

Research Paper: The Effect of Enhancing Components of Environmental Quality of Life on Sustainable Development in Iran (With an Emphasis on Empowerment Mechanism)



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Citation: Shafiei Sabet, N., Rahbari, M., & Ghorbani, M. (2020). The Effect of Enhancing Components of Environmental Quality of Life on Sustainable Development in Iran (With an Emphasis on Empowerment Mechanism). *Journal of Sustainable Rural Development*, 4(1), 71-88. <https://doi.org/10.32598/JSRD.03.02.05>

doi: <https://doi.org/10.32598/JSRD.03.02.05>

Article info:

Received: 11 Agu. 2019

Accepted: 19 Feb. 2020

Keywords:

Quality of Life, Rural Environment, Sustainable Development, Empowerment, Iran

ABSTRACT

Purpose: The present article presents the components of environmental quality of life (with an emphasis on the empowerment mechanism) and their effect on sustainable development.

Methods: This study was conducted using the descriptive-analytical method in the form of a set of 7 independent variables on the enhancement of environmental quality of life. These variables include Educating and Informing, Cognition and Awareness, Transparency, Creating Equal Opportunities, Assurance, Trust and Empathy, Sense of Belonging and Social Responsibility and Participation. Moreover, a band of 4 dependent variables of the sustainable development were examined which include the Environmental, Social, Economic, Physical, and Infrastructural variables.

Results: The results, which have been analyzed by utilizing single-sample T- statistical test, the linkage measure of Kendall's tau-b correlation, and multivariate regression, using SPSS software, show the low quality of the enhancing components of the environmental quality of life in the study area.

Conclusion: Most of the surveyed indicators of the quality of life do not explain the future status of sustainable development of rural settlements in the study area and do not improve its dimensions under the current conditions. Therefore, changing and correcting the existing situation by choosing the appropriate social and economic policies of the state and applying appropriate methods for the empowerment of the rural community has been emphasized.

1. Introduction

One of the most important social and political issues in today's society due to the decrease of capacity of the natural envi-

ronment is how to improve the quality of human life and also the long-term adaptation among human, natural and economic capitals (Malkina-Pykh & Pykh, 2008; Fang et al., 2020). The area of quality of life and its measurement may not have been as large as today (Kac-

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zmarek et al, 2017). On the other hand, improving the quality of life can include other fields of development such as social, economic, physical, and service development.

In Iran, paying attention to rural development has been considered a necessity in the form of the planning system as a part of the development process on the national scale.

However, what is seen in the planning system of rural development of the developing countries such as Iran is the consideration of a one-sided attitude and mechanical and technical method approaches (Quaghebeur et al., 2004).

Lack of attention to appropriate educational policies and strategies, lack of attention to the system and optimal patterns of informing villagers, lack of confidence and responsibility of rural residents (Janssens, 2009), and absence of villagers as the most important beneficiaries of the sustainable development planning system in rural areas can be the result of poor development and unsatisfactory quality of life in rural areas (Fazelnia & Eftekhari, 2005).

Due to these challenges, over time, national and international development brokers have been convinced that rural development strategies should be more comprehensive because of the complexity of the determinants of the development process. Thus, comprehensive rural development approaches and generally qualitative features of development have emerged because of the influence of new development paradigms such as sustainability, spontaneous and conscious participation, self-awareness, environmental awareness, capacity building, and empowerment (Mahmud et al., 2011). What has been done so far in the area of studies on the quality of life in urban and rural communities has been the assessment of the level of quality of life by using subjective and objective elements as well as the development of the kind of indicators and components used in measurement and assessment of the level of quality of life in rural communities.

In this regard, Fahy and Cinneide (2008) have formulated the quality of life as one of the most important factors in sustainable development. This study seeks to produce and enforce an operational framework to evaluate the quality of life in urban environments and apply its results to adopt laws and to enforce appropriate policies to improve the quality of citizens' life. Simone et al (2015) studied a set of indicators in 43 countries in

1999 relating to the quality of life including health, environmental quality, relationships with friends and family, welfare, a sense of belonging to the local community, and personal security. Abdul Mohit (2014) reviewed the future orientation of studies of the quality of life in Malaysia. He stated that the studies of the quality of life should move towards regional and trans-regional cultural differences in this country and offered suggestions based on policymaking and adaptation of laws based on conducted assessments associated with quality of life. In his study, Marans (2015) reviewed and assessed the nature of quality of life based on the two indexes of human development and the Legatum Prosperity Index in European Union member states. Mahmud et al. (2011) examined the positive effect of education, social services, and healthcare facilities on the improvement of the quality of individuals' life among poor communities. He proposed to address the quality of life studies based on educational and cultural components. Ebrahimzadeh et al. (2016) studied urban management performance indicators including social life, urban economy, quality of residence, access to transportation networks, access to urban services, and the quality of the built environment on the enhancement of the quality of life in Maragheh city.

In this study, in the discussion on improving and enhancing the quality of rural life, which is in line with the discussion on sustainable rural development, the basic emphasis is on the overall use of villagers' opinions in different affairs of life, mainly in the form of capacity building mechanisms and the empowerment of villagers (Fazelnia & Eftekhari, 2005).

Meanwhile, the empowerment approach is derived from the initiative of issues such as human development, choice, power, control over life and resources, the ability to make decisions and skills, and generally through influence on what is important to individual and family life, and its result is the enhancement of the quality of life (Pacion, 2003).

The new development model considers human attention as a basic act, the ultimate goal, and in the center of all related activities. Thus, through the promotion of human development, creation of appropriate opportunities for people, and role of different community groups, conditions must be provided to ensure their security, enhance their sense of competence, dignity, self-esteem, public awareness, influence, and freedom (Johansen & Chandler, 2015). Accordingly, improving the quality of the rural living environment and consequently achiev-

ing sustainable development depends largely on how to develop and improve their human resources. .

According to the opinions expressed about the promotion of the quality of life, the main challenge that faces the rural regions of Iran is the problem of poverty and low quality of rural life; mostly in terms of subjective perceptions and intrinsic satisfaction of their living conditions. This manifests itself in the form of widespread migration from rural areas to cities, the withdrawal of active forces from the agricultural sector, increasing urban population, urban marginalization (Marans, 2012), false jobs, and many other destructive consequences. The experience of implementing development and construction projects over more than three decades in Iran has shown that it has made significant changes in rural areas in terms of objective, physical, and infrastructure elements. However, what has been neglected in this process is the participation of villagers in the development programs besides the approaches and policies of the village.

Besides, empowering villagers in terms of education, informing, participation, sense of responsibility as well as the factors arising from out of village policies including the performance of government institutions in decision making, implementation and clarifying the governmental policies for rural residents finally, contribute to improving the quality of life and the development of rural areas.

Due to the challenges posed in rural areas and the need to improve the quality of rural life in line with the new pattern of development (capacity building and empowerment), it would be necessary to study and measure the effect of empowerment indicators on the improvement of the quality of life in rural areas. In response to this necessity, the present study seeks to assess the extent of the enhancement of the quality of life and thus environmental, socioeconomic, physical, and infrastructure sustainability of rural settlements, which is done by empowering villagers and planning for the future of the villages.

2. Literature Review

Environmental Quality of Life

The Quality of the Environment is an abstract concept that acts as a result of human and natural tasks at different spatial scales (Radjhanbany & Partovi, 2011).

Indeed, it can be said that the quality of life environment is a multidimensional concept that can be per-

ceived as one's perception of his position in life according to cultural and value contexts, in respect to goals, expectations, and standards (Zhao et al., 2009).

