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Factors Linking Perceptions of Built Heritage Conservation and Subjective Wellbeing

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ABSTRACT

This research aims to reveal and discuss state-of-the-art research addressing the relation between built heritage and individuals' subjective wellbeing (SWB). Through a systematic literature review, fifty-one studies were analyzed. Even if limited, past research confirms the substantial relation between built heritage and subjective wellbeing, and six primary factors and other sub-factors were identified. This paper's originality is found in its focus, being the link between built heritage and subjective wellbeing seldom addressed, and the definition of a six-factor model deduced from the state-of-the-art, as a theoretical framework to support further research. This paper contributes to the ongoing notion of human-centrality in the built environment and the growing trend to give importance to the human experiences within the built heritage context. The results are valuable for academics and policymakers, contributing to a tailored and place-based sustainable urban development.

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Built heritage; architectural heritage; architectural conservation; environmental perception; subjective wellbeing; human centrality; built heritage and sustainability; analytical study

1. Introduction

The conservation of built heritage is ever more significant and a key indicator of sustainable urban development worldwide. According to target 11.4 of the Sustainable Development Goals (2015–2030 Agenda), countries and cities worldwide are recommended to strengthen efforts to protect and safeguard cultural and natural heritage (United Nations 2015). Goal 3 also considers the assurance of wellbeing an essential factor for sustainable development (United Nations 2015). Hangzhou Declaration pleas for new approaches that take into account wellbeing and sustainability (UNESCO 2013).

A recent initiative by the World Health Organization (WHO), researched how cultural contexts affect the perceptions of the environment, and how strong cultural bonds between people and their valued places contribute to human health and wellbeing (Napier et al. 2017). This initiative led to an expert meeting held in collaboration with the United Nations Educational, Scientific, and Cultural Organization (UNESCO), and the subsequent creation of a platform to enable and promote further research on the intersection between culture, health, and wellbeing (WHO and UNESCO 2017).

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There is an increasing awareness of the contributions of built heritage conservation to sustainable development. The human factor has also gained a more assertive role as the focus on heritage has been broadening towards recognizing socio-cultural values (UNESCO 2011). Furthermore, the 2011 Recommendation on the Historic Urban Landscape highlights the significance of individual and community wellbeing, which accordingly, "can be achieved by proper management of built heritage assets" as "conservation has become a strategy to achieve a balance between urban growth and quality of life on a sustainable basis" (UNESCO 2011).

Enhancing local heritage by increasing awareness about built heritage is considered a means to wellbeing (Auclair and Fairclough 2015). As the quality of the personal image of time, which is based on the awareness of the past and the future, is crucial for individual wellbeing, and the built environment plays a large role in this (Lynch 1972). Individuals construct their mental images about the environment through a cultural and perceptual filter (Fairclough 2009). A sharp image of time that determines behavior and wellbeing through human perception of social and environmental patterns depends on a "vivid sense of the present, well connected with to the future and past, perceptive of change, and able to manage and enjoy it" (Lynch 1972).

According to Pennington et al. (2019), links between heritage and subjective wellbeing (SWB) are found through studies with different perspectives; heritage-based cultural activities, heritage-based object handling, visiting historic buildings, visiting museums, visiting heritage sites, and living in historic places. These indicate an active link between the concept of heritage and SWB; however, there is no explicit notion to the nature of this relationship with built heritage (Sektani et al. 2018).

The purpose of this research is to reveal and discuss state-of-the-art on research addressing the relation between built heritage and individuals' subjective wellbeing (SWB). By means of a systematic literature review, fifty-one studies were analyzed, and the main factors indicating wellbeing in relation to built heritage were identified. In specific, this research answers two main questions; what are the factors linking built heritage and SWB? Moreover, how does the built heritage affect these factors? The results can be relevant to scholars and professionals focused on the built environment and environmental psychology, and those focused explicitly on built heritage and human-environment interactions.

