

RESEARCH

Open Access



# Design for community happiness—an approach and framework

Ramy Kamaleldin Badawy<sup>1\*</sup> , Sayed M. Ettouney<sup>2</sup> and Nasamat M. A. Abdel Kader<sup>2</sup>

\*Correspondence:  
ramykamalbadawy90@gmail.com

<sup>1</sup> Department of Architecture\_  
AET Program, Faculty  
of Engineering, Cairo University,  
Cairo, Egypt

<sup>2</sup> Department of Architectural  
Engineering, Faculty  
of Engineering, Cairo University,  
Cairo, Egypt

## Abstract

The paper addresses the emerging notion of “happiness” and “community happiness” as means and an objective in site planning and community design highlighting its complexities and illusive nature in terms of scope, aspects, and components to formulate a conceptual “framework” and a design tool for monitoring, enhancing, and developing community happiness, in limited scale urban settings. The research presents and follows the proposition that “happiness” is inherently addressed in site planning and design processes and the closely related notions and drives of “sustainable development” and “quality of life”. The design for the “community happiness” framework is formulated through a sequence of relational matrices, for “happiness”, “sustainable development”, and “quality of life”, each comprising selected international approaches and agendas, related indicators, and key aspects, physical, and non-physical, emphasizing similarities and overlapping. The proposed “framework” and underlying propositions were validated through a pilot questionnaire, targeting a sample of specialists, and practicing academics. The participants generally accepted the research key propositions, adopted the method and the proposed “framework”, and interacted with them, emphasizing the relative weights of the selected “happiness” key indicators and relations to site planning elements, and criteria. The relative importance of the design criteria, the related “happiness” indicators, and the likely products, as well as the cost of achieving “happiness” deserve to be further addressed, in future research.

**Keywords:** Community happiness, Quality of life, Sustainable development, Community design, Site planning

## Introduction

Design for “community happiness”, groups, and individuals, addressing and covering acceptance, satisfaction, belonging, safety and security, freedom and liberty, and privacy (psychological and physical), among others was always an undeclared objective and effective action in the processes of urban design and development of sites and settings, post-industrial revolution and through the modern drives and till the present.

Urban design and site planning for people, users, and communities’ needs, physical, and nonphysical was a major concern in the writing, and propositions of the pioneering authors and advocates, including Lynch K, Cullen G, and Alexander C [1], and Rapoport A [2].

Similarly, and with the emergence of “sustainability”, and the related drives, and directives of “sustainable” development and design, the key aspects, criteria, and indicators, recognized “communities”, groups, and individuals, well-being, satisfaction, health, and comfort, this is evident in the works and agendas of UNDP [3], UNESCO [4], and Japan for sustainability [5].

Furthermore, the said trends and concerns of “sustainable” design and development evolved and adopted the drives and work on the “quality of life”, “friendly” urbanism, and settings, presented as means and objectives to secure and realize “communities” satisfaction, safety, and well-being—with urban design and site planning as the tools and processes, deployed to achieve Mercer [6], EIU [7], and HDI [8].

Closely related to the adopted tools of urban design and site planning for “sustainable” development, “quality of life”, and “friendly” urban settings is the conception and practice of “community design”. Regarded as a shift in the evolving realm of urban design from the physically biased and aesthetically focused origins to a three-fold process of caring for and addressing communities’ needs and aspirations and related settings. An endeavor to enhance and appropriate urban design and truly address people, individuals, and groups as the prime concern, objective, and drive behind the physical manipulation of urban settings [9–11].

The design for “community happiness” emerged, presented, and celebrated in the wake of the said established realms and practices and addressed closely related issues and challenges, including urban environments’ characteristics, implications on emotional “happiness”, and well-being [12], “happiness” of the population in urban neighborhoods [13], urban life, urbanism, and “happiness” [14], images of urban “happiness”, and self-representation of “happiness” in urban places [15], and even “happiness” as an alternative objective for “sustainable development” [16].

Despite the endeavors and quality insights into the notion, conception, and processes of “community happiness”, the rationale and objective framework linking and integrating the realms, drives, and approaches are still missing or rather loose. Hence, there is a need to follow and formulate a framework for addressing and the design of “community happiness” development and point out its likely links to community, urban design, and site planning.

The development process and the closely related notions of “sustainable development” and environmental quality planning for “quality of life” and “friendly settings” collectively span and include actions to secure and realize “happiness” for communities and individuals. Hence, it is justifiable to point out that design for “happiness” is inherent in enhancing and supporting site planning and design in related settings, realizing its underlying criteria and indicators, covering the objectives of “sustainable development”, provisions for “quality of life”, and shaping “friendly” environments and urban settings.

### **Propositions**

Happiness, “community happiness”, is closely related to the notions and drives of “sustainable development”, “quality of life”, and “friendly” urban settings and built environments, which in turn is closely related to an undeclared objective in site planning and design processes. Hence, pointing out and delineating the interrelations through the

targeted “community happiness development framework” is likely to enable monitoring, enhancing, and designing for “community happiness”.

### Objectives

The prime objective of the present work is to formulate, develop, and preliminary validate a conceptual framework to help in monitoring, designing, and developing “community happiness” in newly developed (urban) settings, integrating and linking site planning and design tools and criteria to “happiness” aspects and indicators; hence enabling enhancement and realization. The main objective is related to the secondary objectives of linking the notion of “happiness” to the closely related notions and drives of “sustainable development” and “quality of life” through the selected, and briefly presented, approaches, key aspects, and indicators addressing the three notions.

The “propositions” and “objectives” delineate the present research’s likely “contribution”, which may be reiterated as recalling and presenting “happiness” as a design goal and objective, addressing its complexities, and pointing out its close links with “sustainable development”, and “quality of life”, agendas and frameworks as well as highlighting its relation to “community happiness”, community design and site planning, both as means and objectives. The said “contribution” is summed up in developing, presenting, and validating the proposed “framework” for “monitoring, and enhancing community happiness”; a design and decision-making tool that integrates happiness key indicators with site planning elements and criteria.

### Methods

The formulation of the targeted “community happiness” development framework starts by pointing out the conceptual structure of the key notion of “happiness” emphasizing “community happiness” through selected approaches, combining key aspects, components, indicators, and attributes, as well as linking it to the closely related notions of “sustainable development” and “quality of life”.

Happiness development, a collective framework, is formulated through comparative analysis, presentation, and juxtaposition of the three notions’ relational matrices (preliminary frameworks) based on selected published approaches—as presented in Table 1 (Formulation of the “community happiness” framework”) and elaborated in “[Design for community’s happiness development—formulation of the framework](#)” section—in three phases, namely:

- First phase, defining the relational structure of each notion, pointing out its key aspects and underlying indicators.
- Second phase, combining the subtracted indicators for the notions and drives of “sustainable development”, and “quality of life”, and in turn combine with the subtracted indicators of “happiness”, thus reaching the preliminary delineation of the targeted relational framework, addressing the illusive and complex notion; and leading to
- Third phase, developing a “happiness” collective relational framework, through linking to site design and planning components and criteria, resulting in the targeted

**Table 1** Formulation of the “community happiness” framework—phases and matrices

Phase 1	Selected approaches
Matrix (1)	“Happiness”; selected approaches; aspects, indicators, and attributes, Table 3.
Matrix (2)	“Sustainable development”; selected approaches; aspects, indicators, and attributes, Table 4.
Matrix (3)	“Quality of life”; selected approaches; aspects, indicators, and attributes, Table 5.
Phase 2	Integrating indicators and attributes
Matrix (4)	Integrating “Sustainable development” matrix (2) and “Quality of life” matrix (3), indicators and attributes, Table 6.
Matrix (5)	Integrating “Happiness” matrix (1), and the combined “Sustainable development” and “Quality of life” matrix (4), indicators and attributes, Table 7.
Matrix (6.1)	“Happiness development” framework 1; key aspects, integrated indicators and attributes, and happiness key indicators, Table 8.
Matrix (6.2)	“Happiness development” framework 1; key aspects, key indicators, levels; actions and spatial, quality/presence and relative strength, Table 9.
Phase 3	“Happiness development” versus Site planning and design
Matrix (7)	“Happiness development” framework 2; Happiness selected indicators attributes versus Site planning and design, Table 10.

framework, highlighting the conception, and allowing further development and validation, with the help of experts, questionnaires, and interventions.