Some people have interpreted the quality of life as the livability of an area, some others argue that it can be an extension of the degree of attractiveness, and some other people assume that it can be public welfare, social welfare, happiness, satisfaction, etc. (Epley & Menon, 2008). Therefore, in total, the quality of the rural living environment consists of the social, economic, and physical conditions of the rural environment, which reflect villagers' satisfaction or dissatisfaction with the rural environment and their residential environment (Shokri Firuzjah, 2014). Two types of indicators can be identified to measure the quality of the environment. Objective indicators and subjective indicators (Ebrahimzadeh et al., 2016).

Based on the real characteristics of the environment, objective indicators are indicators that can be measured by physical methods and by humans. The subjective indicators are the perceptual and emotional responses that are stimulated by the conditions of the living environment. The criterion to measure these effects is assessing a person's degree of personal satisfaction or dissatisfaction with his living conditions (Wang et al, 2010). We should use a combination of objective and subjective indicators at the same time to provide a proper understanding of the quality of urban or rural life. In other words, considering both the city on the ground and the city in the mind (Pacione, 2003).

Environmental Quality of Life and Empowering Villagers

International experiences have shown that for successful, rural sustainable development, motivating local resources, empowering villagers and engaging them in decision-making and accountability and engagement in their destiny to raise the quality of life (Subramaniam et al., 2013), which is a central part of sustainable development, is inevitable (Eftekhari et al., 2012).

The mechanisms of empowerment and capacity building that need to be promoted as part of the potential and abandoned human and environmental competence of individuals and communities to develop and promote self-sufficiency are among the promotional strategies (Fazelnia & Eftekhari, 2005; Etuah et al., 2020).

Today empowerment is important because it is considered a new strategy in sustainable development and it is

hoped to achieve balanced and sustainable development by applying it. The concept of empowerment is the key to the definition of responsibility and power in different classes of society to pave the way for theory and practice in recent years (Mackinnon, 2002; Kazembe, 2020). The direct indication of empowerment is coping with powerlessness factors (Monkman et al., 2007).

In the simplest definition of empowerment, it can be considered as a process in which groups of people and societies become aware of the current situation of life and prevailing conditions and improve the quality of their living environment by identifying their needs and assets, and appropriate, informed, and organized planning (Lopez & Pastor, 2015).

On this basis, people and local communities are empowered and this power is a kind of synergy with others to achieve effective change (Wang, 1997; Richardson et al., 2019).

Hence, villagers can increase their confidence and self-esteem through interaction with facilitators to resolve their problems (Cherayi & Jose., 2016).

What is widely considered in empowerment theory is to move towards the participatory approach and shift from the system obeying the superior commands, to the bottom-up demand system, and this means local bottom-up development (Thompson, 2016).

Generally, it can be said that empowerment is associated with economic development, providing socioeconomic welfare, and providing justice by ensuring comprehensive participation of villagers in matters which are associated with their lives. It is necessary to accomplish the major goal of rural sustainable development which generally brings about the enhancement of the quality of rural life (Bebbington et al., 2005; Eftekhari et al., 2012).

Environmental Quality of Life, Empowering Villagers, and Rural Sustainable Development:

The complex relationships between the characteristics of rural and urban environments at different scales and the satisfaction of the residents of a city with the quality of life domains are certainly difficult to model without a theoretical framework to guide the process (Marans, 2012; Arora & Kalra, 2018). The determination of an appropriate framework in society to evaluate the quality of the living environment; a framework that studies suitable political reactions to improve certain elements

of sustainable development (socioeconomic and environmental factors) (Fahy & Cinneide, 2008; Ma et al., 2020). Since the quality of life has been integrated with sustainable development indicators, nowadays the main comprehensive planning steps in the field of sustainable development in rural areas are to enhance the quality of rural residents' life. Moving toward sustainable development requires the integration of economic, social, and environmental principles at all levels from global to local, and policies and strategies determined to achieve sustainable development at the local level, especially in rural communities, affect the discussion of the quality of life and consideration of the quality of life (Fahy & Cinneide, 2008). Based on one of the definitions of sustainable development, Rural Sustainable Development is a process of increasing people's choice, increasing democratic participation, increasing happiness and welfare, increasing opportunities and potential capacities, empowering all people especially women (Pini, 2002; Moral et al., 2015) and the poor and smallholder farmers to organize their living space (Han et al., 2019).

In this sense, in terms of rural sustainable development, the basic emphasis is to broaden the alternatives facing the people (Lopez & Pastor, 2015) to reveal hidden things within people or communities, mainly in the form of capacity building mechanisms and empowerment (Costanza, 2007).

The relationship between empowerment and sustainable development can be studied in three ways: 1. Empowerment is one of the components of sustainable development. 2. Empowerment has been considered a factor of sustainable development. 3. Empowerment is the cause of sustainable development (Fernández et al., 2015). Therefore, it is not possible to achieve sustainable development without empowering villagers, and to pursue sustainable rural development goals and better quality of life, each strategy must necessarily emphasize promoting their abilities, awareness, skills, aspirations, self-confidence, and ability to better control their environment (Jeffrey, 2005; Fazelnia & Eftekhari, 2005). Two models have been suggested to explain the relationship between the quality of life and other variables, including the degree of development. First, the up-down model that is based on the assumption that quality of life is a fixed attribute that causes deliverables from certain outcomes in the lives of individuals. Second, the bottom-up model that is grounded in the supposition that certain factors influence people's quality of life. Attitudes, perceptions, and attitude of people towards their lives and generally their attitudes towards how to live

makes the concept of quality of life relative. One of the criticisms of determining the indicators of the sustainability of quality of life is the top-down approach in the development of indicators of sustainability; however the emphasis of researchers and scientists is on the bottom-up approach which stresses the importance of the deep understanding of the local community and their specific needs. Thus, they allow local communities to participate in choosing, collecting, and reviewing the sustainability of the indicators of the quality of life. Of course, an exclusive emphasis on the bottom-up approach cannot be a safe direction to determine the indicators of sustainability. Hence, the stress is on the linkage and the composition of the top-down and the bottom-up approaches. This means that indicators of sustainability have been assessed by experts and specialists as official and legal, but their selection depends on the social and political preferences and priorities of the local community (Pacino, 2003; Esparcia et al., 2015). The empowerment of the

rural communities is an essential concern in enhancing the quality of rural life and achieving rural sustainable development. Empowerment refers to the use of villagers through overcoming the feeling of powerlessness and helplessness, promoting accountability, increasing social participation, improving educational status, increasing social welfare indicators, and strengthening the social capital (Hamdan et al., 2014) (Tables 1 & 2).

Conceptual Model

To examine the position of empowering villagers and enhancing components of the environmental quality of life in enhancing components of the rural sustainable development in the study area in Iran by reviewing the research literature, Figure 1 was modeled as a general framework to determine the relationships between effective research variables.

