












## Article

# Quality of Life and Attachments to Rural Settlements: The Basis for Regeneration and Socio-Economic Sustainability

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**Abstract:** Balanced territorial development and improving living conditions have become the focus of rural development policies. As the number of young people moving to cities or other countries is increasing, rural settlements face serious demographic imbalances and aging societies. Quality of life and place attachment are both key variables in enhancing the social and economic capacities of rural and undeveloped communities and reducing youth out-migration. However, this topic remains underexplored, especially among younger generations, who are critical for further socio-economic sustainability. Thus, the main goal of this study was to explore young residents' perceptions about quality of life, level of attachment to their rural homes, and their interrelationship. This study was conducted among 299 participants in rural areas of Serbia and Croatia. The results identified two quality of life factors: (1) satisfaction with the quality of infrastructure and (2) satisfaction with culture and education. Three attachment factors were extracted, among which place identity was the strongest. Additionally, the influence of quality of life and socio-demographic characteristics on place attachment was confirmed. These results provide new insights that could be very useful in creating strategies and initiatives for rural planning and strengthening rural areas' social, economic, and environmental sustainability.

**Keywords:** quality of life; young residents; rural development; rural empowerment; socio-economic sustainability; depopulation; place attachment; rural areas; settlement organization



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## 1. Introduction

Over the last decades, the world has faced many challenges that have shaped society's social, environmental, and economic capacities. The population's demographic composition, as well as the standard and quality of life, have been profoundly impacted by modernization, industrialization, globalization, and fast-paced living [1]. Major development concerns have particularly affected rural areas. According to Eurostat [2], between 2015 and 2020, the population of predominantly rural regions across the EU declined by an average of 0.1% per year, while the population of predominantly urban regions grew by an average of 0.4% per year. During the same period, the number of older people grew rapidly, with the number of people aged 65 and over increasing by 1.6% per year in predominantly urban and middle-income regions. The most significant growth among this age group was

in predominantly rural regions, at 1.8% per year. In contrast, the working-age population (20–64 years) in predominantly rural regions in the EU declined by an average of 0.6% per year, and the population of younger people (under 20) decreased by 0.7% each year. In predominantly urban regions, these groups experienced growth, with increases of 0.1% and 0.3% per year, respectively, indicating migration from rural to urban areas within the EU for education and employment opportunities. In recent years (2015–2020), the population grew at a relatively fast rate (at least 0.3% per year) in 108 predominantly rural regions of the EU. In contrast, the population declined at a relatively rapid rate (more than  $-0.3\%$  per year) in the 155 predominantly rural regions of the EU.

In the period 2015–2020, the rural areas of the EU with the highest rates of depopulation were in Croatia. The findings of this study deal precisely with the attitudes of young people regarding the perception of their position in rural areas in Croatia and in the neighboring country of Serbia, where, according to the latest census [3], dramatic demographic changes are taking place.

Improving the socio-economic sustainability of settlements has become one of the priority missions of rural planning strategies. The European Rural Development Policy identifies depopulation, aging societies, and quality of life among the crucial socio-economic issues in rural areas [4]. One of the most pressing challenges that has emerged is the increasing depopulation [5,6]. Imbalanced regional and economic development; insufficient infrastructure, public services, and facilities; and increased unemployment have led to great migrations. This demographic shift has strongly affected European countries, resulting in a significant decline in the rural population each year. As the number of young people moving to cities or other countries is increasing, rural areas face serious demographic imbalances [7]. This is a priority problem because the consequences are much deeper for the survival of human settlements than a mere decline in the number of inhabitants. Population loss and aging highly reflect on the quality of public services and facilities and infrastructure, the lack of workforce, and the weakening of economic opportunities, affecting sustainable development and prosperity in rural areas [8,9].

Balanced territorial development and the improvement of living conditions have become the focus of rural development policies [10]. Rural settlements are areas where rural residents live, providing them with the necessary conditions and capacities for carrying out activities and achieving their goals [11]. The structure and arrangement of settlements highly determine the wellbeing of their residents [12,13]. However, in order to be able to enhance quality of life, it is necessary to identify weak points and features that are not satisfactory. Đerčan et al. [14] argued that understanding the needs and attitudes of residents towards the life experience in rural settlements is of great importance for harmonious development. Young generations are crucial for the survival and future of rurality, as they represent the basis of sustainable demographic development and the backbone of a society's biological, economic, and social growth. It is particularly important to provide young residents with satisfactory living conditions, as they will therefore have a greater interest in staying and engaging in activities that will contribute to the further development of rural settlements. Furthermore, it is widely believed that an improvement in quality of life will decrease emigration and promote rural towns as desirable places to live and do business [15]. The first stage towards achieving this is to reveal their attitudes and level of satisfaction with various elements of rural settlements that characterize the standard of living. Despite the great value that this topic has, there is a lack of insight into young people's perceptions of living conditions. As a result, this research aimed to fill that gap and provide new knowledge that could be useful in creating rural regeneration and transformation initiatives.

Considering the major development challenges facing rural areas, the priority missions have become empowerment, revitalization, and improving socio-economic sustainability, which has also attracted the attention of scholars (e.g., [16–21]). Along with quality of life, place attachment has also been considered a key variable in enhancing the social and economic capacities of rural and undeveloped communities and reducing youth out-migration.

Place attachment is a term used to describe the relationship that a person forms with a particular location [22]. Bonds that people create with their living environment predetermine their behavior, interest, and participation in decision making, planning, development, preservation, and protection [23]. In addition, place attachment has been recognized as an important determinant of whether young people intend to stay, leave, or return to their rural homes [24,25]. Although the quality of life in [10,14,15,26–28] and attachments to rural places have attracted the attention of scholars [23,29–33], research on these constructs and their relationships, especially with an emphasis on the young population, is limited. It was previously emphasized that people’s perceptions and relationships towards their living environment predetermine their quality of life and well-being [34–36]. However, when it comes to the impact of quality of life on place attachment, there are only a few studies that have focused exclusively on urban areas [37–39]. As there are a lack of insights, this study aims to fill the existing gap and identify the attributes and structural weaknesses of rural settlements and investigate the level of functional, emotional, and social attachment to these places from the perspective of young rural generations.