Results showcase ways in which the objective qualities of built heritage can be perceived and assessed by people. They can directly inform academia and the disciplines concerned with designing the built environment on the one hand and, on the other hand, built heritage management and decision making. This research contributes to social sustainability and sustainable development.

2. Theoretical Background

The literature reviewed concerns fifty-one references, found available in digital databases such as Web of Science, Scopus, Pubmed, and Google Scholar, as well as gray literature when referenced by these scholars. The inclusion/exclusion criteria were the following: English language and linking heritage and wellbeing (either implicitly or explicitly). No limitation was made concerning discipline, time, or place. Multiple search strings were used, as (built environment) OR (built heritage) OR (architectural heritage) OR

(conservation) OR (historic preservation) OR (historic building) OR (cultural heritage) OR (environmental perception) AND (well-being) OR (wellbeing) OR (subjective wellbeing) OR (community wellbeing) OR (mental wellbeing). A total of 483 publications were screened for relevance based on the titles, abstracts, and keywords. The fifty-one publications were fully read and categorized according to their addressed factors.

2.1. Defining Subjective Wellbeing (SWB)

Theories of wellbeing can be classified as either subjective or objective (Brosch and Sander 2016). The subjectivism affirms that nothing could substantially affect the quality of life unless that person desired or endorsed it, while objective theories do not consider such a condition (Arneson 1999 and Sumner 1996 cited in; Brosch and Sander 2016). Although SWB is relatively new terminology, the concepts it embraces have been around since ancient times (Mouratidis 2018b). SWB is frequently associated with being happy; however, due to its conceptual inclusivity, it is not equated to happiness (Brosch and Sander 2016). As conceptually, it is considered an "umbrella" term, including concepts, namely "social wellbeing," "community wellbeing," "psychological wellbeing," and "mental wellbeing." It is fundamentally complex, subjective in quality, and associated with individuals' experiences and perceptions rather than spatially explicit (Larson, Freitas, and Hicks 2013).

SWB consists of interrelated but separate components which determine its experience; as satisfaction with different life domains for instance place of living, working place and social and community relationships, contentment with economic aspects, engagement in activities of interest, rate of pleasant feelings over unpleasant feelings (Diener 2000; Kesebir and Diener 2008; and Ryan and Deci, cited in; Brosch and Sander 2016). Individual wellbeing is often defined by subjective evaluations, which include both cognitive judgment of satisfaction and affective appraisals of emotions (Kesebir and Diener 2008). Evaluation of SWB is usually self-reported, for the measurement of SWB assesses individuals' perceptions and emotional state in correlation to a specific element(s) of the external environment through surveys (Vigano, Grossi, and Blessi 2018).

2.2. Defining Built Heritage

The concept of heritage is defined as a complex cultural interaction between people, memory, and place (Smith 2006). In the definition of heritage, a larger place is given to perception, due to the great emphasis on heritage values (Fairclough 2009), which are central to the heritage concept (Pirkovic 2009). The European Landscape Convention speaks of perceiving instead of identifying, just like the Faro Convention, which puts the human subjective and personal experiences at the center of defining heritage (Fairclough 2009). To Viñas, the determination of heritage is always drawn upon subjective reasons, which are derived from a subject's preferences and views. Viñas explains further that "a material, objective, scientific approach" may not be able to inform the conservation fully, and he emphasizes how significant the perceptual aspect is (Viñas 2002). Heritage is defined as a process that contributes through cultural sustainability to human wellbeing (Auclair and Fairclough 2015).

