



Article

Quality of Life in Rural Areas: A Set of Indicators for Improving Wellbeing

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Abstract: Quality of life can be generally defined as people's satisfaction with their lives and personal wellbeing. Contemporary literature agrees that dimensions such as health, education, employment, leisure, social relations, security, environment, landscape, and cultural heritage should be considered. Tourism serves as a stimulus for rural development, and assessing residents' and tourists' quality of life is relevant for local administrators of a tourist destination. Given the absence of quality-of-life models for individual municipalities, the research questions were aimed at the mapping of quality-of-life frameworks and the construction of a set of quality-of-life indicators for Alagna Valsesia. This research was conducted in 2023. The results of the research showed the possibility of constructing a modular model of indicator sets aimed particularly at decision making by territorial policymakers. The limitations of the research are related to the difficulty of finding different indicators in public platforms and, in the future, we would like to build a synthetic indicator replicable in other Piedmontese and Italian municipalities.

Keywords: quality of life; rural area; destination; indicators; tourism



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1. Introduction

Quality of life is generally intended as the satisfaction of people with their lives for their personal wellbeing [1,2]. Such a wide concept, which risks being undefined, has been historically related to a raised number of variables. Also, attention has been focused on the identification of actions to improve the state of the art.

Dimensions like individual income, life expectancy, literacy rate, and death rate have been adopted to develop quality of life indexes. The goal is to provide information about the community's quality of life and wellbeing. Indexes based on these dimensions, however, take into consideration only quantitative variables, are mainly focused on economic and social aspects, and include only some of the factors that influence the quality of life and wellbeing of people [3].

Quality of life is a multidimensional concept [4–6]. The perceived quality of life is influenced by different kinds of aspects; some of them could be objectively measured, others are subjective. Dimensions that have enriched the studies about quality of life are, for example, health, education, work, free time, economic wellbeing, social relationships, safety and security, environment, cultural heritage, and services [7].

Governmental and non-governmental institutions have created indicators to study citizens' wellbeing and support public policies, being aware of the limitations of the GDP [8]. Economists like Smith, Mill, and Ricardo formerly underlined that individual wellbeing is influenced by public policies [7].

Wellbeing and quality of life are themes of interest not only at a national level but at a local level too [9], especially for those variables that are under the responsibility and management of local entities. This topic has become of interest at the European level [10]. For example, the OECD Regional Well-Being Guide underlines that "The framework for

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regional and local well-being starts with the consideration that making better policies for better lives means understanding what matters to people" [11]. At a local level, wellbeing can influence decisively the sustainable development of the local community itself [6,12]. In other words, the ability to maintain satisfying levels of quality of life in rural areas is an essential condition for its local development, even in the case of tourist destinations [13–15].

It is useful to underline that unsatisfying wellbeing in rural areas involves and hastens events like depopulation [13]. Relations between the quality of life and local development have become increasingly relevant.

The objective of this study, in such a context, was to identify and implement a set of indicators related to quality of life that is useful for local stakeholders. The set is intended to supply information about the state of the art, facilitate the identification of potential criticalities, and supervise the performance over time. More in detail, the research aims at identifying a set of meaningful and measurable indicators to supply local stakeholders with useful information about their own decisional processes and the execution of ameliorative actions if and where necessary [16].

This study has led to the definition of a framework of indicators—within which the birth process is presented—created and tested in a preliminarily way in the background of a research project called "Alagna Walser Green Paradise" (AWGP), which is one of the studies about the quality of life at a local level. The identified indicators cover the main dimensions of quality of life, in line with the literature review: work and economic wellbeing; health, safety and security; education; subjective wellbeing, free time and social relationships; institutions and politics; landscape and cultural heritage; environment; services. Public local stakeholders should employ the framework in whole or in part, based on the most important topics for their area and ongoing development policies. Since the set was identified with reference to a rural tourist destination, some of the indicators are related to tourism matters and the relationship between the local community and tourism. The indicators were distinguished between those that the local administration could directly control and those that are undirectedly controlled because of the dependency on national and international policies; other indicators could not be controlled by local entities.

The research aims are as follows:

- Mapping quality-of-life frameworks at the international and national levels;
- Selecting a set of quality of life indicators for Alagna Valsesia.

This paper is structured as follows: the second section is dedicated to a review of the literature on the subject of quality of life and its importance for local development policies; the third section illustrates the methodology used, considering the phases of the research process and the definition of the set of indicators, and defines the contextualization of the geographical area of study; the fourth section highlights the main results obtained and the fifth section presents the discussion of the results. The final section is dedicated to the main considerations of the study.

2. Literature Review

The definition of quality of life has been debated in many studies from the 1960s. Andereck and Nyaupane [17] identified more than a hundred definitions of quality of life. Quality of life is a general concept, and it can be measured in different ways and with objective and subjective indicators. Some attempts have been made to define quality of life. According to Allardt [18], quality of life is divided into objective and subjective conditions. He identified four dimensions: level of life, quality of life, satisfaction, and happiness. Andrews [19] defined quality of life as the set of material, non-material, objective, and subjective elements. Zapf [20] underlined the relationships between objective life conditions and subjective perceived quality of life, identifying four situations: disagreement when a person lives in good objective conditions but considers the subjective perceived quality of life as being not good; wellbeing when the objective conditions and subjective sensations are both positive; deprivation when they are both negative. Cantril [21] highlighted the cognitive elements of peoples' perceived quality of life, which is the result of an

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individual comparative process between one's own life goals, achieved goals, and the level of satisfaction. Brandburne and Caplovitz [22] concentrated their studies on emotional components, those related to a happiness condition that is more emotional and less rational.