Two neighboring European countries were chosen as the case study areas: Serbia and Croatia. To the best of our knowledge, this is the first study that investigates these two important indicators of future development and their interrelationship from the perspective of the young population within a single research framework. As finding solutions for contemporary challenges of sustainability is of priority value, knowledge on these phenomena will contribute to both theory and practice—making them more visible as key actors in the socio-economic development of rural communities and providing knowledge that could be implemented in future strategies and initiatives.

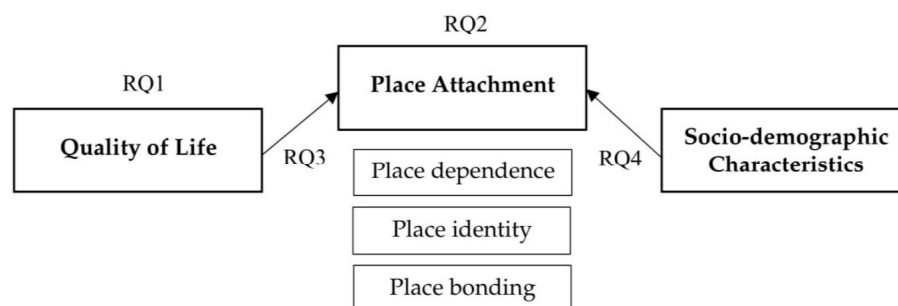
The proposed research framework is shown in Figure 1. The objectives of this study can be summarized in the following research questions:

RQ1: What are young residents’ perceptions about the quality of life in rural settlements?

RQ2: To what extent are young residents attached to rural settlements, in terms of place dependence, place identity, and place bonding?

RQ3: How does satisfaction with the quality of life in rural areas affect place attachment (place dependence, place identity, and place bonding)?

RQ4: How do the socio-demographic characteristics of young residents affect their attachment to rural settlements (place dependence, place identity, and place bonding)?



**Figure 1.** Research framework.

## 2. Literature Review

### 2.1. Quality of Life in Rural Areas

The European Commission identifies rural regions on the basis of urban–rural typology. The classification of regions is determined by identifying the population in rural grid cells (all cells outside of urban clusters) and their proportion. Therefore, predominantly rural regions are defined as those in which more than half of the population lives in rural grid cells [40].

One of the critical drivers for the development and revitalization of rural areas is the quality of life of their inhabitants [41]. This term broadly refers to residents’ satisfaction

with the standard and quality of life [42]. There have been different approaches to its conceptualization, but today, quality of life is seen as a multidimensional concept that includes the assessment of different living aspects such as social, economic, political, cultural, etc. [15,43]. Moreover, quality of life is evaluated based on the perception of various elements of a place, including infrastructure, accessibility, healthcare, safety, education, cultural heritage, environment, services, facilities, everyday activities, and standard of living [44].

According to Boncinelli et al. [10], the availability of fundamental capacities and services for performing daily activities is of vital importance for achieving a satisfactory standard of living in rural areas. Casini et al. [41] add that the ability to sustain an adequate quality of life is a critical component of social and economic sustainable development in rural regions. This has become one of the most pressing issues in these areas, which are facing major structural changes as a result of large waves of emigration and an aging community [45]. The lack of economic opportunities for young people, unsatisfactory public services, and the demographic structure of the population highly jeopardize the quality of life and development prospects in rural areas [1]. As mentioned at the beginning, the depopulation of rural areas is a global challenge, but improving quality of life can significantly contribute to decreasing youth migration and promoting rural areas as a desirable environment for living. In this regard, the analysis of rural quality of life is of priority importance, as is developing new initiatives and policies that will enable the positioning of rural areas as appealing living environments for people of all ages [15].

Prior studies addressed the quality of life in rural areas [10,14,15,26–28], but were mostly focused on identifying different models, frameworks, and perspectives for assessing quality of life. This study, on the other hand, aimed to gain insight directly from the young population by conducting quantitative research where they had the opportunity to evaluate various organizational and structural elements of rural settlements and express their level of satisfaction. A few authors addressed this topic prior the pandemic and reported certain distinctions in attitudes between different age groups when exploring how locals perceive rural landscapes in relation to quality of life [27]. These indications leave room for further research and focusing exclusively on one age group, in this case, the young generation, whose increasing migration has caused rural settlements to face population loss and aging, and experience demographic and economic imbalances.

The structure and arrangement of settlements highly determine the wellbeing of their residents [12,13]. Several authors investigated the satisfaction of farmers with the standard of living in rural areas in China [11,46,47], while Boncinelli et al. [10] identified the main determinants of quality of life in rural Tuscany. In their study on rural regeneration, Shach-Pinsly and Shadar [18] analyzed the qualities of different settlement features, including density, accessibility, safety, visibility, landscape, etc., but they did not conduct research among the inhabitants. Moreover, Hussain et al. [48] pointed out that the development of public infrastructure has a key role in raising the socio-economic standard of living in rural communities. According to Đerčan et al. [14], understanding residents' needs and attitudes towards quality of life in rural settlements is vital for balanced development. However, the authors called for additional research in other regions and countries, to which this study responded and applied their instrument for measuring the quality of life in rural settlements, but exclusively among the young population.