### Community happiness

Aristotle presented the concept and definitions of happiness through his questions on the necessity and pursuit of happiness, how to get and achieve it, linking happiness to morals and virtue, and securing the physical necessities throughout life [17]. He further confirmed the “dependence of happiness on human beings” as a main goal in life, stressing its many physical and mental aspects, including virtue, ethics, and well-being, as well as “moderation” and “equilibrium” between the “alternatives” and “contradictions” in dealing with [18]. Anthropologists emphasized the “inevitability of happiness” and its connection to humans from the isolated primitive tribes to the inhabitants of contemporary cities, referring to the association between “smiling and happiness” [19]. Research, literature, and empirical studies on “happiness” conceptions and definitions, invariably pointed out the complexity, illusive structure, and attributes of the notion of happiness.

### On happiness—conceptions and definitions

Despite the acceptance of the complexity and intricate structure of the notion of happiness and the varying meanings among individuals, there is “uniformity in the feelings of happiness and misery” [20]. Happiness is simply presented as the feeling of “happiness” and “well-being” as well as the product of the positive evaluation of the state and quality of life, and its (comparative/relative) state through time (past and present) [21] as well as feeling and experiencing pleasure(s) and pain(s) [22]. Happiness is also expressed as “a conscious judgment of the extent of an individual’s satisfaction with life and evaluation of his emotional and mood aspects [23]; in other words, it may be defined as “the general assessment of the various aspects of an individual’s life”; hence, the importance

of “happiness” as a concept and a goal is highlighted in its presentation as a general judgment on life through standards (references) and comparisons (the criteria of a good life [24]).

It is argued that once the basic needs are satisfied, actual happiness is represented by non-material factors, including self-acceptance, meaning, and love [25]. Layard proposed a set of factors that affect happiness, comprising family relationships, financial status, work, community and friends, health, personal freedom, and personal values [26]. Happiness may be presented as a set of subjective and objective features, which contribute to the distinguished quality of human life [27]. Other factors that help in initiating and enhancing happiness were pointed out, including religion, family, volunteer work, donation, freedom, employment, and enhancing chances of success, rather than economic growth or economic equality [20]. Furthermore, happiness is related to the family (settings and relations), as well as meaningful friendships, economic success, (higher) levels of education, and freedom of choice, and the interrelations are extended to stable government systems and demographic variables: social and cultural aspects, spirituality, employment, and income [28].

### **Happiness and well-being**

The concepts and definitions of “happiness” are related to and overlap with those of “well-being” which in turn is related to valuable experiences, positive beliefs about self, the environment, psychological and positive performance—and in the treatment of happiness in psychology, happiness is treated as a basic emotion in the “psychology of emotions” [29]. Happiness spans and combines various philosophical and psychological concepts, including pleasure, a good life, meanings, and approaches to functional/utilitarian and ethical philosophies [30]. The pursuit of defining and analyzing happiness was also associated with attempts to develop its components and criteria into empirical/tangible indicators that can be monitored and assessed.

The notion of “happiness” was also used as a description of the state of mind and mood, represented by feelings of contentment and positive emotions, “happiness as a state of mind”—contrasting the concept of intangible and emotional “happiness” with that of “well-being”, which is generally associated with quantitative and qualitative indicators and criteria that can be traced and evaluated. To reiterate, “happiness” is accepted as a supreme goal that humans and communities strive to achieve through “well-being”, “quality of life”, welfare, and pleasure.

### **On happiness: selected theories**

The said definitions, structure, and components of happiness can be elaborated through the rational attempts to deal with, and the resulting theories and propositions, delineating and covering: the concept, structure, components and attributes, assessment, and evaluation, subjective and objective—causes of happiness, among others—focusing on the three aspects of the concept: biological (health)—personal/subjective—and external/social (objective). Table 2 summarizes selected attempts at delineating and synthesizing; “happiness”, “well-being”, and “satisfaction”, highlighting, common key components, elements, and attributes [29].

**Table 2** Happiness—selected theories and components [29]

Components—original expression	Theories							Relative importance
	Onion-happiness	Objective happiness	Subjective well-being	Authentic happiness	Social-psychological prosperity	Eudaimonia well-being	Psychological well-being	
	Czerwinski and Peeters 1991	Kahneman 1999	Diener 2000	Seligman et al. 2005	Diener et al. 2010	Waterman et al. 2010	Ryff 2013	
1 Autonomy							1	1
2 Engagement/ involvement in activities/ effort				1	1	1		3
3 Environmental mastery/ competence/ achievements				1	1		1	3
4 Meaning in life	1			1	1		1	4
5 Optimism					1			1
6 Personal growth/ development of best potentials						1	1	2
7 Positive experience (pleasant/ good enjoyable)	1	1	1	1		1		5
8 Positive relationships				1	1		1	3
9 Respect					1			1
10 Satisfaction with life	1		1			1		3
11 Self-acceptance					1		1	2
12 Self-discovery						1		1
13 Will to live	1							1
14 Perspective								0
15 Hedonic	1	1	1	1	1			5
16 Eudemonic	1			1	1	1	1	5

The selected theories and rationales to define and analyze happiness (Table 2) could be briefly presented as follows:

- Onion theory: happiness includes three complex layers: the core (desire and will to live), a mid-layer (contentment and self-acceptance), and an outer layer (positive experience and satisfaction with life) [31].
- Objective happiness: focuses on positive experiences (enjoyable, pleasant, and good) in terms of good versus bad as the indicator of utility [32].
- Subjective well-being: emphasizes positive personal experience and life satisfaction; a balance that serves as the basis for assessing life (satisfaction levels) [23].

- Authentic happiness: combines interaction and engagement with the context, competence, achievement, meaning of life, positive experience, positive relationships, well-being/living, and fun/enjoyment [33].
- Social-psychological prosperity: refers to positive performance in expressing happiness and focuses on social and psychological relationships, that combine interaction and participation with contexts, as well as listing elements of positive functioning across diverse domains [34].
- Eudemonia well-being: focuses on self and personal expression, and positive feelings as an additional result or a by-product of these pursuits [35].
- Psychological well-being: emphasizes positive psychological characteristics of happiness, including autonomy, environmental mastery, and personal growth [36].

### **On happiness: selected approaches**

Following the brief recalling/presentation of “happiness” definitions and common theories towards the formulation of the targeted framework on the design for “community happiness” development, this section prepares the structure of the preliminary relational framework for “happiness”, through the brief presentation of the (sample) selected approaches and guidelines (to emphasize the methodology adopted throughout), each suggesting the structure of “happiness” and pointing out likely components and indicators. To enable summing/integrating and development of the said structures, the components, indicators, and attributes are qualitatively categorized according to a number of “key aspects” common to and derived from the presented “happiness” theories and approaches, spanning the physical and the non-physical, namely, environmental, urban, physical and built form (related), health, political, institutional, economic, social, and cultural.