Interesting dichotomies about quality of life emerged in a few studies. Nuvolati (1998) [23] underlined the difference between material and non-material needs, and Gerson (1976) [24] considered individual and collective conditions regarding the analysis of standards of living, about the distinction between personal conditions or wishes and public interests. Instead, Galtung and Wirak [25] defined the relations between primary and secondary services and materialistic and post-materialistic values.

Starting from the second half of the XX century, different attempts to measure quality of life have been developed at the national and international levels [26]. The differences between these attempts are mainly related to the dimensions of wellbeing considered, to the indicators measured and, when the result is a synthetic index, the methodologies applied to standardise and aggregate the different indicators [27].

The wide debate about quality of life has not led to the identification of a methodology that is considered, in general, better than the others [4,9]. This is due to the individual contexts of analysis [15], and to the recognised multidimensionality of the concept of quality of life, which involves, and must consider, both objective/qualitative and subjective/quantitative variables [4,15].

Nowadays, analysing quality of life with economic indicators such as GDP and GDP per capita are no longer sufficient [28–31]. An increase in income and personal wellbeing or perceived quality of life are not necessarily connected. Easterlin [32] demonstrated that the relation between income and wellbeing is absent from a certain level of income, because this relation is related to the concept of adaptation: people conform to their personal conditions and then an increase in income and the chance to buy more assets does not necessarily entail an increase in wellbeing. In addition, countries with a high level of income and GDP could support a higher level of health, education, and welfare services than countries in which the GDP is lower; but comparing, for example, Western economies, in which the standard of living is fair, it becomes clear that GDP is not adequate to measure communities' wellbeing. To this end, the GDP has risen in Western economies in recent decades but a similar increase in terms of wellbeing has not been observed [33]. Another example is the fact that some oil-rich Middle Eastern countries have some of the highest levels of per capita income but there are relevant discrepancies with Western countries about human rights, education, and other dimensions regarding the quality of life [7]. In addition, Easerling [33] underlines that there are not long-lasting relations between income increase and happiness level.

GDP, as a measure of wellbeing, presents numerous advantages, such as its relatively easy calculation and the possibility to make comparisons, but it is only one component of the wide concept of quality of life

GDP does not take into account the natural, social, and human aspects of the community, which are relevant when talking about the quality of life of individuals [15]. Musikanski et al. [30], recalling other authors, point out some interesting facts. GDP application is an incomplete strategy because of the disconnection between the GDP and personal income and the latter and happiness. A country's GDP may rise, and, at the same time, the personal income of most people may reduce [34]. This also does not consider that personal income is only one aspect of one's own happiness and personal wellbeing [35]. Happiness depends on other factors, such as personal relationships, political and economic freedom, health, education, and income allocation [36]. These items differently matter from one person to another and one culture to another. For instance, many countries have started to measure happiness in addition or in place of GDP [30]. Another point of interest is that GDP does not distinguish the positive or negative effects of economic activities on wellbeing [36].

Some attempts to consider other variables in addition to GDP are, for example, the Physical Quality of Life Index (PQLI), suggested by Morris [37], or the Human Development

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Index (HDI), developed by the United Nations Development Programme (UNDP) in 1990 [26].

The PQLI considers life expectancy, child death rate, and literacy rate, together with GDP; it was one of the early composite indexes proposed. Composite indexes, however, have some problems in terms of how the variables are brought together and how the indicators are standardised with different measurement units, and problems with the quality of the available information and the choice of indicators [13,27].

The HDI instead measures three elements: life expectancy at birth, literacy (that is, the years of study and the ability of adults to read and write), and per capita income. The index should be considered satisfactory in terms of trends and for the comparison of different countries, concerning the three domains that do not cover the whole life experience and cannot be subjectively measured (only objectively) [26]. Some criticism has underlined that a ranking based on the HDI is not significantly different from one based on GDP (making the former redundant) and that it does not pay attention to environmental awareness. In addition, the HDI is considered incomplete because income, life expectancy, and education are only two dimensions of development, that is, social and economic [3]. Due to this criticism, over time, some measurement methods have been modified [27].

These dimensions do not consider the individual perception of wellbeing, which is relevant in the identification of human satisfaction; for this reason, indexes have started to consider subjective variables related to family, society, health, culture, and environment [13].

In 1998, the Centre for the Study of Living Standards developed the Index of Economic Well-Being—IEWB—based on a paper by Lars Osberg [38–40], who focused on four topics of economic wellbeing: effective per capita consumption flows; net societal accumulation of stocks of productive resources; income distribution; economic security from job loss and unemployment, illness, family breakup, and poverty in old age. The IEWB verifies the trends of economic wellbeing and related topics, allowing public stakeholders to identify actual problems and needed interventions. Even if the IEWB could be measured not only at the international or national levels but also at a local one, it is a complex index to be defined and should be improved at the local level thanks to more adequate variables for quality of life, adding, for example, items about the environment. It is also useful to underline that the IEWB covers only economic themes, as the name suggests itself.

Lastly, subjective measures needed to study quality of life are absent in the IEWB [26]. It is difficult to identify an adequate measure of quality of life, which is a multidimensional concept, including a variety of quantitative and qualitative domains [4].

