



Analysis of Livability of Rural Settlements (Case Study: Villages of Kashmar County)

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Abstract

Purpose- This study aimed to determine the constructive components of livable rural communities. To this end, it investigates the status of livability from the viewpoint of rural population in villages of Kashmar County.

Design/methodology/approach- This is a descriptive-analytic study. In the first stage, indicators were extracted by reviewing the relevant literature. Then, a questionnaire was developed based on the Likert scale. Using the Cochran formula, 350 samples were selected and were randomly distributed. Finally, the data were analyzed using the SPSS software and employing correlation and Friedman tests.

Finding- The results of the Spearman test showed no significant relationship between individual characteristics (age, sex, education) and livability indicators. On the other hand, the results of the Friedman test revealed that villages have higher livability in terms of the environmental dimension than other dimensions. In terms of the social dimension, recreation and leisure time indicator had the highest rank from respondents' viewpoint (5.50), and other indicators were also effective in varying degrees. Respondents were more satisfied with public space than other indicators.

Originality/value- Due to the novelty of the subject in Iran, and since it has received low attention in the relevant global literature, more time is needed to carry out further studies. The results of this study may be useful for rural officials and planners, rural students and researchers.

Key words: Livability, rural settlement, villagers, Kashmar.

Paper type- Scientific & Research.

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1. Introduction

Nearly, 30% of the population of Iran is rural. Since economic, social, cultural, human and sustainable development is achieved through basic changes in villages, special rural areas should be considered more, notably because these areas are deprived of the economic and social facilities of the urban areas. In addition, the existence of dynamic villages with proper livability conditions will be effective in identifying the problems and factors affecting their unsustainability (Hakim Doost, Moradi, Nazari, & Rostami, 2016).

The increasing importance of livability is due to increased awareness of unsustainable patterns of life and unhealthy and unsustainable consumption that reduces the capacity of environmental resources to support the earth's population in the long term (Wang, 2010). Some of these concerns for each community include satisfying the needs (housing, energy, water and food), waste management, public health and safety, education and entertainment, social interaction, cooperation, economic activities and innovation. Livability deals with these needs and demands from various aspects, such as reducing economic welfare and increasing social dissatisfaction (Ghalibaf, 2009). The rural livability is highly influenced by time and place. Moreover, the components that make up rural settlements vary according to the time period and geographical location. In this regard, the quality of life of rural people depends on a variety of factors, including the availability of high-paying jobs, access to important services such as education, hygiene, powerful associations, health, natural environment and security. The urban population is also dependent on these needs to some extent, however, their challenges to have a better life, despite being similar, are different from those of the rural population. Some of these challenges are dependent on the mainstream of the economy, however, others are confined to the organizational and institutional framework of rural areas. In other words, small scale and low density of rural settlements, lack of job diversification and proper income in agriculture, distance from other residential centers, and lack of proper roads and inefficient transportation systems postpone the

implementation of the necessary policies to revitalize the quality of rural life (Bullock, 2004). The rural settlements in Kashmar city, like most of the rural areas in Iran, have undergone a significant decline in rural population over the past half century. According to data coming from the number of immigrants arriving in Kashmar over the past 10 years, about 56% of the population has entered the city over the past three years, indicating an intensification of the immigration process in recent years. The social and physical structure of Kashmar can be attractive for the rural immigrants due to a number of factors, including the existence of higher education centers, two main informal contexts, career attractiveness and urban facilities, and high employment rate (Bemanian, Mehrdadian & Rezaei Rad, 2011).

Thus, the present study aims to determine the constructive components of livable rural communities based on previous studies in order to investigate the livability from a rural population's viewpoint in the villages of Kashmar. This study also seeks to answer the following questions:

Is there a significant relationship between individual characteristics and livability indicators in Kashmar villages?

Is the economic dimension of livability compared to other indicators of livability at a lower level?

Are the indicators of social livability, participation and health and education at a lower level compared to other social indicators?

Is the pollution indicator at a higher level compared to environmental livability indicators?

2. Research Theoretical Literature

2.1. Livability

Livability theory was originally developed by Abraham Maslow's work on human needs; he categorized human needs into five levels, including biological needs, security needs, social needs, respect, and self-actualization (Figure 1). The hierarchy pyramid of human needs from Maslow's viewpoint). This theory has been developed in the area of quality of life by Veenhoven. He believes that the general feeling of people leads to a better life for them when they live in better and more livable communities. What is more, social livability is not entirely clear, but people are happier and more satisfied in communities where their needs are satisfied (Radcliff, 2001)



Figure 1. Hierarchy pyramid of human needs from Maslow’s viewpoint
(Source: Radcliff, 2001, p. 940)

Livability refers to the aspects that improve the quality of life. Increasing the quality of life will also affect lifestyle and health conditions, and the sustainability of the built environment will increase (Shamsuddin, 2012); therefore, livability consists of a number of interdependent economic, social

and environmental concepts and these relationships should always be considered to prevent it to be one-dimensional and mimetic (Khorasani, Mollaei Ghalichi & Rezvani, 2015). There are several definitions of livability; a few are listed in Table 1.

Table 1. Definitions of livability in relevant literature

(Source: Khorasani and Rezvani (2013), Isaloo et al. (2013), Bandar Abaad and Ahmadi Nejad (2014), Sasanpour (2017))

Definition	Year	Definition
American, I. O. A. (AIA)	2005	A local livable community recognizes its unique identity and places great value on planning processes, as these processes contribute to the management of growth, and can be modified to maintain and enhance the character of the local community.
Chicago Metropolitan Agency for Planning	2009	Livable communities are safe, secure and pedestrian-based communities that provide different options for timely access to schools, work centers and urban services, as well as basic needs.
Competition & Efficiency Commission	2008	Livability reflects the welfare of a local community where people tend to live there in the present and future.
United States Department of Transportation US DOT	2010	Investing in transportation, services and housing should be provided with adequate access to them through sustainable mobility options that are environmentally adaptable.
National Recreation and Parks Association	2010	The locally based community provides healthy places for purposeful and productive lifestyles at work, school, playground, a place of worship, and in the neighborhood for residents and visitors.
Mccrea et al.	2012	Livability is a part of the overall quality of life of residents in urban environments.
Miller et al.	2013	Livability is one of the features of a living environment that provides a peaceful, secure, valuable, interactive and sustainable with social and psychological well-being, with respect for nature and the lack of loss of natural resources through the strengthening of social life, community spaces, and the connection between the place of gathering and activity with the various transportation options.
Mahmoudi et al.	2015	Livability improves the quality of urban spaces in modern cities and humanizes them as far as possible.
Merriam-Webster Dictionary	2016	Livability refers to the right place for human life.

