attitude of the agricultural role on the quality of farmers in Jiroft

Abstract

Quality of life is a concept, which has attracted authors and psychologists in recent years to the "quality of life" issue and its importance in the health and spirit of people. This study was conducted to examine the sociological attitude of agricultural activities' role on the quality of life dimensions among farmers of Jiroft. This is an applied study in terms of objective, extensive in terms of expansion, micro in terms of scope, and cross-sectional in terms of time. This study's research method was field using survey technique and a questionnaire was used as a data collection tool. The present research's statistical population included all the farmers of Jiroft, which was equal to 8500 people according to the statistics of the Agricultural Jihad Organization. A simple random sampling method was used to determine sample size and 376 people were selected as the research's sample based on the Cochran formula. According to the research's findings, there is a relationship between agricultural activities and the total amount of quality of life (0.334) and its dimensions including physical dimension (0.391), mental dimension (0.346), and social dimension (0.231) and family dimension (0.175).

Keywords: *Agricultural activities, quality of life, farmers, Jiroft.*

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Introduction

The beginning of the quality of life discussion dates back to Aristotle. He considered good life as happiness. This issue has been specially considered in recent centuries by Islamic philosophers. The academic approach to quality of life has entered a new phase since the 1920s by dealing with this issue. Given that the quality of life is considered an important concept for people of society, an attempt to improve it is one the main principles and priorities of social planners, policymakers, managers, and government officials in every society and country. Quality of life's findings can be used for recognizing previous policy strategies and designing future planning policies (Kakavand, 2016, page 12). The quality of life term is applied for evaluating the general condition of people and communities. This term is used in an extensive range of fields including international development areas, health, and policy (Beshagh et al, 2014, page 32).

In traditional agriculture, farmers use previous experiences inherited from their fathers and grandfathers during generations in the field of agricultural operations, therefore, traditional agriculture and its experiences have been yet applied as a method of agriculture due to the low and average level of a majority of farmers in our country (Sadeghi et al, 2017, page 75).

According to the World Health Organization, quality of life is people's perception of their position in life in terms of culture, the value system in which they live, their goals, expectations, standards, and priorities. So, it is completely personal it is not observable and is based on people's perception of different aspects of quality of life (Abdullah Poor et al, 2011, page 44).has no actual meaning itself, but only people give it sense (Poor Taheri et al, 2011, page 18).

Safi Jahanshahi et al (2017) conducted research entitled "evaluating the indexes of the quality of life in rural areas, case study: Meymand village". Research results show that quality of life is a complex term related to a population's condition and situation in an area or village. As a result, there is a direct correlation (0.15) between social indexes of quality of life and satisfaction of villagers.

Ghane et al (2015) conducted research entitled "evaluation of the agricultural land integration role in improving quality of life of the beneficiaries (case study: Asadabad plain village)". The research's results indicated a positive effect of small credits in land integration and it was able to present some significant changes in agricultural development indexes at the level of 95%.

Ajza Shokuhi & Kamandari (2015) fulfilled a study entitled assessment of the quality of life satisfaction in District 4 of the city of Kerman. The research's results which were in the form of nonparametric tests, Wilcoxon, Kruskal-Wallis, Mann Whitney U-Test, and Spearman correlation, showed that there is a negative gap of quality in all five dimensions of quality of life including housing, security, social relations and sense of belonging, urban facilities, and transportation. Boshagh et al (2014) carried out research entitled" presenting a model to explain the relationship between agricultural system's sustainability and quality of life in rural areas (case study: Miandeh Village of Fasa Town)". It shows that there is a positive and significant relationship between sustainable agriculture development and quality of life. Also, partial fit indicators (critical ratio and their significance level) show that all factor loads have a significant difference with zero.

Barimany et al (2013) conducted research entitled "assessment and analysis of quality of life in rural areas (Case study: Mehban village, Nikshahr city)". Findings of conventional indicators status of quality of life showed that the villages under study are in a bad situation in terms of indicators of

leisure, property, education, quality of collective resources, and satisfaction with the natural tourism features.

Zeinal et al (2012) performed research on "housing condition and quality of life of urban poor people in Malaysia". The results showed that there is a significant relationship between housing conditions, hygiene, security and social support, and quality of life. So, it is necessary to evaluate the quality of life topic in order to provide appropriate solutions to take scientific measures to improve the lives of residents as much as possible In this regard, the present research's general objective is to determine the role of agricultural sociological factors on quality of life among farmers in Jiroft.