This, in turn, will enable the integration of the sample-selected approaches and related attributes and indicators into collective sets based on the key aspects (and related common attributes/indicators). Hence, the preliminary matrix for “community happiness” development comprising key aspects and attributes (Table 3 matrix (1)) shows the selected sample approaches, namely, Better Life Index [37], Happy Plant Index [38], Gallup Well-Being Index [39], Sharecare Community Well-Being Index [40], and Layard’s Seven Happiness Principles [26]; the related indicators (to each), the 6 key aspects, and the designation of the indicators too.

### **Sustainable development and quality of life—two underlying notions**

Continuing the drive to the formulation of the framework for the design of “community happiness” and adhering to the methodology followed in the preceding “[Methods](#)” section, the delineation of the relational framework for happiness, matrix (1) (Table 3), combining the selected approaches, components and attributes, and designation to key aspects. This section presents the relational tables; matrices (2) and (3) in the drive, for the two underlying notions of “sustainable development” and “quality of life”. Each is presented through selected approaches, related attributes/indicators for each approach; and the designation of the indicators to the adopted six

**Table 3** Happiness—selected approaches, indicators, and key aspects (matrix 1)

Selected approaches	Indicators	Key aspects						Total
		Environmental	Urban	Health	Political	Economic	Social	
Better Life Index [37]	Environment	11	•					5
	Housing		•					
	Health			•				
	Income					•		
	Jobs					•		
	Work-life balance						•	
	Education						•	
	Civic engagement						•	
	Safety						•	
	Life satisfaction						•	
	Community						•	
Happy Planet Index [38]	Ecological footprint	3	•					3
	Life expectancy			•				
	Wellbeing						•	
Gallup Global Well-Being Index [39]	Physical health	5		•				3
	Sense of purpose					•		
	Financial security					•		
	Social relationships						•	
	Relationship to community						•	
Sharecare Community Well-Being Index [40]	Housing and transportation	5	•					3
	Healthcare access			•				
	Economic security					•		
	Resource access					•		
	Food access					•		
Layard's Seven Happiness Principles [26]	Health	7		•				4
	Personal freedom				•			
	Work					•		
	Financial situation					•		
	Community and friends						•	
	Family relationships						•	
	Personal Values						•	

A total of 31 indicators in the 6 key aspects



key aspects, presented earlier, and again common to and derived from the selected approaches.

Table 4 (Sustainable development, selected approaches, indicators, and key aspects, matrix (2)) in the drive combines four approaches and collective agendas, namely, United Nations Development Program [3], UNESCO [4], Japan's for sustainability [5], and Egypt's vision 2030 [41], the related indicators for each of the four, and designation of indicators to the adopted 6 key aspects.

Similarly, Table 5 (Quality of life, selected approaches, indicators, and key aspects, matrix (3)) completes the 1st phase of the drive, toward the formulation of the targeted framework. It combines 5 sample selected approaches and collective agendas to the "quality of life", namely, NUMBEO [42], Mercer [6], the Economist Intelligence Unit (EIU) [7], the Human Development Index (HDI) [8], and Quality of life in "Boston" [43]. The related indicators for each are presented and designated to the six key aspects.

### **Design for community's happiness development—formulation of the framework**

As indicated earlier ("Methods" section), the formulation of the proposed target framework for the design and development of "community happiness" is carried out through three interdependent phases, as presented in Table 1; a progressive sequence deploying selected sample approaches and the related attributes and indicators, addressing the three notions: "happiness", and the closely related "sustainable development" and "quality of life", namely,

- Phase 1—introducing the procedure and presenting the (sample) selected approaches together with related indicators and attributes classified according to the six key aspects related to the brief introduction of "happiness" definitions and theories, as well as the two underlying notions of "sustainable development" and "quality of life" in "Community happiness" and "Sustainable development and quality of life—two underlying notions" sections comprising matrices 1, 2, and 3, Tables 3, 4, and 5 respectively.

Phase 1—introducing the procedure and presenting the (sample) selected approaches together with related indicators and attributes classified according to the six key aspects related to the brief introduction of "happiness" definitions and theories, as well as the two underlying notions of "sustainable development" and "quality of life" in "Community happiness" and "Sustainable development and quality of life—two underlying notions" sections comprising matrices 1, 2, and 3, Tables 3, 4, and 5 respectively.

The formulation sequence continues through phases 2 and 3:

- Phase 2—progressively formulating the targeted framework in three steps, namely
  - *Step 1.* Combining the relational tables, matrices (2) and (3), covering the sample selected approaches for "sustainable development" and "quality of life" indicators and attributes, and the key aspects into a collective representative set of indicators against the 6 key aspects resulting in the relational matrix (4) (Table 6).

**Table 4** Sustainable development—selected approaches, indicators, and key aspects (matrix 2)

Selected approaches	Indicators		Key aspects							
			Environmental	Urban	Health	Political	Economic	Social	Total	
United Nations Development Program [3]	Sustainable cities and communities	17	•							5
	Clean water and sanitation		•							
	Good health and well-being				•					
	Peace, justice, and strong institutions					•				
	Partnerships for the goals					•				
	Decent work and economic growth						•			
	Affordable and clean energy						•			
	Industrial innovation and infrastructure						•			
	Responsible consumption and production						•			
	Climate action						•			
	Eliminate poverty						•			
	Erase hunger						•			
	Reduced inequalities							•		
	Gender equality							•		
	Life on hand							•		
	Life below water							•		
	Quality education							•		
UNESCO Organization [4]	Sustainable Development Goals for Ocean	6	•							3
	Natural Sciences					•				
	Social and Human Sciences						•			
	Communication and Information						•			
	Culture Education						•			

**Table 4** (continued)

Selected approaches	Indicators	Key aspects						Total
		Environmental	Urban	Health	Political	Economic	Social	
Sustainability in "Japan" [5]	Energy/climate change	15	•					5
	Biodiversity/food/water			•				
	Transportation/mobility				•			
	Policy/systems/technology					•		
	Steady-state economy						•	
	Resilience						•	
	Corporate/CSR						•	
	Money						•	
	Mineral resources						•	
	Chemicals						•	
	Reduce/reuse/recycle						•	
	Civil society							•
	Well-being							•
	Eco-business/social venture							•
Education							•	
Egypt's vision 2030 [41]	Environment	10	•					5
	Urban development			•				
	Health				•			
	Economic development					•		
	Transparency and efficient government institutions						•	
	Energy						•	
	Knowledge, innovation, and scientific research						•	
	Social justice							•
	Culture							•
	Education and training							•

A total of 48 indicators in the 6 key aspects

- Step 2. Juxtaposing and integrating matrix (4) the combined set of indicators and those of matrix (1), "happiness" indicators, through the governing 6 key aspects, matrix (5) (Table 7).