There is an evident lack of studies addressing quality of life and community perceptions about the organization of rural settlements, especially with an emphasis on young generations. It is essential to investigate how they perceive the characteristics and attributes of rural settlements and how satisfied they are with the quality of life provided. It is widely believed that an improvement in quality of life will decrease emigration and promote rural towns as desirable places to live and do business [15]. Therefore, understanding young residents' attitudes is critical for developing strategies that will enable the transformation and regeneration of rural settlements, as well as the achievement of standards for satisfactory living quality.

In addition, our goal was to explore the impact of quality of life on place attachment, which, to our knowledge, has not been carried out in this research and sample context. This influence has previously been confirmed in an urban study setting [37–39], but knowledge about the direct relationship between quality of life and attachment to rural places is limited. It was previously stressed that residential satisfaction had a significant and positive effect on attachment to rural places [32]; however, more research is needed, particularly with youth. Understanding these constructs and their interrelationships from the perspective of young residents is critical to planning and strengthening the environmental, economic, and social sustainability of rural settlements.

## 2.2. The Concept of Place Attachment

Place attachment refers to the cognitive–emotional relationships between individuals and their socio-physical settings [49–51]. During a certain period of life in one area, a person may develop a strong emotional and personal tie with that place, allowing them to identify with it and experience a feeling of belonging and affection [52–54]. Place attachment is of a complex nature and implies bonding to the physical environment, people, and way of life [33], but also the formation of a functional attachment—dependence on a given living environment, which is difficult to achieve elsewhere [55].

Various definitions and identifications of this term have passed through the scientific literature so far, but what can be concluded from all of them is that place attachment is interdisciplinary in nature and multi-dimensional [56–58]. However, the two dimensions of place attachment that have received the most attention and use in prior research are place identity and place dependence (e.g., [29,59,60]). Place identity is described as a personal outcome of the impact a place has on an individual, specifically, how the distinct ambience of a place shapes one’s character, cognition, attitudes, values, and beliefs [35,61]. It represents the emotional attachment to a particular setting [55], a set of feelings arising from symbolic relationships with the place and the development of personal identity that it provides [62]. On the other hand, place dependence refers to a functional bond with a place and its capability to meet the needs of individuals, resulting in becoming dependent on the place and unwilling to replace it with any other [29]. This dimension of place attachment refers to the physical environment’s role in providing the necessary and desired means to fulfill the individual’s goals and objectives [55,63]. It reflects an assessment of the quality, value, and support a place provides for residents to successfully fulfill their purpose and needs, as well as to engage in their preferred activities [64]. Furthermore, it is believed that the stronger the functional connection, the greater the chances of a place becoming embedded in a person’s identity [29].

The previously mentioned two dimensions of place attachment were used in this study as well. The items were taken and adapted from Williams and Vaske [55], who are among the pioneers in this field. Their instrument for measuring place attachment has been widely recognized and used in research so far (e.g., [29,39,59,65]). In addition, a third dimension has been introduced by the authors: place bonding. It consists of five items aimed at investigating the impact that friends, family, safety, financial convenience, and general security have on choosing to live in a given place and thus creating a connection with it. As mentioned in the earlier literature, people make connections with different aspects of a place, including social ones that relate to social contacts, networks, and connections with their friends, family, and community [30,33,49,54]. Thus, the introduced third dimension incorporates such aspects of the place as well as some additional ones that the authors considered worthy of research.

## 2.3. Place Attachment in Rural Planning and Development

The concept of place attachment has become increasingly popular within the numerous social science research studies [66]. Among others, it has found notable application in environmental and social psychology, rural planning, and community development [33,57]. Place attachment is considered an important foundation for the development and empow-

erment of communities in rural areas, considering the several important roles it plays [32]. According to Moore [33], bonds that people create with their living environment contribute to the understanding of their involvement in planning and development processes. Previous research has pointed out that residents' perceptions of and established connections with their living environment greatly determine their behavior [57]. Individuals who are strongly connected to a place and community are more likely to remain loyal, and strive to improve and protect their living environment [56]. Tourism represents a great opportunity for strengthening underdeveloped rural areas, but place attachment, which predetermines locals' attitudes and interest and participation in its development, is of essential importance [31]. Furthermore, Kanakis et al. [67] found that people's connection with a place is among the crucial motivators for staying in the community. It is also important to mention that the emotional bond young people form with a place is an essential determinant of whether they intend to stay, leave, or return to their rural homes [24,25]. Therefore, place attachment has been recognized as an important link in understanding the growing problem of depopulation in rural areas.

Due to its significant and multiple implementations, this phenomenon aroused the interest of scholars, who investigated the relationship between residents and rural environments from different aspects [23,29–33]. For instance, Strzelecka et al. [31] addressed the link between place attachment and community attitudes toward tourism and revealed the influence of place dependence on residents' perceptions of empowerment through tourism. Darabaneanu et al. [23] emphasized the role of place attachment in the social stability of rural areas and suggested that stronger attachment to a place results in beneficial community attitudes and behavior towards resolving the problems of degradation and pollution. Similarly, Moore [33] explained that established attachment to a place motivates residents to join together and form different economic funds, which contribute to the development and strengthening of the communities of underdeveloped areas. On the other hand, when it comes to youth as a critical point in this matter, there is an evidential lack of studies. There are only a few studies addressing the issue of place attachment among young rural residents [54,68,69]. Pretty et al. [68] conducted a study more than two decades ago on adolescents' sense of place in rural towns, Stockdale and Ferguson [54] performed qualitative research to identify young adults' attachment to the countryside, and Rodríguez-Díaz et al. [69] measured young people's interest in rural life. However, the objectives, the methods used, and the research setting varied, and among them, only one study was conducted after the pandemic that generally changed the course of people's lives.

