WELL-BEING AND QUALITY OF LIFE: DIFFERENT PERSPECTIVES IN RURAL AND PERI-URBAN AREAS IN THE NORTH OF PORTUGAL

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Abstract

Quality of life is a multidimensional concept that has been gaining prominence in works intending to study the level of development of a territory, mainly based on secondary data treated statistically. Other approaches have emerged based on primary data, which is the case of this work.

This study captures the perception of residents in Vila Marim, a small parish in Portugal, about their quality of life by a survey technique based on the WHOQOL-BREF instrument.

The results obtained point to different weightings in the several domains of quality of life. In particular, we would like to point out that peri-urban areas have better indexes in the domains of general quality of life, social relations and the physical domain, while rural areas have better ones in the psychological and environment domains.

Additionally, it was added one open question to the original survey, which made possible to understand that issues related to income and physical security are common to all age groups. Health concerns increase with age as well as governance and basic rights are issues with improved importance.

These results show different sensitivities about how quality of life is experienced and, therefore, the importance of the methodology and territorial scale used.

This work was done in partnership with local government agents, and its results may serve as a basis for a more direct and immediate action, providing greater effectiveness and efficiency of policies to support the quality of life of residents in Vila Marim, Portugal and in other rural and peri-urban areas.

Keywords: Quality of Life, Low density territories, WHOQOL-BREF methodology, Regional sustainable development, Cohesion policies

JEL classification: I31, O18, R10

Acknowledgments: This publication is supported with European funds under the Erasmus+ project LEARNVIL- Learning Villages: Citizenship, Entrepreneurship, Heritage & Environmental Education for Rural Sustainable Development (2020-1-ES01-KA227-ADU-096064). The authors also would also like to thanks to their research centre CETRAD for its general support as full researchers (FCT project UIDB/04011/2020) and CQVR (FCT project UIDB, RG-Norte-616-1509).

1. Introduction

Quality of life is a recurring theme with the most diverse outings, often interrelated with development, and emerging unavoidably, as one of the main objectives to be achieved by our modern sustainable, inclusive, and intelligent society. The concept of quality of life or well-being has evolved from a perspective dominated by the economic perspective to a multidimensional approach, where the purely economic dimension is joined by other dimensions such as living conditions, demography, health, education, physical security, leisure and social interactions, governance, and environment.

This multidimensionality, evident in the reports produced by international institutions such as the Organization for Economic and Social Cooperation (OECD) and the European Union (EU), as well as national ones like Statistics Portugal (INE), and in various academic works focusing on different geographies, is supported by a diversified set of methods to measure the level of quality of life, from the construction of numerous indices, to the use of multivariate statistical analysis. These works and indicators are based on secondary data, obtained from official statistical data sources, are easy to obtain and have are reliable. However, they have the major disadvantage of not always having a reduced geographic dimension or not including all the aspects that modern theories consider to be important. In fact, especially in Portugal, official secondary data are very difficult to find at a more micro scale, namely at the level of subareas of municipalities or parishes, and do not include the subjective side of the quality of life.

Thus, works have emerged intending to overcome these limitations, which can be used on a regional or local geographic scale and have the advantage of capturing the so-called subjective dimension of quality of life, or the way by which quality of life is perceived, through primary data. This article follows precisely this perspective: it studies the perception of the quality of life of residents in a small Portuguese parish, in the north of Portugal, using surveys.

It was carried out within the framework of the LEARNVIL - Learning Villages research project, developed by several European partners (for more information, visit: https://www.learnville.eu/). In Portugal there are two partners: UTAD and Ruralidade Verde, both collaborating with the Parish Council of Vila Marim.

This study was developed around four axes: (1) the framework, which includes the conceptual review and the territorial context, (2) the presentation of the objectives and methodology, (3) the obtained results, and finally, (4) their discussion and conclusion.

2. Conceptual and territorial framework

2.1. Theoretical and conceptual review

In a modern society, there is a growing interest in the so-called quality of life of people, going beyond issues merely related to income, physical and/or psychological well-being (Almeida et al., 2020; Dionisio et al., 2023; Haraldstad et al., 2019; Marquez, 2018). The quality of life definition is a very broad concept and has changed over the years; however, some indicators such as psychological well-being, physical well-being, social well-being, financial and material well-being remain with research lacks (Marquez, 2018).

In Lawton's classic text published in 1991 “A multidimensional view of quality of life in frail elders”, the author defined quality of life as the multidimensional and multifactorial evaluation, that includes socio-normative and intrapersonal criteria of the personal/environmental system in the present, past or future. This author overlapped and interrelated psychological well-being, perceived quality of life, behavioral competence, and environmental conditions (Lawton, 1991).

Three years later the World Health Organization (WHO) defined that quality of life can be considered as the individual perception of its position in life.

This is a broad and subjective concept that includes, in a complex way, a person's physical health, psychological state, level of independence, social relationships, personal beliefs and convictions and their relationship with important aspects of the environment (Santos and Souza, 2015). The concept remains and today it is possible to read on the WHO website the brief definition of quality of life as “an individual's perception of their position in life in the

context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns"[1].

The European Union and the OECD have also addressed this issue. As Dionisio et al. (2023) point out, since the 2000s, European organizations have published reports, such as the European Quality of Life Surveys (EQLS), by the European Foundation for the Improvement of Living and Working Conditions. One of the most recently published research says that survey presents data on issues that general statistics often not cover, such as the perceived quality of society, trust in institutions and social tensions. It looks at a range of issues, such as housing, deprivation, family, health and well-being. It also looks at subjective topics, such as people's levels of happiness, how satisfied they are with their lives and their participation in society (Eurofound, 2017).