Research method

This research method is a cross-sectional survey regarding time. The data collection tool is also a questionnaire in this study. The present research's statistical population includes all the farmers in Jiroft whose number is equal to 8500 according to the statistics of the Agriculture Jihad organization. It is necessary to mention that the farmer in the present study includes landowners and gardeners. Respecting the extent size of the statistical population and lack of access to all members of the community, the number of people who represent the total population should be selected as the sample size. Cochran's formula was used in this study to extract the sample size which was equal to 376.

$$n=\frac{\frac{t^2pq}{d^2}}{1+\frac{1}{N}\left(\frac{t^2pq}{d^2}-1\right)}$$ N= 8500 t=1.96 P=0.5 d=0.05

$$n=\frac{\frac{(1/96)^2\times(0/5)(0/5)}{(0/05)^2}}{1+\frac{1}{8500}\left(\frac{(1/96)\times(0/5)(0/5)}{(0/05)^2}-1\right)}=376$$

N: population size

t: It is fixed and equal to 1.96 at the level of confidence of 95%

p: The value of the ratio of attributes existing in the community. If it is not available, it can be considered 0.5. In this case, the variance is reached its maximum value.

q: The percentage of people who do not have an attribute in society and it is equal to (q = 1-p). So 1 minus 0.5 is equal to 5.

d: researcher's acceptable level of error which is usually equal to 0.05.

The sampling method in the present research is two-step random. In this way in the first stage, many sectors in the city were randomly selected and in the second stage, those who had agricultural activities were randomly extracted from each sector as the final sample.

The researcher-made questionnaire has been used in this study to collect data. The following stages have been done in order to prepare the researcher-made questionnaire:

1- Theoretical study regarding the subject
2- Conceptual definition of dependent and independent variables and determining its objective indicators
3- Preparing some questions in order to measure the major research variable which is the dependent variable
4- Preparing some questions for each one of the considered dependent variables in this research
5- Adjusting the questionnaire in its final format and its implementation among 30 farmers based on their share in the statistical community
6- Determining different variables' reliability and validity in the questionnaire
7- Removing some questions and items in order to increase the questionnaire's validity and final confirmation by professors
8- The next stage is completing the questionnaire by respondents which are done following questionnaire confirmation y professors

On the other hand, the method of internal coordination of items by the use of Cronbach's alpha method is applied in order to obtain the reliability of the questionnaire. Some methods are used to measure the validity of the questionnaire including conducting preliminary research, using the experts' opinions, and applying some statistical methods. While some other methods are applied to measure the reliability of the research tool depending on the type of tool which includes splitting, retesting, parallel forms, or the method of internal coordination of items using Cronbach's alpha formula. Some methods have been used in the present study in order to determine the validity of the questionnaire including preliminary research to determine possible issues and problems in research questions using the specialists' and experts' opinions to find the face validity of the questionnaire's questions. Face validity is a kind of content validity in which "the consensus of experts on the study of indicators is the reason for their validity and disagreement on each index means its face validity" (Sarukhani, 1999).

It is clear in this case that the indicators determined for the sociological study of the agriculture role on the quality of life among farmers in the Jiroft can measure what has been considered in this regard.

The final questionnaire's reliability based on Cronbach's Alpha coefficient is as following table:

Table 1- Reliability of dimensions of quality of life and agricultural activities questionnaire

variable	indicator	Final questionnaire	
		Number of items	Alpha coefficient
Quality of life	Physical dimension	7	0.850
	Social dimension	6	0.793
	Mental dimension	10	0.801
	Family dimension	4	0.788
Agricultural activities	Person activity	3	0.799
	Prosperity and product monetization	5	0.745
	Satisfaction with job	5	0.787

Research's findings

Table 1 which is related to marital status shows that 80.05 percent of respondents are married and 19.95 percent of them are single.

Table 1- Respondents distribution based on marital status

Marital status	frequency	Percentage
Married	301	80.05
Single	75	19.95
Total	376	100

Table 2 shows the manner of respondents' distribution according to income of individual or family in which the largest number of respondents (29.39) have an income of 1001000- 1500000. The lowest number of respondents (13.24) have an income higher than 2 million.

Table 2- respondents' frequency distribution based on income of family

Income in toman	frequency	percentage
Under 1 million toman	25	6.65
1/000/000-1/500/000	105	27.93
1/500/000-2/000/000	121	32.18
2/000/000-3/000/000	64	17.02
3/000/000-4/000/000	46	12.24
More than 4/000/000	15	3.98
total	376	100

Table 3 shows that the highest number of respondents is in the age range of 40 to 49 years old with 28.99 percent and the least number of them is in the age range of 50-65 with 3.98 percent.

Table 3- Frequency distribution of age variable

Age	frequency	percentage
18-24 years old	17	4.53
25-29 years old	66	17.55
30- 34 years old	87	23.13
35-39 years old	82	21.82
40-49 years old	109	28.99
50-65 years old	15	3.98
Total years	376	100

The findings of table 4 show that among the indicators of agricultural activities, the level of activity of the individual has the highest average (3.46), and satisfaction and the prosperity and monetization level of the product has the lowest average (3.06). Also, the general situation of agricultural activities shows that in all components, respondents have stated that agricultural activities are slightly above average (3.32).

Table 4- Frequency distribution based on agricultural activities

Research's variables	Descriptive indexes		Component status					
	mean	Standard deviation	Very low	low	average	high	Very high	total
Person's activity level	3.46	0.99	29	20	155	90	82	376
Prosperity and monetization level	3.06	0.86	16	100	138	88	34	376
Level of	3.44	0.95	37	41	100	113	85	376

satisfaction with job		
total	3.32	376

The findings of table 5 show that among quality of life indicators, the physical dimension has the largest average (3.51) and the social dimension has the lowest average (3.09). The general condition of quality of life also shows that all the respondents in all components stated that quality of life is higher than the average level of 3.25.