To the best of our knowledge, this is the first study to use Williams and Vaske's [54] widely recognized instrument (place identity and place dependence), and additionally included a third dimension (place bonding), to measure place attachment among young rural residents. Furthermore, the impact of residents' quality of life and socio-demographic characteristics on attachment to a place was investigated, which has not yet been carried out in this research context. As understanding the relationship between residents and places is key to rural planning and development from social, economic, and environmental perspectives [32], it is necessary to explore this phenomenon more deeply and focus especially on the young population, who represent the core and future of the rural community.

### 3. Materials and Methods

#### 3.1. Case Study Area

This research was conducted in rural areas in two neighboring European countries: Serbia and Croatia. The location of both case study countries is presented in Figure 2. The Republic of Serbia is located in the center of the Balkan Peninsula, with a population of 6.7 million, according to the most recent census (2022). In terms of age structure, Serbia has reached the bottom level of the demographic age stage, as evidenced by the following data: it has an average age of 43.9 years, 19.4% of people are under 20 years old, 43% of people are under 40 years old, 29.2% of people are older than 60 years old, and the aging index (60+/0–19) is 150.1 [70]. The Republic of Croatia is situated at the crossroads of Central and

Southeastern Europe, with access to the Adriatic Sea. According to the latest census (2021), the population of Croatia is 3.9 million inhabitants. Similar to Serbia, in 2021, Croatia was experiencing continuous aging of the population. The average age in 2021 was 44.3 years, and the structure by age group was as follows: 24.54% of people under were 24 years old, 11.40% of people were under 34 years old, 41.61% of people were under 64 years old, and 22.45% of people were older than 64 years old [71].



**Figure 2.** Location of the two case study countries (Serbia and Croatia).

### 3.2. Instrument

This research was conducted through a questionnaire consisting of three parts. The first part was about the respondents' socio-demographic characteristics, including gender, age, education, income, employment, and marital status.

The second part was created to determine the young residents' perceptions about the quality of life in rural areas. For this purpose, 18 statements characterizing the standard of living in rural settlements were used, taken from Đerčan et al. [14]. The respondents had to evaluate their level of satisfaction with various elements of their standard of living, such as roads, infrastructure, public services, safety, schools, healthcare, prices, etc. Answers were measured on a 5-point Likert scale (1—not at all satisfied; 5—very satisfied).

The third part measured young residents' attachment to rural areas through a total of 18 statements. An adapted scale developed by Williams and Vaske [55] was used, which consisted of 12 items divided into two dimensions: place identity and place dependence. The authors added another item (When I spend time in my place, I feel fulfilled and peaceful) to the second dimension and also introduced a third dimension, place bonding. It included 5 items aimed at exploring the impact that friends, family, safety, financial privileges, and general security have on choosing to live in a given place. A five-point Likert scale was used to rate the level of agreement with each statement (1—strongly disagree; 5—strongly agree).

### 3.3. Data Collection

A quantitative research approach was used in order to collect the necessary data. The research was conducted from December 2023 to May 2024 in two neighboring countries, Serbia and Croatia. The research involved young people (older than 18) who were residents

of rural, underdeveloped areas of both countries. The questionnaires were distributed through specialized marketing research agencies. The authors provided them with the desired sample characteristics, and they contacted the respondents who fulfilled the requirements. The respondents filled out the questionnaires using the classic paper–pen method, and a total of 299 valid surveys were collected. All participants were informed about the purpose of the study and that being part of it was completely voluntary and anonymous.

### 3.4. Study Sample

The sample consisted of 299 respondents from Serbia (N = 150) and Croatia (N = 149) between 18 and 30 years of age (M = 20.161). The majority of the respondents were of female gender (72.9%). Most of them had gained a high-school education degree (77.3%). A significantly lower percentage of the respondents had gained a bachelor's degree (19.4%), a master's degree (1.3%), or a primary school degree (1.7%). Even though 83.9% of the respondents were still students, some of them were employed (11.7%). According to their marital status, 60.9% of the respondents stated that they were single (60.9%) or in a relationship (36.5%). A minority of the respondents from the sample were married (2.3%). Half of the respondents (51.5%) described their monthly incomes as average, while a slightly lower percentage of them claimed that their financial situation was over (27.1%) or below average (21.1%).

### 3.5. Analytical Method

Principal component analysis (SPSS 23.0) was used to examine the latent structure of the two scales: the quality of life scale and the place attachment scale. To justify the application of the principal component analysis, the Kaiser–Meyer–Olkin indicator (the value should be above 0.6) and Bartlett's test of sphericity (the value should be significant) were used. Since we expected the extracted dimensions to correlate, we used the Promax method of rotation. To determine the final number of factors, we used eigenvalues (which should be above 1) and a Scree plot. In order to assess the relationship between quality of life, socio-demographic variables, and place attachment, general linear modeling was carried out. A general linear model is a regression model that is used in order to determine how certain variables are related. In this case, we explored how connected quality of life and place attachment are, as well as the respondents' socio-demographic characteristics and place attachment. Therefore, quality of life and socio-demographic characteristics represent independent variables (predictors), while place attachment represents a dependent variable (criterion). The B coefficient was used to assess significance, and the Eta value was used to determine the strength of the relationship. B is a coefficient that can only be used to determine the influence of continuous variables, whereas Eta can be used for both continuous and categorical variables.

## 4. Results

### 4.1. Quality of Life

Principal component analysis was conducted for 18 items regarding the respondents' satisfaction with their quality of life. The recorded value of the Kaiser–Meyer–Olkin indicator was 0.857, which exceeds the recommended level of 0.6. Bartlett's test of sphericity reached statistical significance ( $p < 0.001$ ) and justified the application of the principal component analysis in this case, too. The principal component analysis revealed the presence of two components with eigenvalues over 1, explaining 27.62% and 7.53% of the variance. After the extraction of factors, Promax rotation with Kaiser Normalization was implemented, which resulted in a model with 18 items grouped into 2 factors that explained 35.15% of the total variance. The identified factors are represented within Table 1 and they are labeled satisfaction with the quality of infrastructure (1) and satisfaction with culture and education (2).