The OECD also adopted this multidimensionality of the concept, and currently provides two indicators: the "How's Life? Measuring Well-being" (OECD 2021a), and the "Better Life Index" (OECD, 2021b).

At national level a large majority of countries also publish indicators of this type through their official statistical services. In the case of Portugal, the Index of Well-being is published by Statistics Portugal (INE).

Many other authors and institutions have addressed this issue of quality of life, using similar multidimensional concepts with several methods, namely multivariate statistical analysis and different territorial scales. As a recent example, we can find more information in the research of Calcagnini and Perugini (2019), Dardha and Rogge (2020), Ehrlich et al., (2021); Sjöberg (2022), and Yamasaki and Yamada (2022).

In Portugal, several research results have been published (Amado et al., 2019; Diniz and Sequeira, 2008; Dionísio and Rego, 2020; Dionisio et al., 2023; Pinto and Guerreiro, 2010; Rego et al., 2021). A recent study on well-being coordinated by Mauritti (2022) is based on the identification of 11 dimensions: 1-Subjective Well-Being; 2-Civic Participation; 3-Safety; 4-Social Contacts; 5-Environmental Quality; 6-Decent work; 7-Digital Society; 8-Education and Culture; 9-Health; 10-Housing; and 11-Work/Family Balance, and estimates the asymmetries of Portuguese municipalities using a mixed methodology, predominantly quantitative. The results of this study point to the safety and environmental quality of the place where one lives, and especially to the balance between family and work time, the access to housing and education, health and transport services, along with involvement in communities, as the factors that most influence people's perception and experience of well-being, suffering large variations between territories (Mauritti, 2022).

Parallel to these works essentially based on statistical data and multivariable statistical analysis, appeared another type of research, that wants to capture the subjective component of quality of life, obtained through personal individual surveys such as the WHO recommends.

Indeed, from the 2000s onwards, the WHO presents an instrument to measure quality of life, called WHOQOL-BREF, which constitutes "a quality of life assessment developed by the WHOQOL Group, with fifteen international field centers simultaneously, trying to develop a quality of life assessment instrument that would be applicable cross-culturally" in several countries[2].

One year after the presentation of the WHOQOL-BREF, around 150 papers were published, being particularly important the work done by Saxena et al. (2001). It reports the importance of the WHOQOL-BREF items in a pilot trial with 4804 respondents from 14 countries, discussing that quality of life is experienced either individually or with others, bringing people together for a purpose, in order to improve life or at least parts of it.

In 2002 it was possible to verify that this questionnaire could be adapted to the region and place where it will be applied, as observed by Yao et al. (2002) in Taiwan, applying 1068 short interviews in 17 hospitals, in which they validated and verified the reliability of a brief form, as an alternative to the long form of the questionnaire.

[1] *https://www.who.int/, accessed 10 August 22.*
[2] *https://www.who.int/tools/whoqol. accessed 11 August 22.*

The WHOQOL-BREF was tested again and the results showed that it is a solid and cross-culturally valid assessment of the quality of life in its four domains: physical, psychological, social and environmental (Skevington et al., 2004).

The questionnaire is widely used to measure and verify the quality of life of people in different areas, communities and populations ranging from hospital studies (Hsiung et al. 2005; Skevington and Mccrate 2012) to validation studies, learning how to use the questionnaire (Hawthorne et al., 2006; Jaracz et al., 2006; Nedjat et al., 2008), to evaluate the quality of life of the elderly (Chachamovich et al., 2007; Lucas-Carrasco et al., 2011), and to do statistical calculations with its results (Pedroso et al., 2010).

In the last five years, the most relevant studies have addressed questions about quality of life of hospital patients (Almeida-Brasil et al., 2017; Lin et al., 2019), who need medical treatments and procedures (Abbasi-Ghahramanloo et al., 2020), systematic reviews and meta-analyses (Lin and Yao, 2022; Skevington and Epton, 2018), the general population, youth, adults and elderly (Gobbens and Remmen, 2019; Goes et al., 2021; Purba et al., 2018; Singh et al., 2022), the effects of lockdown and Corona virus (Chawla et al., 2020), psychometrics and data validation (Kalfoss et al., 2021).

The WHOQOL-BREF is a self-response questionnaire, which can be self-administered, assisted by the interviewer or administered by the interviewer, with some criteria to avoid error and external influence on the answers. The answers must be given in private and must not be discussed during the application of the questionnaire; the questions must be read in full and classified according to the choice of the respondent. It is also necessary to emphasize that the extra explanations of the interviewer/in the questionnaire must be clear, and to assure that questions are not repeated (Canavarro et al., 2007).

In the case of this study, the questionnaire was made for and used in Vila Marim, a Portuguese parish, with the characteristics presented below.

2.2. Territorial Context

The parish of Vila Marim is located in the district of Vila Real in the north of Portugal. In order to contextualize this research territorially we present some of the main characteristics of this territory. Table 1 presents a comparative summary between Portugal and the European Union. In Table 2, the municipality of Vila Real (which includes the parish of Vila Marim) is compared with the average of Portugal's national values.