**Table 5** Quality of life—selected approaches, indicators, and key aspects (matrix 3)

Selected approaches	Indicators	Key aspects						
		Environmental	Urban	Health	Political	Economic	Social	Total
Numbeo [42]	Pollution including air and water	6	•					5
	Traffic (commute times)		•					
	Health system quality			•				
	Affordability of housing					•		
	Cost of living and purchasing power					•		
	Crime rates						•	
Mercer [6]	Natural environment	10	•					6
	Housing		•					
	Public services and transport		•					
	Medical and health considerations			•				
	Political and social environment				•			
	Economic environment					•		
	Consumer goods					•		
	Socio-cultural environment						•	
	Schools and education						•	
	Recreation						•	
The Economist Intelligence Unit–EIU [7]	Climate and geography	9	•					5
	Health			•				
	Political stability and security				•			
	Political freedom				•			
	Job security					•		
	Material well-being					•		
	Family life						•	
	Community life						•	
Gender equality						•		
Human Development Index–HDI [8]	A long and healthy life	3		•				2
	A decent standard of living						•	
	Being knowledgeable						•	

**Table 5** (continued)

Selected approaches	Indicators	Key aspects						Total
		Environmental	Urban	Health	Political	Economic	Social	
Quality of Life in "Boston" [43]	Environment and energy	10	•					5
	Housing		•					
	Transportation		•					
	Health			•				
	Economy					•		
	Technology					•		
	Public safety						•	
	Civic vitality						•	
	Cultural life and the arts						•	
Education						•		

A total of 38 indicators in the 6 key aspects

- *Step 3.* Synthesis of phase 2 representing the collective combination of matrices (4) and (1), and matrix (5), into the preliminary "happiness" development integrated matrix (6.1) (Table 8), highlighting key aspects, main indicators, and attributes. The brief set of "happiness development" key indicators are then presented together with the likely levels of action and spatial settings (macro-micro) regional, national, and local, as well as the quality/presence and relative strength; concluding step 3 and presenting integrated matrix (6.2) (Table 9), which provides "happiness development" framework 1, for monitoring and assessing "happiness" in localities and limited scale settings.
- Phase 3—happiness key indicators versus site planning and design criteria and elements.

This concludes the formulation of the proposed framework for "happiness development"; allowing monitoring, design, and development of community happiness. A relational matrix (7), framework 2 (Table 10) combining selected brief attributes/indicators of happiness development (environmental, physical/built form, and socio-cultural) against a sample set of site planning and design components and criteria [44–47].

The preliminary framework (1, 2) provided the basis for the validation of the research propositions, pointing out the potential of "happiness development" attributes and indicators to delineate and answer the question of the relative importance of, guided by designers and developers, and to be further checked (later) by target users and communities, groups, and individuals.

**Table 6** Sustainable development and quality of life—key aspects and indicators (matrix 4)

Key aspects	Sustainable development (matrix 2)	Quality of life (matrix 3)	Integrated sustainable development and quality of life
Environmental	<ul style="list-style-type: none"> <li>- Sustainable cities and communities</li> <li>- Sustainable development</li> <li>- Goals for ocean environment</li> <li>- Energy/climate change</li> <li>- Biodiversity/food/water</li> <li>- Clean water and sanitation</li> </ul>	<ul style="list-style-type: none"> <li>- Natural environment</li> <li>- Climate and geography</li> <li>- Environment and energy</li> <li>- Pollution (air and water)</li> </ul>	<ul style="list-style-type: none"> <li>- Sustainable cities and communities</li> <li>- Sustainable development</li> <li>- Goals for ocean environment</li> <li>- Natural environment</li> <li>- Energy/climate and geography</li> <li>- Biodiversity-environment</li> <li>- Clean water and sanitation</li> </ul>
Urban	<ul style="list-style-type: none"> <li>- Urban development</li> <li>- Transportation/mobility</li> </ul>	<ul style="list-style-type: none"> <li>- Housing</li> <li>- Public services and transport</li> <li>- Traffic (commute times)</li> </ul>	<ul style="list-style-type: none"> <li>- Housing</li> <li>- Urban development-public services</li> <li>-Transportation/traffic/mobility</li> </ul>
Health	<ul style="list-style-type: none"> <li>- Health</li> <li>- Good health and well-being</li> </ul>	<ul style="list-style-type: none"> <li>- Health system quality</li> <li>- Medical and health considerations</li> <li>- A long and healthy life</li> </ul>	<ul style="list-style-type: none"> <li>- Good health and well-being</li> <li>- Health system quality</li> <li>- Medical and health considerations</li> <li>- A long and healthy life</li> </ul>
Political	<ul style="list-style-type: none"> <li>- Peace, justice, and strong institutions</li> <li>- Partnerships for the goals</li> <li>- Policy/systems/technology</li> </ul>	<ul style="list-style-type: none"> <li>- Political stability and security</li> <li>- Political and social environment</li> <li>- Political freedom</li> </ul>	<ul style="list-style-type: none"> <li>- Peace, justice, and strong institutions</li> <li>- Political stability and security</li> <li>- Partnerships for the goals</li> <li>- Policy/systems/technology</li> <li>- Political and social environment</li> <li>- Political freedom</li> </ul>
Economic	<ul style="list-style-type: none"> <li>- Money</li> <li>- Erase hunger</li> <li>- Eliminate poverty</li> <li>- Affordable and clean energy</li> <li>- Mineral resources</li> <li>- Chemicals</li> <li>- Climate action</li> <li>- Corporate/CSR</li> <li>- Decent work and economic growth</li> <li>- Industrial innovation and infrastructure</li> <li>- Knowledge, innovation, and scientific research</li> <li>- Natural sciences</li> <li>- Reduce/reuse/recycle</li> <li>- Transparency and efficient government institutions</li> </ul>	<ul style="list-style-type: none"> <li>- Economy</li> <li>- Consumer goods</li> <li>- Economic environment</li> <li>- Affordability of housing</li> <li>- Cost of living and purchasing power</li> <li>- Material well-being</li> <li>- Technology</li> <li>- Job security</li> </ul>	<ul style="list-style-type: none"> <li>- Economy</li> <li>- Economic environment</li> <li>- Consumer goods</li> <li>- Affordability of housing</li> <li>- Cost of living and purchasing power</li> <li>- Material well-being</li> <li>- Money</li> <li>- Eliminate poverty</li> <li>- Erase hunger</li> <li>- Affordable and clean energy</li> <li>- Mineral resources</li> <li>- Chemicals</li> <li>- Climate action</li> <li>- Corporate/CSR</li> <li>- Job security</li> <li>- Decent work and economic growth</li> <li>- Industrial innovation and infrastructure</li> <li>- Knowledge, innovation, and scientific Research</li> <li>- Natural sciences</li> <li>- Reduce/reuse/recycle</li> <li>- Technology</li> <li>- Transparency and efficient government institutions</li> </ul>

**Table 6** (continued)

Key aspects	Sustainable development (matrix 2)	Quality of life (matrix 3)	Integrated sustainable development and quality of life
Social	<ul style="list-style-type: none"> <li>- Civil society</li> <li>- Social justice</li> </ul>	<ul style="list-style-type: none"> <li>- Civic vitality</li> <li>- Public safety</li> <li>- Crime rates</li> </ul>	<ul style="list-style-type: none"> <li>- Civil society</li> <li>- Civic vitality</li> <li>- Social justice</li> <li>- Public safety</li> <li>- Crime rates</li> </ul>
	<ul style="list-style-type: none"> <li>- Social and human sciences</li> <li>- Communication and information</li> <li>- Eco-business/social venture</li> </ul>	<ul style="list-style-type: none"> <li>- Family life</li> <li>- Community life</li> </ul>	<ul style="list-style-type: none"> <li>- Social and human sciences</li> <li>- Communication and information</li> <li>- Eco-business/social venture</li> <li>- Community life</li> <li>- Family life</li> </ul>
	<ul style="list-style-type: none"> <li>- Reduced inequalities</li> <li>- Gender equality</li> </ul>	<ul style="list-style-type: none"> <li>- Gender equality</li> </ul>	<ul style="list-style-type: none"> <li>- Reduced inequalities</li> <li>- Gender equality</li> </ul>
	<ul style="list-style-type: none"> <li>- Well-being</li> <li>- Life on hand</li> <li>- Life below water</li> </ul>	<ul style="list-style-type: none"> <li>- Recreation</li> <li>- Material well-being</li> <li>- A decent standard of living</li> </ul>	<ul style="list-style-type: none"> <li>- Well-being</li> <li>- Life on hand</li> <li>- Life below water</li> <li>- Recreation</li> <li>- Material well-being</li> <li>- A decent standard of living</li> </ul>
	<ul style="list-style-type: none"> <li>- Quality education</li> <li>- Education and training culture</li> </ul>	<ul style="list-style-type: none"> <li>- Schools and education</li> <li>- Being knowledgeable</li> <li>- Socio-cultural environment</li> <li>- Cultural life and the arts</li> </ul>	<ul style="list-style-type: none"> <li>- Education and training culture</li> <li>- Being knowledgeable</li> <li>- Socio-cultural environment</li> <li>- Cultural life and the arts</li> </ul>