Although the definition of livability varies across societies, social planning aims to provide definitions and criteria for assessing indigenous livability. Livability is often used to define different dimensions of the community and common experiences that shape it and focuses on the human experience of the place and considers it in a given time and place (Khorasani, 2012). In

Livable communities: An evaluation guide, a community is considered to be livable if it provides adequate housing, social services and support, and adequate transport options, education, and cultural diversity that leads to individual autonomy and civil and social participation of the inhabitants (AAPRS, 2005)

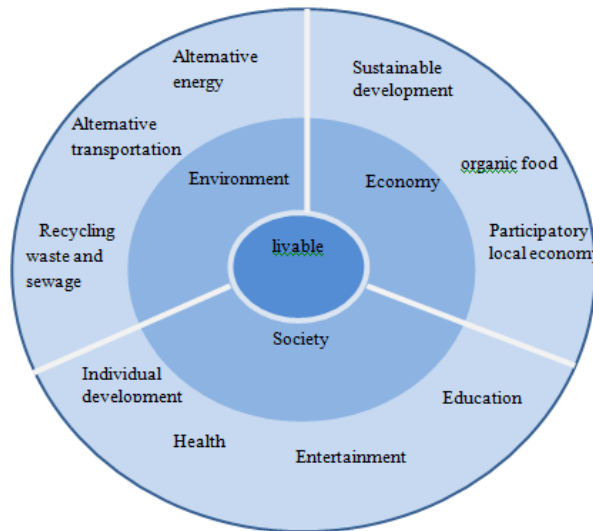


Figure 2. The cycle of the principles of livability
(Adapted from Khorasani, 2012, p. 86)

Thus, the concept of livability has been developed because of the importance of existing factors that threaten the quality of life. Factors such as rapid growth, the lack of farmland and open spaces, housing shortages, the growth of social inequality, the growing weakness of local and spatial identity and social life, are serious threats to livability and community (Khorasani & Rezvani, 2013).

2.2. Rural livability

The term "livability" was officially introduced into the planning-relevant literature since *Livable Villages* was published in 1938

Livability borrows the principles and criteria of planning-relevant theories, such as favorable sustainable development and, in some places, is overlapping with these theories and sometimes contradicts them (South worth, 2011). The idea of livability connects many concepts and refers to special places that interact together and guarantees citizens' satisfaction by meeting the cultural, economic, social needs and improving health and happiness, conservation of natural resources and ecosystem functioning from local to global levels

(Hesari, Mousavi, Movahed & Tavalaei 2016; as cited in Stein, 2002, p. 25).

In fact, the livability approach promotes the concepts of the quality of the living place of people in order to provide them with the best living practices. Therefore, the ultimate goal of the study of the livability of the living environment and its subsequent application is to improve the quality of people's life to enjoy a meaningful life. In real conditions, rural environments suffer from many problems due to various reasons such as low population density, long distance from the urban centers, geographical isolation, economic structure based on agriculture and so on. Moreover, due to the living conditions of urban communities, living conditions and quality of life in rural environments differ from the realities and standards of contemporary human life, and challenge the living conditions and housing in rural environments (Housing Foundation of the Islamic Revolution of Iran, 1982). Hence, currently, rural life is of great importance for creating decent living conditions and preventing rural destruction and migration.

Many planners and theorists has provided different definitions of the livable village, depending on their field of their interest. These definitions are closely related and complement each other, some of which are described below.

"A livable village is attractive and safe for all people, not just for those in a certain age group" (Yuan, 2012).

"A livable village respects its historical past, and on the other hand, it also cares about those who are not born, and this type of village also fights against any waste of resources, so it is also a sustainable village" (NARC, 2010).

"A livable village is suitable for social life, communication and dialogue. It is a place for living, activity and design of the public space that provides the context for the presence of residents in the general realm" (Omar, 2010).

Seymoar (2008) considers the principles and conditions for the realization of the livable villages that are generalizable for each village in each region, so that if one of them is damaged it hurts the whole of the livable villages from a certain aspect; therefore, these principles are a prerequisite for the realization of livable villages, but not enough. These principles and characteristics are discussed in Table 2.

Table 2. Livability conditions of rural areas from the viewpoint of Saymoar and Alberta
(Source: Boozarjomehri et al., 2017, p. 98).

Principles
All principles follow a rule. The principles restrict each other and are conditioned. Principles complement each other. Principles contradict each other.
Conditions under the principles
Sustainable livability: Villages need to be livable, satisfy health and basic human needs. Safety and security: the village must be safe. In order to protect the village from natural and unexpected events and human and financial losses. Financial productivity: The village must have a financial economy and increase productivity and efficiency in all areas. Cooperation: Healthy social communication that involves collaboration. Access: The village must provide the actual and potential facilities for access to the service and information centers and resources. Balance: The village must seek to maintain, sustain, and strengthen the balance in its general sense. Adaptability: The village should bring about adaptation and integration of elements together and with natural conditions. Dynamics: The village must have dynamism. Identity: The village must prevent historical cessation and the breakdown of cultural links through their preservation and enhancement, so that the identity of the village can be recognized. Beauty: The village should be enjoyable in all aspects. Diversity: The village must seek to maximize diversity in its physical, social and economic structure. Attachment: The village must strengthen the villagers' attachment and make it to a feeling of responsibility in various ways.