Table 1. Portugal in Europe

Indicators	Portugal	EU 27
Aging Index - 2020	165,1	137,2
Population at risk of poverty rate (%), after social transfers - (%) - 2021	18,4	16,8
Early school leavers rate (%) - 2021	5,9	9,7
Unemployment rate (%) - 2021	6, 6	7
GDP per capita (PPS) 2021	23.900	32.300

Source: Francisco Manuel dos Santos Foundation, 2022.

Table 1 shows some key points about the specific context of Portugal. The Portuguese population presents a high risk of poverty regardless of having an unemployment rate and an early school leavers rate lower than the average. The country presents a very low GDP per capita, far below the European Union average. In addition to the significant differences in Portuguese development and well-being compared to its European partners, one of the main problems Portugal is facing, is the development difference between its regions.

Table 2 presents some data from Vila Real, the municipality where Vila Marim is located. As shown, Vila Real has a higher aging rate and a lower purchasing power.

Table 2. Vila Real in Portugal

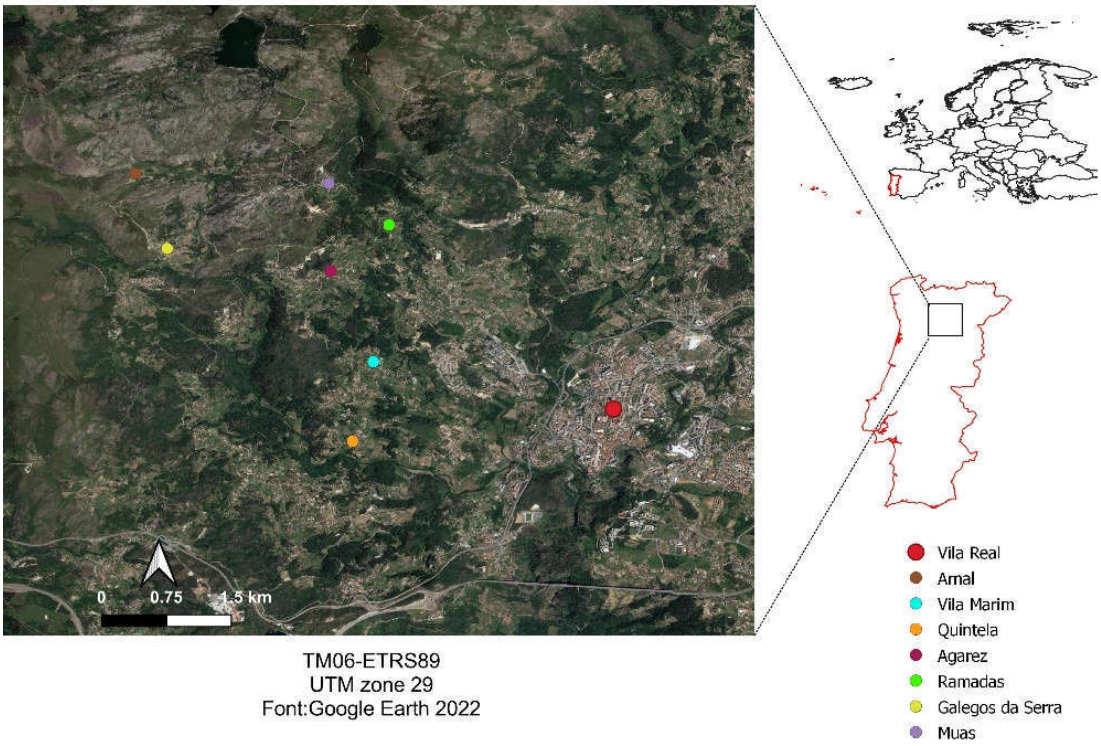
Indicators	Portugal	Vila Real
Aging Index-2021	182,7	195,9
Purchasing power per capita 2019	100	98,3

Source: Francisco Manuel dos Santos Foundation, 2022.

According to recent statistics, Vila Marim has a decreasing resident population (only 1500 residents according to census 2021), most of them being aged and having a low level of education (Statistics Portugal, 2021).

The population of Vila Marim is split into 7 villages or places (Figure 1), from which 5 are more rural places (Arnal, Agarez, Ramadas, Galegos da Serra and Muas), and 2 are considered peri-urban (Vila Marim and Quintela), as they are in a transitional position between strictly rural and urban areas (in this case the city of Vila Real).

Fig. 1. Location of the places/villages studied, belonging to the parish of Vila Marim, in the north of Portugal



Source: Google Earth 2022.

3. Objectives, material and methods

3.1. Objectives

The main goal of this work is to understand how the concept of quality of life is perceived by the local residents in a parish in the north of Portugal (Vila Marim) located in the surroundings of Vila Real, a small-town capital of district.

The secondary objectives are to determine the main domains and terms that are crucial for the quality of life in the residents' understanding, and to verify whether there are differences between the results of places closer to the city and those located further inland.

We hope that these results can contribute to a better definition of public policies and instruments of action, namely at parish level.

3.2. Sample Definition and Questionnaire

The sample definition of the residents to be surveyed took the number of residents in each place (7 strata, corresponding to each of the villages or places) into account; the composition of this population by sex (2 strata); and by age group (3 strata: groups 0-24 years old, 25-64 years old; and 65 years old or more). The method of proportional stratified sampling was used, according to the methodological terms indicated by Freixo (2018) and Hill and Hill (2009). These last ones show the advantage of this method tending to be more efficient with a lower probability of error associated.