The definition of heritage relies on the socio-cultural context, as "heritage, like cultural action, is rooted in space as well as time, and is consequently more often than not place-based, site-specific, locality-sensitive and community-contextualized" (Auclair and Fairclough 2015). The individual and/or collective perception of heritage values is found at the base of the notion of heritage (Clark 2019), for how people perceive their heritage is critical to devise strategies for built heritage conservation (Serageldin 2019). Built heritage is a broad term for a built environment with any cultural significance and may often be referenced as a tangible/immovable form of cultural heritage (Tweed and Sutherland 2007; Sjölm 2016). However, built heritage includes both tangible and intangible attributes as well as values systems that underpin the experiences and interpretations of the built environment, by which they influence the human wellbeing (Darvill 1994; Pereira Roders 2007; Vakhitova 2015; Pereira Roders 2019; Taçon and Baker 2019). The conservation of built heritage has become a dynamic process that involves community participation and understanding for associated meanings and traditions, by shifting the focus to perception and valuation (Matero 2001). It is this drawing away focus from the physicality of built heritage to the perception and evaluation, which makes sustainable development applicable to the historic environment (Fairclough 2001).

2.3. Environmental Perception

Environmental perception and experiences are the centers of environmental psychology; this discipline focuses on how the individual changes the environment, and individual experiences are changed by the environment (Gifford 2007). Most research in environmental psychology pays attention to the physical attributes due to their objectification [where the focus is on objective, measurable variables removed from subjective experiences], and only a few studies focus on the "perceptual, cognitive, affective, social, cultural, and symbolic processes," however the results of these limited number of studies are not reflected upon in environmental designs (Gifford, Steg, and Reser 2011). To Relph 1979, the perception of the built environment can be affected by personal experiences and memories, the length of time spent, as well as the awareness of the historic significance (Power and Smyth 2016). Moreover, perceiving the built environment varies according to personal and cultural perspectives (Gifford, Steg, and Reser 2011), tends to be subjective in quality (Landry 2006), and is contextualized as well as culture-based (Brysbaert 2018). Consequently, alterations in cultural perspectives directly influence the preservation and cultural heritage education and policy, which determine the knowledge and understanding of built heritage values for future generations; thus, those alterations affect the future generations' perceptions (Atkinson 2014).

The exploration of experiences of the built environment could allow researchers to find how individuals understand and perceive architectural heritage and how, through the interactions with the built environment, they perceive their own identity and place in the world (McFayden 2018). Perceiving architectural monumentality may change throughout its material lifecycle (McFayden 2018), since "people largely perceive buildings emotionally through the senses" (Mallgrave 2010), as Scarre argues that past individuals perceived monuments and their landscape differently compared to modern-day individuals (Brysbaert 2018). The creation built heritage strongly relies on the perceptual factor, as "even if the actual item is not physically impressive, it is the peoples' perceptions

of monuments … that create the perceptions of something more than the usual, something monumental" (McFayden 2018).

2.4. Built Environment and SWB

As health and wellbeing are mainly affected by the local environment (Morris and Saunders 2017), a multidisciplinary framework is required to advance further the field of urban development, environmental quality, and human wellbeing (Van Kamp, Leidelmeijer, and Marsman 2003). To date, most research and guidance focus on the relationship between the built environment and physical wellbeing rather than the subjective aspects (Moore et al. 2018). However, there is no generally accepted conceptual framework nor a coherent system for measuring and evaluating the relationship between environmental quality and wellbeing (Petermans and Pohlmeyer 2014). From an architectural perspective, the built and social environments profoundly impact SWB by affecting individual and community experiences (Landry 2006; Petermans and Pohlmeyer 2014), since through the design of form, space, and materiality, architecture can order human relationships and human-environmental interactions, which provides opportunities to improve the sense of wellbeing (Steemers 2015). Although changes to the built environment, such as redesign and redevelopment was found to have no- to small effect on wellbeing (Moore et al. 2018), the built environment is regarded to be an essential predictor of SWB (Mouratidis 2018a).