Table 1. Affecting components and indicators related to the subject of research

Independent component	Indicators	Researches
Enhancing components of environmental quality of life	Educating and Informing	Jeffrey, 2005; Epley & Menon, 2008; Janssens, 2009; Shamaei et al., 2012; Abdul Mohit, 2014; Ebrahimzadeh et al., 2016; Hamdan et al., 2014
	Cognition and Awareness	Jeffrey, 2005; Epley & Menon, 2008; Janssens, 2009; Shamaei et al., 2012; Hamdan et al., 2014; Abdul Mohit, 2014; Ebrahimzadeh et al., 2016
	Transparency	Shamaei et al., 2012
	creating equal opportunities	Bebbington et al., 2005; Epley & Menon, 2008; Shamaei et al., 2012; Hamdan et al., 2014
	Assurance, trust, and empathy	Jeffrey, 2005; Epley & Menon, 2008; Janssens, 2009; Shamaei et al., 2012; Abdul Mohit, 2014; Ebrahimzadeh et al., 2016
	A sense of belonging	Abdul Mohit, 2014
	Social responsibility	Jeffrey, 2005; Epley & Menon, 2008; Janssens, 2009; Shamaei et al., 2012; Hamdan et al., 2014; Abdul Mohit, 2014; Ebrahimzadeh et al., 2016
	Participation	Jeffrey, 2005; Bebbington et al., 2005; Epley & Menon, 2008; Shamaei et al., 2012; Ebrahimzadeh et al., 2016; Abdul Mohit, 2014; Hamdan et al., 2014

(Reference: Analysis based on the literature and background of the research, 2020)



Table 2. Dependent components and indicators related to the subject of research

Dependent components	Indicators	Researchers
Sustainable development	Environmental-ecological, socio-economic, physical-instructor.	UNDP, 1994; Amarasinghe, 1998; Bruff & Wood, 2000; OECD, 2001; UN, 2001; World Bank, 2002; FAO, 2005; Scerri & James, 2009; Servaes et al., 2012; Chiranjeevee & Harald, 2012; Palmisano et al., 2016; Poudel et al., 2016; Straka & Tuzova, 2016; Puppachai & Zuidema, 2017 &

(Reference: Analysis based on the literature and background of the research, 2020)



The Geographical Location of the Study Area

The region under study here includes the villages on the edge of and surrounding Kavir Desert in Semnan Province, Iran (Figure 2). Since the geographical region has a special status due to the desert establishment, vil-

lages of this region have been chosen for examining the quality of life. Villages in this area are located between the Central Alborz Mountain range in the north and the border of the desert plains and the central plateau of Iran in the south.

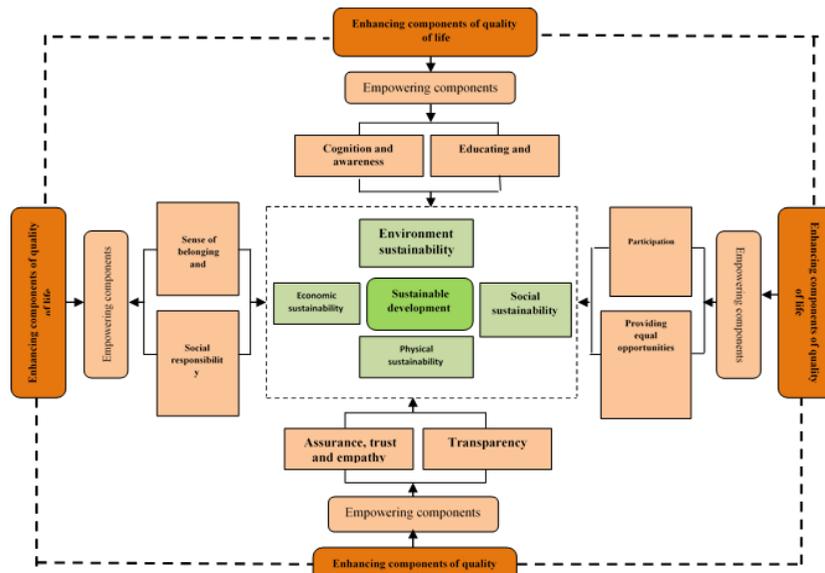


Figure 1. Conceptual framework of research. (Reference: Based on the review of the literature and background of the research, 2020)

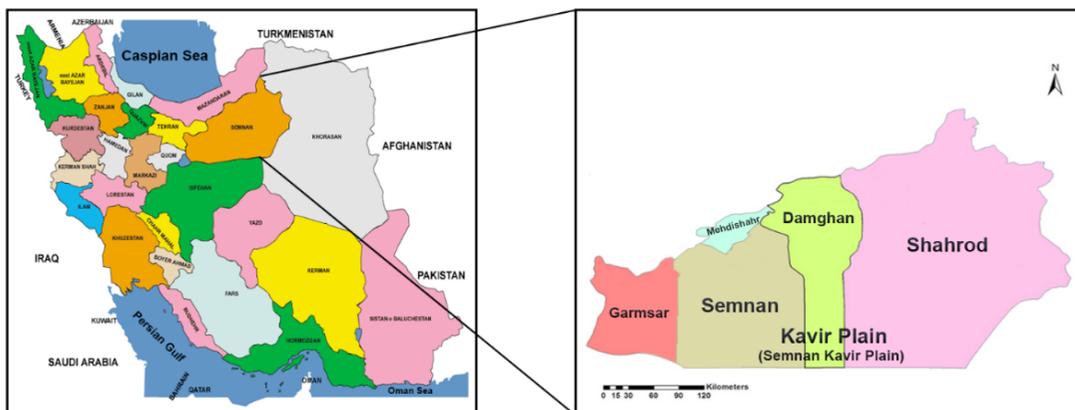


Figure 2. Location of Damghan County in Semnan Province



3. Methodology

The present study is basic research in terms of the purpose and descriptive-survey research in terms of the methodology and data collection method and is research-based regarding the nature of the data. In this study, a set of seven indicators (Educating and Informing (14 items), Cognition and Awareness (10 items), Transparency (6 items), Creating Equal Opportunities (4 items), Assurance, Trust and Empathy (13 items), A Sense of

Belonging and Social Responsibility (5 items) and Participation (20 items)) (Table 3) have been studied. Also, regarding the process of sustainable development, a set of four indicators (Including environmental– ecological (13 items), economical (38 items), social (23 items)) and physical and infrastructural (28 items) indicators) were applied to the process of the enhancement of environmental quality of life (independent variable) in the sustainable development (dependent variable) (Table 4).

Table 3. Indicators for measuring the enhancement of environmental quality of life process

The indexes and the procedure of the enhancing variables of the quality of life (independent variable)	
Indicators	Items
Educating and Informing	The rate of investment of responsible bodies associated with hiring propagative forces and training workshops, The level of success of performing training courses The level of villagers' access to rural educational opportunities, The level of applicability of provided educating, The level of relevance of the provided training with local activities, The rate of educational programs provided to villagers in different aspects of the village etc.
Cognition and Awareness	The level of villagers' awareness of socioeconomic and environmental issues The level of villagers' awareness to raise the productivity of agricultural and non - agricultural production factors the level of villagers' awareness of investment situation and the distribution of credits in rural areas the level of villagers' awareness of decision making by responsible institutions in the field of economic, social, construction activities, etc.
Transparency	The level of information and transparency of the authorities in the field of regulations related to rural developmental projects The level of informing and clarifying the purpose of implementing various rural developmental program and projects The level of promises which have done by accountable institutions The level of transparency of accountable institutions in the field of economic, social, and constructional activities, etc.
creating equal Opportunities	The level of independence of local organizations in rural areas from governmental institutions, The level of paying attention to the interests of all beneficiaries, NGOs enjoyment of socioeconomic resources of rural, The level of equal opportunities between women and men etc.
Assurance, Trust and Empathy	The level of delegation of authority to local authorities, The level of cooperation between the decision - making bodies in the village, The level of empathy and compassion of authorities with the public, The level of paying attention and care to the villagers, The level of villager's trust to the local managers , The level of trust and coherence of rural resident with each other, The level of paying attention and supervision of rural residents in the local development programs etc.
Sense of belonging and Social responsibility	A sense of responsibility of villagers in the field economic, social and constructional activities The amount of residents ' sense of belonging to the village where they live The level of sense of responsibility of local authorities in the field of various issues of rural The tendency of villagers to stay in the village etc.
Participation	The level of commitment of managers and authorities to participate in rural residents in decision-making and implementation The importance of the participation of villagers in developmental projects from the look of high-level managers The importance of creating public institutions from projects from the look of high-level managers The level of association and participation of high-level managers with rural managers The level of villagers' participation in socio-economic and constructional decisions The rate of non-governmental social organizations The rate of non-governmental economic organizations The membership and participation of villagers in rural local groups The level of villagers' participation in council meetings The level of villager's participation in the establishment of infrastructural, educational and cultural, health and treatment facilities installation, etc.