As for the size of the sample, we pointed to 10% of the universe, which represents around 150 questionnaires. As previously mentioned, we used the questionnaire based on the WHOQOL-BREF and adapted for Portugal by Canavarro et al. (2007).

This questionnaire allows to record general and socio-demographic data based on the variables location of the parish, age, date of birth, gender, education, activity or profession, marital status, and general questions about health status, as well as the way questionnaire administration.

The core of the WHOQOL-BREF survey consists of 26 questions (Canavarro et al., 2007; Marques, 2018; Skevington et al., 2004) divided into five domains according to Canavarro et al. (2007), namely:

a) General domain (questions 1 and 2 about quality of life);
b) Physical domain (questions 3. Pain and discomfort, 4. Dependence on medication or treatments, 10. Energy and fatigue, 15. Mobility, 16. Sleep and rest, 17. Activities of daily living, and 18. Work capacity);
c) Psychological domain (questions 5. Positive feelings, 6. Spirituality/religion/personal beliefs, 7. Thinking, learning, memory and concentration, 11. Body image and appearance, 19. Satisfied with yourself and 26. Negative feelings, such as sadness, despair, anxiety and depression);
d) Social relationships domain (questions 20. Personal relationships, 21. Sexual activity and 22. Social support);
e) Environmental domain (questions 8. Physical safety and protection, 9. Home environment, 12. Financial resources, 13. Opportunities to acquire new information and skills, 14. Participation in, and recreation/leisure opportunities, 23. Physical environment, 24. Health and social care: availability and quality and 25. Transportation).

All responses have been measured with a five-point scale, articulated by positive and negative dimensions, being the higher the score the better the quality of life (Marques, 2018).

In addition to the questions from the WHOQOL-BREF questionnaire adapted to Portugal, an initial open-ended question was asked: What are the determining factors for your quality of life? This question was deliberately posted in the beginning, before answering the basic questionnaire, to avoid influencing the possible answers with the knowledge of the different dimensions to be analyzed.

The purpose of this question was to try to find out what the respondents, *a priori*, understood as important for their quality of life, allowing a subsequent comparison with the variables traditionally used by international organizations in multidimensional research with secondary data, such as those mentioned above.

3.3. Procedures and data analysis

After the stratification of the sample, the method to select other residents to inquire was the random method, and the survey was made available on a platform and a call for participation through the Parish Council, the representative entity of the local government, was made.

Due to the relatively low adherence of the inhabitants (online we received only around 40% of the intended inquiries), a group of UTAD students helped to fill the questionnaires out in loco. In this second phase, sampling was carried out by convenience, considering the intended stratification.

The inquiry work took place between April and July 2022, with the voluntary and anonymous participation of 107 participants residing in the parish of Vila Marim, young, adult and elderly of both sexes and aged between 14 and 89 years.

The surveys were completed by the participants and either assisted by the interviewer or through an interview individually and anonymously to avoid third-party influences on the answers and ensure anonymity.

Once the surveys were obtained, they were treated considering the following steps:

- Description of sociodemographic data by means of the abundance and percentage of variables, and considering the rural or peri-urban characteristics of the villages or

places: as mentioned before, Agarez, Arnal, Galegos da Serra, Muas and Ramadas are rural, whereas Vila Marim and Quintela are peri-urban.

- Calculation of the Quality of Life Index (QLI) according to the method proposed by Canavarro et al. (2007) for the WHOQOL-BREF SPSS, based on the formula:

$$IQV = \frac{SD - PMin}{PMax - PMin} \times 100 \quad (1)$$

where:
IQV is a value between 0 and 100,
SD is the sum of the points made by the participant,
PMin is the sum of the minimum possible points in the survey and
PMax is the sum of the maximum possible points in the survey.

- Estimation of the indexes by domain for each group (rural villages and peri-urban villages) and overall sample population.
- Use of the Mann-Whitney test with a significance value of 5% to check whether there was a difference between the domains in rural villages and peri-urban villages.
- Calculation of mean values, standard deviation, minimum and maximum values and mode assigned to each question in the questionnaire and grouping into peri-urban and rural villages.
- Grouping of all the determining factors for quality of life, based on the answers to the open question and for the three defined age groups. All the answers were classified according to the indicators of the nine dimensions (health; education; productive or main activity; material living conditions; natural and living environment; governance and basic rights; economic and physical safety; social relations and leisure; feelings).

All statistical analyzes were performed using the program R Core Team, 2022, with the main results being presented in the next point.

4. Results

A total of 107 residents of the parish of Vila Marim responded to the survey, 55 coming from the two peri-urban sites (the villages of Vila Marim and Quintela), representing 51.4% of the respondents and 52 from the rural villages (Agarez, Arnal, Galegos da Serra, Muas, Ramadas), corresponding to 48.6% of the total.

The number of filled out survey is very close to the numbers fixed at the time of defining the sample, in terms of residents by place, sex and age group.

Table 3 presents the socio-demographic characterization of the 107 participants. With regard to age, the dominant group, 56%, included the respondents aged between 25 and 64 years, followed by a group of 31% with people of 65 or more years and only 13% of the sample was aged under 24. This situation reflects the increased aging of the country which is aggravated in the villages of the interior of northern Portugal.

Among the participants we recorded 64% as women, 35% as men and only one person answered other.

In terms of education, there were still 3% without being able to read or write and in the dominant group almost 30% had only the old basic schooling of 4 years. However, around 22% have university degrees.