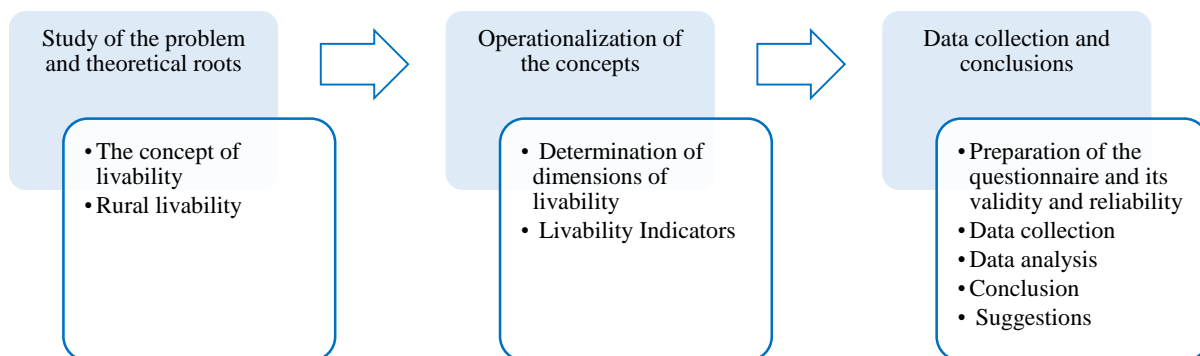


Figure 3. Research Process
(Source: Research Results, 2017)

2.3. Review of literature

Livability is frequently used to define the various dimensions of the community and the common experiences that shape it. It focuses on the human experience of the place and takes it into account in a certain time and place (Afrakhteh, Anvari, Jalalian & Manuchehri, 2016). The issue of

livability has been raised since the 1980s due to the rapid development of urban areas around cities (Bandar Abaad & Ahmadi Nejad, 2014). In this regard, the review of literature on rural livability provides us with valuable information as presented in Table 3.

Table 3. Review of literature on rural livability

(Source: Research finding, 2017)

Scholar (s) & Year	Findings
Wang, 2010	The current level of rural livability in Henan province is still at an early stage. In addition, there is a positive correlation between quality of rural population and the qualitative level of economic and demographic characteristics of Henan Province. Regional economy and population quality should be improved in order to develop the level of rural livability.
Lau Leby et al., 2010	This study considered the four dimensions of livability: social, physical, functional and secure. The most important dimension was the security and the least important was the social dimension from the residents' viewpoint
Faiz et al., 2012	This study aimed to explain the livability and sustainability and study the relationship between road sustainability and its impact on rural livability. Results showed that the quality and sustainability of the roads of a settlement had a direct effect on the provision of living conditions and the improvement of livability
Khorasani & Rezvani, 2013	In this study, the livable settlement was defined as a suitable place for living and working. The study area was urban villages located in Varamin and adjacent to the four urban centers. The results showed that there was no significant relationship between the livability score of each village with its service development coefficient. This correlation was measured between each dimension of the livability and service. There was no significant relationship between the dimensions and the services provided.
Jomepour & Tahmasebi Tehrani, 2013	The level of quality of life and livability in the villages was low and the participants evaluated the quality of life in all aspects of social, economic and environmental considerably as low. There was a significant difference in terms of the rate of livability and quality of life in the villages located in the research area.
Khorasani et al., 2015	The results showed that there was a significant relationship between sex variable with recreation and leisure time, and between the jobs of people and public transportation indicators and open and green spaces, and there was no significant relationship between age and education and all livability indicators. Finally, there was a significant relationship between the duration of residence in the village and the indicators of employment and income, the place attachment and landscape.
Isaloo et al., 2015	Economic indicators such as occupation, income level, and savings among other criteria had a significant effect on determination of the rate of livability in rural areas of this district. The results of comparative analysis of settlements showed that although some villages have more population and services and more facilities, in terms of livability, the quality of living conditions was lower than that of the less-populated rural areas.
Sojasi Qeidari et al., 2017	The results showed that out of the 16 indicators examined, based on the significance level of the T test, eight of the livability indicators were significant from respondents' viewpoint, suggesting a significant difference between the livability of the studied samples. Also, the ranking of villages based on the multi-indicator model of the VIKOR showed that Ghourichai and Haji Nabi rural point are ranked with the lowest level of livability indicators. However, the villages of Aghchi Olia and Bahram Sufi are ranked with the highest level.

3. Research Methodology

3.1 Geographical Scope of the Research

Kashmar is one of the cities of Khorasan Razavi. It is connected to Nishabur and Sabzevar from the north, to Torbat-e Heydariyeh from the east, to Feiz Abaad from the south and to Khalil Abaad and Bardscan from the west. From the economic point of view, Kashmar is a developed city in an agricultural area. Weaving silk and woolen carpets by local weavers is another area that promotes the economic level of this region. The Kashmar rug is one of the most popular carpets in Iran and is exported abroad. Kashmar consists of two parts, five villages and two towns; it is the capital of the

central part, consisting of "Bala Velayat" and "Paein Velayat" villages; the "Kooh-e Sorkh" district, the center of which is Rivash, and includes Bar Rood, Bar Kooh and Takab (Ashrafi, Hooshmand & Karamatzadeh, 2014).

Based on the data obtained on the social stability of Kashmar villages by Entekhabi et al. (2017), these villages are in a relatively desirable situation or in some of the indicators are undesirable. According to the data provided, the number of immigrants arrived in Kashmar over the past 10 years reveals that about 56% of the immigrant population has entered the city in the past three years, indicating the intensification of the city's migration process in recent years (Bemanian et al., 2011).