**Table 1.** Factor analysis results for quality of life satisfaction.

Items	Satisfaction with Infrastructure Quality $\alpha = 0.773, M = 3.582$	Satisfaction with Culture and Education $\alpha = 0.740, M = 3.558$
I am satisfied with the access roads to my settlement.	0.355	
I am satisfied with the transport connection (three is a sufficient number of bus and train lines) to my settlement.	0.385	
I am satisfied with the quality of the roads in the settlement.	0.577	
I am satisfied with the infrastructural facilities of the settlement (electrification, water supply, sewerage, gas, telephone, television and internet).	0.383	
I am satisfied with the hygiene in the settlement.	0.532	
I am satisfied with the work of public services.	0.425	
I am satisfied with the safety of living in my neighborhood.	0.520	
I am satisfied with the provision of medical services.	0.522	
I am satisfied with the prices of products and services.	0.803	
I am satisfied with the quality of products and services.	0.682	
I am satisfied with my standard of living.	0.435	
I am satisfied with the number of preschool institutions.		0.601
I am satisfied with the number of primary schools.		0.695
I am satisfied with the number of secondary schools.		0.765
I am satisfied with the number of colleges and universities.		0.563
I am satisfied with the number and availability of cultural institutions.		0.584
I am satisfied with the number and availability of sports and recreational facilities.		0.448
I am satisfied with the variety of facilities for children and adults.		0.500

Extraction method: principal component analysis. Rotation method: Promax with Kaiser Normalization.

The first factor was labeled satisfaction with the quality of infrastructure. It pertained to items that point to the respondents' satisfaction with the access roads and transport connections to their settlement, including the quality of the roads in the settlement, infrastructural facilities of electrification, water supply, sewerage, gas, telephones, television, and internet, as well as their general impressions regarding the work of public services. It also pertained to items regarding hygiene and the provision of medical services, the safety of living in the neighborhood, and also the prices and the quality of products and services and general standard of living.

On the other hand, the second factor related to satisfaction was termed satisfaction with culture and education. It pertained to items regarding satisfaction with the number of preschool institutions, primary and secondary schools, and colleges and universities. In addition to this, it pertained to items about the number and availability of cultural institutions, sports and recreational facilities, and variety of facilities for children and adults.

Based on the research results represented within Table 2, it can be noted that there is a significant medium correlation between the aforementioned types of satisfaction (0.531).

**Table 2.** Component correlation matrix for the quality of life factors.

Factor	Satisfaction with the Quality of Infrastructure	Satisfaction with Culture and Education
Satisfaction with the quality of infrastructure	1.000	0.531
Satisfaction with culture and education	0.531	1.000

#### 4.2. Place Attachment

Furthermore, another principal component analysis was conducted for 18 items about place attachment. The recorded value of the Kaiser–Meyer–Olkin indicator was 0.862, which exceeds the recommended level of 0.6. Bartlett's test of sphericity reached statistical

significance ( $p < 0.001$ ) and justified the application of the principal component analysis for this research. The analysis revealed the presence of three components with eigenvalues over 1, explaining 29.22%, 11.64%, and 6.93% of the variance. After the extraction of factors, Promax rotation with Kaiser Normalization was implemented, which resulted in a model with 18 items grouped into 3 factors that explained 47.79% of the total variance. The identified factors are represented within Table 3 and they are labeled place dependence (1), place identity (2), and place bonding (3).

**Table 3.** Factor analysis for place attachment.

Items	Place Dependence	Place Identity	Place Bonding
	$\alpha = 0.835$ M = 3.309	$\alpha = 0.732$ M = 3.867	$\alpha = 0.608$ M = 3.767
I would not do anything other than what I do in my place.	0.796		
No other place can be compared to my place.	0.721		
I would enjoy another place only if it is similar to my place.	0.721		
My place is the best place for what I like to do.	0.685		
Doing what I do in my place is more important to me than doing it anywhere else.	0.683		
I strongly identify with my place.	0.599		
Living in my place says a lot about who I am.	0.570		
My place is very special to me.		0.775	
My place means a lot to me.		0.650	
I am very attached to my place.		0.631	
When I spend time in my place, I feel fulfilled and peaceful.		0.628	
I feel that my place is a part of me.		0.541	
I am more satisfied staying in my place than in any other place.		0.484	
I live in my place because my family is there.			0.742
I live in my place because it suits me financially.			0.539
I live in my place because I feel safe there.			0.468
I live in my place because that is where all my friends live.			0.451
I live in my place because everything is provided for me there.			0.428

Extraction method: principal component analysis. Rotation method: Promax with Kaiser Normalization.

The first factor, labeled place dependence, includes items that are related to positive attitudes to a specific place. This dimension indicates that no other place can be compared to the respondents' place of living, as well as that their place of living is perceived as an ideal place for conducting usual everyday activities. In addition to this, the items of this factor indicate that the respondents' involvement in specific activities in their place of living was more important to them than performing these activities anywhere else, as well as that they would enjoy another place only if it is similar to their place of residence. Place dependence contains items related to strong identification with a given place and the belief that that place of living says a lot about who the respondents actually are.

The second factor was termed place identity, mainly according the fact that grouped items are related to high evaluation of the place of living. The first factor consists mainly of items that observe the quality of their place of living in comparison to other places, while in the second one, the focus is on the emotional relationship with their place of living. More precisely, the items indicate that the living environment is very special and it means a lot to the respondent. The items describe a person who is more satisfied with staying in their place than in any other place. On the other hand, the items of this factor characterize a person that is very attached to their place of living, they feel that this place is a part of them, and they feel fulfilled and peaceful when they spend time there.