(Reference: Analysis based on the literature and background of the research, 2020)

Table 4. Indicators for measuring the process of rural sustainable development

Explanation of the indicators and the operation of the enhancing variables of the rural sustainable development process (Dependent variable)	
Environmental dimension	<ul style="list-style-type: none"> The level of improving the quantity and quality of rural drinking water resources The level of improving the quantity and quality of the sources of agricultural water supply The level of improving soil usage in the village The level of Improving biodiversity in the village The level of Improving rubbish collection and disposal system in the village The level of improving rural sewerage network system The level of improving the rural environment The level of decreasing chemical pesticides and agricultural pesticides the level of improving the land covered by new irrigation in the village etc.
Social dimension	<ul style="list-style-type: none"> The level of increasing rural population The level of increasing villagers' inclination to stay in the village The level of increasing the number of men and women literates in the village The level of increasing the educational level of men and women in the village The level of improvement and expansion of educational facilities in the village The level of increasing awareness of villagers in the field of economic and social issues in the village The level of increasing economic skills training to villagers The level of Increasing villagers' public awareness and information The level of Increasing empowerment of residents in the field of rural economic, social and construction participation The level of enhancing and improving the interaction and participation of villagers with rural managers The level of Increasing social cohesion of villagers The level of increasing people's trust to each other etc.
Economic dimension	<ul style="list-style-type: none"> The level of Increasing the number of employed men and women The level of Increasing total agriculture and non-agricultural employment The level of Increasing the number of workers in agricultural and non-agricultural activities The level of Increasing and expanding a variety of rural agricultural and non-agricultural activities The level of Increasing irrigated and rain-fed agricultural land in the village The level of Increasing farming and gardening agricultural land in the village The level of Increasing the share of rural residents in rural poultry and livestock production The level of Increasing the share of rural residents in non-agricultural employment the share of rural residents in the processing of farming and gardening products The level of Increasing villagers' access to rural credit services and loans etc.
Physical and infrastructure dimension	<ul style="list-style-type: none"> The level of Improving houses built with durable materials The level of Improving public access to services The level of improving the situation of rural road and passages The level of Expanding the landline and mobile phone communication networks in rural areas The level of the villagers' enjoyment of agricultural inputs in the village The level of enjoyment of villagers of health home Services The level of enjoyment of villagers of a general practitioner, specialist, dentists, paramedics, and midwives, etc.

(Reference: Analysis based on theoretical foundations, literature, and background of the subject, 2020)



The Statistical population in this study is the villages on the edge of and surrounding Kavir Desert in Semnan Province, Iran. According to the population census in 2016, there were 394 villages with 45816 households and 141858 people in this area. According to the nature of the present research, the clustering and classification method has been used. In this way, each county was determined as a cluster, and then from each cluster, based on population and topography, number of classes were determined. First, 40 villages were selected as a sample from 394 inhabited villages, and based on the PPS¹ method, the number of samples (villages) in each county

1. Probability proportional to size

was determined. Then, in the next stage, rural areas were divided into different classes based on topography and population, and the number of samples in each county was determined based on the natural location and the population, using the Probability Proportional to Size (P.P.S) method. Finally, according to the P.P.S method, the sample size of the household questionnaire in each village was obtained using Cochran's formula ($n = 400$), and in each village, a questionnaire was conducted based on the questionnaire tool. A statistical test was performed on the data obtained from the questionnaire after coding the data and entering it into SPSS.

Therefore, at first, One-sample T-test was used to evaluate the environmental quality of life in terms of promotional indicators. In the next step, Kendall's tau-b coefficient was used to investigate the relationship between the environmental quality of life and the process of sustainable development. Finally, a multivariate regression test was used to investigate the effect of indicators that improve the environmental quality of life on the process of sustainable development of rural settlements in the study area. Besides, to ensure the face validity and content validity of the questionnaire, three academic experts in the field of rural planning reviewed the questions and items of the questionnaire and expressed their corrective opinions. Besides, to assess the reliability of the questionnaire, Cronbach's alpha method was used, which has been described in the following table (Tables 5,6 &7).

4. Findings

Descriptive Findings

Based on the information obtained and according to the table, the main governmental organizations providing educational services to the villagers and local management are the Ministry of Agriculture, the Housing Organization, and institutions related to the Ministry of

the Interior such as the Government Office, Provincial Government and in particular the County Office. Each of these governmental agencies is active in its respective sector and provides villagers and local government with necessary training related to the intended parts. For example, the agriculture sector, which is responsible for agriculture and food security, provides necessary training in rural areas such as livestock breeding, cultivation, gardening, aquaculture, rural fisheries industry, promotion of agriculture, etc. The Housing Organization, which is responsible for the physical and infrastructure affairs in rural areas, provides necessary training in rural areas such as valuable rural, context, method of construction, rural paths, etc. Besides, the organization related to the Ministry of Interior provides necessary training in matters such as waste management, crisis management, employment and investment, entrepreneurial courses, attracting public participation, etc. It should be noted that the mentioned training is limited to the local management and the villagers do not use many of these trainings. Besides, the non-governmental organizations and institutions have a very small role in their education and position in rural areas. Only governmental agencies are responsible for providing the necessary training to the local management in necessary cases (Table 7).

Table 5. The reliability coefficient of the variable indexes of the environmental quality of life (independent variable)

Independent variable	Indicators	Number of items	Reliability coefficient
Environmental quality of life of life	Educating and Informing	14	0.745
	Cognition and Awareness	10	0.781
	Transparency	6	0.809
	creating equal Opportunities	4	0.886
	Assurance, Trust and Empathy	13	0.698
	Sense of belonging and Social responsibility	5	0.711
	Participation	20	0.910

(Reference: research findings, 2020)



Table 6. Reliability factor indices of sustainable rural development (dependent variable)

Dependent variable	Indicators	Number of items	Reliability coefficient
Sustainable Rural Development	Environmental dimension	13	0.658
	Social dimension	23	0.706
	Economic dimension	38	0.801
	Physical and infrastructure dimension	28	0.714

(Reference: research findings, 2020)



Table 7. Governmental institutions which educate the villagers and provide educational items to them

Governmental institutions, which are educating			
The enhancing component of the environmental quality of life	The Ministry of the Interior (the Government Office, Provincial Government, the County Office)	The Housing Organization	The Agriculture Jihad
education to promote rural empowerment	Waste Management Crisis Management Employment and investment Familiarity with Rural Conductor Projects Entrepreneurship courses Attracting popular contributions Agricultural courses and agricultural promotion etc.	Principles and Foundations of the valuable Rural texture Design Principles and Supervision of the Workshop supervision in the implementation of rural pedestrians The land conservation method and the issuance of a document for an urban and rural area. A set of rules and regulations of the Registration rights and estate. Participation in the preparation and implementation of rural development projects etc.	Livestock affairs cultivation Gardening Aquaculture and fisheries Rural Industries promotion of agriculture Water and soil Preserving Plants etc.