Table 4. Villages under study in the research

(Source: Statistics Center of Iran, 2016)

Row	Village name	Number of households	Sample size
1	Ashrat Abaad	463	42
2	Mamar Abaad	362	33
3	Mohammadiyeh	440	40
4	Haji Abaad	202	21
5	Zنده Jan	518	49
6	Moghan	680	63
7	Kasrineh	639	58
8	Sarhozak	477	44
Total		3781	350

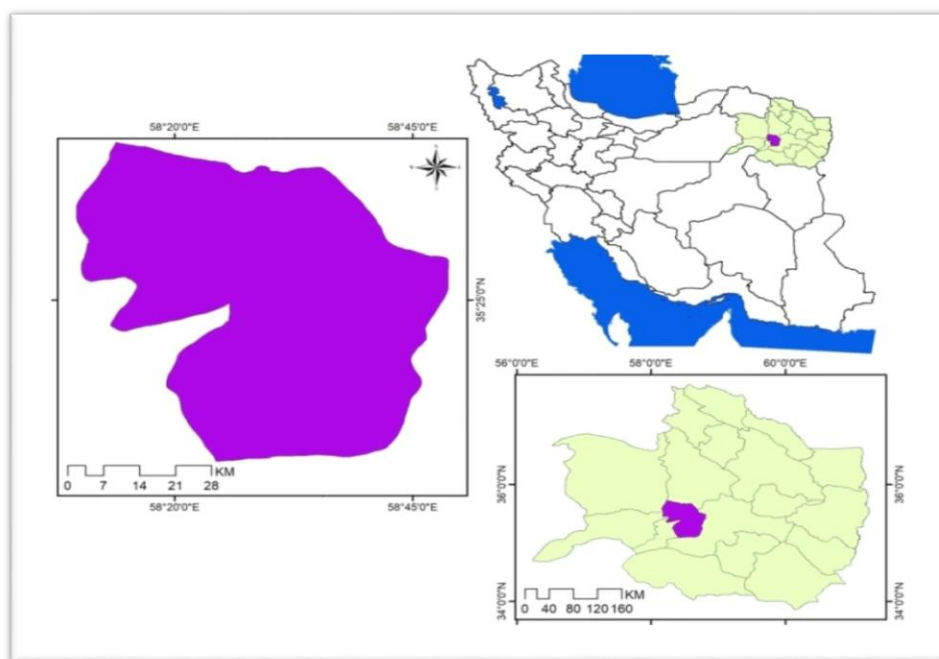


Figure 3. Map of the location of the villages of Kashmar

(Source: Research finding, 2017)

3.2. Methodology

This is a descriptive-analytic study in terms of the nature and objectives of the subject. Due to the novelty of the subject in Iran and also the small literature of this subject in rural studies in the world, indicators of livability in rural settlements were extracted and then, adapted to the conditions of villages in this city.

In the first stage, using the content analysis of previous international studies, the relevant indicators were extracted. In the second stage, using a questionnaire designed for researchers, among all the extracted indices and components, the research indicators were extracted using sources and then, a questionnaire was developed based on the five point Likert scale.

In order to evaluate the validity of the household questionnaire as the main tool for measuring the livability of villages in Kashmar, the geography and rural planning as well as rural development and sociology experts' comments were taken into account. After verifying the validity of the questionnaire by experts, Cronbach's alpha was used to determine the reliability that was 0.831, indicating an acceptable coefficient of reliability.

In this study, Cochran method is used for sampling. Rural households and the level of rural analysis were considered as the analysis unit for this research. The number of households in the villages was 3781 based on the census of 2016, of which, 350 households were selected using the Cochran formula for this study; moreover, the sample distribution was randomly conducted. Also, 20 questionnaires were added to the total number for obtaining more accurate results. Finally, data were analyzed using SPSS software and correlation and Friedman tests were used.

4. Research Findings

The results of field findings in each of the studied domains were calculated in the information tables and were presented in two parts: descriptive findings and analytical findings.

4.1. Descriptive findings

Table 5 reports descriptive characteristics of respondents, including age, education, and job status; notably, it shows the low level of education of the research population (62.9% diplomas and under-diplomas), which can partly affect the livability indicators.

Table 5. General characteristics of respondents

(Source: Research finding, 2017)

No.	Description: (age status)	Frequency	Percentage	No.	Description: (Educational level)	Frequency	Percentage
1	15-40	224	60.5	1	Reading and writing	101	27.3
2	41-60	114	30.8	2	Diploma	155	41.9
3	Above 60	32	8.6	3	Bachelor	99	26.8
No.	Description: (Job Status o)	Frequency	Percentage	4	Masters	15	4.1
1	Governmental	36	9.7				
2	Self-employed	202	54.6				
3	housewife	73	19.7				
4	Unemployed	5	1.4				
5	Others	54	14.6				

Each of the livability dimensions is dealt with below.

4.2. Analysis of economic dimensions of livability

Table 6 shows that the indicators of available job opportunities, proper income and availability of suitable jobs in the adjacent village or city showed

the highest mean with 4.06, 3.95 and 3.94, respectively. Sufficient illumination in housing had the lowest mean with 2.19, the quality of the pipeline gas network with 2.22 and the building strength with 2.23.