The Eurobarometer was created by European Commission in the 1970s, which was employed by European institutions, to regularly supervise public opinion among Europeans about matters related to the Union but also political and social topics and others that specifically interested European institutions. The Eurobarometer supplies a limited indicator of quality of life because the survey focuses on political matters [26].

At the beginning of the 70s, the OECD proposed a list of social interests that were common to most countries, including quali-quantitative variables. Among the aims of the OECD project were the definition of the topics related to wellbeing and the allocation of wellbeing among countries. In 2011, the OECD launched the Better Life Initiative, focused on the development of statistics about people's topics of interest that, taken together, convey the quality of life. Starting from the Better Live Initiative, the OECD developed the Regional Well-Being project, a set of indicators divided into eleven dimensions that could be a common reference at the local level to develop wellbeing measures of interest for local stakeholders [11]. Quality of life has become increasingly relevant for the European Union [16], especially concerning its sustainable development principles. Some initiatives recently developed by European countries were pointed out in the "Final report of the expert group on quality-of-life indicators. 2017 edition" published by [41]. In many cases, they recalled the so-called Stiglitz Report [42]—used as a basis for talking about progress and quality of life and the importance of wellbeing in public policies. These initiatives enlighten common elements in terms of domains to consider in the evaluation of quality

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of life. Among the other initiatives, the final report cited the BES—Benessere Equo e Sostenibile (literally "Fair and Sustainable Wellbeing")—project developed by the Italian national statistic board ISTAT.

It is clear from the presented review that indicators and frameworks for quality of life are available at the national level, sometimes at the regional level, and rarely at a provincial level or related to the metropolis. It is difficult to identify surveys and frameworks about quality of life at a local level, even considering single topics such as sustainability [43,44].

The complexity of finding measures to study quality of life at local levels has risen, as found in the literature review. It is necessary to relate the quality of life to territorial development, especially in rural areas. In fact, for example, in the EU, they represent more than 91% of the territory, and 56% of the entire population are no longer characterised by a productive system based exclusively on agriculture, nor are they necessarily affected by socio-economic problems [45,46]. However, many rural areas have long faced significant challenges: depopulation, lower average per capita income generally in rural regions compared to that of cities; the consistency of local skills is significantly more limited, and the tertiary sector is less developed; the smartening of rural areas; and sustainable economic development [47–50]. Several rural areas have implemented territorial innovation policies favouring the development of multifunctionality in various economic sectors such as tourism [51,52].

Small and medium-sized tourism businesses are the dominant actors in the sector in rural destinations and contribute to the socio-cultural benefits of territorial sustainability through local resources: procurement, education, resource synergies, inclusion, and quality of life [53–55].

An interesting aspect to underline is the relationship between quality of life and public policy making. This is a social process that involves communication among people involved in a variety of organizations. These interactions are conditioned by other stakeholders, which reflects wider social characteristics that model the environment [56]. It is necessary to take note of the vitality of the research in this field of study, which converges about domains that involve numerous stakeholders including enterprises, residents, and tourists [57–60]. Starting from these quali-quantitave studies, indicators could be developed, and information could be made available that is useful for public policymakers to develop territorial policies, for example in the tourism field [61].

Culora and Van Stolk [62] report that there is little evidence that local policymakers adopt indicators about quality of life at the local level. However, the authors claimed a crucial impact of quality of life indicators on local policies, if the whole process is planned in a proper way. They recalled three examples to support this thesis, three cases in which public local stakeholders effectively integrated indicators of wellbeing in the adoption of local public policies: the Bristol Quality of Life Survey; the RAND Local Well-Being Index; and the Seattle Happiness Survey. The implementation of a set of indicators at a local level in Spain was useful to public stakeholders to understand the topics related to quality of life that needed more attention [63]. Concerning the tourism industry, the implementation and supervision of a proper set of indicators is useful to local policymakers to prevent negative externalities that could arise from tourist flows (such as over-tourism) or to define the interventions related to sustainable tourism [64].

3. Materials and Methods

Quality of life is a multidimensional concept, as stated before. For this reason, it is necessary to consider significant indicators at the local level for each dimension. Several indicators related to the tourism field and sustainable tourism development at local destinations have been added to the list. In this sense, the quality of life of residents and the perceived quality of life of tourists are intended to be an attractive and promotional factor for the destination itself. The Brand Country Index [65], for instance, points out that a country is favourably perceived if its quality of life is good and, in the tourism field; the same index underlines a relation between quality of life and the desire to visit the country.

Considering indicators about tourism in the analysis of the quality of life of a destination is also important because tourism could influence the standards of living of residents, both in a positive (e.g., the creation of jobs) and a negative way (e.g., traffic congestion) [17]. Understanding the relationship between residents and tourists, from the perspective of residents, is a key element for the sustainable development of destinations; it is then crucial to increase the quality of life of residents to make the destination more sustainable and competitive [1].

The literature review led to the identification of frameworks and studies about quality of life mostly related to the national and regional levels; it is rare to find quality of life studies about rural areas, with or without a tourism integration, and about rural tourist destinations. With "frameworks", available sources are indicated—such as documents, indexes, websites, reports, etc.—that consider the domains and indicators of quality of life and sustainable tourism; some frameworks present, as a result, a synthetic index and/or a ranking based on the results obtained by the application of indicator models related to single frameworks.

The literature review did not highlight a single efficient model that is recognised by research and entities. The proposed set of indicators about quality of life, related to rural tourist destinations, was organised starting from the international and national frameworks and indexes of governmental and non-governmental bodies; the set was then integrated to consider sustainable tourism matters and available and measurable information at the local levels.