**Results and discussion**

An integral part of developing the proposed “community happiness development” framework is the preliminary validation of the concluding matrices (6.2) and (7), the proposed frameworks 1 and 2 respectively. The proposed framework and underlying propositions were presented to a validation group comprising a limited sample of specialists; practicing academics, combining teaching, research, and professional practice, in the closely related fields of architecture, urban design and planning, site planning, design, and landscape.

A questionnaire backed by the relational matrices (5), (6.1 and 6.2), and (7) was presented to and completed by the validation group. The validation questionnaire, supported by the attached related research products, comprised 4 parts, namely:

- The participants’ profiles, key data, specialization, and years of experience,
- The research key propositions, matrix (5), and methodology of formulating the framework (Table 1).
- The proposed “community happiness development” framework 1, matrices (6.1 and 6.2), (Tables 8 and 9).
- The proposed “community happiness development” key indicators and attributes versus site planning and design criteria and elements framework 2, matrix (7) (Table 10).

The four aspects of the preliminary validation sequence are briefly presented and discussed in the following sections.

**Table 7** Happiness, sustainable development and quality of life—key aspects and indicators (matrix 5)

Key aspects	Happiness (matrix 1)	Integrated sustainable development and quality of life (matrix 4)	Happiness, sustainable development and quality of life; integrated indicators
Environmental	<ul style="list-style-type: none"> <li>- Environment</li> <li>- Ecological footprint</li> </ul>	<ul style="list-style-type: none"> <li>- Sustainable cities and communities</li> <li>- Sustainable development</li> <li>- Goals for ocean environment</li> <li>- Natural environment</li> <li>- Energy/climate and geography</li> <li>- Biodiversity</li> <li>- Environment</li> <li>- Clean water and sanitation</li> </ul>	<ul style="list-style-type: none"> <li>- Ecological footprint</li> <li>- Sustainable cities and communities</li> <li>- Goals for ocean environment</li> <li>- Natural environment</li> <li>- Sustainable development</li> <li>- Energy climate and geography</li> <li>- Biodiversity</li> <li>- Environment</li> <li>- Clean water and sanitation</li> </ul>
Urban	<ul style="list-style-type: none"> <li>- Housing</li> <li>- Transportation</li> </ul>	<ul style="list-style-type: none"> <li>- Housing</li> <li>- Urban development</li> <li>- Public services</li> <li>- Transportation/traffic/mobility</li> </ul>	<ul style="list-style-type: none"> <li>- Housing</li> <li>- Urban development</li> <li>- Public services</li> <li>- Transportation /traffic/mobility</li> </ul>
Health	<ul style="list-style-type: none"> <li>- Health</li> <li>- Physical health</li> <li>- Healthcare access</li> <li>- Life expectancy</li> </ul>	<ul style="list-style-type: none"> <li>- Good health and well-being</li> <li>- Health system quality</li> <li>- Medical and health considerations</li> <li>- A long and healthy life</li> </ul>	<ul style="list-style-type: none"> <li>- Physical health</li> <li>- Healthcare access</li> <li>- Good health and well-being</li> <li>- Health system quality</li> <li>- Medical and health considerations</li> <li>- Life expectancy</li> <li>- A long and healthy life</li> </ul>
Political	<ul style="list-style-type: none"> <li>- Personal freedom</li> </ul>	<ul style="list-style-type: none"> <li>- Peace, justice, and strong institutions</li> <li>- Political stability and security</li> <li>- Partnerships for the goals</li> <li>- Policy/systems/technology</li> <li>- Political and social environment</li> <li>- Political freedom</li> </ul>	<ul style="list-style-type: none"> <li>- Peace, justice, and strong institutions</li> <li>- Political stability and security</li> <li>- Partnerships for the goals</li> <li>- Policy/systems/technology</li> <li>- Political and social environment</li> <li>- Political freedom</li> <li>- Personal freedom</li> </ul>



**Table 7** (continued)

<b>Key aspects</b>	<b>Happiness (matrix 1)</b>	<b>Integrated sustainable development and quality of life (matrix 4)</b>	<b>Happiness, sustainable development and quality of life; integrated indicators</b>
Economic	<ul style="list-style-type: none"> <li>- Sense of purpose</li>   <li>- Income</li> <li>- Jobs</li> <li>- Work</li>   <li>- Financial security</li> <li>- Economic security</li> <li>- Financial situation</li>   <li>- Resource access</li> <li>- Food access</li> </ul>	<ul style="list-style-type: none"> <li>- Economy</li> <li>- Economic environment</li> <li>- Consumer goods</li>   <li>- Affordability of housing</li> <li>- Cost of living and purchasing power</li> <li>- Material well-being</li> <li>- Money</li> <li>- Eliminate poverty</li> <li>- Erase hunger</li>   <li>- Affordable and clean energy</li> <li>- Mineral resources</li> <li>- Chemicals</li>   <li>- Decent work and economic growth</li> <li>- Climate action</li> <li>- Corporate/CSR</li> <li>- Job security</li>   <li>- Industrial innovation and infrastructure</li> <li>- Knowledge, innovation, and scientific research</li> <li>- Natural sciences</li> <li>- Reduce/reuse/recycle</li> <li>- Technology</li>   <li>- Transparency and efficient government institutions</li> </ul>	<ul style="list-style-type: none"> <li>- Economic environment</li> <li>- Consumer goods</li> <li>- Resource access</li> <li>- Economy</li> <li>- Food access</li>   <li>- Cost of living and purchasing power</li> <li>- Material well-being</li> <li>- Eliminate poverty</li> <li>- Affordability of housing</li> <li>- Money</li> <li>- Erase hunger</li>   <li>- Affordable and clean energy</li> <li>- Mineral resources</li> <li>- Chemicals</li>   <li>- Income</li> <li>- Climate action</li> <li>- Decent work and economic growth</li> <li>- Corporate/CSR</li> <li>- Job security</li>   <li>- Industrial innovation and infrastructure</li> <li>- Knowledge, innovation, and scientific research</li> <li>- Natural sciences</li> <li>- Reduce/reuse/recycle</li> <li>- Technology</li> <li>- Sense of purpose</li>   <li>- Transparency and efficient government institutions</li> <li>- Financial security</li> <li>- Economic security</li> <li>- Financial situation</li> </ul>