Table 6. Frequency, weight mean and standard deviation of economic components
(Source: Research finding, 2017)

Economic dimension	Items	Frequency					Average	Standard deviation
		very low	low	medium	high	very high		
Employment and income	Having a good job	0	16	103	171	80	3.85	0.80
	Access to a suitable job in an adjacent village or city	0	10	83	195	82	3.94	0.74
	A high number of job opportunities	0	35	53	191	91	3.91	0.87
	Proper income	55	11	89	157	108	3.95	0.87
	Available job opportunities	10	10	58	159	133	4.06	0.93
Housing	Building strength	10	26	227	92	21	3.23	0.77
	Suitable and sanitary bathroom	32	164	142	32	0	2.47	0.77
	Suitable heating and cooling system	21	147	144	31	27	2.71	0.96
	Sufficient illumination in housing	55	199	110	0	6	2.19	0.74
	Hygiene wastewater system	24	84	136	76	48	3.09	1.10
	Proper and adequate housing area	42	143	174	5	6	2.43	0.77
	Number of rooms in the house	16	122	207	20	5	2.66	0.70
Facilities and Services Infrastructure	Quality of access to the city	59	124	128	5	54	2.65	1.20
	The quality of access to the surrounding villages	42	99	132	54	43	2.88	1.15
	The quality of passages and squares	6	48	152	120	44	3.40	0.91
	The quality drinking water in the village	66	120	137	37	10	2.47	0.98
	The quality of supplying everyday needs by the grocery store	22	111	133	83	21	2.91	0.99
	The quality of the cooperative in the village or adjacent villages	0	15	117	133	105	3.88	0.86
	The quality of pipeline gas network	74	171	99	21	5	2.22	0.87
Public transportation	The number of public transport hours	10	70	110	115	65	3.41	1.06
	The number of public vehicles	26	69	93	107	75	3.36	1.19
	The number of vehicles for carrying loads	16	56	204	66	28	3.09	0.89
	Appropriate access to public transportation	6	96	92	69	107	3.47	1.20
	The quality of passenger transport by public transport	5	49	119	110	87	3.60	1.02

4.3. Analysis of the dimensions of social livability

The findings in Table 7, which have been prepared to measure the livability rate of social dimension indicators in rural areas of Kashmar, show that the

indicators of the quality of services and equipment in the gym, the quality of services for recreation and leisure spaces and the quality of services and the breadth of the library with the average of 4.55, 4.54 and 4.26, respectively, had the highest

averages. The lowest average was also attributed to the riders/drivers' safety indicators at night with 2.01, life in the village with suitable conditions for

living and working with 2.03 and a good relationship with relatives and neighbors in the village with 2.

Table 7. Frequency, weight mean and standard deviation of social components
(Source: Research finding, 2017)

Economic dimension	Items	Frequency					Average	Standard deviation
		very low	low	medium	high	very high		
public education	Adequate and suitable educational setting	15	42	139	101	73	3.47	1.05
	The quality of access to schools in adjacent city	31	70	121	119	29	3.12	1.07
	The quality of educational equipment of the school	10	41	131	96	92	3.59	1.06
	The quality of school buildings	11	56	119	120	64	3.86	3.56
	The quality of school teachers	20	132	141	48	29	2.82	0.99
Health	The quality of services of health home in the village	22	119	144	47	38	2.89	1.04
	Health care support	22	89	121	83	55	3.16	1.12
Cooperation and solidarity	Compassion for development of village	77	109	104	51	29	2.58	1.18
	The relationship of members of the Islamic Council and governor of the rural district	48	140	117	48	17	2.58	1.01
	People's cooperation during construction projects in the village	11	80	139	106	34	3.19	0.97
	The presence and sympathy of the village people in rural affairs	10	89	157	90	24	3.07	0.92
	Trusted members of the Islamic Council of the village	74	130	91	47	28	2.52	1.16
	The respect level of the village people	64	129	147	25	5	2.40	0.89
	The spirit of the team work among the villagers	38	76	141	82	33	2.98	1.09
Identity and place attachment	The desire to live in the village	70	105	79	83	33	2.74	1.24
	A sense of nostalgia in the distance away from the village	82	136	82	59	11	2.40	1.08
	Good relationship with relatives and neighbors in the village	105	170	58	31	6	2.08	0.95
	Having hope to improve living conditions in the village	68	130	90	44	38	2.60	1.21
	The desire to work in the village	94	97	76	81	22	2.56	1.24
	The desire to invest in the village	67	92	93	80	38	2.81	1.25
	Living in the village with suitable conditions for living and working	141	123	79	6	21	2.03	1.08
	The desire to spend leisure time in the village	89	128	97	34	22	2.38	1.12
	Believing in the village as a good place to live in the region	100	116	111	32	11	2.29	1.04
Individual and social security	Low crime rates (drug abuse, robbery and so on).	21	98	157	74	20	2.92	0.95

Table 7

Economic dimension	Items	Frequency					Average	Standard deviation
		very low	low	medium	high	very high		
Individual and social security	Low levels of conflict between newcomers and indigenous people	33	91	117	103	26	2.99	1.07
	Security of women's traffic within 24 hours	97	143	77	43	10	2.25	1.05
	The traffic security of the pedestrians at night	95	146	104	15	10	2.18	0.95
	The traffic security of the riders/drivers at night	38	113	94	25	0	2.01	0.94
	Traffic safety in the roads and streets in terms of the speed of cars within 24 hours	64	85	172	22	27	2.62	1.06
	The quality of the performance of police station	26	51	126	89	78	3.38	1.16
Recreation and leisure time	The quality of services and equipment in the gym	0	0	49	65	256	4.55	0.71
	The quality of services and the area of the library	0	10	41	159	160	4.26	0.76
	The quality of services for cultural and religious sites	63	138	106	43	20	2.51	1.07
	The quality of service of cultural and historical places	0	16	63	101	190	4.25	0.89
	The quality of services for recreation and leisure areas	5	0	36	76	253	4.54	0.77

4. 4. Analysis of environmental dimensions of livability

Table 8 shows the frequency, weight average and standard deviation of the environmental components. In this dimension, industrial pollution indicators with 4.36, the location of the children's

playground with 4.31, and the area of children's playground with 4.23, had the highest averages. The lowest average was also attributed to the quality of garbage collection with 3.02, calmness and lack of noise pollution with 3.04 and beautiful natural landscape with 3.10

Table 8. Frequency, weight mean and standard deviation of environmental components, (Source: Research finding, 2017)