(Reference: research findings, 2020)



As stated by 70% of the villagers, the quantity and quality as well as the feasibility and relevance of the training courses held by private and government institutions providing educational services to villagers have not been so effective in promoting the empowerment of most villagers. In other words, the methods of empowerment of rural communities have been unproductive due to the adoption of a top-down and government-oriented development approach. They have failed to provide productive empowerment, reinforce villagers’ self-esteem, self-efficacy, and self-determination, and enhancing the components of the environmental quality of life in the process of the sustainable rural development has faced with a number of challenges.

Inferential Findings:

The Position of Enhancing Components of Environmental Quality of Life

At first, as Table 8 indicates, a single-sample t-test has been applied to examine the position of enhancing components of the environmental quality of rural life in the study area. According to the results, (the level of significance and up and down bounds), in all used components, except the assurance, trust, and empathy components, the significance level was lower than alpha 0.05 and the up and down bounds were negative. The position of the components of educating and informing, recognition, transparency, creating equal opportunities, a sense of belonging and social responsibility, and participation

in rural settlements is lower than moderate. Nevertheless, since in assurance, trust, and empathy components, the significance level was higher than alpha 0.05, the up-bound was positive and the down bound was negative, the amount of testing value does not sustain a substantial difference with the norm. The position of this indicator is equal to the average level in this region in terms of enhancing components of the environmental quality of life. The results have shown the challenge of the low quality of enhancing components of environmental quality of life in the study area. So, items such as the degree of delegation of authority to local authorities, the level of attention devoted to the decisions made by the villagers, the degree of cooperation, and friendly relationship between the rural decision-maker institutions are at the average level in this area. Besides, the authorities and managers’ empathy and compassion towards people, the degree of understanding problems of vulnerable rural groups by the accountable institutions, the level of compassion and understanding among rural residents in different social, economic (etc.) issues are equal to the average level in this part as well. Other components were lower than average at the level of rural settlements of the area

Investigation of the Relationship Between the Enhancing Components of Environmental Quality of Life and the Rural Sustainable Development:

Table 8. Examining the status of enhancing factors of environmental quality of life in the study region by utilizing single-sample t-test

Components	Level t Calculated	Degrees of freedom (DF)	Significance level (sig)	Mean difference	A confidence level of 95 percent	
					Up-bound	Down-bound
Educating and informing	-16.508	295	0.000	.48576-	-.48576	0.5437
Cognition and awareness	-3.887	295	0.000	-.15135	.0747	-0.2280
Transparency	-2.576	295	0.010	-.19088	-.0450	-0.3367
Creating equal opportunities	-6.723	295	0.000	-.33192	-.2348	-0.4291
Confidence, trust, and empathy	-.626	295	0.532	-.02105	.0451	-0.0872
A sense of belonging and social responsibility	-2.400	295	0.017	-.15946	-.0287	-0.2902
Participation	-3.920	295	0.000	-.09206	-.0458	-0.1383

(Reference: research findings, 2020)



As Table 9 indicates, a set of seven independent variables, as enhancing elements of environmental quality of life and a set of four dependent variables have been used to evaluate the relationship between the enhancing factors of environmental quality of life and sustainable development. The relationship of each of the components of environmental quality of life with sustainable development components has been measured and evaluated by using Kendall’s tau-b linkage index.

According to Table 9, the relationship between the component of educating and informing and sustainable development components has been evaluated. The educating and informing component have been derived from a combination of 14 items. Besides, each component of sustainable development (including environmental sustainability (13 items), economical sustainability (38 items), and social sustainability (23 items)) and physical and infrastructural sustainability (28 items) has been obtained as well. The results of examining the relationship between this component and the (components of environmental, economic, and physical) sustainability of development have demonstrated a substantial relationship (lower than alpha 0.05) between the educating and informing component and components of environmental, economic, and physical sustainability. Meanwhile, the relationship between this component and social sustainability is not significant due to higher levels of sig than alpha 0.05. Paying attention to issues like providing required training by responsible institutions for different aspects of villages, the level of villagers’ access to educational opportunities available in the village, the

level and type of information required to hold educational programs in the village by responsible bodies, etc. cause an increase in the degree of development of the environmental dimensions in the study area. Besides, it has caused the improvement in a different economic and physical dimensions, including the performance of agricultural and non-agricultural activities, job diversification and promotion and improvement of active economic agencies, etc. The issue which in this statistical analysis can be seen as associated with educating and informing component and social development indicates that educating and awareness components have caused environmental, economic, and physical development at the level of the region. Nevertheless, the type and orientation of provided education programs were not enough to lead to the social impacts mentally and perceptually, such as increasing villagers’ satisfaction and inclination to stay in the village, etc.

The second measured independent component is the component of recognition and awareness obtained from a combination of 10 items. The result of Kendall’s correlation coefficient indicates the existence of a significant correlation (lower than alpha 0.05) between the components of recognition and awareness and environmental, social, and physical sustainability. Since the amount of sig is higher than alpha 0.05, there is no significant correlation between this component and the economic sustainability. Indeed, villagers’ lack of sufficient understanding of discussions such as the economic issues of their village in various agricultural and non-agricultural activities as well as factors affecting productivity of such

activities can be due to the weakness of education programs and information by the propagative forces at the village level. The condition of investments and distribution of credit in the village, as well as the low awareness of villagers about the state of economic activities and the effect of villagers' dissatisfaction with the economic situation of the village and their life in terms of income, savings, employment status and so on, has not contributed to economic development of the region.

The third independent element is the transparency factor that has been obtained from the combination of items. The results showed that there is a significant relationship between this element and the environmental and economic sustainability because the amount of sig is lower than alpha 0.05. Nevertheless, there is no significant correlation between this component and the physical and social sustainability because the amount of sig is higher than alpha 0.05. Since the major economic activities in the region are based on agricultural output, especially pistachio, and are more linked to the natural environment and the economy, most of the development programs and cooperation of government and villagers to resolve issues related to the decision-making is associated with these two proportions. Hence, what has been overlooked in this process is social and physical dimensions of environmental rural life related to decision-making, growth, and elucidation of this type of program for villagers by accountable agencies and consequently reaching social and physical development in the region.

The fourth element is the component of creating equal opportunities that has been obtained from the combination of four items. As Table 9 indicates, since the amount of sig in all components is lower than alpha 0.05, there is a significant correlation between the component of creating equal opportunities and components of environmental, economic, social, and physical sustainability. In other words, attention should be devoted to the interests of beneficiaries who are all villagers. Besides, creating equal opportunities for villagers through collective formations in the village so that they may enjoy the economic and social resources of rural areas has led to the development of settlements of the study area in four environmental, societal, economic, and physical dimensions.

The fifth element is the component of assurance, trust, and empathy that has been obtained from the combination of 13 items. The result of Kendall's correlation coefficient has proven that there is a significant correlation between assurance, trust, and empathy components and physical and environmental sustainability (lower

than alpha 0.05). Also, since the amount of sig is higher than alpha 0.05 in the sustainability of socioeconomic components, there is no significant correlation between this independent component and socioeconomic sustainability. This shows the low level of trust and empathy between villagers and between local and public institutions and the mutual trust between villagers and officials and managers of institutions regarding the economic and social affairs of their village. Thus, this lack of trust and empathy between villagers and related institutions has emerged in the form of social and economic underdevelopment.

The sixth component is the component of a sense of belonging and social responsibility that has been obtained from the combination of 13 items. According to Table 9, there is a significant correlation between a sense of belonging and social responsibility component and socioeconomic and physical sustainability. Nevertheless, there is not a significant correlation between these components and environmental sustainability due to the higher value of sig compared to alpha 0.05. The level of sense of responsibility of villagers in regard to maintaining and improving the overall quality of the village and maintaining its natural environment was not enough to provide environmental sustainability through development and construction activities and plans.