**Table 7** (continued)

Key aspects	Happiness (matrix 1)	Integrated sustainable development and quality of life (matrix 4)	Happiness, sustainable development and quality of life; integrated indicators
Social	<ul style="list-style-type: none"> <li>- Community</li> <li>- Social relationships</li> <li>- Relationship to community</li> <li>- Community and friends</li> <li>- Family relationships</li> </ul>	<ul style="list-style-type: none"> <li>- Civil society</li> <li>- Civic vitality</li> <li>- Social justice</li> <li>- Public safety</li> <li>- Crime rates</li> </ul>	<ul style="list-style-type: none"> <li>- Civil society</li> <li>- Civic vitality</li> <li>- Social justice</li> <li>- Public safety</li> <li>- Crime rates</li> </ul>
		<ul style="list-style-type: none"> <li>- Social and human sciences</li> <li>- Communication and information</li> <li>- Eco-business/social venture</li> <li>- Community life</li> <li>- Family life</li> </ul>	<ul style="list-style-type: none"> <li>- Communication and information</li> <li>- Eco-business/social venture</li> <li>- Community life</li> <li>- Social and human sciences</li> <li>- Family life</li> </ul>
	<ul style="list-style-type: none"> <li>- Life satisfaction</li> <li>- Wellbeing</li> <li>- Safety</li> </ul>	<ul style="list-style-type: none"> <li>- Well-being</li> <li>- Life on hand</li> <li>- Life below water</li> <li>- Recreation</li> <li>- Material well-being</li> <li>- A decent standard of living</li> </ul>	<ul style="list-style-type: none"> <li>-Life satisfaction</li> <li>- Safety</li> <li>-Wellbeing</li> <li>- Life on hand</li> <li>- Life below water</li> <li>-Recreation</li> <li>-Material well-being</li> <li>- A decent standard of living</li> </ul>
	<ul style="list-style-type: none"> <li>- Civic engagement</li> <li>- Work-life balance</li> </ul>	<ul style="list-style-type: none"> <li>- Reduced inequalities</li> <li>- Gender equality</li> </ul>	<ul style="list-style-type: none"> <li>- Civic engagement</li> <li>- Work-life balance</li> </ul>
	<ul style="list-style-type: none"> <li>- Education</li> <li>- Personal values</li> </ul>	<ul style="list-style-type: none"> <li>- Education and training culture</li> <li>- Being knowledgeable</li> <li>- Socio-cultural environment</li> <li>- Cultural life and the arts</li> </ul>	<ul style="list-style-type: none"> <li>-Reduced inequalities</li> <li>-Gender equality</li> <li>-Education</li> <li>-Personal values</li> <li>- Cultural life and the arts</li> <li>- Being knowledgeable</li> <li>- Socio-cultural environment</li> </ul>

**The validation group—participants**

The questionnaire was distributed to a selected sample of academic practitioners, with experience spanning some 15 years and more. The pilot sample totaled 15 academic professionals. The profiles of the 15 respondents covering the questionnaire and interacting with the proposed framework 1 and 2, matrices 6.2 and 7, Tables 9 and 10 respectively, may be summarized as follows:

- Areas of specialization: research, teaching, and professional practice, spanned; architecture, urban design and planning, site planning, design, and landscape,
- The academic ranks and current positions: professors (4), associate professors (4), and lecturers (7).
- The years of experience range from 15 to 50 years, with an average/mean of 17 years.

**Key propositions**

With a semantic differential response range varying between 1 and 5, namely; fully accept/agree (5), agree (4), fairly accept (3), do not accept/agree (2), and do not know and no response (1); the respondents generally accepted the 3 key research propositions, namely

**Table 8** The proposed framework (1), happiness development framework—integrated, indicators and attributes, and key indicators, (matrix 6.1)

Key aspects	Happiness, sustainable development, and quality of life; integrated indicators	Happiness key indicators	
Environmental	- Sustainable cities and communities - Goals for ocean environment - Natural environment	- Sustainable development - Ecological footprint	
	- Energy/climate and geography - Clean water and sanitation	- Biodiversity - Environment	
Urban	- Housing		
	- Urban development - Public services	- Transportation/traffic/mobility	
Health	- Medical and health considerations - Good health and well-being - Physical health	- Health system quality - Healthcare access	
	- A long and healthy life	- Life expectancy	
Political	- Peace, justice, and strong institutions	- Political stability and security	
	- Partnerships for the goals	- Policy/systems /technology	
	- Political and social environment - Political freedom	- Personal freedom	
	- Economic environment - Consumer goods - Resource access	- Economy - Food access	
Economic	- Cost of living and purchasing power - Material well-being - Eliminate poverty	- Affordability of housing - Money - Erase hunger	
	- Affordable and clean energy - Mineral resources	- Chemicals	
	- Decent work and economic growth - Climate action - Corporate/CSR - Work	- Jobs - Job security - Income	
	- Industrial innovation and infrastructure - Knowledge, innovation, and scientific research - Natural sciences	- Sense of purpose - Reduce/reuse/recycle - Technology	
	- Financial security - Transparency and efficient government institutions	- Economic security - Financial situation	
			Sustainable development
			Energy, climate, and geography
			Pollution (levels)
			Housing
			Urban development, public services, and mobility
		Good health—healthcare-wellbeing	
		Long and healthy life	
		Peace—justice -Political stability	
		Partnerships	
		Political environment - Freedom	
		Economic environment	
		Economic, material well-being	
		Resources; access and affordable	
		Jobs, income, security, and quality - Economic growth	
		Economic quality-innovation, infrastructure	
		Economic security, efficiency, transparency	

**Table 8** (continued)

Key aspects	Happiness, sustainable development, and quality of life; integrated indicators		Happiness key indicators
Social	- Civil society	- Civic vitality	Civil society, vitality, justice, safety
	- Social justice	- Public safety	
	- Crime rates		
	- Communication and information	- Social and human sciences	Family and community life
	- Eco-business/social venture	- Family life	
	- Community life		
	- A decent standard of living	- Well-being	Life satisfaction, wellbeing–living standards
	- Recreation	- Life below water	
	- Life on hand	- Life satisfaction	
	- Material well-being	- Safety	
- Civic engagement	- Work-life balance	Civic engagement, balance	
- Reduced inequalities	- Gender equality	Equality	
- Education and training culture	- Socio-cultural environment	Socio-cultural environment - Education and cultural quality	
- Cultural life and the arts	- Personal values		
- Being knowledgeable			

- Happiness was always and still is an undeclared objective in urban and site planning and design, a total of 10 (66.6%).
- Happiness is closely related to the notions and drives of sustainable development and quality of life and is attained by the implementation of the related processes and drives, accepted by all 15 respondents.
- All three notions are integrated and covered by site planning and community design, drives, and processes, accepted by all respondents.

**Happiness development framework**

The respondents invariably accepted the adopted procedure to follow the propositions, towards the formulation of the proposed framework; the sequence of integrating approaches to the three notions was checked and accepted, the principles and product, the proposed preliminary relational matrices, and the happiness monitoring and enhancing framework. The respondents emphasized the key aspects’ relative importance in physical planning and site development and highlighted the weights and impact of the environment, built environment, and sociocultural aspects on community happiness. They recognized the importance of the levels of actions, macro, and micro emphasizing the local, namely, districts, neighborhoods, and designated communities. Furthermore, they accepted the format of the preliminary framework, pointing out the ease of usage and application.