Built heritage conservation is often associated with two types of benefits; the primary benefits of addressing the direct quality of life and wellbeing, and the secondary benefits include indirect economic impacts (Fujiwara, Cornwall, and Dolan 2014). Heritage conservation fosters a closer relationship with one's environment by creating a sense of place (Power and Smyth 2016), and it has been empirically confirmed that higher active engagement in heritage is associated with a higher probability of social capital outcomes such as wellbeing (Graham, Mason, and Newman 2009). According to further research in neuroscience, psychology, and environmental design, heritage is vital in creating sense of place, which is shown to be an essential factor in the generation of wellbeing (Bott 2019). Although the notion of heritage conservation requires psychological support and entails fundamental philosophical and ethical questions (Lynch 1972; Logan 2013). These ethical aspects have been extensively formulated (ICOMOS 2014), while the psychological and subjective aspects are recently gaining focus (ICCROM 2018).

With the intention to integrate values and individual perceptions into conservation planning, the scholars Larson, Freitas, and Hicks (2013) revealed through an empirical study that heritage values are related to individual place-attachment through the place of residence, involvement in community activities, country of birth, and the length of time respondents lived in the specific environment. Similarly, Power and Smyth empirically found three main positive effects of heritage participation: local communities participate in research on the local historical assets. First, the social aspect of wellbeing, such as personal enrichment, learning, and understanding history. Second, the satisfaction of sharing heritage products [such as recordings of oral histories, exhibitions, maps and photographs, books] with others, causing long-lasting relationships. Third, the decreased anxiety about the present, since a sense of comfort is derived from looking to the past. Moreover, the participation of local communities in built heritage conservation was found beneficial for both their mental and physical wellbeing (Power and Smyth 2016).

3. Indicators of the Built Heritage and SWB

Results reveal that studies which have considered the relationship between built heritage and wellbeing are mainly interdisciplinary. There is minimal research addressing subjective wellbeing. Furthermore, those that do so do not take a holistic definition of subjective wellbeing into account. The literature review showcases which factors mediate the relationship; however, it remains under-investigated in terms of specific categories of built heritage.

According to the reviewed literature, there is a significant relationship between built heritage and subjective wellbeing governed by six main factors; contributing to emotional connections, increasing/intensifying social relationships, preferred environmental experiences, creating a knowledge platform, increasing/improving physical activities, and cultural accessibility (Figure 1). Different built heritage categories affect subjective wellbeing in different intensities; for example, the historic town and historic building have the most positive influence on subjective wellbeing. The effect of perceived built heritage on subjective wellbeing is seemingly dependent on the individual's age group, whether the individual has physical and/mental deficiencies and the social group to which the individual belongs.

3.1. Emotional Connectedness

Multiple concepts describe the emotional experience of the built environment, as "sense of place," "topophilia," "place dependence," "community sentiment," "sense of community," and "community identity," nevertheless the concept taking a central position in the related research is "place attachment" (Rollero and De Piccoli 2010). A substantial number of studies are concerned with the positive benefits of place attachment for wellbeing (Evans, Kantrowitz, and Eshelman 2002; Damasio 2003; Auclair and Fairclough

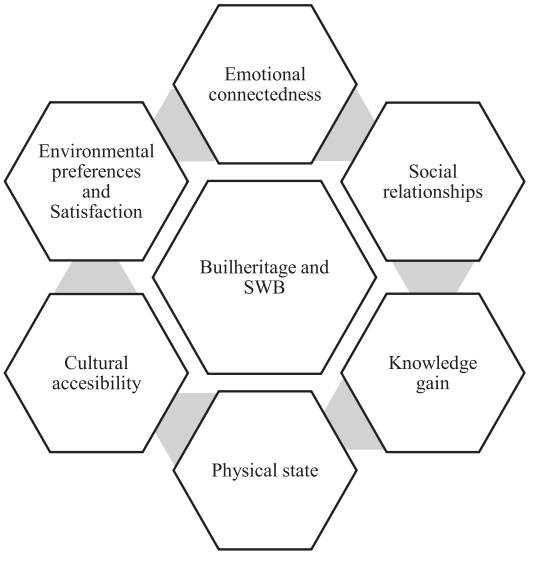


Figure 1. Mediating factors between built heritage conservation and SWB. Source: Author according to literature.