The proposed set of indicators was elaborated with regard to Alagna Valsesia, a rural mountain municipality involved in a process of enhancement and development of sustainable tourism. The research project called "Alagna Walser Green Paradise" was structured in four pillars [66], underlined at the European level [67], to evaluate how to make tourist destinations smarter:

- Cultural heritage and creativity: employ your own territorial, social, and human capital to develop the tourism industry for the prosperity of the area and a better quality of life for the inhabitants;
- Environmental sustainability: offer a rich and customised experience through the enhancement of local assets, respecting and involving the local community;
- Digitalization: develop innovative, smart, and inclusive solutions in the field of tourism;
- Accessibility: facilitate access to tourist services and products thanks to new technologies, interconnection, and interoperability of services.

Quality of life, the subject of the research project and of the present paper, is strictly related to the four pillars.

3.1. Research Steps

Due to the multidimensional topic of quality of life, the methodology of the research referred to the mixed-method research approach [68–73]. It is useful to structure a variety of activities and surveys. To define the proposal of a set of indicators, researchers have to employ quantitative and qualitative methods of analysis, comparing and linking results of different sources and different methodologies adopted. This research was conducted in 2023.

The research phases (Figure 1) are organised as follows:

- 1. Literature review to contextualise the topic of quality of life and, in particular, to identify international and national frameworks related to quality of life (as a whole or about single aspects), on one hand, and the tourism field (and attention paid to sustainable tourism) on the other hand;
- 2. Desk analysis about the availability of information at a local level, with reference to the dimensions of quality of life in a tourist destination;
- 3. Proposition of a set of indicators that should be significant and measurable at the local level, potentially able to supply local stakeholders with useful information for their

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- decisional processes to improve the state of the art; discussion with local stakeholders about the proposal;
- 4. Surveys and interviews with relevant local stakeholders to test the possibility of gathering information related to the proposed set of indicators (qualitative ones in particular); in a preliminary test phase, there were involved:
 - Tourists, to investigate their perception of the destination and the perceived quality of life; a pilot questionnaire was created which was submitted to a panel of experts, and subsequently, the definitive questionnaire was advertised on the online channels of the municipality, tourist office, local museum, and accommodation services and administered in 2021 with the CAWI methodology; 346 tourists participated in the research. The questionnaire consisted of 16 questions. One set of questions investigates the motivations for travelling, the period of stay, and the types of accommodation required, and mobility. One question investigated perceptions on different aspects such as quality of life, air quality, water quality, safety in the area, measuring it with a Linkert scale. Finally, a set of questions for the socio-demographic profiling of tourists (age, gender, education, occupation, and income);
 - Residents, to investigate their perception of the general quality of life and the relationship between the local community and tourism; a pilot questionnaire was created which was submitted to a panel of experts, and subsequently, the definitive questionnaire was advertised on the social channels of the municipality of Alagna Valsesia and administered in 2022 with the CAWI methodology; only 75 residents (about 10% of the adult population) participated in the research. The questionnaire consisted of 27 questions. The first part investigated several thematic areas relating to quality of life, education and training, work, landscape and cultural heritage, environment, quality of services, and the relationship between the local community and tourism. Finally, a set of questions for the socio-demographic profiling of tourists (age, gender, education, occupation and income) was included;
 - Accommodation services, restaurants, and cafés: A pilot questionnaire was created and tested by a panel of experts; finally, the definitive questionnaire was created, and FREAR was administered in 2021 with the CAWI methodology [74,75]; 50 companies participated in the survey, equally divided between hotels and bars/restaurants, representing almost all the companies in the area. The high participation in the survey was due to the action carried out by the mayor of Alagna Valsesia who played the role of research facilitator. The questionnaire consisted of three sections. The first part asked for information on the types of accommodation and services offered. Subsequently, sets of questions were focused on restaurant, bar, and accommodation activities. Another part was devoted to customer characteristics. Finally, the relationship of the accommodation facilities with the environment was investigated with regard to energy savings, the approval of agro-food raw materials for a catering business and a plastic-free project.

Some scholars adopted a similar frameworks [9,43,76,77].

The activities carried out by the research group are in line with the key steps to develop a set of indicators proposed by UNWTO [78]. The following compliance is underlined:

- Research and organisational phase: Destination definition, referring to participatory
 methods involving stakeholders such as residents, tourists, identification of tourism
 assets and risks, long-term view of the destination;
- Set of indicator development phases: Definition of the priority themes, identification of the desired indicators, sources inventory, selection process;
- Implementation phase: Evaluation of the feasibility, data collection, and analysis.

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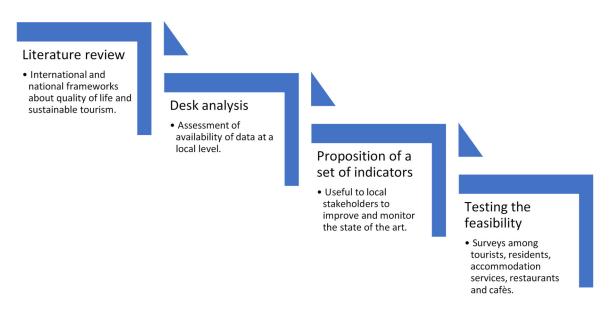


Figure 1. Description of research steps (source: authors' elaboration).

The objective of the research phases, at this point, is to present a model that allows us to select available indicators to measure the quality of life. The next stage will be to define the intensity of each indicator about quality of life, to obtain a standardization useful to make comparisons among different municipalities.