Environmental dimension	Items	Frequency					Average	Standard deviation
		very low	low	Medium	High	very high		
Pollution	The quality of garbage collection	10	83	198	47	32	3.02	0.89
	The quality of surface water collection	5	77	132	113	43	3.30	0.97
	The quality of sewage collection	0	36	122	116	96	3.73	0.95
	Relaxation and lack of noise pollution	10	79	190	68	23	3.04	0.86
	Pollution from vehicle transportation	5	61	187	63	54	3.27	0.94
	Pollution from industrial factories	10	6	31	115	208	4.36	0.90
	Pollution from proximity to waste disposal site and construction waste	5	40	77	146	102	3.81	1
Landscape	Beautiful natural landscape	33	61	172	43	61	3.10	1.13

Table 8

Environmental dimension	Items	Frequency					Average	Standard deviation
		very low	low	Medium	High	very high		
	Proper landscape of buildings and architectural monuments	0	25	151	108	86	3.68	0.90
	Proper landscape of roads and streets	0	23	134	145	68	3.69	0.83
	The landscape of the green space of the village	5	25	90	142	108	3.87	0.95
public area	The area of the children's playground or the green space of the village	5	10	60	112	183	4.23	0.91
	The quality of children's playground in terms of security and cleanliness	5	10	57	125	173	4.21	0.89
	The location of the children's playground or the green space of the village	10	83	198	47	32	4.31	0.96

4.5. Final results

The Spearman correlation test was used to examine the relationship between individual characteristics (age, sex, education) and livability indicators. The results of the Spearman correlation test are presented in Table 9. The significance level of 11

obtained in the age variable is 0.07. As a result, there is no significant relationship between the two variables. Also, the level of significance was more than 0.05 for the variables of sex (0.96) and education (0.921). Therefore, there is no significant relationship between the individual characteristics of the respondents and the livability indicators

Table 9. Spearman test results

(Source: Research finding, 2017)

Variable	Value	Age	Sex	education
Individual characteristics	The correlation coefficient	-0.092 0.077 ns	0.02 0.963 ns	0.005 0.921 ns
	Significance level			
Livability indicator	number of samples	370	370	370

Table 10 shows the ranking of various dimensions of the livability of villages (economic, social and environmental). The mean rank of each dimension is reported in the table. The comparison of mean ranks indicates that the environmental dimension of the allocation of medicine had the highest mean rank (2.71), indicating that the villages have higher livability in the environmental dimension than other dimensions. Then, economic and social

dimensions are the most important dimensions of the livability of villages, respectively. It should be noted that the mean rank is different from the arithmetic mean and the two means are differently calculated. The value of the obtained chi square is equal to 312.04 which is at the error level less than 0.05 ($p < 0.5$). The significance of the Friedman test means that respondents consider the understudy dimensions to be differently ranked.

Table 10. Friedman test results

(Source: Research finding, 2017)

Dimensions	Mean rank	chi square	Degrees of freedom	Significance level	number of samples
Economical	1.85	312.049	2	0.000**	370
social	1.44				
environmental	2.71				

Table 11 shows the ranking of variables and social indicators. The mean rank of each of the indicators is reported in the table. The comparison of mean ranks indicates that the recreation and leisure time indicators had highest mean rank (5.50) as the best

status of social livability from respondents' viewpoints; then, general education, health, cooperation and solidarity, individual and social security, and identity and place attachment

Table 11. Mean rank of social indicators
(Source: Research finding, 2017)

Component	Average rating
public education	4.03
Health	3.38
Cooperation and solidarity	2.84
Identity and place attachment	2.42
Individual and social security	2.82
Recreation and leisure time	5.50

Table 12 is the most important Friedman test table, thus, before interpreting the other tables, the results of this table should be evaluated and, if the Friedman test is significant; then, the results of the descriptive tables and the mean rank should be interpreted. This table shows statistical significance. The chi square is 681.42, which is at

a level of error less than 0.005 ($p < 0.05$); therefore, the research hypothesis that "indicators of cooperation, health and education compared to other social indicators are in a worse situation" are rejected, and it can be concluded that social indicators (in terms of respondents) are effective in varying degrees.

Table 12. Friedman test results
(Source: Research finding, 2017)

number of samples	370
chi square	681.427
Degree of freedom	5
Significance level	0.000**

Table 13 shows the status of the ranking of variables and environmental dimension indicators. The mean rank of each of the indicators is reported in the table. The comparison of the mean ranks indicates that public space had the highest mean rank (2.61), which means that respondents are more satisfied with the indicator of public space than other environmental indicators. Subsequently,

landscape and pollution are the most important environmental indicators. The chi-square obtained is 223.83 at the error level less than 0.05 ($p < 0.05$). The significance of the Friedman test means that respondents have a different ranking between environmental indicators. Thus, the research hypothesis that "the pollution indicator is better than other environmental indicators" is rejected

Table 13. Friedman test results
(Source: Research finding, 2017)

Dimensions	Mean rank	Chi square	Degree of freedom	Significance level	number of samples
Pollution`	1.59	223.838	2	0.000**	370
Landscape	1.80				
public space	2.61				

5. Discussion and Conclusion

People are always looking for a positive and optimal response to satisfy their needs and demands in their

outer or peripheral environments. If the existing and objective conditions are adequate to meet their needs, it will lead to mental satisfaction and

ultimately, improvement of the quality of life (enjoyment of life), although by satisfying the old needs, new demands are emerging, and this cycle continues. Thus, successful and livable settlements should always be dynamic and responsive to the needs of their inhabitants (Isaloo & Bahrami, 2015, p. 111). Livability refers to a system in which the social, physical, and psychological health of all its inhabitants is considered. Key principles that reinforce this concept include equality, dignity, and access to infrastructure, food, clean air, relationships, recreation, participation and empowerment; therefore, livability is an approach that provides sustainable development if it is properly addressed (Jafari & Hamzeabadi, 2013, p. 172)

This study, which aimed to identify the indicators of livable rural communities and assess these conditions in the rural settlements of Kashmar, introduced 13 common indicators of the livable villages in four social, economic, physical and environmental dimensions. Results showed that economic indicators such as available job opportunities, proper income and access to suitable jobs in the adjacent village or city, among other criteria, had a significant impact on the rate of livability in rural areas of the city. These findings are consistent with those of Zhang Mao's (2010) study, which indicated that material and economic challenges, such as income levels and rural saving, are the main indicators for measuring living standards.