2015), this attachment is ingrained in the immediate physical and social context (Brown, Perkins, and Brown 2003). Place attachment is rooted in feelings of pride about the local area and its physical characteristics, sense of place, and emotional attachment to the community and the built environment (Brown, Perkins, and Brown 2003; Graham, Mason, and Newman 2009; Ujang, Moulay, and Zakariya 2015; Chi, Cai, and Li 2017). Attachment to place is predicted by the individuals' educational level, participation in local activities, the presence of significant relationships within the living environment (Rollero and De Piccoli 2010), and the length of residence (Lalli 1992). However, recent studies started contesting this earlier assumption (Rollero and De Piccoli 2010). Place attachment is identified as an essential symbolic and affective aspect of environmental action (Devine-Wright 2009). For residents' willingness to be involved in local issues, they are shown to be affected by their emotional connection to the environment (Manzo and Perkins 2006). Evans found that substandard housing can interfere with place attachment, by which the psychological wellbeing is diminished among adults, and place attachment is mediating the relationship of housing quality and wellbeing (Evans, Kantrowitz, and Eshelman 2002). It is also empirically proven, that a high level of attachment to the built environment leads to its positive evaluation (Rollero and De Piccoli 2010), disregarding environmental quality. Although little research has investigated how the built environment and its attributes affect emotions, according to Damasio, there is a rising possibility that understanding feelings "can inspire the creation of conditions in the physical and cultural environments that promote the reduction of pain and the enhancement of wellbeing for society" (Damasio 2003).

Built heritage invokes attachment, a sense of connection, and identification (Bott 2019). Meanwhile, heritage environments contribute to the sense of place and sense of continuity, which can reinforce individual self-esteem and place attachment (Graham, Mason, and Newman 2009). Several heritage studies highlight exploring the past as a means to support shared values (Smith 2006; Atkinson 2014; Auclair and Fairclough 2015) that reinforce social networks. Significantly, place attachment can be generated through social networks, and certain types of historic environments may assist in supporting social activities and enable personal motivations by providing attractive places (Graham, Mason, and Newman 2009). Studies on place attachment highlight the positive contributions of the historic environment to a sustainable place identity, which promote psychological wellbeing within the built environment (Ujang and Zakariya 2015). The sense of belonging and place identity are expressed in tangible and intangible attributes conveyed to heritage, such as memories, creative activities, and aspirations (Landry 2006). Becker and Keim (1973) revealed that the intensity of identification and attachment with the built environment is increased if it has cultural significance (historic or monumental), which makes part of the collective memory of the local community (Lalli 1992). Similarly to Bahrdt (1971), identification and emotional connectedness are related to the built environment's individuality and uniqueness, such as in historic centers (Lalli 1992). Power and Smyth found a range of affective experiences such as passion, curiosity, delight, accomplishment, pride, reciprocity, and growth in community-based heritage conservation studies (Power and Smyth 2016). These positive effects contributed to the sense of belonging and social wellbeing. These findings support that local heritage can be conceived as a tool to promote social cohesion and wellbeing, as embracing heritage and the histories, traditions, and values; as well as, the urban fabric, can be perceived as a

means to improving the quality of life, social cohesion and wellbeing (Auclair and Fairclough 2015; Skogheim et al. 2018). Conversely, built heritage can also have adverse effects on place attachment, with cities as Amsterdam, where over-tourism has caused adverse effects on the emotional attachment of the residents, experiencing more significant disconnection and disaffiliation, due to the changes of function in the built environment towards tourism (Pinkster and Boterman 2017).

