes on the behavioural approach provide the impetus to investigate some possibilities to recode human psychological variables for reaching sustainable high performance within a period of physical or mental activity (*time on*) as well as a period of leisure and recreation (*time off*). Within this framework of thought, we discuss the issue of original *time off* paradigms for contributing to the understanding of several aspects of sustainable tourism (Moscardo et al., 2013). It would be significant to underscore the importance of this subject from the environmental point of view (getting benefits from unity with nature during tourism activities, individuals are more sensitive to the matters of promoting environmental protection), and from the educational perspective (innovative tourism education programmes always serve as an attraction for lifelong learners).

3. WELL-BEING AND SUSTAINABLE TOURISM

Working toward an understanding of the variety of tourism-related behaviours with the application of positive psychology (Pocinho et al., *forthcoming*), scholars support the view that 'tourism is a social, cultural and economic phenomenon related to the movement of people to places outside their usual place of residence, pleasure being the usual motivation' (*International Recommendations for Tourism Statistics*, 2010: 1). Furthermore, the terms 'well-being' and 'wellness' facing new conceptualisations. Contemporary societies in search of better and healthier lifestyles are trying to apply a 'new way of being' to their daily routine and not only to a free time (*European Travel Commission*, 2016). In fact, people are looking for new paths for equilibrium between work and relaxation time. Steps in this direction can

be motivated by various intentions such as the idea of feeling good (Pyke et al., 2016) and the desire to find well-being if moving away from one's daily lives across tourism experiences and activities (Filep, 2016). Hence, well-being is a far greater predictor of sustainability-place attachment than are geographical and demographic variables (Vada et al., 2019).

In case of the EU, the total population is projected to increase in the future. Further, according to the *2018 Ageing Report* (2018), the number of citizens aged over 65-years is growing exponentially and, as a result, tourist movements are increasing worldwide (*World Tourism Organization*, 2016).

Talking about the working-age population (individuals aged between 15 and 64), the *2018 Ageing Report* reports that the number of

people aged between 15 and 64 will decrease significantly from 333 million in 2016 to 292 million in 2070... The old-age dependency ratio (people aged 65 and above relative to those aged 15 to 64) in the EU is projected to increase by 21.6 percentage points, from 29.6% in 2016 to 51.2% in 2070. This implies that the EU would go from having 3.3 working-age people for every person aged over 65 years to only two working-age persons. (*The 2018 Ageing Report*, 2018).

Within this framework, people will be in much less of a hurry to work; on the contrary, they will seek to improve their health and well-being. In these conditions, natural products and types of tourism services directly related to natural sources will increasingly be in demand. As may be expected, this should bring a lot of attention to thousands of miles of natural resources with the view to improve the environmental protection strategies on which people's well-being depends. In fact, it is a great opportunity for developing some creative experiences and making adaptations to the new wave of behaviour. Furthermore, the contributions on this subject are integral parts of the tourism industry for promoting sustainable tourism.

Seeking physical and psychological well-being, modern people focus on a balanced life that satisfies high-quality requirements. Positively, individuals have changed their psychological profiles – being more spontaneous and knowledgeable, they ask for products and services of excellence and desire authentic experiences that have long-lasting impacts. Gradually, they are becoming more aware of the environment and sustainability of destinations, reflect about experiences and life; and look for self-development to build a better world (Paulisic et al., 2016).

Thus, for professionals, it is fundamental to accompany the abovementioned changes and introduce better strategies for developing sustainable practices. In this context, it would be useful and timely to make sensible reflections on a country level on the contribution of tourism products and practices for disseminating sustainable attitudes and contributing to behaviour changes.

The Sustainable Development Goals state:

We recognize that social and economic development depends on the sustainable management of our planet's natural resources. We are therefore determined to conserve and sustainably use oceans and seas, freshwater resources, as well as forests, mountains and drylands and to protect biodiversity, ecosystems and wildlife. We are also determined to promote sustainable tourism, to tackle water scarcity and water pollution, to strengthen cooperation on desertification, dust storms, land degradation and drought and to promote resilience and disaster risk reduction (*Transforming our World: The 2030 Agenda for Sustainable Development*, 2015: 9).

In fact, the promotion of sustainable tourism is not only an investment in nature preservation; the reimbursement occurs at different levels and across various dimensions (including economic growth and dissemination of the strategies for modifying of behavioural codes). For instance, for lifelong learners, it would be essential to deep the knowledge on how to reach sustainable high performance in every day routine. The acquisition of this experience is more pleasant on the level of short- or long-term tourism programmes within a framework that, at the same time, makes as much as possible connections to sports, literature, artwork, cultural heritage, celebrations, gastronomy, music, etc. Sustainable practices can be taught through the beneficial exchange of experiences, sharing life-meaning positive attitudes and behaviours. Here, we would like to conceptualise a definition of *tourism as a turning or changing point* while individuals adapt their performance in tune with nature to find ways to achieve physical, mental and spiritual equilibrium. To attain such a result, individuals need to learn how to change their working and living habits. Some examples of current projects and initiatives that are described below provide a good platform for sharing of experiences.