3.2. Study Area

The research project was developed with reference to Alagna Valsesia (Figure 2), a mountain municipality of 729 inhabitants (residents on 1 January 2022) located in the north of Piemonte—northwestern Italy—in the province of Vercelli, along the Alps, in the context of the Natural Park of Alta Valsesia—the highest one in Europe—on the slopes of Monte Rosa, the second highest peak of the Alps.



Figure 2. The spotting of Alagna Valsesia (Source: authors' elaboration).

Alagna Valsesia is well known for its natural and cultural heritage. The main attractiveness of the area is Mount Rosa, characterised by its high peaks of over 4500 m. UNESCO accepted the Valsesia Geopark in 2013, created for the conservation and protection of the fauna and flora species in this area. The vegetation is typical of the alpine and subalpine areas with a local forest of beech and silver fir and the fauna is typical of the alpine valleys, with, i.e., chamois, roe deer, marmots. This ecosystem is also protected by the "High Valsesia Natural Park" which extends between 900 and 4559 m a.s.l., making it the highest in Europe. It has different types of environments such as glaciers, moraines, grasslands, and shrub areas.

One of the main peculiarities of Alagna Valsesia is the typical culture of Walser. Its origin is Germanic and the first migrations to the slopes of the Monte Rosa massif [66] date back to the 13th century. This population developed an extraordinary ability to adapt to mountain life. Alagna Valsesia is one of the few communities left in the Alps that seeks to preserve and pass this culture to future generations [79–81]. Walser's culture is attested by the architecture, the clothing, the language, and the cuisine [82,83].

The main economic asset of the area is tourism. Alagna Valsesia, thanks to the wild territory and the typical local culture, attracts a lot of tourists all year round, especially foreigners.

The territory of Piedmont can be divided into three concentric bands, with the predominant and outermost being the Alpine and Apennine region (comprising 43% of the regional territory). Within it lies a hilly area (31% of the territory), which encloses a plain area (26% of the territory).

4. Results

International and national frameworks were analysed in terms of domains (also called topics or dimensions) and indicators taken into consideration. Overall, 19 frameworks (Table 1) were analysed with more than 1700 indicators/variables, based on the available information and the structure of each framework. As it can be seen, they are related to the quality of life and several frameworks are also about tourism development and sustainable tourism, in line with the aims of the proposed set of indicators.

Table 1. Overview of the international and national frameworks analysed.

Framework Application Level Entity of Reference

	Framework	Application Level	Entity of Reference	Notes
1	Quality of Life	European	Eurostat	
2	Well-being framework and Better Life Initiative	European	OECD	
3	Regional Well-Being	European	OECD	It derives from the Better Life Initiative experience
4	World Happiness Report	International	Group of independent experts	Based on Gallup's World Poll
5	Benessere Equo e Sostenibile in Italia—BES (literally "Fair and Sustainable Wellbeing in Italy")	National–Regional	Italian statistic board Istat	
6	Bes dei territori (literally "Fair and Sustainable Wellbeing of districts")	Provincial	Italian statistic board Istat	Based on the BES experience
7	Indagine sulla Qualità della Vita (literally "Survey on Quality of Life")	National–Provincial County Seats	Italian daily newspaper "Il Sole 24 Ore"	
8	Future Brand Country Index	International	FutureBrand and QRi Consulting	

Table 1. Cont.

	Framework	Application Level	Entity of Reference	Notes
9	Network Readiness Index	International	Founders and co-editors Soumitra Dutta and Bruno Lanvin, under the patronage of Portulans Institute	Project started by WEF. Focus on technology
10	Global Competitiveness Report	International	WEF	
11	Digital Economy and Society Index—DESI	International	European Commission	Focus on digitalisation
12	Inclusive Internet Index	International	The Economist–Intelligence Unit	Commissioned by Facebook. Focus on the relevance of Internet for all
13	Indicators of Sustainable Development for Tourism Destinations	Not defined	UNWTO	Set of indicators of interest for the tourism sector
14	European Tourism Indicators System—ETIS	Not defined	European Commission	Set of indicators of interest for the tourism sector
15	Indicators for Measuring Competitiveness in Tourism	Not defined	OECD	Set of indicators of interest for the tourism sector
16	Travel & Tourism Competitive Index—TTCI	International	WEF	
17	European Capitals of Smart Tourism	European cities	European Commission	Initiative that recognises important goals for smart tourism in European cities
18	Happiness Index	Individual	Happiness Alliance	Questionnaire available online for an auto-evaluation of the level of happiness
19	Bandiere Arancioni (literally "Orange Flags")	National–Municipality	Italian non-profit association "Touring Club Italiano"	Environment and tourism quality brand for municipalities with less than 15,000 inhabitants

Quality of life is considered under different aspects and with the employment of quantitative and qualitative indicators in the following frameworks: Quality of Life by Eurostat, Well-being framework and Regional Well-being by OECD, World Happiness Report [84], Benessere Equo e Sostenibile–BES (literally "Fair and Sustainable Wellbeing)—in Italy and BES dei territori (literally "Fair and Sustainable Wellbeing of districts") by Italian statistic board ISTAT [85], and Indagine sulla Qualità della Vita (literally "Survey on Quality of Life") by the Italian economic–financial daily newspaper [86]. Wellbeing is a focus in the Future Brand Country Index [54] and the Network Readiness Index [87]; in the 2020 Future Brand edition, quality of life was the top driver in terms of trust in the brand of the country, underlying that quality of life is a multidimensional concept. The Global Competitiveness Report by [88] does not focus on quality of life but includes some topics that are present in some of the mentioned frameworks. The Digital and Economic Society Index [89] by the European Commission and the Inclusive Internet Index by The Economist [90] were analysed because of the increasing importance of technology and the internet, which have repercussions on quality of life [91–94].