Among the economic indicators, the available job opportunities had the highest mean (4.26) and sufficient illumination in housing had the lowest mean (2.19). In terms of social dimension, indicator of quality of services and equipment in the gym, and the indicator of the traffic security of the riders/drivers at night had the highest and lowest mean, respectively, at a weight of 4.55 and 2.01. Also, in terms of environmental dimension, the highest and lowest mean of pollution indicators belonged to industrial workshops (4.36) and waste collection quality (3.02).

The Spearman test results show that there is no significant relationship between individual characteristics (age, gender, education) and life

indicators, and the first hypothesis of the research was rejected with 99% confidence. Khorasani et al. (2015) in a research entitled "Analysis of the effect of individual variables on the perception of livability of villages around the city (Case study: Varamin city)" concluded that there is a statistically significant relationship between the individual characteristics of sex, occupation and duration of residence in rural areas and livability, however, there is no relationship between age and educational level. The similar results of these two studies show that people in different age groups and different educational levels have identical attitudes on how they can satisfy their living needs.

The results of Friedman's test showed that villages have higher livability levels in the environmental dimension than other dimensions. In terms of the social dimension, the best livability status of respondents is the recreation and leisure time indicator (mean rank is 50/5), and other indicators are also effective in varying degrees. In terms of environmental dimension, respondents are more satisfied with the public space than other indicators. Previous studies on livability show that in each village, different factors affect livability that are different from those factors that affect other villages; for example, Khorasani and Rezvani (2013) conducted a study on the villages around Varamin city and pointed out that in terms of environmental livability, more than 80% of respondents were dissatisfied with the quality of landscape in all cases, including the natural landscape, buildings and architecture of buildings, streets and green space of the village. These results are inconsistent with the results of the present study, indicating that the identical approaches cannot be used in rural planning for rural development. Thus, the differences should be considered.

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تحلیل زیست‌پذیری سکونتگاه‌های روستایی

(مطالعه موردی: روستاهای شهرستان کاشمر)

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چکیده مبسوط

۱. مقدمه

اهمیت فزاینده زیست‌پذیری ناشی از افزایش آگاهی به الگوهای ناپایدار زندگی و مصرف ناسالم و ناپایدار است که در درازمدت موجب کاهش توان منابع محیطی برای حمایت از جمعیت زمین می‌شود. یکی از این نگرانی‌ها در هر جامعه رفع نیازها و خواسته‌ها (مسکن، انرژی، آب و مواد غذایی)، مدیریت ضایعات، بهداشت و امنیت عمومی، آموزش و پرورش و سرگرمی، تعامل اجتماعی، مشارکت‌ها، فعالیت‌های اقتصادی و نوآوری است که با دادن خدمات به مردم برطرف می‌شود. با توجه به این دیدگاه، زیست‌پذیری با زیر ذره‌بین قرار دادن این نیازها و خواسته‌ها در بیش‌تر مناطقی که روبه‌خامت هستند، مثل کاهش رفاه اقتصادی و افزایش نارضایتی اجتماعی، توجه زیادی را معطوف به این مناطق نموده است. سکونتگاه‌های روستایی واقع در شهرستان کاشمر همانند اکثر نقاط روستایی کشور طی نیم قرن اخیر با کاهش قابل توجهی از جمعیت روستایی مواجه بوده است. به استناد داده‌های ارائه شده از تعداد مهاجرین وارد شده طی ۱۰ سال گذشته به شهر کاشمر، حدود ۵۶ درصد طی ۳ سال گذشته وارد شهر شده‌اند که این امر حاکی از شدت گرفتن روند مهاجرپذیری شهر در سال‌های اخیر است. ساختار اجتماعی و کالبدی شهرستان کاشمر به چندین دلیل از جمله وجود مراکز آموزش عالی، وجود دو بافت عمده غیررسمی، جاذبه‌های شغلی و امکانات شهری بالا بودن نرخ اشتغال در شهر کاشمر می‌تواند مهاجرت روستائیان را در پی داشته باشد. بر این اساس تحقیق حاضر با هدف تعیین مؤلفه‌های سازنده جوامع روستایی زیست‌پذیر

و بر پایه مطالعات پیشینه به بررسی زیست‌پذیری از دیدگاه ساکنان نواحی روستایی در روستاهای شهرستان کاشمر خواهد پرداخت.

۲. مبانی نظری تحقیق

در حقیقت رویکرد زیست‌پذیری، ترویج و توسعه مفاهیم کیفیت محیط زندگی مردم است تا بهترین شیوه‌های زیستی برای آن‌ها فراهم شود و بنابراین، هدف نهایی مطالعه زیست‌پذیری محیط زندگی و کاربرد متعاقب آن این است که زندگی مردم کیفیت زیادی داشته و هدفمند و لذت‌بخش باشد. در شرایط واقعی، محیط‌های روستایی به دلایل مختلفی مانند جمعیت کم، دوری از مرکز، انزوای جغرافیایی، ساختار اقتصادی متکی بر کشاورزی و ... از مشکلات متعددی رنج می‌برند و با توجه به شرایط زندگی جوامع شهری، شرایط و کیفیت زندگی در محیط‌های روستایی با واقعیت‌ها و استانداردهای زندگی انسانی معاصر تفاوت بسیاری دارد و این، شرایط زیست و سکونت را در محیط‌های روستایی با چالش مواجه کرده است. از این‌رو، در شرایط فعلی، زیست‌پذیری سازی روستاها از لحاظ ایجاد شرایط مناسب برای زندگی مطلوب و استاندارد و جلوگیری از تخریب روستاها و مهاجرت روستایی بسیار ضروری است. هر یک از برنامه‌ریزان و نظریه‌پردازان مختلف بسته به حیطه عملشان، تعاریف متفاوتی از روستای زیست‌پذیر ارائه داده‌اند. این تعاریف در مواردی بسیار نزدیک و مکمل یکدیگرند که در ادامه به تعدادی از آن‌ها اشاره می‌شود: - روستای زیست‌پذیر، روستایی است که برای همه اقشار جذاب، امن و مناسب است؛ نه فقط برای آن‌ها که در گروه سنی خاصی باشند. - روستای زیست‌پذیر از یک سو به گذشته‌های تاریخی و ریشه‌های روستائیان احترام می‌گذارد و از سوی دیگر به آنان که متولد نشده‌اند