3.2. Social Relationships

Social connections, sense of relation to others, and social experiences are regarded as vital aspects of wellbeing (NEF 2009). The factors found influencing SWB are respectively: economic status, social environment (social relationships, connection with others, emotionally close relations, social support, safety, outdoor recreations), sense of community (sense of belonging, strong emotional bond due to shared history) (Chi, Cai, and Li 2017). It is demonstrated that social relationships play a role in SWB and suggested that these relationships are affected by accessibility to shops, places to meet, and opportunities to volunteer (Balducci and Checchi 2009). Social relationships are also central to improving personal identity, local identity, and wellbeing (Lalli 1992). It is empirically confirmed that short distances to the city center, higher densities, and mixed land uses contribute to subjective wellbeing by increasing socializing frequency, the number of social relationships, and opportunities to meet new people (Mouratidis 2018a). Social relationships were strongly related to emotional connectedness, as they are both based on sense of place and place attachment embedded in the meanings associated with the built environment. Those meanings motivate emotional bonds with the environment and increase social interactions, which are essential to SWB (Najafi and Shariff 2011).

Since the 1950s, scholars emphasize the social dimension of architecture. To Zevi, "the content of architecture is its social content" (Zevi 1957, cited in; Martínez 2019). Zevi argued, according to Vitruvius' principles, that there is no sense in isolating beauty and ignoring the social context. Summerson, in "The Case for a Theory of Modern Architecture," refutes the establishment of formal theory and concludes "the source of unity in modern architecture was in the social sphere, in other words in the architect's program" (Summerson 1957, cited in; Martínez 2019).

The social design method is a way to create a built environment that suits users better. It aims to match settings to their occupants, satisfy a variety of principal players' needs, promote personal control in the building, and encourage social support (Gifford, Steg, and Reser 2011). The social values of conservation have been earlier mentioned by Lynch, as associated with upper-middle-class values (Lynch 1972). The social values are currently one of the fundamental cultural values, defining the notion of built heritage (Viñas 2002; ICOMOS 2013). Designers are recommended to address social values to create built environments that contribute to wellbeing (Tromp 2013).

3.3. Environmental Satisfaction and Preferences, Esthetic Experience

Earlier research has indicated that neighborhoods' aesthetic quality has a positive impact on mental wellbeing (Moore et al. 2018). Aesthetic pleasure derived from a place benefits individuals, this pleasure is linked to the neighborhood and residential satisfaction as well

as to judgments of buildings and architecture (Scannell and Gifford 2017). Environmental psychologists found harmful effects of perceived "ugliness" on SWB, which may be caused by attributes such as buildings, materials, or urban design (Mouratidis 2018b). Instead, although depending on the cultural context, beauty is found to have restorative effects on SWB (Mouratidis 2018b). In line with this notion, Landry states that beautiful, well-designed, high quality built environments have a restorative effect that decreases the feelings of stress and fear of crime while increasing social relations and wellbeing (Landry 2006).

Sensory experiences caused by esthetically pleasing environments have positive effects on sense of place and, therefore, on SWB (Bott 2019). The importance of heritage can be found in the value for the sensory experiences it provides, as the aesthetic values have been proven as vital contributors to the sense of wellbeing, but also considered as the most personal and individualistic of the socio-cultural types of values (Mason 2002). Furthermore, "human wellbeing is determined by peoples' preferences" derived from the economic theory in which benefits increase wellbeing, and consequently, any cost is expected to decrease wellbeing (Mourato and Mazzanti 2002). Furthermore, residents' and visitors' preferences towards heritage can vary; the latter may prefer the nostalgic past, which may dominate the future development in contradiction to the residents' needs (Landry 2006).

Mouaratidis defined a conceptual framework for the relationships between the neighborhood and the SWB, where environmental satisfaction was a factor with a significant impact on life satisfaction, hence the SWB (Mouratidis 2018a). In the context of residential studies, many attributes related to the built environment were also found to affect individual satisfaction, such as physical features of the residence, architectural style, floor plans, colors, and outdoor areas (Gifford, Steg, and Reser 2011). However, it is not just the built environment that affects environmental satisfaction; individuals' cultural background also plays an important role (Gifford, Steg, and Reser 2011).