**Table 9** The proposed framework (1), happiness development framework—selected key aspects, key indicators, levels, and presence/quality—monitoring and assessment tool (matrix 6.2)

Key aspects	Happiness key indicators	Levels–action/spatial				Presence/quality- relative strength			
		Macro		Micro		Strong	Medium	Limited	Absent/weak
		International	National	Regional	Local				
Environmental	Sustainable development								
	Energy, climate, and geography								
Urban	Pollution (levels)								
	Housing								
Health	Urban development, public services, and mobility								
	Good health–healthcare–wellbeing								
Political	Long and healthy life								
	Peace–justice - Political stability								
Economic	Partnerships								
	Political environment - Freedom								
	Economic environment								
	Economic, material well-being								
	Resources, access, and affordable								
	Jobs, income, security, and quality - Economic growth								
	Economic quality-innovation, infrastructure								
	Economic security, efficiency, transparency								

**Table 9** (continued)

Key aspects	Happiness key indicators	Levels–action/spatial				Presence/quality- relative strength			
		Macro		Micro		Strong	Medium	Limited	Absent/weak
		International	National	Regional	Local				
Social	Civil society, vitality, justice, safety								
	Family and community life								
	Life satisfaction, well-being–living standards								
	Civic engagement, balance								
	Equality								
	Socio-cultural environment - Education and cultural quality								

**Happiness versus site planning and design**

The respondents accepted and agreed with the suggested relational matrix (7), Table 10 (The proposed framework (2), “happiness development” selected attributes versus site planning and design elements and criteria) [44–47] and were asked to use and complete in the light of their combined experience, research, and practice, emphasizing the relative weight, the strength of the relations among the selected “happiness” aspects, attributes and indicators and site planning and design elements and criteria.

**Epilogue**

The purpose of the preliminary validation was to assess the acceptance and applicability of the proposed framework; its role in taming the complexities of the addressed notions and pointing out means of integrating “community happiness development” into the site planning and design principles, criteria, and processes, as well as supporting its potentials, for further development.

The validation was an added phase of the propositions and proposed framework formulation, following the presentation and integration of approaches, to the three intertwined notions of “happiness”, “sustainable development” and “quality of life”, and the progressive integration of their attributes towards the preliminary framework, for monitoring, enhancing, and developing “community happiness”.

**Table 10** The proposed framework (2)–“happiness development” selected attributes versus site planning and design elements and criteria, (matrix 7)

Key aspects	Happiness Key indicators	Site planning and design elements and criteria							
		Environmental aspects	Density Physical-activity	Privacy	Safety and security	Accessibility	Scenes and views	Visual form and aesthetics	Open spaces and greens
Environmental	Sustainable development	✓	∅	×	×	×	∅	∅	✓
	Energy, climate, and geography	∅	×	×	×	∅	∅	∅	∅
	pollution (levels)	✓	×	×	×	×	×	×	✓
Urban	Housing	∅	✓	✓	✓	✓	y	✓	✓
	Urban development, public services, and mobility	∅	✓	×	✓	✓	×	×	y
Social	Civil society, vitality, justice, safety	✓	y	✓	✓	✓	∅	✓	✓
	Family and community life	✓	∅	✓	✓	✓	×	×	✓
	Life satisfaction, wellbeing–living standards	✓	∅	y	✓	✓	∅	∅	✓
	Civic engagement, balance	∅	×	×	✓	∅	×	∅	∅
	Equality	×	×	∅	∅	∅	×	×	∅
	Socio-cultural environment - Education and cultural quality	∅	✓	∅	∅	✓	∅	∅	✓

✓ strong relation, ∅ medium relation, × fair/weak relation

### Conclusions

The present work addressed the notion of “happiness” and “community happiness” as means and an undeclared objective in site planning and community design presented and followed its complexities and illusive nature, developed a preliminary framework for interacting with, monitoring, enhancing, and developing community happiness, in limited scale urban settings. It presented “happiness” as a worthy design goal, highlighting its close links to the closely related notions and drives of “quality of life”, “friendly settings”, and “sustainable development”.

The paper secured its prime objective of formulating, developing, and validating the said conceptual framework for “community happiness” monitoring and development; integrating, and linking site planning and design tools and criteria to “happiness”

aspects and indicators; hence, enabling, enhancing, and achieving. It also realized the secondary objectives of linking the notion of “happiness” to the closely related notions and drives of “sustainable development” and “quality of life” through the presentation and integration of the selected approaches, key aspects, and indicators, addressing the three notions.

The formulation of the proposed framework, for monitoring and developing “community happiness”, highlighted in Table 1 was carried out through 3 interdependent stages, in a progressive sequence, deploying the selected approaches, and the related attributes and indicators, together with the governing key aspects; covering the three notions; “happiness”, and the closely related “sustainable development” and “quality of life”.

The resulting brief set of “happiness development” key indicators are presented together with the likely levels of action and spatial settings (macro-micro) regional, national, and local, as well as the quality/presence and relative strength (Table 9), providing “happiness development” framework (1) for monitoring and assessing “happiness” in limited scale localities and settings. Selected attributes and indicators of “happiness development”, namely, environmental, physical/built form, and socio-cultural from the resulting set are presented against a sample set of site planning and design components and criteria, framework (2), (Table 10).

The preliminary framework (1) and (2) provided the basis for the preliminary validation of the research propositions. The validation is regarded as an integral part of developing the proposed framework and underlying propositions; carried out, through a pilot questionnaire, presented to a small sample of specialists; practicing academics, combining teaching, research, and professional practice, in the closely related fields of architecture, urban design, and planning, site planning, design, and landscape.

The respondents generally accepted the research propositions, and the adopted procedure to follow, towards the formulation of the proposed framework; and the resulting “happiness” monitoring and enhancing framework. The respondents emphasized the key aspects’ relative importance in physical planning and site development, as well as the levels of action and the format of the preliminary framework (1), pointing out the ease of usage and application. Furthermore, they accepted and interacted with the proposed framework (2), “happiness development” selected attributes versus site planning and design elements and criteria.

The preliminary qualitative validation highlighted the applicability of the proposed framework, its role in taming the complexities of the addressed notions and presenting means of integrating “community happiness development” into site planning and design principles, criteria, and processes, as well as supporting its potential for further development.

The “proposed framework” is a two-fold tool; on the one hand, framework (1), “happiness development” (Table 9) combines key indicators, action and spatial levels, and presence, quality, and relative strength, allowing field monitoring, and assessment of “community happiness”, on the various spatial levels, macro, and micro, including neighborhoods and local areas, by specialists, designers, and developers, as well as by targeted communities. Framework (2) (Table 10); on the other hand, comprises “happiness development” selected attributes, key aspects, and indicators, together with, site planning and design selected elements and criteria, provides a design tool, supporting and



complementing, site planning processes, allowing, deployment of its elements and criteria, to secure communities' happiness and satisfaction.

"Happiness" is likely to continue as a supreme goal, that individuals and communities strive to achieve, through; "well-being", and "quality of life"; justifying, recalling, and addressing "happiness" as a design goal, and an integral part of site planning, community design, and development, with its clear objectives of securing "quality of life" and "sustainability".

The relative importance of the design criteria and related "happiness" indicators, and the likely products, as well as the cost of achieving "community happiness", collectively deserve to be further addressed and investigated, in future research.

#### Abbreviations

OECD	Organization for Economic Co-operation and Development
HPI	Happy Planet Index
GDP	Gallup Global Well-Being
UNDP	United Nations Development Program
UNESCO	United Nations Educational, Scientific, and Cultural Organization
EIU	The Economist Intelligence Unit
HDI	Human Development Index

#### Acknowledgements

Not applicable.

#### Authors' contributions

All authors read and approved the final manuscript.

#### Funding

This study had no funding from any resource.