The third factor was labeled place bonding and it mainly pertained to the reasons for staying in a specific place. The items of this factor actually indicate that for respondents, their place of living is pleasant, and they stay there mainly because their family and friends are there, it suits them financially, and they feel safe there. Finally, the items point to the fact that everything is provided for the respondent in their place of living.

According to the research results presented within Table 4, it can be noted that there is a positive correlation between all extracted factors. A medium correlation is identified between place dependence and place bonding (0.318), while a slightly lower correlation is identified between place dependence and place identity (0.302). The lowest, albeit significant, correlation is recorded between place identity and place bonding (0.206).

**Table 4.** Component correlation matrix for the place attachment factors.

Factor	Place Dependence	Place Identity	Place Bonding
Place dependence	1.000	0.302	0.318
Place identity	0.302	1.000	0.206
Place bonding	0.318	0.206	1.000

#### 4.3. The Impact of Quality of Life and Socio-Demographic Characteristics on Place Attachment

In this stage, the results confirmed the influence of both quality of life and the socio-demographic characteristics of residents on place attachment (Table 5).

**Table 5.** General linear model results.

Source		B	F	Sig.	Partial Eta Squared
Satisfaction with the quality of infrastructure	Place identity	0.171	4.200	0.041	0.015
Satisfaction with culture and education	Place dependence	0.125	3.661	0.057	0.013
Gender	Place dependence		6.881	0.009	0.024
Country of origin	Place dependence		119.483	0.000	0.298
	Place identity		9.059	0.003	0.031
	Place bonding		7.143	0.008	0.025

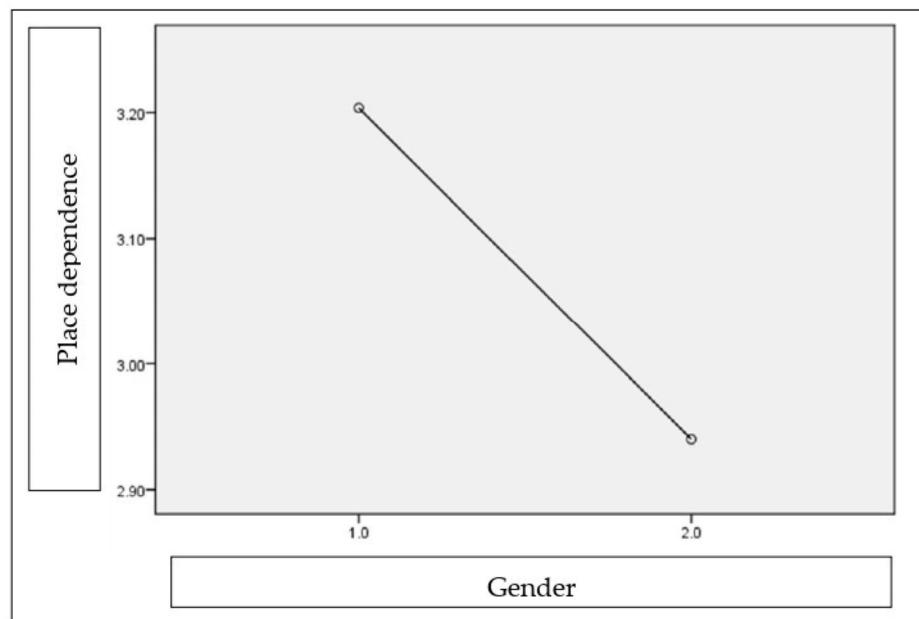
$R^2 = 0.467$ .

The research results of the multivariate general linear model analysis showed that place dependence was shaped by satisfaction with culture and education ( $F = 3.661$ ,  $p = 0.057$ ). More precisely, it was shown that place dependence was higher among the respondents who expressed higher satisfaction with culture and education ( $B = 0.125$ ). On the other hand, place identity was shaped by satisfaction with the quality of infrastructure ( $F = 4.200$ ,  $p = 0.041$ ), as the findings confirmed that this place attachment factor is higher in cases of higher the satisfaction with the quality of infrastructure ( $B = 0.171$ ).

Furthermore, place dependence was shaped by the respondents' gender ( $F = 6.881$ ,  $p = 0.009$ ) and country of origin ( $F = 119.483$ ,  $p = 0.000$ ). Place identity was shaped by the respondents' country of origin ( $F = 9.059$ ,  $p = 0.003$ ). The same applies to place bonding, which was shaped only by the respondents' country of origin ( $F = 7.143$ ,  $p = 0.008$ ).

According to the research results represented within Figure 3 it can be noted that place dependence is higher among the male respondents. The mean value for males is 3.204, while in the case of females, the mean value is 2.940.

Finally, these research results point to the fact that place dependence and place bonding are higher among the respondents from Croatia (place dependence:  $M_c = 3.629$ ,  $M_s = 2.515$ ; place bonding:  $M_c = 3.687$ ,  $M_s = 3.408$ ), while only place identity is higher among the respondents from Serbia ( $M_c = 3.611$ ,  $M_s = 3.918$ ).



**Figure 3.** Place dependence and respondents' gender (gender: 1—male; 2—female).

## 5. Discussion

The primary goals of this study were to (1) reveal the perceptions and satisfaction among young residents regarding quality of life in rural settlements, (2) determine the level of place attachment, (3) explore whether and how quality of life reflects the creation of a strong emotional bond with the place of living, and (4) explore the influence of the socio-demographic characteristics of young residents on place attachment. In this light, the answers to the four developed research questions are discussed below.