Positive evaluation of environmental quality is related to the degree of identification with the built environment; thus, individuals with more identification tend to view their environment more positively (Lalli 1992). Furthermore, the level of identification with the built environment is linked with the identity of the place itself, which is a synergy between the physical attributes of the place as well the intangible attributes, such as the social construction created by the individual and group perception (Lalli and Ploger 1991, cited in; Lalli 1992). It is recently found that contemporary architectural styles are evaluated less positively than traditional styles (Mouratidis and Hassan 2020), as statistical analysis comparing users' perceptions and experiences suggests that users prefer the visual appearance of traditional architectural styles.

3.4. Gaining Knowledge

The built environment can indirectly influence wellbeing by being used as a resource for education. A study conducted by Falk and Dierking found that museums' learning is "influential in articulating health and wellbeing" (Ander et al. 2012). Culture, history, historic environments, and heritage were also proven to aid people to learn about their area (Graham, Mason, and Newman 2009). On the level of individual wellbeing, Morse and Chatterjee (2017), found an increase in the learning goals and the sense of achievement,

through the handling of heritage objects. Furthermore, to learn through heritage about the human abilities to excel is deemed as a positive contribution to the SWB (Froggett et al. 2011). Cultural heritage-related courses have been acknowledged to stimulate the participants' minds to learn more about history and contribute to their mental wellbeing (Todd et al. 2017).

3.5. Physical State

The sense of safety plays an essential role in the attractiveness and the wellbeing of an area, which can be achieved by speed limits and pedestrianization (Alfonzo 2005). Although pedestrianization is the case of many built heritage areas, sense of safety is also enormously increased due to their compatibility with the human scale (Alfaraidy and Furlan 2017). Experimental research in neuroscience shows that buildings and built-up areas perceived as beautiful produced high activity in the orbitofrontal cortex, which is the brain part responsible for the emotions and memory and works perceived as ugly activated the motor cortex. Translating this to architecture and the built environment, beautifully perceived buildings fill the individual with happiness and a sense of gratification, while ugly buildings make the individual take flight (Mallgrave 2010); this indicates the experience of buildings as having an influence on the physical activities.

Cultural heritage-related activities have reportedly been associated with an increase as well as improvement of physical activities (Todd et al. 2017). Not to mention that scientifically, culture and art are regarded as useful as physical exercise for the human body, which has led doctors to prescribe museum visits for patients (Livni 2020).

3.6. Cultural Accessibility

Recent studies on the impacts of cultural participation on psychological wellbeing revealed that cultural accessibility ranks as the second most important factor of psychological wellbeing, immediately after the absence or presence of a disease (Grossi et al. 2012). In another empirical study (Vigano, Grossi, and Blessi 2018) found that the lower cultural participation is, the lower the SWB of the participants. Over a preceding twelve months, Visiting heritage areas has a positive effect on life satisfaction, which is slightly higher than the impacts of participating in sports and the arts (Fujiwara, Cornwall, and Dolan 2014). It is important to note that the intensity of effect varies per heritage category. For example, Fujiwara and others found no relation in the historic parks/gardens, monuments, and sports heritage sites taken as a case study. Instead, historic towns, historic buildings, historic industrial sites, historic places of worship, and archaeological sites are found to be statistically significant heritage variables that increase life satisfaction (Fujiwara, Cornwall, and Dolan 2014). Furthermore, they found evidence suggesting that specific groups derive higher wellbeing from heritage visits than others; e.g., people with a longstanding illness or disability higher than healthy people, people of age 45 and older higher than younger people, people without children higher than with children (Fujiwara, Cornwall, and Dolan 2014).

6. Conclusions and Recommendations

Considering the growing literature that regards human-factors as having a significant role in the conservation of the built heritage, it is expected that this topic and understanding will continue to grow. The relationship between built heritage and SWB adds another factor to the importance of heritage in general and built heritage in specific. SWB, as part of sustainable development, becomes an essential role for heritage and built heritage in particular. Built heritage preservation campaigns and awareness among new generations regarding, how to better preserve heritage as a premise for future sustainable development can enhance the SWB of individuals and communities. Methods of investigating the effects of built heritage on the local community are essential for architects, urban designers, urban planners, and policymakers. SWB, either on the individual level or community level, is an essential factor in the success rate of built heritage interventions. This study deduced a theoretical framework consisting of six main factors through a literature review, by which built heritage conservation can be linked to SWB (Table 1).