#### Availability of data and materials

The data can be shared upon request as a requirement dictated by Springer rules.

#### Declarations

##### Ethics approval and consent to participate

Not applicable.

##### Consent for publication

Not applicable.

##### Competing interests

The authors declare that they have no competing interests. The study has neither been copyrighted, published, nor submitted for publication elsewhere.

Received: 11 July 2023 Accepted: 23 April 2024

Published online: 03 May 2024

#### References

1. Larice M, Macdonald E (Eds.) (2012) *The urban design reader*. Design Reader Series, 2nd Edition, Routledge, London, England
2. Rapoport A (1977) *Human aspects of urban form: towards a man-environment approach to urban form and design*. Pergamon Press, Oxford
3. United Nations Development Program, *The Sustainable Development Goals*. Accessed 2023. Available online at: <https://www.undp.org/sustainable-development-goals/>
4. UNESCO and Sustainable Development Goals. Accessed 2023. available online at: <https://en.unesco.org/sustainable-development-goals/>
5. Japan for Sustainability. Accessed 2023. Available online at: <https://www.japanfs.org/>
6. Mercer, *Quality of Living Indicators*. Accessed 2023. Available online at: <https://mobilityexchange.mercer.com/quality-of-living-reports>
7. Hajduova Z, Andrejovský P, Beslerová S (2014) Development of quality of life economic indicators with regard to the environment. *Proc Soc Behav Sci Sci Direct* 110:747–754
8. Human Development Index. Accessed 2023. Available online at: <https://hdr.undp.org/data-center/human-development-index#/indicies/HDI>

9. Eduardo L (1990) *Community design and the culture of cities*. Cambridge University Press, Cambridge, England
10. Arthur W (1999) *Community design – a team approach to dynamic community systems*. SAGE Publications, London
11. Abdel Kader N, Ettouney S (2017) Communities in transformation – sustaining community design, enabling interventions. *Int J Housing Sci Appl* 41(2):101–112
12. Pringle S, Guaralda M, Mayere S (2019) Urban environment characteristics and their implications on emotional happiness and well-being: Proposal of a theoretical and conceptual framework. In Jackson S, Muffatt L (Eds.), *Proceedings of the 12th Liveable Cities Conference, Association for Sustainability in Business Inc., Australia*, pp. 33–66
13. Abdullah Y, Zulkifli F (2016) Concepts and theories of happiness of population in urban neighborhoods. *Environ Behav Proc J* 1:260–268
14. Okulicz-Kozaryn A, Mazelis J (2016) Urbanism and happiness: a test of Wirth's theory of urban life. *Urban Stud* 55(2):349–364 (Sage Publications, Ltd)
15. Pringle S, Guaralda M (2018) Images of urban happiness: pilot study in the self-representation of happiness in urban places. *Int J Image* 8(4):97–122
16. Cloutier S, Pfeiffer D (2017) Happiness: an alternative objective for sustainable community development. Phillips R, Wong C (Eds.) *Handbook of Community Well-Being Research. International Handbooks of Quality-of-Life*. Springer, pp. 85–96
17. Montgomery C (2013) *Happy city: transforming our lives through urban design*. Farrar, Straus and Giroux, New York, November 12, pp. 19–20
18. Aristotle (2009) *The Nicomachean Ethics*. Ross D, Brown L (eds.), Oxford University Press, Oxford World's Classics
19. Klein S (2006) *The science of happiness: how our brains make us happy-and what we can do to get happier*. De Capo Press Lifelong Books
20. Brooks C (2008) *Gross national happiness: why happiness matters for America - and How We Can Get More of It*. Basic Books, New York
21. Shin D, Johnson D (1978) Avowed happiness as an overall assessment of the quality of life. *Soc Indicators Res* 5:475–492
22. Bentham J (1789) *Introduction to the principles of morals and legislation*. Clarendon Press, Oxford, pp. 24–28
23. Diener E (2000) Subjective well-being: the science of happiness and a proposal for a national index. *Am Psychol* 55:34–43 (Washington)
24. Veenhoven R (2008) Healthy happiness: effects of happiness on physical health and the consequences for preventive health care. *J Happiness Stud* 9:449–469 (Springer)
25. O'Brien C (2005) *Sustainable happiness: harmonizing our internal and external landscapes*. 2nd International Conference on Gross National Happiness, Antigonish, Nova Scotia
26. Layard R (2005) *Happiness: lessons from a new science*. Penguin Books, New York
27. Griffin J (2007) What do happiness studies study? *J Happiness Stud* 8:139–148
28. Demir M, Ozdemir M (2010) Friendship, need satisfaction and happiness. *J Happiness Stud* 11:243–259
29. Lukasz D (2017) Happiness. In: Zeigler-Hill V, Shackelford T (Eds.), *Encyclopedia of personality and individual differences*, Springer, Cham, Switzerland, pp.1–5
30. Tatariewicz W (1976) *Analysis of happiness*. Martinus Nijhoff, Den Haag, The Hague
31. Czapiński J, Peeters G (1991) The onion theory of happiness: basic concepts and cross-cultural test. In N.Bleichrodt & P. J. D. Drenth (Eds.), *Contemporary issues in cross-cultural psychology*, Amsterdam: Swets & Zeitlinger, Amsterdam, pp. 196–206
32. Kahneman D, Diener E, Schwarz N (Eds.) (1999) *Objective happiness in: the foundations of hedonic psychology*. Russell Sage Foundation, New York.
33. Seligman M, Steen T, Park N, Peterson C (2005) Positive psychology progress: Empirical validation of interventions. *Am Psychol* 60:410–421
34. Diener E, Wirtz D, Tov W et al (2010) New well-being measures: Short scales to assess flourishing and positive and negative feelings. *Soc Indicators Res* 97:143–156
35. Waterman A et al (2010) The questionnaire for Eudemonic well-being: Psychometric properties, demographic comparisons, and evidence of validity. *J Positive Psychol* 5:41–61
36. Ryff C (2013) Psychological well-being revisited: advances in the science and practice of eudaimonia. *Psychother Psychosom* 83:10–28
37. OECD Better Life Index, The Organization for Economic Co-operation and Development. Accessed 2023. Available online at: <https://www.oecdbetterlifeindex.org/#/111111111111>
38. Happy Planet Index. Accessed 2023. available online at: <https://happyplanetindex.org/>
39. Gallup Global Well-Being Index. Accessed 2023. available online at: <https://news.gallup.com/poll/175694/country-varies-greatly-worldwide.aspx>
40. Sharecare Community Well-Being Index. Accessed 2023. Available online at: <https://wellbeingindex.sharecare.com/>
41. Egypt's Vision 2030. Accessed 2023. Available online at: <http://sdsegypt2030.com/?lang=en>
42. Numbeo, Quality of Life. Accessed 2023. Available online at: <https://www.numbeo.com/quality-of-life/>
43. Boston Indicators. Accessed 2023. Available online at: <https://www.bostonindicators.org/indicators>
44. Lynch K (1971) *Site Planning*. The MIT Press, Cambridge, Massachusetts, London, England
45. Untermann R, Small R (1977) *Site planning for cluster housing*. Van Nostrand Reinhold Company, London, England
46. Marcus C, Sarkisian W (1986) *Housing as if people mattered - site design guidelines for medium density family housing*. University of California Press, London
47. Ettouney S, Abdel Kader N (2013) Shaping development in limited resources settings – community design and development. LAP Lambert Academic Publishing, Germany, pp. 3–11, 12–40

## Publisher's Note

Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.