* نویسنده مسئول:

۵. بحث و نتیجه گیری

نتایج نشان می دهند که شاخص های اقتصادی مانند شاخص های فرصت های شغلی موجود، درآمد مناسب و دسترسی به شغل مناسب در روستا یا شهر مجاور و ... در میان سایر معیارها، تأثیر به سزایی در تعیین میزان زیست پذیری در نواحی روستایی این شهرستان داشته است. در میان شاخص های مورد بررسی در بعد اقتصادی، بالاترین میانگین مربوط به شاخص فرصت های شغلی موجود (۴/۰۶) و پایین ترین میانگین مربوط به شاخص روشنایی کافی در مسکن (میانگین ۲/۱۹) است. در بعد اجتماعی بالاترین و پایین ترین میانگین به ترتیب متعلق به شاخص کیفیت خدمات و تجهیزات سالن ورزشی و شاخص امنیت تردد سواره در شب با وزن ۴/۵۵ و ۲/۰۱ بوده است. همچنین در بعد زیست محیطی بالاترین و پایین ترین میانگین مربوط به شاخص های آلودگی ناشی از کارگاه های صنعتی (میانگین ۴/۳۶) و شاخص کیفیت جمع آوری زباله (۳/۰۲) است. در ادامه نتایج آزمون اسپیرمن گویای عدم رابطه معنادار بین ویژگی های فردی (سن، جنس، تحصیلات) و شاخص های زیست پذیر است و فرضیه اول تحقیق با ۹۹ درصد اطمینان رد شد. نتایج آزمون فریدمن نشان داد روستاها در بعد زیست محیطی از زیست پذیری بالاتری نسبت به سایر ابعاد برخوردارند. در بعد اجتماعی نیز بهترین وضعیت زیست پذیری از نظر پاسخگویان، شاخص تفریح و اوقات فراغت (میانگین رتبه ۵/۵۰) است و شاخص های دیگر نیز با درجات متفاوتی مؤثر هستند. پاسخگویان در بعد زیست محیطی در رابطه با شاخص فضای عمومی از رضایت بیشتری نسبت به سایر شاخص های آن برخوردارند.

کلیدواژه ها: زیست پذیری، سکونتگاه روستایی، روستائیان، کاشمر.

تشکر و قدرانی

پژوهش حاضر خروجی طرح پژوهشی با عنوان "تحلیل زیست پذیری سکونتگاه های روستایی (مطالعه موردی: روستاهای شهرستان کاشمر)" و بدین وسیله از دانشگاه پیام نور که هزینه اجرای این طرح پژوهشی را تأمین کرد، قدرانی می کنیم.

نیز اهمیت می دهد و همچنین این نوع روستا علیه هرگونه اتلاف منابع مبارزه می کند، بنابراین روستای پایدار نیز محسوب می شود. روستاهای زیست پذیر مکان هایی برای زندگی اجتماعی، ارتباط و گفتگو هستند. این روستاها محیط سکونت و فعالیت و طراحی فضای عمومی را به گونه ای خلق می کنند که زمینه حضور ساکنان در قلمرو عمومی را فراهم می سازد.

۳. روش شناسی تحقیق

روش تحقیق در پژوهش حاضر با توجه به ماهیت و اهداف موضوع، توصیفی-تحلیلی است. با توجه به نبودن موضوع تحقیق در کشور و نیز سابقه اندک این موضوع در مطالعات روستایی در سطح جهان، اقدام به استخراج شاخص ها و نماگرهای زیست پذیری در سکونتگاه های روستایی و در مرحله بعد، انطباق آن ها با شرایط روستاهای این شهرستان گردید. واحد تحلیل این تحقیق خانوارهای روستایی بوده اند و سطح تحلیل روستا است. تعداد خانوار روستاهای مورد مطالعه بر اساس سرشماری سال ۱۳۹۵، ۳۷۸۱ خانوار است و با فرمول کوکران، تعداد ۳۵۰ نفر حجم نمونه انتخاب و توزیع نمونه به صورت تصادفی صورت گرفته است. البته برای دقت بیشتر در ارائه نتایج تعداد ۲۰ پرسشنامه به تعداد کل افزوده گردید. در نهایت داده ها با استفاده از نرم افزار SPSS و آزمون های همبستگی و فریدمن تحلیل شد.

۴. یافته های تحقیق

نتایج آزمون اسپیرمن گویای نبود رابطه معنادار بین ویژگی های فردی (سن، جنس، تحصیلات) و شاخص های زیست پذیری است. همچنین نتایج آزمون فریدمن نشان داد روستاها در بعد زیست محیطی نسبت به سایر ابعاد، زیست پذیری بالاتری دارند. در بعد اجتماعی نیز بهترین وضعیت زیست پذیری از نظر پاسخگویان، شاخص تفریح و اوقات فراغت (میانگین رتبه ۵/۵۰) است و شاخص های دیگر نیز با درجات متفاوتی مؤثر هستند. پاسخگویان در بعد زیست محیطی در رابطه با شاخص فضای عمومی نسبت به سایر شاخص های آن رضایت بیشتری دارند.

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