4. DEVELOPING SUSTAINABLE PRACTICES

A good illustration of the opportunity to learn how to reach sustainable high performance through a tourist activity that leads to a changing/turning point is the *Rent a Finn* programme (*Rent a Finn*, 2019). On the one hand, this project can be considered a tourism programme; from another perspective, it proposes multiple dimensions for developing sustainable initiatives contributing to improvement of many areas of people's lives: promoting well-being, lifestyle changes, and unity with nature. This programme firmly favours environmental protection by changing the human vision about the planet into sustainable behaviour. The main concept of this project is that a human performance wheel contains the following essential components that must be integrated: mental energy, general health, physical activity, nutrition, biomechanics, sleep, and recovery. Each part of the wheel should be in balance, otherwise the wheel stops spinning. According to the specialists, 'Improving the quality of your recovery and helping you find a sustainable balance between work and rest are key components of all our programmes' (*Hints a Performance*, 2018). In fact, it is not an easy task to help individuals change their habits during busy days. However, being reconnected to nature helps to process and feel its importance as the primary source of a human life. Two participants of the programme argue:

Nowadays... everyone is pretty busy – with the normal daily routine, work, and everyone's got stuff to do. And then we don't give enough attention and importance to nature. And to me, this is [a] massive mistake... What I realized actually, is you guys give a lot of importance to nature. You know how to protect it. The more you are respectful of nature, the more nature is going to be respectful to yourself as well. And you can always make the most out of nature if you take care of it as well. So I would say our connection to nature has improved a lot. We kind of reconnected again. And I think we value it more now (*Rent a Finn*, 2019: visits from Summer 2019).

At present, one of the main challenges for individuals is to overcome the transitional border representing past habits that prevent all components of a human performance wheel from being in balance. For this reason, creating and investing in tourism programmes with the objective of serving as *a turning or changing point* for individuals in relation to themselves, environment, and other objects or factors, could significantly contribute to the achievement

of the urgent pressing needs with which people are struggling today. Based on the acquired experiences, travellers can create *lifelong education networks*, exchanging the results of their trips and contributing to further investigations, to assist other individuals in integrating approved models into daily routine.

There are a variety of other programmes for developing sustainable practices. The Tourist Well-Being Project and Madeira Wine Contributions are examples of recent projects developed for such purposes on the Portugal's Madeira Island (Garcês et al., 2017; Abreu et al., 2019).

The Tourist Well-Being Project is an empirical study designed to evaluate well-being from a psychological perspective and explore the attributes and features of a psychological profile of tourists in Madeira. Among the main project's aims are the following: (1) evaluate tourists' well-being on Madeira Island through the measurement of creativity, optimism, spirituality, and well-being variables from a positive psychology perspective; (2) evaluate the most attractive tourism product offers for Madeira visitors; (3) connect tourists' personal and psychological variables to the activities they undertake on the Island; (4) develop an app that will enable service customisation based on the discoveries of the tourist psychological profile (*The Tourist Well-Being Project*, 2017–2020). Since 2017, specialists have applied a tourism well-being scale, an instrument used to assess human optimal psychological experience, through the HOPE theoretical Model (Garcês et al., 2017). The project results suggest that the most enjoyed activities and experiences are related to nature: Madeira Levada walks; leisure walks; sport activities through Madeira landscapes, villages, gardens, and mountains; discovering the local gastronomy, authentic contacts with *the Sea* ('o Mar' is the Portuguese term for the Atlantic Ocean) and cultural interactions with the locals. The researchers underscore a significant upgrade of tourist flows on the Island due to high-quality conditions to obtain well-being experiences (Garcês, Pocinho & Jesus, 2020).

The outcomes of the Madeira Wine Contributions project show that the Madeira wine industry has had a significant environmental impact and is one of the main tourist attractions for the global community. According to the researchers,

... within the environmental impacts, we can highlight that tourism contributes to: solid waste increase; water and energy consumption increase; atmospheric emissions increase; noise increase; impacts on local fauna and flora; impacts on the geological heritage; people increase, both visitors and manpower' (Abreu et al., 2019: 347).

This study supports the role of the Madeira wine industry that helps in decreasing the rate of land abandonment and soil degradation and embraces the preservation of the rural humanised landscape. In fact, the above-mentioned project gives several valuable practical insights on minimising environmental impacts and improving the conservation of biodiversity through sustainable tourism development.

5. CONCLUSION

The purpose of our study is to emphasise the relevance of exploring the outcomes of the behavioural approach (from the standpoint of various fields of study) as methodological support for the development of sustainable tourism practices. These practices contribute to environmental sustainability and a human search for self-definition and well-being in the current geological age. This subject consists of challenging traditional paradigms, allowing researchers to derive new perspectives in considering initiatives that promote the

dynamic participation of lifelong learners in tourism programmes. In addition, we propose a definition of the term 'tourism' as a turning or changing point that leads individuals to rethink, in depth, their performance and adapt it to align with nature, thereby finding the means to achieve physical, mental, and spiritual equilibrium. There are a variety of tourism programmes designed with the purpose of motivating changes in behaviour (by reconnecting individuals to nature for their realignment on the ways to well-being as well as recognition of the importance of environmental conservation). These programmes reinforce the following idea:

when placed in a conducive environment with beautiful scenery, novel cultural context, and the potential for meaningful connections with others, 'peak' experiences can initiate transformative meaning-making in a tourist (Kirillova et al., 2017: 509).

For tourism programmes, it is important that, while promoting the acquisition of new knowledge on well-being, they provide high-quality standards for acknowledging the cultural peculiarities of sites and take into consideration diverse tourist education requirements. The research on tourist profiles make it possible to identify the potentials of customised sustainability experiences for increasing interest in sustainable tourism programmes. These kinds of initiatives should be managed carefully, ensuring that tourists compatible with these aims are offered what they are looking for a while, at the same time, they are able to identify strong fundamentals for protecting and preserving natural resources. We believe that each individual has the power to alter his/her own behaviour for establishing connections with nature that, all taken, are a firm step toward sustainable development at multiple levels of maturity.

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