Most respondents are employed (51%) or retired (33%). The majority declared as marital status married (58%), followed by single (22%) and widowed (10%).

In terms of health only 40% reported themselves as sick, and within the patient group 86% had medical follow-ups. We would like to add that approximately 34% of the sick participants are monitored by doctors through external consultations.

Table 3. Sociodemographic characterization of the respondents' sample

Variables	Peri-urban areas		Rural areas		Total surveys	
	Number	%	Number	%	Number	%
Age (years)						
0 -24	4	7.3%	10	19.2%	14	13.1%
25 – 64	32	58.2%	28	53.8%	60	56.1%
65 or more	19	34.5%	14	26.9%	33	30.8%
Sex						
Male	15	27.3%	22	42.3%	37	34.6%
Female	39	70.9%	30	57.7%	69	64.5%
Other	1	1.8%	0	0.0%	1	0.9%
Education						
Can't read or write	1	1.8%	2	3.8%	3	2.8%
Up to 4 years of education	18	32.7%	14	26.9%	32	29.9%
5 to 6 years of education	7	12.7%	3	5.8%	10	9.3%
7 to 9 years of education	3	5.5%	11	21.2%	14	13.1%
10 to 12 years of education	10	18.2%	14	26.9%	24	22.4%
University Studies	12	21.8%	6	11.5%	18	16.8%
Postgraduate training	4	7.3%	2	3.8%	6	5.6%
Activity						
Unemployed	1	1.8%	4	7.7%	5	4.7%
Employee	26	47.3%	29	55.8%	55	51.4%
Student	3	5.5%	4	7.7%	7	6.5%
Other	4	7.3%	1	1.9%	5	4.7%
Retired	21	38.2%	14	26.9%	35	32.7%
Marital status						
Married	35	63.6%	28	53.8%	63	58.9%
Divorced	1	1.8%	2	3.8%	3	2.8%
Single	11	20.0%	13	25.0%	24	22.4%
Living together	3	5.5%	3	5.8%	6	5.6%
Widower	5	9.1%	6	11.5%	11	10.3%
Sick						
No	35	63.6%	29	55.8%	64	59.8%
Yes	20	36.4%	23	44.2%	43	40.2%
Treatment						
Outpatient Consultation	17	85.0%	20	87.0%	37	86.0%
Admission to hospital	1	5.0%	1	4.3%	2	4.7%
No treatment	2	10.0%	2	8.7%	4	9.3%

Source: author's elaboration

There are differences of socio-demographic characterization between the more rural and peri-urban villages. The most significant differences were found in the women over 65 years old in the peri-urban areas. They also have a much higher education degree, are less unemployed, are more prone to be married and are healthier.

After the socio-economic characterisation of the population surveyed, we focused on the results obtained through the WHOQOL-BREF surveys. These surveys allowed us to obtain a general overall quality of life index of the villagers for each of the five domains (Table 4).

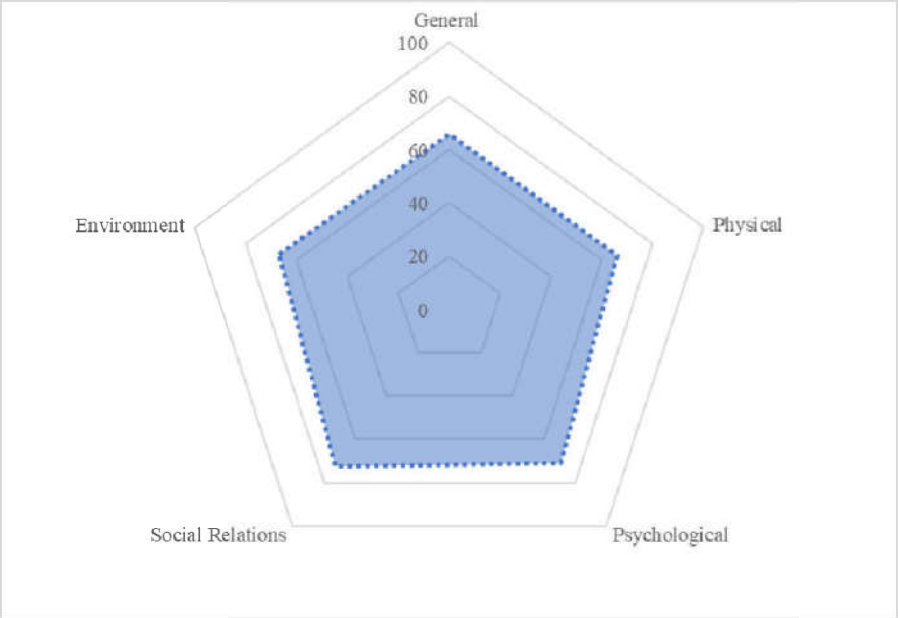
Table 4. Indexes of Quality of life of the population surveyed

Domains	**Index Value**
General	65.9
Physical	65.8
Psychological	71.1
Social Relations	72.8
Environmental	67.1
Global Index	68.6

Source: author's elaboration

The overall quality of life index was calculated for the total population surveyed and is 68.6 for the 107 individuals interviewed (Table 4), being higher for the domain of social relations, followed by the psychological domain, and lower for the general (perception of their quality of life as a whole), physical and environmental domains. These, overall, similar results are shown in Figure 2.

Fig. 2. Radar chart of the domains of Table 4



Source: author's elaboration

In order to better understand the differences between the responses obtained in more rural or peri-urban villages, Table 5 was elaborated.