Multiple references highlight the significant role of environmental perception in determining the nature of the relationships between built heritage conservation and SWB. Despite the rising numbers of literature concerned with the human wellbeing within the built environment, there is a lack of a consensual definition of SWB as well as a tool for measuring the contribution of perceptions of the built environment in general and built heritage specifically. However, considering the multidisciplinary nature of

Table 1. Mediating factors linking the built heritage to SWB according to the literature analysis. (Source: Author according to reviewed literature).

Factors	Indicators	References
1. Emotional connectedness	Feelings of pleasure, while feelings of displeasures are decreased. Feelings of attachment and relatedness to the built environment	(Lalli 1992), (Evans, Kantrowitz, and Eshelman 2002), (Brown, Perkins, and Brown 2003), (Landry 2006), (Graham, Mason, and Newman 2009), (Rollero and De Piccoli 2010), (Ujang, Moulay, and Zakariya 2015), (Auclair and Fairclough 2015), (Power and Smyth 2016), (Pinkster and Boterman 2017), (Chi, Cai, and Li 2017), (Bott 2019)
2. Social connectedness	Social connections and relationships Quantity and quality of social relationships Community engagement and volunteering activities	(Lalli 1992), (Najafi and Shariff 2011), (Gifford, Steg, and Reser 2011), (Ander et al. 2012), (Ujang, Moulay, and Zakariya 2015), (Chi, Cai, and Li 2017), (Mouratidis 2018a), (Martínez 2019)
3. Knowledge gain	Learning about history through the built environment Learning about human capabilities Being inspired by knowledge of past achievements	(Graham, Mason, and Newman 2009), (Froggett et al. 2011), (Ander et al. 2012), (Morse and Chatterjee 2017), (Todd et al. 2017)
4. Physical state	Experiences of the physical activities Motivating physical activity Aiding in physical comfort	(Mallgrave 2010), (Auclair and Fairclough 2015), (Todd et al. 2017)
5. Cultural accessibility	Taking part in cultural activities Visits and engagement in cultural activities	(Grossi et al. 2012), (Fujiwara, Cornwall, and Dolan 2014), (Fujiwara, Cornwall, and Dolan 2014), (Vigano, Grossi, and Blessi 2018)
6. Preferences and satisfaction	Preferences of the built environment's formal features Preferences of the built environment's functional features	(De La Torre 2002), (Landry 2006), (Gifford, Steg, and Reser 2011), (Scannell and Gifford 2017), (Moore et al. 2018), (Mouratidis 2018b), (Mouratidis 2018a), (Bott 2019)

existing research, individual researchers, as well as governmental institutions, are not deterred by this deficit. The proposed six-factor model of mediating factors merges numerous indicators from interdisciplinary sources, and it is applicable in the context of future built environment research.

Although this study was conducted to answer how built heritage was linked to subjective wellbeing, it is essential to produce substantial evidence through empirical studies (for which the proposed six-factor model can be adopted) to address this question fully. This study opens doors for further research to bridge the gaps between varying proposals and disciplines concerned with socially and environmentally sustainable cities. As the relationship between the two variables is not self-evident, this research has also revealed more questions that also need answers; How to further expand and adopt the framework proposed in this study that links the relationship between built heritage conservation and SWB in an empirical research approach? What are the individuals' perceptual factors that determine the nature of the relationships between built heritage conservation and SWB? As such, it would be essential to investigate further the effect of the varying factors within different built heritage contexts and/or different communities, which potentially unveils new criteria directing towards more significant socially sustainable cultural heritage conservation.

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