The first research question related to discovering the perceptions and satisfaction of young residents with the quality of life in rural areas. This construct was measured through 18 items, while two factors were singled out: satisfaction with the quality of infrastructure ( $M = 3.582$ ) and satisfaction with culture and education ( $M = 3.558$ ). The mean values for both quality of life factors were not high, and the respondents had a fairly uniform opinion about both. It can also be said that their attitudes towards settlements' organizational and functional elements were neutral, but mild satisfaction prevailed. Regarding the first factor, these results are in line with Wang et al. [47], whose study also showed a quite low rating for satisfaction with physical infrastructure and public services in China. On the other hand, satisfaction with culture was rated highest in their study, which is contrary to our findings. Petrovič and Maturkanič [72], who conducted research among students in the Czech Republic, also confirmed similar results in terms of the relatively low quality of life in rural areas, especially when compared to urban regions. Additionally, Đerčan et al. [14] reported that the younger population was less satisfied with certain aspects of the quality and standard of living in rural settlements (as compared to the older population), such as social services work and the availability of cultural institutions. The results of this research showed that the issue of unsatisfactory quality of life among young generations is highly present in rural settlements. In this regard, it was confirmed that there is a strong need for the improvement of living conditions, which is one of the key missions of rural development [10]. Settlements that manage to provide young people with good conditions for living and satisfy their needs will have multiple benefits, among which are a reduction in population loss and aging, and ensuring vitality and sustainability. Hussain et al. [48] emphasized that public infrastructure projects are essential in improving social and economic living conditions for rural communities and enhancing sustainable performance for future generations. Furthermore, infrastructure development can contribute to economic prosperity, an increase in living standards, and poverty reduction [73,74].

Our results also showed that the two mentioned factors are interconnected and that with an increase in satisfaction with one, satisfaction with the other increases, which implies that it is equally important to work on improving all aspects of quality of life. Given that the respondents were not highly satisfied with the current living standard, these results confirmed that there is a need to improve living conditions in rural settlements. Pretty, Chipuer, and Bramston [68] found similar results, indicating that other objective dimensions of a community, such as its economic opportunities, may be more instrumental to identity during the adolescent life stage. The decline in quality of life, along with depopulation and economic imbalance, are among the biggest challenges facing rural areas [1]. Therefore, it is crucial to raise awareness of this growing problem and create strategies and initiatives that will improve people's quality of life while also contributing to the survival and development of rural areas.

The second research question was aimed at analyzing the level of place attachment among young rural residents. The results identified three factors of place attachment among young residents of rural areas: place dependence, place identity, and place bonding. However, the mean values for all three determinants were generally not high, and none of them exceeded 3.9. Thus, attachment to places exists to a certain extent, but young people have not yet developed a strong connection with their rural homes. Among the prominent factors, the most powerful one that determined attachment to a place was place identity ( $M = 3.867$ ). Emotional connection with a place was the most represented, and it has been shown that young people are closely attached to their rural homes, and that they identify with that place and consider it a part of themselves. These findings are in line with prior research that showed that residents of rural areas develop emotional bonding, attachment, and a higher sense of belonging and place identity at a younger age [75,76]. This also represents a great advantage for rural areas in terms of reducing emigration, since the emotional bond young people form with a place is critical in determining whether to leave, stay, or even return [24,25]. Furthermore, our results revealed that the second strongest factor was place bonding ( $M = 3.767$ ). This dimension mainly includes reasons for choosing to live in a given rural place, among which are friends and family, safety, financial convenience, and the fact that everything is provided in that place. Similarly, Rodríguez-Díaz et al. [69] found that social relationships and the environment play a significant role in young people's decision to live in the countryside. Moreover, the authors pointed out that a strong attachment to a place is more likely to emerge in young residents who are satisfied with their community surroundings and interactions. Stockdale and Ferguson [54] also confirmed that family roots have a strong effect on young people staying in their communities. Furthermore, Mitchell [77] and Henderson et al. [78] point out that safety is one of the domains in this dimension. In addition, economic climate is usually mentioned as key driver of youth out-migrations [25], but this research confirmed that there is still some interest among young people in rural life if they can function there financially. Despite this, respondents generally did not rate this factor and reasons for staying highly, which may insinuate and predict their abandonment of their rural roots. Place dependence was the third factor and had the lowest mean value ( $M = 3.309$ ), which means that the given rural places currently do not sufficiently meet the needs of the respondents, as a result of which they have not formed a functional attachment and dependence on these places. In line with this, Gieling et al. [79] argued that due to advanced mobility, residents of rural areas no longer depend on local facilities, which further negatively affects their place attachment. Similarly, the present results are supported by previous research [80] indicating that rural residents are becoming less dependent on their surroundings due to the quick access to nearby urban resources, especially young people who are highly mobile. Therefore, it is important to educate, encourage, and support young people, especially women, to start business ventures and inspire them with the idea of entrepreneurship as a development path for their careers [81]. If their current place of living enables them to do what they desire and achieve their goals, they are more likely to establish a functional bond, stay, and not relocate [82].

Our results further revealed that there was a positive correlation between the extracted place attachment factors. In particular, it was shown that the stronger place dependence is, the stronger place bonding and place identity are. Anton and Lawrence [29] previously suggested that the stronger the functional connection, the greater the chances of a place becoming embedded in a person's identity, which this study confirmed. A connection between place identity and place bonding was also shown, meaning that a more developed emotional connection with a place leads to a greater interest in staying and becoming attached to rural life.

The findings of this study successfully answered the third research question and confirmed the impact of quality of life on the attachment of young residents to rural places. More precisely, it was revealed that the respondents who expressed higher satisfaction with culture and education reported higher place dependence. This means that young people who were satisfied with the availability of educational and cultural institutions, sports and recreational facilities, and a variety of facilities for children and adults developed a higher functional attachment to a given rural place. This certainly points to the importance of encouraging local culture, heritage, and community involvement as a necessary step in the revitalization process of rural areas, to ensure that regeneration efforts are sustainable and have broad support [83].