Table 5. Quality of life Indexes for the population surveyed in peri-urban and rural villages

Domains	Peri-urban villages (index value)	Rural Villages (index value)
General	67.3	64.4
Physical	66.9	64.6
Psychological	69.2	72.9
Social Relations	73.2	72.3
Environmental	64.1	68.8
Global Index	**68.2**	**68.6**

Source: author's elaboration

According to Table 5, the values obtained when we split the interviewees by peri-urban villages or rural villages, just as it has been the case for the total population, both the psychological and social relations domains appear at the top and are above the global averages of 68.2 and 68.6 respectively.

In the rural areas the physical domain represents lower values, but the values for the environmental and psychological domains are higher than those of peri-urban areas. In terms of perception of quality of life in general, it is clear that the value for peri-urban is higher than the one of rural areas.

Concerning the answers obtained by type of region (Table 6), we can highlight the following aspects, in each of the domains:

- General: peri-urban villages have a higher quality of life indicator than rural ones, as a result of higher scores obtained in either of the questions (assessment of quality of life and satisfaction with it).
- Physical: It is the domain where the values of quality of life are the lowest of all domains for population of both areas. For this, contributed questions 3 and 4 (with inverted score, that is, the higher the value, the more difficult the situation) and for rural populations the issue of physical pain and the need for medical care to support daily living becomes more evident.
- Psychological: In the psychological domain most of the questions got a better score by the residents in the rural areas, namely in liking in their life, and feeling that life makes sense and the ability to concentrate.
- Social: Peri-urban villages presented a higher quality of life index value in the personal relationships' domain, since questions 20 and 21 presented respectively an average of 4.25 and 3.60 (Table 6).

- Environmental: In this domain the rural villages stand out positively from the peri-urban. They have a feeling of security and of living in a healthy environment, and they are also more satisfied with their income; the satisfaction is only lower with regard to the access to health services. Respondents from peri-urban villages are more unsatisfied with their security, environmental conditions, access to information, leisure opportunities and income; nevertheless, they are relatively more satisfied with the conditions of the place where they live.

Table 6. Questions and descriptive results obtained through the surveys, by type of area

Questions/Parameters	Peri-urban Areas					Rural Areas				
	Mean	S Dev	Min.	Max.	Mode	Mean	S Dev	Min.	Max.	Mode
General Domain										
1 (G1) How do you assess your quality of life?	3.76	0.81	2	5	4	3.73	0.71	2	5	4
2 (G4) How are you satisfied with your health?	3.62	0.98	1	5	4	3.42	0.95	1	5	3
Physical Domain										
3 (F1.4) To what extent do your (physical) pains prevent you from doing what you need to do?*	2.35	1.24	1	5	1	2.71	1.25	1	5	3
4 (F11.3) To what extent do you need medical care to make your daily life?*	1.98	1.04	1	4	1	2.23	1.03	1	4	2
10 (F2.1) Do you have enough energy for your daily life?	3.64	1.08	1	5	3	3.58	1.13	1	5	3
15 (F9.1) How would you assess your mobility (ability to move and move by yourself?	3.87	1.24	1	5	5	3.81	1.02	1	5	4
16 (F3.3) How satisfied are you with your sleep?	3.15	1.15	1	5	4	3.10	1.15	1	5	4
17 (F10.3) To what extent are you satisfied with your ability to perform your day-to-day activities?	3.64	1.03	1	5	4	3.79	0.86	2	5	4
18 (F12.4) How are you satisfied (a) with your working capacity?	3.78	0.97	1	5	4	3.75	0.94	1	5	4
Psychological Domain										
5 (F4.1) How much do you like life?	4.15	0.84	2	5	5	4.31	0.97	1	5	5
6 (F24.2) To what extent do you feel that your life has meaning?	4.18	0.90	2	5	5	4.27	0.94	1	5	5
7 (F5.3) How can you concentrate?	3.35	0.94	2	5	4	3.60	1	1	5	4
11(F7.1) Are you able to accept your physical appearance?	4.04	0.89	2	5	5	4.12	1.03	1	5	5
19 (F6.3) To what extent are you satisfied with yourself?	4.04	0.95	1	5	5	4.02	0.89	2	5	4
26 (F8.1) How often do you have negative feelings, such as sadness, despair, anxiety or depression?*	2.69	0.97	1	5	3	2.69	0.97	1	5	3
Social Relations Domain										
20 (F13.3) To what extent are you satisfied with your personal relationships?	4.25	0.96	1	5	5	4.17	0.83	2	5	5
21 (F15.3) How are you satisfied with your sex life?	3.60	1.11	1	5	3	3.54	0.72	2	5	3
22 (F14.4) How are you satisfied with the support you receive from your friends?	3.93	1.04	1	5	4	3.96	0.98	1	5	4
Environment Domain										
8 (F16.1) To what extent do you feel safe in your day-to-day life?	3.89	1.12	1	5	5	4.077	1.07	1	5	5
9 (F22.1) How is your physical environment healthy?	3.82	0.81	2	5	4	4.288	0.97	1	5	5
12 (F18.1) Do you have enough money to meet your needs?	3.13	1.08	1	5	3	3.442	1.06	1	5	3
13 (F20.1) To what extent do you have easy access to the information needed to organize your daily life?	3.69	1.06	2	5	4	4.038	1.06	1	5	4
14 (F21.1) How do you have the opportunity to perform leisure activities?	3.13	1.27	1	5	3	3.25	1.33	1	5	4