The last independent component is the participation that has been obtained from the combination of 20 items. The results showed that there is no significant relationship between the component of participation and social and physical sustainability, and there is no significant relationship between the component of participation and environmental and economic sustainability. In other words, the level of participation of villagers together and with local and governmental organizations at higher levels as well as these organizations' participation and engagement with villagers in economic and environmental programs in matters such as upgrading and improving the quality of the village's natural environment and agricultural and non - agricultural economic activities is not enough to ensure the sustainability of environmental and economic dimensions.

In conclusion, the results, which have been obtained from Kendall's correlation coefficient, indicate that there is a significant relationship between the indicators enhancing the environmental quality of life and the indicators of rural sustainable development in the study area. However, the significance of the relationship between indicators of the independent components and the indicators of rural sustainable development is due to the low

level of the weighted average of the dependent and independent indicators compared to the average level.

In other words, since the level of promotion of the indicators enhancing the environmental quality of rural life is low, the level of promotion of the indicators of the rural sustainable development has been low either, which has caused a significant relationship between them.

The Final Assessment of the Effect of the Components Enhancing Environmental Quality of Life on Rural Sustainable Development:

After the relationship between each of the components enhancing environmental quality of life and rural sustainable development was measured by using the link measures, in this section, to define the intensity of the level of

correlation and effects, a set of independent components related to sustainable development components and the level of rural development that have a significant correlation have been analyzed using multivariate regression.

Based on the achieved results (Table 10), there is a correlation of 0.540 between components enhancing the environmental quality of life and rural sustainable development. In summation, the adjusted coefficient of determination indicates that 0.275 percent of the sustainable development changes in rural settlements have been explained by the linear combination of seven components enhancing the environmental quality of life.

Also, based on the calculated value of F and significance level of 0.000, it can be said that a linear combination of independent components can explain and predict

Table 9. Determination of the relationship between the components enhancing the quality of life and rural sustainable development by using Kendall’s tau-b linkage

Items	Physical sustainability		Social sustainability		Economic sustainability		Environmental sustainability	
	Significance level	Correlation coefficient	Significance level	Correlation coefficient	Significance level	Correlation coefficient	Significance level	Correlation coefficient
Educating and informing	0.025	.093*	0.578	-.023	0.000	-.170**	0.000	.231**
Cognition and awareness	.0.000	.201**	0.035	-.087*	0.411	.034	0.000	.298**
Transparency	0.785	.011	0.842	-.008	0.000	.266**	0.000	.279**
creating equal opportunities	0.028	.092*	0.001	-.146**	0.000	-.187**	0.000	.273**
Assurance, trust, and empathy	0.007	.111**	0.692	-.016	0.755	.013	0.000	.220**
A sense of belonging and social responsibility	0.000	.253**	0.000	.250**	0.000	.239**	0.168	-.058
Participation	0.000	.214**	0.000	.231**	0.511	-.027	0.635	.020

(Reference: research findings.2020)



Table 10. Determination of the correlation between the components enhancing environmental quality of life and sustainable development using multivariate regression

R Multiple correlation coefficient	R ² coefficient of determination	Adjusted R Square	Std. The error of the Estimate
.540 (a)	.292	.275	31.87971

a. Dependent variable: educating and informing, cognition and awareness, transparency, creating equal opportunities, assurance, trust and empathy, a sense of belonging and social responsibility, participation. (Reference: research findings.2020)



the changes of the dependent component (sustainable development of the rural settlements) (Table 11).

Based on the standardized coefficients of the effect of independent variables on dependent variables, the results show that affected indicators (educating and informing, a sense of belonging and social responsibility, participation) have a significant statistical effect on the sustainable development of rural settlements. While the components of educating and informing and transparency do not have a significant statistical effect on the sustainable development of these villages. Most of the studied indicators related to the environmental quality of life do not explain the future status of sustainable development of rural settlements in the study area and do not improve its dimensions (Table 12).

In general, a significant relationship has been proven to exist between the majority of independent indicators and rural sustainable development in the study area. However, the relationship between indicators of the dependent and independent variables is significant because

of its decreasing effects. In other words, the lack of attention to the indicators enhancing the environmental quality of life, such as cognition and awareness, creating equal opportunities, assurance, trust and empathy, a sense of belonging and social responsibility and participation has led to the low level of rural sustainable development in the study area. Therefore, mobilizing local resources, empowering villagers, and involving them in decision-making and accountability have been considered important factors in enhancing the quality of life. The findings of this study emphasize these points. Other studies such as Bebbington et al. (2005), Subramaniam et al. (2013), Abdul Mohit (2014) have reviewed these issues as well. Increasing confidence and self-esteem of the villagers to achieve the greater goal of a dignified life which has been emphasized in this research and its effect on the indicators enhancing environmental quality of life has been examined as well, are consistent with the findings of Chiayi & Jose (2016).

Thus, all the studies somehow emphasize the social dimensions and empowerment components as one of the

Table 11. Significance of regression of variables enhancing environmental quality of life on sustainable development (ANOVA)

	Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	120713.628	7	17244.804	16.968	0.000 (b)
	Residual	292698.909	288	1016.316		
	Total	413412.537	295			

a. Dependent variable: rural sustainable development

b. Predictors: educating and informing, Cognition and awareness, Transparency, creating equal opportunities, assurance, trust and empathy, a sense of belonging and social responsibility, participation. (Reference: research findings.2020)



Table 12. Coefficients of the intensity of the effect of variables enhancing environmental quality of life on the rural sustainable development coefficients

Model	Indicators	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	Educating and informing	1.553	.305	.278	5.094	0.000
	Cognition and awareness	-2.637	.631	-.239	-4.179	0.000
	creating equal opportunities	1.139	.276	.229	4.127	0.000
	A sense of belonging and social responsibility	1.453	.352	.222	4.128	0.000
	participation	1.063	.241	.229	4.414	0.000

a. Dependent variable: rural sustainable development- (Reference: research findings.2020)



most important factors in the enhancement of quality of villagers' life in line with the other environmental, economic, and physical indicators, which is consistent with the examined indicators and the findings of this study.

5. Discussion

The new model of sustainable development has paid attention to humankind as a basic action, the ultimate goal, and at the heart of all actions that are interrelated to the development. Therefore, conditions have been provided for improving the quality of life and creating equal opportunities for individuals and the participation of various social groups in order to ensure their social-economic status and increase the quality of social security (Johansen & Chandler, 2015). Accordingly, this research has reviewed the most important components enhancing the environmental quality of villagers' life and their effect on the process of rural sustainable development in the study region of the villages on the edge of and surrounding Kavir Desert in Iran.

Based on this study, we have analyzed the methods of empowering villagers to enhance the quality of life in line with sustainable development. The findings have shown that although there is a significant relationship between the dependent and independent variables, the level of promotion of these variables is low, which indicates that the situation of these indicators among the rural community is not suitable in the study area.

According to the literature review and the background of this research, this finding is in contrast to the findings of Marans (2015) in Europe, and Mahmud et al. (2011). Because, based on these studies, educating and informing methods are effective in increasing the awareness of villagers to empower them to participate in socio-economic activities and as a result, improving the quality of their life in line with sustainable development. Therefore, rural settlements in the study area were not able to provide the required conditions to improve the quality of rural life to develop sustainable development in a way, that the context of forming the enhancing indicators of the environmental quality of life and empowering villagers in regard to their lives has been mostly crystallized in the physical and objective dimensions (economic and physical) in the study area. Although in recent decades physical and infrastructure development programs in rural settlements in the study area have increased, these programs have failed to attain the subjective satisfaction of the villagers with their living conditions and have reduced the sense of belonging and led to the reluctance of the villagers to stay in the village.