Some of the analysed frameworks are about tourism, with particular attention to sustainable tourism, i.e., the Guidebook of Indicators of Sustainable Development for Tourism Destinations by UNWTO [78]; the European Tourism Indicators System—ETIS—by the European Commission [95]; the Indicators for Measuring Competitiveness in Tourism by OECD [96]; and the Travel & Tourism Competitiveness Index (TTCI) by WEF [88].

In addition, the initiative "European Capitals of Smart Tourism" by the European Commission [97] was analysed. Moreover, the Happiness Index by Happiness Alliance [15] represents an attempt to join with a qualitative questionnaire on both the quality of life and tourism matters.

The last examined framework was the Bandiere Arancioni (literally "Orange Flags") by the Italian non-profit association Touring Club Italiano (TCI) [98]. This is an environment and tourism quality brand for municipalities with less than 15,000 inhabitants, located in the backcountry, that benefit from relevant historical, cultural, and environmental heritage, able to offer a high-quality welcome to tourists. TCI has developed the so-called Modello di Analisi Territoriale—M.A.T. (literally "Territorial Analysis Model")—that allows for an evaluation of the quality of the area and of tourist services in the municipality, with the elaboration of development plans with attention to sustainable tourism.

The analysis of the main frameworks about quality of life led to the identification of the main domains or dimensions to consider (Figure 3). These cover the variables linked to quality of life, even at an urban and local level. The comparison with the literature review had positive confirmation [6,9,13,16,27,29,31,99] and eight dimensions of interest can be identified:

- 1. Employment and economic wellbeing;
- 2. Health and physical security;
- 3. Education and knowledge;
- 4. Subjective wellbeing (which is also general satisfaction with their own life), leisure and social relations;
- 5. Government and politics;
- 6. Landscape and cultural heritage;
- 7. Environment;
- Services.

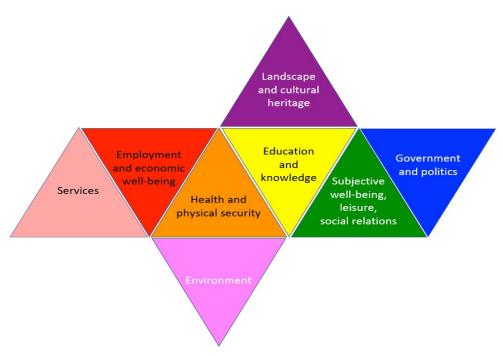


Figure 3. The identification of the eight dimensions of interest (source: authors' own).

These dimensions are in line with the pillars of the research project AWGP, from which the set of indicators was developed, i.e., cultural heritage, environment, digitalisation, accessibility, quality of life.

The literature review did not identify any quality of life framework applicable at the local level, therefore international and national frameworks were analysed [6,9,16,28,43,44,76,100].

A preliminary list of potentially useful indicators for local stakeholders was made considering three of the above-mentioned frameworks, that is, Italian ISTAT "BES" and "BES dei territori" and the Guidebook of Indicators of Sustainable Development for Tourism Destinations by UNWTO.

Many scholars have cited the BES framework [6,16,21,28,41,44,76]. BES by ISTAT [84] is made up of dimensions developed by the "Comitato di indirizzo sulla misura del progresso della società italiana" (literally Committee of direction about the measure of the Italian society progress), formed by a representation of trade unions, trade associations, not-forprofit associations, environmentalist associations, and female associations. The technical and statistical component of BES, that is, the selection of useful indicators to measure wellbeing, was developed by a dedicated scientific commission. The BES project covers a regional level, and it was the object of methodological and analytical innovation over the course of time, with revisions to the set of indicators and the study of the distribution among social groups. In 2016, there was an integration with the Sustainable Development Goals (SDGs) and part of the key indicators was shared among two frameworks. To analyse the distribution of wellbeing among the areas of the country, ISTAT created a sub-regional set of indicators in coherence with the national BES framework. The statistical measures selected by ISTAT maintain a high level of quality and follow the evolution of the BES framework, making use of the available information. As part of the national BES, ISTAT has started the project "BES dei territori" (literally BES of districts) [84] that involves several Italian provinces, with many indicators to evaluate wellbeing at the provincial level.

The Guidebook of Indicators of Sustainable Development for Tourism Destinations by UNWTO [94], instead, is the result of an intensive study on international initiatives that involves 62 experts from more than 20 countries. The result is a framework that describes more than 40 relevant themes in terms of sustainability: from natural resource management such as rubbish, water, and energy to the development of a system to supervise tourists' and residents' satisfaction, from the safeguarding of cultural heritage to seasonality, from economic losses to climate change. The framework consists of basic indicators and others applicable to the tourism sector. The aim of the guide is to help tourist managers (in the private and public sectors), their partners, and other stakeholders to make better decisions about tourism. This is in line with the set of indicators proposed in this paper, that is intended be a useful tool for public (in particular) stakeholders, with attention to rural tourist destinations.

The indicators selected in this first phase have been compared with the other considered frameworks and compliance has been found, with reference both to quality of life and sustainable tourism development.