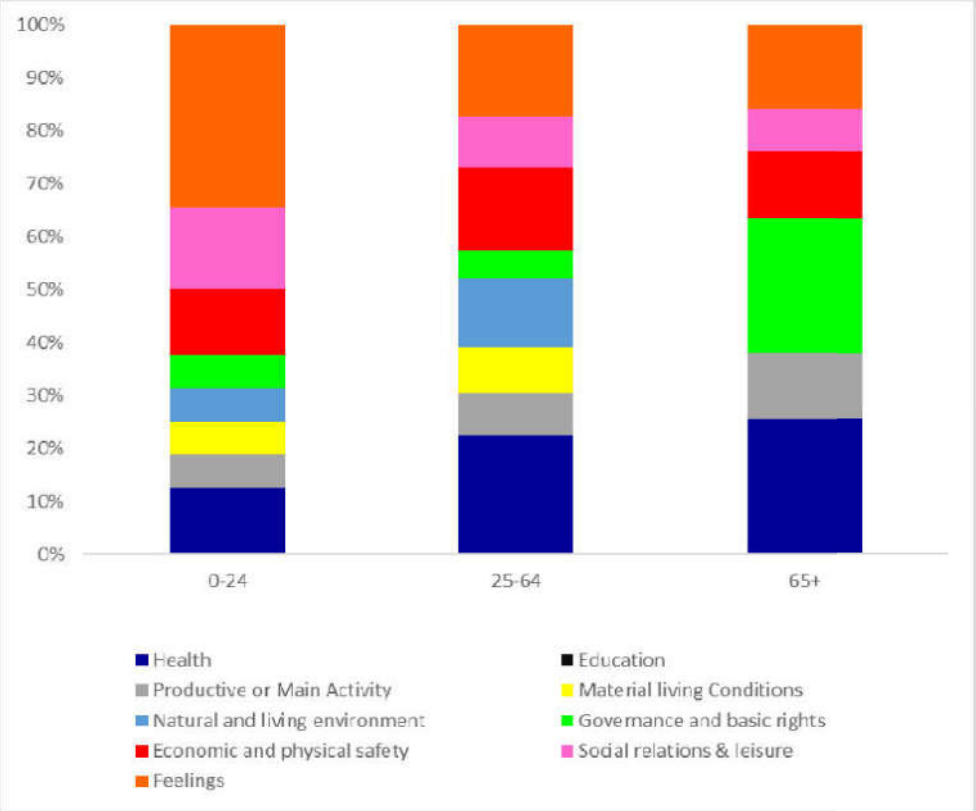
Questions/Parameters	Peri-urban Areas					Rural Areas				
	Mean	S Dev	Min.	Max.	Mode	Mean	S Dev	Min.	Max.	Mode
23 (F17.3) How are you satisfied with the conditions of the place where you live?	4.24	1.01	1	5	5	4.096	1.13	1	5	5
24 (F19.3) How are you satisfied with your access to health services?	3.53	1.17	1	5	4	3.442	1.22	1	5	3
25 (F23.3) How are you satisfied with the transport you use?	3.09	1.34	1	5	4	3.385	1.2	1	5	4

Note: *represents that the question has an inverted formula: these questions were formulated negatively, being 'lower' the better value of the parameter (questions 3, 4 and 26).

Source: author's elaboration, adapted from Canavarro (2007)

Finally, regarding the open question added to the WHOQOL BREF baseline survey, that will allow us to verify the extent to which the interviewees reported, *a priori,* dimensions or variables normally considered in studies with secondary data and multivariate statistics, we proceeded with the treatment of the surveys as described in the methodology and synthesized in Figure 3.

Fig. 3. Factors determining quality of life, based on the answers of the open question, by size and age group



Source: author's elaboration

As observed in Figure 3 the most representative values for the age group up to 24 years old fit the domains feelings, social relations and leisure and health. The majority of respondents in this group answered "quiet", "peace" and "freedom" in the feeling's domain. In the social relations and leisure domain, the main answers were "social life", "conviviality", "friends" and "leisure". In the health domain, the main answer was "being healthy".

In the age group of 25 to 64 years, the most representative domains were health, and feelings, economic and physical safety. In the health domain, the main answer was "being healthy". For the feelings domain the main answers were "tranquillity", "peace", "quiet" and "happiness". In the economic and physical safety domain, the main answers were "money" and "safety".

The most representative domains in the age group aged 65 years or older were health, governance and basic rights and feelings. In the governance and basic rights domain, the

main answers were "improvements in access", "public transport", "sleep", "water" and "light". In the health domain, the main responses were "health" and "no diseases". For the domain feelings "peace", "personal satisfaction" and "stress free" were the most common responses.

Analysing the less mentioned dimensions, the ones that recorded the lowest number of responses from the groups up to 24 years were productive or main activity, material living conditions, natural and living environment, governance and basic rights. For the group of 25 to 64 years governance and basic rights were the most common responses and, for the group of 65 years and older, social relations and leisure were the most referred.

None of the three groups answered anything related to the education domain, and the material domains living conditions and natural and living environment did not obtain any response from the group aged 65 years or older.

These results will be discussed in the next point.

5. Discussion and final remarks

The results previously presented were obtained applying the WHOQUOL BREF questionnaire to 107 residents in the parish of Vila Marim, located in the north of Portugal. This parish contains seven villages, being five considered as rural and two as peri-urban. The surveys were made according to a sample previously stratified by village, age group and gender.