The mentioned features of a living environment enable the performance of everyday and desired activities, so the respondents perceived a place that meets these criteria as complete and ideal for life. Additionally, higher satisfaction with the quality of infrastructure resulted in establishing a stronger emotional bond with a place. This dimension refers mainly to the functional aspects of a place, such as roads, transport, infrastructure, public services, healthcare, safety, prices, the quality of products, etc. Therefore, a rural place that meets such criteria will have a better chance of evoking a high living environment evaluation among young residents and making them feel more fulfilled and satisfied there than anywhere else. These results support Chen et al. [32], who previously pointed out that residential satisfaction positively affects attachment to rural places. Rodríguez-Díaz et al. [69] found similar results indicating that strong attachment to a place is more likely to develop if young people are satisfied with the community and surroundings. Hence, if the specific place meets the living standards and needs of young residents, they will not have to pursue them anywhere else and will remain loyal to their rural community.

Finally, the answer to the fourth and last research question of this study is addressed. Our results confirmed the impact of the socio-demographic characteristics of young residents on their attachment to a place. All three factors of place attachment were analyzed individually, and the influence on all factors was noted. Moreover, place dependence was shaped by the respondents' gender and was higher among male respondents. Men therefore developed greater dependence on and functional attachment to places, which is not surprising, because women often have limited labor opportunities in rural areas, which is why many rural regions face shortages and the out-migration of young women [84]. In the end, differences were observed in terms of place attachment (place identity and place bonding) in relation to country of origin, which leaves room for further research on this topic to gather more knowledge and determine specificities.

## 6. Conclusions

Finding solutions for the empowerment of rural areas experiencing population outflows due to an underdeveloped economy is a primary mission. This study shed light on the major challenges facing rural areas and confirmed that there is an evident problem of low quality of life and weak attachment to places among young rural residents, due to which they more easily decide to leave their rural homes. In addition, our results demonstrated the role of quality of life and socio-demographic characteristics on them creating a strong emotional bond with their place of living. Young residents are vital for the survival and development of rural areas, but the issue of youth outmigration is increasing. Quality of life and attachments to places are highly important determinants for the development of

rural areas; therefore, understanding these aspects from the perspective of young people is key to rural planning and strengthening rural areas' social, economic, and environmental sustainability. With this aim, the results of the present study provided an insight into the perceptions of young people, which are very important and useful for creating strategies and initiatives for the future of rurality.

This study has several theoretical contributions. This is the first study that addresses place attachment, quality of life, their interrelationship, and socio-demographic differences in the context of young residents of rural areas in one research framework. Further, this research is the first to measure young rural residents' place attachment using three dimensions, including Williams and Vaske's [55] place identity and place dependence, and place bonding as an additional third dimension. Additionally, the impact of quality of life on place attachment has been proven, but has not yet been explored in a rural research context and in young participants. Finally, our results provide new knowledge on the impact of the socio-demographic characteristics of young residents on their attachment to rural places.

In addition to the theoretical implications, the results of this study yielded important insights that can be very useful in practice, in the process of creating rural development strategies and policies. This research concept should be used to build community resilience. Policymakers should account for place attachment, quality of life, their interrelationship, and socio-demographic differences in the context of young residents of rural areas when crafting interventions to revitalize rural areas. Tailoring policies to address the unique needs and preferences of rural residents can enhance community satisfaction and promote sustainable development. Since this research has shown that there is no strongly developed connection between young people and rural environments and that they are not quite satisfied with the quality of life in these areas, it is very important to raise awareness about this and make efforts to reduce and prevent youth migrations. For instance, to strengthen place identity, young people may be more involved in various activities, programs and decision making so that they feel part of the community and develop a sense of belonging. It is also very important to provide them with business opportunities and support for career development, and to enable them to carry out daily activities in their place of living unhindered. In this way, their functional attachment to this place can be improved, as a result of which they will not want to change it for any other.

Enhancing quality of life also represents a chance for the development of person–place relationships. For example, to strengthen place dependence, rural areas should provide an adequate number of educational institutions of all levels; cultural, sports, and recreational facilities; and a variety of facilities for children and adults. On the other hand, satisfactory and high-quality infrastructure, roads, transport, public services, healthcare, and safety; good prices; and high-quality products and services can lead to a stronger emotional connection with a place (place identity). These results ultimately showed that different socio-demographic characteristics shape attachment to a place. It is particularly noticeable that men developed greater functional connections with places; therefore, if rural areas want to retain women, special attention should be focused on their empowerment and involvement, and the provision of labor opportunities.

Successful strategies should also focus on strengthening residents' emotional and social ties to their communities. Promoting local culture, heritage, and community engagement can play a vital role in revitalizing rural settlements and ensuring that regeneration efforts are both sustainable and widely supported. Communities with strong emotional connections are better positioned to tackle social challenges, offer mutual support, and collaborate on local projects, thereby fostering a more resilient and unified society.

Engaging communities in decisions that affect their quality of life and attachment to their surroundings can enhance their investment in regeneration efforts and ensure that projects align with their needs and aspirations.

Finally, this study included only the concepts of quality of life and place attachment, but other determinants can also help in understanding the behavior of young people in

rural areas and their intention to stay/leave. Thus, future research can explore young people's attitudes towards entrepreneurship or tourism development in rural areas. Also, this study included both genders of respondents, but considering that there is such a prominent shortage of women shortage, even though they are of the greatest importance for the survival of rural communities, future research should focus exclusively on the empowerment of women in rural areas. Furthermore, this research was carried out quantitatively, while in the future, it could be conducted qualitatively in order to gain a deeper understanding of certain phenomena from the perspective of young residents of rural areas.

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