In other words, the adoption of the "top-down" development planning approach and paying little attention to the socio-cultural dimensions and methods of empowerment of villagers to participate in decision making and rural development programs have not achieved the internal and subjective satisfaction of the villagers in the study area.

So, mobilizing local resources, empowering villagers, and involving them in decision making and accountability have been considered important factors to enhance the quality of life. The findings of this study emphasize these points. Other studies, such as Bebbington et al. (2005), Subramaniam et al. (2013), and Abdul Mohit (2014), have been reviewed as well. Increasing the self-confidence and self-esteem of the villagers to achieve the greater goal of a dignified life, which has been emphasized in this research, and its role in enhancing indicators of quality of life have also been examined, which is consistent with the findings of Chiayi and Jose (2016).

Thus, all research, in some way, emphasizes the social dimensions and empowerment components as one of the most important factors in the enhancement of quality of villagers' life in line with the other environmental, economic, and physical indicators that are adapted along with the examined indicators and the findings of this study.

The study has shown that the indicators of empowering villagers to enhance the quality of their life were not able to strengthen the self-confidence, self-efficacy, and self-determination of villagers and local management in various affairs and activities.

In this regard, lack of sufficient knowledge of the economic and social issues in matters such as the types of economic and social activities as well as the factors affecting the productivity of agricultural and non-agricultural activities, low knowledge of villagers about the condition of economic and social activities, lack of transparency, etc. can be mentioned. However, this has not improved the economic and social indicators and satisfaction with rural life in these fields.

The literature review of this study has emphasized the suitable methods of empowering to enhance the components of the environmental quality of life in line with the dimensions of sustainable development indicators in rural areas. Therefore, enhancing indicators of rural sustainable development are effective in this regard. These indicators have been affected by the proper use of empowerment methods to enhance the quality of life indi-

cators and by choosing appropriate social and economic government policies based on development planning. Therefore, proper recognition of rural empowerment methods to participate them in rural development planning process to improve the environmental quality of life can help to promote policy-making by the government and inspire rural sustainable development.

The approaches and policies of the rural development planning system in developing countries such as Iran tend to be mechanical with expert knowledge and from top to bottom to improve and raise the quality of villagers' life. Besides, these approaches have not paid enough attention to the views, demands, and desires of the villagers that are in line with the indicators of the quality of their life. Therefore, the previous expression of the "top-down" approach has been ineffective because it considers the community-based approach and the appropriate methods for empowering villagers in this regard to enhance the quality of life indicators in line with the rural sustainable development. Local bottom-up initiatives in the method of socioeconomic empowering of villagers are very important to ameliorate the quality of life of rural residents. The local government of the study area should order to identify local initiatives in this region as a pioneer and to project a suitable method to empower villagers and enhance the indicators of the quality of life and rural sustainable development.

Given the obtained results, it is necessary to consider the following assumptions and suggestions:

- Moving toward the empowerment of the local community and rural NGOs in the process of development in cooperation with public and private sectors
- Providing the legal and social contexts for the maximum participation of villagers in all stages of the decision-making in the village and giving them effective economic-political power to attract confidence in the local community.
- Enhancement of education and developing human resources to create a rural community with knowledgeable, creative, and flexible members who have a collaborative approach and cooperate with public and private sectors, the decision-makers, implementers, implementation, and users.
- Improving the knowledge and skills of villagers by enhancing educational resources and desirable promotion and informing system

- Strengthening effective accountability by establishing a peaceful democracy

- Informing and clarifying the construction and development programs developed by the responsible institutions for the villagers and preparing, realizing, and implementing them in line with the goals and demands of the local community

- Strengthening accountability and transparency through institutions responsible towards villagers and establishing a peaceful democracy

- Building trust and solidarity between the local community and governmental and non-governmental sectors to better understand the policies for increasing quality of life in rural areas

Acknowledgements

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

Conflict of Interest

The authors declared no conflicts of interest.

References

- Abdul Mohit, M. (2014). Present Trends and Future Directions of Quality of life. *Social and Behavioral Sciences*, 153, 655-665.
- Amarasinghe, D. P. (1998). Is integrated rural development sustainable? An investigation of a process-oriented approach in Monaragala, Srilanka. Clark University.
- Arora, S. Kalra, R. (2018). Quality of life (QOL) of people living with substance users in the urban and rural community of Delhi, *Current Medicine Research and Practice*, Vol. 8, Issue 3, pp. 96-99.
- Bebbington, A. Dharma wan, L. Fahmi, E. Guggenheim, S. (2005). Local Capacity, Village Governance, and Political Economy of Rural Development in Indonesia. *World Development*, 34 (11), 1958-1976.
- Bruff, G.E., Wood, A.P. (2000). Making sense of sustainable development: politicians, professionals, and policies in local planning, *Environment and Planning C: Government and Policy*, Vol. 18, pages 593 – 607.
- Costanza, R. (2007). Quality of life: An approach integrating opportunities, human needs, and subjective well-being, *Ecological Economics*, 61(1-2), 267-276.