The preliminary set of indicators has then been integrated, and some changes have been made due to

- The debate with local stakeholders to identify the main interesting topics;
- The particular context of study, that is, a rural tourist destination;
- The opportunity to measure the indicators at a local level and the need to obtain useful information for local stakeholders and decision makers [101–103].

About this third point, the UNWTO Guide considered as relevant an indicator if and only it is able to address in an efficient way the main topics of the tourist destination planning and management processes and if the indicators are measurable and analysable. The lack of data at local levels is stated also by Calcagnini and Perugini [28].

The problem of finding a relevant set of indicators about different dimensions, at the local level, is underlined by Frare et al. [43], Viccaro et al. [6], and Nissi and Sarra [16]. To make these integrations and variations in the proposed set of indicators, the research team has always tried to provide positive feedback on the analysed frameworks.

The research activities led to the proposal of a set of 85 indicators related to the eight dimensions considered as relevant for quality of life (Table 2; Figure 4). The detailed list of indicators is reported in Table S1 (please see Supplementary Materials). Even indicators referring to tourism matters are attributed to the eight dimensions, considering redundant

and insignificant the creation of a ninth dimension; in addition, tourism topics and tourism effects cross (directly or indirectly, positively or negatively) the dimensions of quality of life. As can be seen, the multidimensional concept of quality of life and wellbeing is forced to consider different issues in the set of indicators.

Table 2. Number of indicators	per topic, pe	er dimension.	per availability, and	d per availability rate.

Indicators	Category	No.
Per topic	Quality of life	
("Quality of life" indicator is attributed to both topics)	Tourism	22
Per dimension	Environment	29
(some indicators are included in more than one dimension)	Services	28
	Subjective wellbeing, leisure and social relations	18
	Employment and economic wellbeing	15
	Landscape and cultural heritage	14
	Health and physical security	6
	Government and politics	3
	Education and knowledge	3
Per availability	Indirect	
·	Direct	34
Per rate of availability	Medium rate	30
(only indirect indicators)	Low rate	21

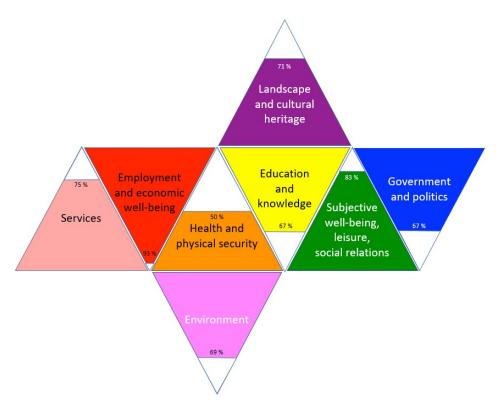


Figure 4. Percentage of available indicators for each dimension (source: authors' own).

Data are indirectly and directly available. Indirect or secondary data refers to information that can be accessed on platforms provided by public entities, such as Eurostat, ISTAT, regions, municipalities, environmental agencies, and tourist boards. Direct or primary data can be information obtained through field surveys, for example, from residents, tourists, and business operators. Additionally, for each indicator, the availability has been identified as "directly available", "medium-level availability" (information accessible through the

distribution of questionnaires), and "low-level availability" (data that should be available but are not published by public or private entities).

The administration of questionnaires to local public and private stakeholders, residents, and tourists is relevant to evaluate some individual and subjective topics [103–108].

The proposed set of indicators includes both quantitative/objective information and qualitative/subjective information [6], in line with the definition of quality of life.

5. Discussion

The difficulties in finding in the literature a valid framework to analyse the quality of life in a rural tourist destination, paying attention to sustainable tourism development, entail the need to define an ad hoc set of indicators that could be used by local stakeholders to obtain potential useful information. The proposed set of indicators was developed within the scope of research performed in Alagna Valsesia and derived from the analysis of 19 frameworks, indexes, and documents published by international and national entities. This is a guarantee of a rigorous methodology of analysis and a rigorous methodology of identification and choice of the indicators included in each framework. Most of the mentioned bodies allow one to access free and detailed information about their frameworks and, for this reason, it was possible to apply an in-depth analysis of the variables considered in each framework.

In this sense, it was necessary to take into consideration these international and national experiences even if there is, in the literature, criticism about both composed indexes and subjective approaches. Composite indexes present problems in terms of the aggregation rules, standardisation of the indicators with different units of measurement, quality of the available information, and choice of indicators for each dimension [13,27]. Subjective approaches, instead, present a complexity in the elements that should be taken into consideration to define the satisfaction of people in the different aspects of life [27].

The proposed model is made up of 85 indicators that are useful to gather quantitative and qualitative information of potential interest for local stakeholders. It covers the dimensions generally considered when studying quality of life. The stated indicators are measurable at a local level, involving different sources of information (public and private stakeholders, entities, residents, tourists); the resulting summary allows for local decision makers to have an overview of the state of the art, evaluate trends, highlight and monitor critical situations, identify how to intervene on the basis of available resources. Each decision maker could then decide a desirable goal for the indicators considered most important for the community, without focusing on the comparison of one area to another [63]. If it is true that a unique index facilitates a comparison among different areas, the aim of the research is to supply decision makers with a list of elements (indicators) to pay attention to and monitor in order to increase quality of life and sustainable tourism development. In this sense, a single decision maker could organise the set based on their own investigation needs, deciding, for instance, to select only some indicators (the ones considered most important) or divide primary and secondary indicators in accordance with special needs, priorities, resources, and time availability.

In addition, the synthetic index could provide useful information to local stakeholders, in particular quality of life policy makers [63].