Regarding the socio-economic characterization of the sample, more than 87% of the respondents belonged to the group of 25 years or more, which corresponds to the reality of aging observed in Portugal and in particular in the northern interior. In addition to the low birth rate, many of the few young people born in the parish seek better living conditions in urban centres, in search of new opportunities (Vieira et al., 2015).

Female respondents prevailed in both rural and peri-urban areas. The majority of respondents have basic and middle schooling, a minority (mainly in peri-urban areas) having university and/or post-graduates degrees. Most of them are retired, or work in nearby cities and most respondents are married.

The overall quality of life index for the total of respondents was 68.6, which can be considered good. And considering the various domains, the ones that obtained the best scores were in the domains social relations (72.8), psychological (71.1) and environmental (67.1). These values may be explained by the fact that living in a small village in a predominantly rural area makes it easier to meet neighbours, friends and family. This finding is in line with what Fleck et al. (2003) highlighted: that the factors that allow a good quality of life are mainly in the domains of health, psychological, social relations, environment, spirituality and personal beliefs.

Comparing rural areas with peri-urban areas, we conclude that the overall quality of life index is slightly higher for rural parishes, with 68.6 and 68.2, respectively. The more influencing domains in rural villages were psychological (72.9), social relations (72.3) and environmental (68.8). In peri-urban parishes, the domains that most influenced were social (73.2), psychological (69.2) and quality of life in general (67.3) domains.

Bibliography reports that quality of life is related to a heterogeneity of issues, showing a multidimensional construction based on social and normative criteria of the individuals about present, past and future relationships and their environment (Fleck et al., 2003; Lawton, 1983).

The main differences between the respondents of the two types of villages are in the physical domain, where the situation is much better in the peri-urban areas (66.9 vs 64.6), and in the environmental field, where the situation is reversed, the rural areas presenting the best values (68.8 against 64.1). In fact, the peri-urban areas are closer to the cities and have less contact with wild nature and natural landscapes, while the environment is one of the most important domains that influences people's quality of life (Silva et al., 2022).

Analysing briefly some of the questions and corresponding answers by domain and starting with the general, the peri-urban scored better values. This may be related to the proximity of the village to hospitals, medical health services in cities, family and friends

living in cities, social relationships, social roles, activities and having good neighbours to relate to. Indeed, all are important characteristics for having a good quality of life (Leung et al., 2004; Puts et al., 2007).

With regard to the physical domain, when we compare the answers between villages we notice that respondents from peri-urban villages have more energy for daily life, better mobility and are more satisfied with their night rest, while rural villages' respondents complain that their physical pain scares them in day-to-day activities, and that they need medical care to be able to perform their activities, although they are still satisfied with their ability to develop their daily activities. The best positioning of peri-urban residents may be related to the access to medical care, which those in the rural villages say they have less access to.

For the psychological domain, respondents from rural areas like their lifestyle more, believing that their lives have more meaning, they have a better concentration capacity and accept their physical appearance better. In peri-urban villages respondents are more satisfied with themselves. Unfortunately, in both types of neighbourhood, they do sense negative feelings, such as sadness, despair, anxiety or depression.

When we look at the responses of the social relations domain, respondents in peri-urban areas are more satisfied with their personal and sexual relationships, while respondents from rural areas feel they have more support, especially from their friends and acquaintances.

Surprisingly, in the domain of the environment, in addition to the very positive answers, one would expect from rural residents, who feel safer and appreciate that they are living within a healthier environment, the rural villagers also respond that they have enough money to meet their needs; that they can access the information required to organize their life; that they are satisfied with the available leisure opportunities, and the existing transport offer. It remains to be answered in future work whether their income is an effectively higher or if it is only the result of a better management of their income, less expectations and a lower degree of consumerism.

In peri-urban areas respondents are more satisfied with their life and with the health services they need.

Examining the open question added to the WHOQOL-BREF basic survey, young people up to 24 years of age place more value on the mastery of feelings, considering that, for them, a good quality of life means to have tranquillity, peace and happiness. Among adults (25-65 years), we observed a better balance between all the domains, while for older adults (over 65 years of age) the most important for a good quality of life is to be healthy, and to have good public policies and basic rights.

Concluding, there are differences in the factors that affect the perception of quality of life among the residents in the rural and peri-urban villages of Vila Marim. According to our results, the peri-urban areas of Vila Marim have better indexes in the domains of general quality of life, social relations and the physical domain, while its rural areas have better indexes in the psychological and environmental areas. These findings are according to the literature.

In addition, the open question allowed us to understand that as age increases, health gains importance, as well as governance and basic rights, while feelings and material living conditions lose importance. The importance of social relations remains as well, just as of physical and monetary security.

The answers to the open question have also allowed us to understand that all the dimensions identified and used in research with secondary data have the same weight or importance and that, decidedly, the place and the territory where you live matter.

That is, going down to a more micro scale, that of the parish, and trying to capture the perception of quality of life through an inquiry, is a very valid initiative, while of immediate utility. In fact, the analysis of the answers of this survey can be an important tool for the design of the most effective policies and practices to be developed by the intervening actors in this territory.

Finally, we present a suggestion to enrich this research area by suggesting that this type of work should be done in the learning villages of other country partners of the LEARNVIL

project (or in other small villages), to enable the establishment of comparisons and to open paths to improve our actual knowledge and future studies.

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