- Cherayi, SH. Jose, J.P. (2016). Empowerment and Social inclusion of Muslim Women: Towards a new conceptual model, *Rural studies*, Vol.45, pp.243-251.
- Chiranjeevee K. Harald. V. (2012). Comparing a top-down and bottom-up approach in the identification of criteria and indicators for sustainable community forest management in Nepal, *Forestry*, Vol. 85, No. 1.
- Eftekhari, A. Azimi Amoli, J. Pour Taheri, M. Ahmadi pour, Z. (2012). Presenting a suitable model of good rural governance in Iran. *Geopolitics*, Eighth year, No.2.
- Epley, D., Menon, M. (2008). "A Method of Assembling Cross-sectional Indicators into a Community Quality of Life", *Soc Indic Res*, 88:281-29.
- Ebrahimzadeh, I., Shahraki, A.A. Shahnaz, A.A. Manouchehri Myandoab, A. (2016). Progressing urban development and life quality simultaneously, *City, Culture and Society*, pp.1-8.
- Esparcia, J. Escribano, J. Serrano, J.J. (2015). From development to power relations and territorial governance: Increasing the leadership role of LEADER Local Action Groups in Spain, *Rural studies*, Vol.42, pp.29-42.
- Etuah, S., Ohene-Yankyera, K., Aidoo, A., Haleegoah, J., Wiggins, S & Henley, G. (2020). Impact of oil palm-related activities on women's empowerment in Ghana, *World Development Perspectives*, Available online 20 June 2020, 100225.
- Fahy, F. Cinneide, M.O. (2008). Environmental Impact Assessment Review-Developing and testing an operational framework for assessing the quality of life, pp:366-379.
- FAO. (2005). Sustainable Agriculture and Rural Development (SARD) and Good Agricultural Practices (GAPS). Paper for 19th Session of Committee on Agriculture, FAO. Rome, 13-16.
- Fazelnia, G. Eftekhari, A. (2005). Explanation of the theory of effective factors on villagers' cognition and awareness of their abilities and the surrounding environment. *Humanities teacher*, No.1.
- Fernández, M. María J., J. PabloVidueira M. V. Díaz-Puente, D. (2015). Empowerment Evaluation in Spain: The Critical Friend Role in Working with Rural Communities, *Procedia-Social and Behavioral Sciences*, Vol.191, pp.984-989.
- Fang, F. Ma, L. Fan, H. Che, X. Chen, M. (2020). The spatial differentiation of quality of rural life based on natural controlling factors: A case study of Gansu Province, China, *Environmental Management*, Vol.264.
- Hamdan, H. Yusof, F. A. Marzukhi. M. (2014). Social Capital and Quality of life in Urban Neighborhoods High-Density Housing, *Procedia-Social and Behavioral Sciences*, Vol.153, pp.169-179.
- Han, W. Zhanh, X. Zhang, Z. (2019). The role of land tenure security in promoting rural women's empowerment: Empirical evidence from rural China, *Land use policy*, Vol.86, pp.28-289.
- Janssens, W. (2009). Women's empowerment and Creation of Social Capital in Indian Villages, *WWW.elsevier.com, World Development*, Vol.38, No.7, pp:974-988.
- Johavsen, P., Lund Chandler, T. (2015). Mechanisms of power in participatory rural planning, *rural studies*, Vol.40, pp:12-20.
- Jeffrey, C. (2005). Reproducing Difference Schooling, Jobs, and Empowerment in Uttar Pradesh, India, *World Development*, Vol.33, No.12, pp.2085-2101.
- Kaczmarek, M. Pacholska-Bogalska, J. Kwaśniewski, W. Kotarski, J. Halerz-Nowakowska, B. Goździcka-Józefiak, A. (2017). The association between socioeconomic status and health-related quality of life among Polish postmenopausal women from urban and rural communities, *HOMO*, Vol.68, Issue 1, pp.42-50.
- Kazembe, L. (2020). Women empowerment in Namibia: Measurement, determinants and geographical disparities, Available online 20 June 2020, 100211
- Lopez, M. Pastor, R. (2015). Development in rural Through capacity building and education for business, *Social and Behavioral Sciences*, pp:1882-1888.
- Ma, L. Liu, Sh. Fang, F. Che, Xi. Chen, M. (2020). Evaluation of urban-rural difference and integration based on the quality of life, *Sustainable Cities and Society*, Vol.54, pp.
- Mackinnon, D. (2002). Rural governance and local involvement: assessing state community relations in the Scottish Highlands, *Rural studies*, Vol.18, pp.307-324. PII: S 0 7 4 3 - 0 1 6 7 (0 1) 0 0 0 4 8 - 1.
- Mahmud, S., Shah Nirall, M., & Becker, S. (2011). Measurement of Women's empowerment in rural Bangladesh, *WWW.elsevier.com, World Development*, Vol.40, No.3, pp: 610-619
- Malkina-Pykh, I.G., Pykh, Yu. A. (2008). Quality of life indicators at different scales: Theoretical background, *Ecological indicators*, pp: 854-862.
- Marans, Robert, W. (2015). Quality of urban life & environmental sustainability studies: Future linkage opportunities, *Habitat International*, pp: 47-52.
- Marans, Robert, W. (2012). Quality of urban life Studies: An Overview and Implications for Environment-Behavior Research, *Social and Behavioral Sciences*, pp: 9-22.
- Monkman, K. Miles, R. Easton, P. (2007). The transformative potential of a village empowerment program: The Tostan replication in Mali, *Women's studies international forum*, Vol.30, pp.451-464, DOI: 10.1016/j.wsif.2007.09.005.
- Moral, F; Vidueira, M.J; Diaz Puente, P; Nicolas, J.M & Luis De, V. (2015). Empowerment Evaluation in Spain: The Critical Friend Role in Working with rural Communities, *Social and Behavioral Sciences*, pp:984-989.
- OECD. (2001). The DAC guidelines, strategies for sustainable development.
- Pacione, M. (2003). landscape and urban planning-Urban environmental quality and human wellbeing, a social geographical perspective, pp: 19-30
- Palmisano, G.O; Govindanb, Kannan; Boggia, A; Viviana Loisia, R; Bonia, A.D; Roma, R. (2016). Local Action Groups and Rural Sustainable Development. A spatial multiple criterion approaches for efficient territorial planning Department, *Land Use Policy*, Vol.59, pp. 12-26,
- Pini, B. (2002). Focus groups, feminist research, and farm women: opportunities for empowerment in rural social research, *Rural studies*, Vol.18, pp.339-351.

- Poudel, S., Nyaupane, P.N., Budruk, M. (2016). Stakeholders' Perspectives of Sustainable Tourism Development: A New Approach to Measuring Outcomes, *Travel Research*, Vol. 55, N.4, PP. 465-480.
- Pupphachai, U., & Zuidema, C. (2017). Sustainability indicators: A tool to generate learning and adaptation in sustainable urban development, *Ecological Indicators*, Vol.72, pp. 784-793.
- Quaghebeur, K. Masschelein, J. Nguyen, N. (2004). The paradox of participation: Giving or taking part? *Community and Applied Social Psychology*, PP 154-165.
- Radjahanbini, N. Partovi, P. (2011). Comparative study of the quality of the environment in urban neighborhoods by using sustainable development approach: (Case study: Street and Iqli Tabriz neighborhood), *Bi-Quarterly of the University of Arts*, No. 6.
- Richardson Ngwenya, P. Restrepo, J. Fernández, R. A. Kaufmann, B. (2019). Participatory video proposals: A tool for empowering farmer groups in rural innovation processes? *Rural Studies*, Vol.69, pp.173-185.
- Servaes, J., Polk, E., Shi, S., Reilly, D., Yakupitijage, T. (2012). Towards a framework of sustainability indicators for 'communication for development and social change' projects, the *International Communication Gazette*, Vol.74, No.2, pp. 99-123.
- Scerri, A & James, P. (2009). Communities of citizens and 'indicators' of sustainability, *Community Development*, Vol. 45 No. 2, pp. 219-236.
- Shamaei, A. Azimi, A. Faraji Molaei, A. (2012). Investigating the effects of urbanization of rural areas on improving the quality of life of residents. *Urban management*, No.3.
- Shokri Firuzjah, P. (2014). Investigating the effective components on the level of citizens' satisfaction with the quality of the residential environment (Case study: 1 & 8 districts of Tabriz city), *Geographical space*. No. 47.
- Simone, C. Andrea De Montis b, D. (2015). Computers Accessibility and rurality indicators for regional development, *Environment and Urban Systems*, V.49, 98-114.
- Straka, J & Tuzova, M. (2016). Factors Affecting Development of Rural Areas in the Czech Republic: A Literature Review, *Procedia - Social and Behavioral Sciences*, Vo.220, pp. 496 - 505.
- Subramaniam, G. Tan, P.L. Maniam, B. Ali, E. (2013). Workplace Flexibility, Empowerment, and Quality of life, *Procedia-Social and Behavioral Sciences*, Vol.105, pp.885-893.
- Thompson, D. (2016). Community adaptation to environmental challenges under decentralized governance in southwestern Uruguay, *Rural studies*, Vol.43, pp.71-82.
- UN. (2001). Guidance in preparing national sustainable development strategies, Revised Draft, New York.
- UNDP. (1994). Human development report; New York: Oxford University Press.
- Wang, B., Li, X., Stanton, B., Fang, X. (2010). The influence of social stigma and discriminatory experience on psychological distress and quality of life among rural-to-urban migrants in China, *Social Science & Medicine*.
- Wang, XU. (1997). Mutual Empowerment of State and Peasantry: Grassroots Democracy in Rural China, *World Development*, Vol.25, No.9, pp.1431-1442. PII: s0305-750x (97)00047-8
- World Bank. (2002). Expanding the Measure of Wealth: Indicators of Environmentally Sustainable Development, *Environmentally Sustainable Development Studies*, and Monographs, No.17, Washington, D.C.
- Zhao, J. Li, Y. Wu, Y. Zhou, J. Ba, L. Gu X. Wang, W. Yao, H. Ren, N. Chen, J. Xu, L. (2009). Impact of different contraceptive methods on the quality of life in rural women of the Jiangsu province in China contraception, *Contraception*, 80(2):180-6.