A set of indicators whose aim is to obtain a synthetic index also presents the problem that it would not be possible for the decision maker to modify it on the basis of their needs, because a variation in one of the indicators involves an alteration in the result of the set and in the weight of each dimension, a problem underlined by Casini et al. [13], when the choice of dimensions was made by revision, the involvement of local stakeholders and experts, or deductive processes. This aspect is validated by the discussion with local stakeholders, whose need is not to summarise the information in a unique index but to have a useful set to study quality of life and tourism enhancement topics, focusing then on each result.

Costanza et al. [103] underline the importance for local administrations to better understand quality of life implications. Layard [34] concludes that sustainable improvement

in quality of life in the long term should be a primary goal for public entities. It is necessary to say that at a local level, quality of life is often only one of many factors to consider when making decisions in a context of limited available resources [62]. European policies can have significant impacts on improving quality of life, especially in marginal areas [46].

A proposal of a set of indicators that covers different dimensions makes it possible for local decision makers to choose and concentrate on most interesting and relevant matters for the quality of life of residents; in this case, the available (and limited) resources could be concentrated to pursue those actions that maximise quality of life [62,103], thanks to the results of the implementation of the framework. The application of measures and frameworks about quality of life, in fact, should be strictly related to understanding interesting aspects for users [62].

The improvement of quality of life for residents is a crucial topic for local administrators [104–106] and it cannot be independent from sustainable development policies carried out by local decision makers.

Quality of life, especially in Anglo-Saxon countries, has been related to sustainable development for years. From this perspective, improvement in quality of life for present generations should not threaten the quality of life of future generations [62,107].

For this reason, the implementation of a set of indicators related to local sustainability, with the aim to improve quality of life, is a useful tool for local decision makers to understand the state of the art and identify where to act [108]. European policies are aimed at supporting local development [63,109]. Ferrara et al. [10] underline that European rural development policies influence local community wellbeing; they demonstrate a linear relation between total money transfer and wellbeing, with differences due to the period considered and the level of development of the area.

Public administrations should be interested in monitoring and acting to improve residents' quality of life for two main reasons: the positive social and economic consequences and because a higher level of quality of life could implicate a better level of political participation, which is a better quality of public institutions [98]. In addition, a higher quality of life in terms of subjective topics is linked to positive objective consequences, such as health, income, and productivity [110].

The proposed set of indicators also considers some data about the perceived quality of life that could be only gathered by the involvement of residents and tourists, as it is a framework dedicated to tourist destinations. Residents play a key role in studies about quality of life; considering a tourist destination, it is important to examine the relation between the local community and tourism [1,4,5,29,94,111,112]. The direct involvement of residents and tourists, thanks to questionnaires, is useful for pointing out critical factors that need attention. The residents' quality of life survey could ask about general resident satisfaction and solicit specific responses on satisfaction with particular topics of interest [29]. Since the framework is made for tourist destinations, residents' wellbeing and the quality of tourist hospitality depends even on the relation between the local community and tourism: this is the reason why some questions have analysed this item and, at the same time, it has been asked if respondents take direct advantage (or not) of tourism activities.

The involvement of tourists is in line with the aim of studying the perceived quality of life during their stays at the destination, that in particular, in investing in tourism and sustainable tourism development. From this perspective, the perceived quality of life of tourists could be considered an aspect of attraction for the destination, as underlined in the Future Brand Country Index [65]. In fact, the index stated that a country is perceived in a favourable way when it presents a good level of quality of life, and the same index, talking about tourism, considered the desire to visit a country. In the 2020 edition of the index, it is interesting to underline that quality of life was the top driver in terms of trust in the country. Moreover, paying attention to tourists' quality of life could point out useful topics for stakeholders, about, for example, the satisfaction of tourists and problems that should be solved.

6. Conclusions

The definition of a reliable tool to evaluate quality of life and its subsequent implementation allows us to keep track of improvement with time, identifying where it is necessary to act and where progress has been made. Measuring quality of life also allows us to evaluate the repercussion of politics and public programmes carried out, helping us to identify the needed changes and/or integrations to make implemented territorial systems more vivid.

In such a context, the presented research is performed to obtain a structural evaluation tool for the quality of life at rural levels, that could be used in the studied area (i.e., Alagna Valsesia) and, in general, that could be implemented even in other rural communities. To do this, the definition and involvement of local community/communities is crucial, as occurred in Alagna Valsesia, to stimulate the sense of belonging and control of destiny and of local resources. A structural evaluation of the quality of life is needed to support the activities of decision makers and local governmental bodies. If objective, detailed, and comparable data are available, it could contribute to the improvement of basic services (such as water, energy, ICT infrastructures, roads, transport facilities), to support primary sector activities (e.g., farming firms) and environmental preservation (fauna, flora, water bodies), to enhance education and, in general, the development of the community (tourism, local handicrafts, other economic activities).

The presented model is therefore the first step towards an application tool for measuring quality of life that meets the different needs of local stakeholders, in order to create a dashboard to help public stakeholders in decision-making processes, for example. Future research will be oriented towards standardising the implementation of the proposed set of indicators in other rural communities, with the aim of obtaining a standardisation of the selected indicators and thus a modular synthetic index that allows for easier application in different rural areas.

Supplementary Materials: The following supporting information can be downloaded at https://www.mdpi.com/article/10.3390/su16051804/s1, Table S1: The proposed set of indicators, divided into the eight selected dimensions, with information about data availability.

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