Table 5- Frequency distribution based on quality of life

Research's variables	Descriptive indexes		Component status					
	average	Standard deviation	Very low	low	average	high	Very high	total
Physical dimension	3.51	0.94	31	41	107	99	98	376
Psychological-mental dimension	3.20	0.97	32	68	118	108	50	376
Social dimension	3.09	0.90	40	75	123	86	52	376
Family dimension	3.18	0.89	45	55	125	86	65	376
total	3.25	0.93						376

There are some preconditions for using parametric tests including normality of data and second, data should be random. The first condition should apply to all data, but the second condition applies only to historical data (data obtained over time - such as temporal regression analyzes). Therefore, we will use this test to check the considered condition. The Kolmogorov-Smirnov single-sample test is used to evaluate the normality of the factors as follows.

H_0= Data is normally distributed

H_1=Data isn't normally distributed

Table 6- Kolmogorov-Smirnov test in order to determine research's variables normality

Research's components	Agricultural activities	Physical dimension	Psychological-mental dimension	Social dimension	Family dimension
Number	376	376	376	376	376
Kolmogorov-Smirnov	0.80	1.74	1.56	2.59	2.75
Significance level	0.080	0.061	0.129	0.245	0.124

According to table 6, we can conclude that these components are normally distributed because the significance level of all the research variables is higher than 0.05. So, parametric tests can be used in analyzing research hypotheses.

The main hypothesis test: There is a relationship between the level of agricultural activities accomplishment and prosperity. Pearson correlation coefficient is used to test this hypothesis. The findings are as follows:

H_0: $\rho = 0$

H_1: $\rho \neq 0$

Table 7- correlation coefficient of agricultural activities and total level of quality of life

Quality of life		
Agricultural activities	Relationship intensity	0.334
	Significance level	0.001
	number	376

According to the calculated significance level between the two ranges which is equal to 0.001 and because this number is less than 0.05, so there is a significant relationship between two variables including agricultural activities and quality of life of farmers. Also, according to the calculated correlation intensity which is equal to 0.334, there is a positive, moderate, and direct correlation between the two variables including agricultural activities and the quality of life of a farmer. Thus, the more agricultural activities there are among farmers, the higher the overall quality of life among them. The main research's hypothesis is confirmed accordingly.

The first sub-hypothesis test: There is a relationship between agricultural activities and the physical dimension of quality of life.

Pearson correlation coefficient is used for testing this hypothesis. The findings are as follows:

H_0: $\rho = 0$
H_1: $\rho \neq 0$

Table 8- correlation coefficient of agricultural activities and physical dimension of quality of life

Physical dimension of quality of life		
Agricultural activities	Relationship intensity	0.391
	Significance level	0.001
	number	376

According to the calculated significance level between the two ranges which is equal to 0.000 and because this number is less than 0.05, so there is a significant relationship between two variables including agricultural activities and the physical dimension of quality of life of farmers. Also, according to the calculated correlation intensity which is equal to 0.391, there is a positive, moderate, and direct correlation between the two variables including agricultural activities and the physical dimension of the quality of life of a farmer. Thus, the more agricultural activities there are among farmers, the higher the overall quality of life regarding physical dimension among them. The research's first sub-hypothesis is confirmed accordingly.

The second sub-hypothesis test: There is a relationship between agricultural activities and the mental dimension of quality of life.
Pearson correlation coefficient is used for testing this hypothesis. The findings are as follows:
H_0: $\rho = 0$
H_1: $\rho \neq 0$

Table 9- correlation coefficient of agricultural activities and mental dimension of quality of life

Mental dimension of quality of life		
Agricultural activities	Relationship intensity	0.346
	Significance level	0.001
	number	376

According to the calculated significance level between the two ranges which is equal to 0.001 and because this number is less than 0.05, so there is a significant relationship between two variables including agricultural activities and the mental dimension of quality of life of farmers. Also, according to the calculated correlation intensity which is equal to 0.346, there is a positive, moderate, and direct correlation between the two variables including agricultural activities and the mental dimension of quality of life of a farmer. Thus, the more agricultural activities there are among farmers, the higher the overall quality of life regarding mental dimension among them. The research's second sub-hypothesis is confirmed accordingly.

The third sub-hypothesis test: There is a relationship between agricultural activities and the social dimension of quality of life.
Pearson correlation coefficient is used for testing this hypothesis. The findings are as follows:
H_0: $\rho = 0$
H_1: $\rho \neq 0$

Table 10- correlation coefficient of agricultural activities and social dimension of quality of life

the social dimension of quality of life		
Agricultural activities	Relationship intensity	0.231
	Significance level	0.001
	number	376

According to the calculated significance level between the two ranges which is equal to 0.001 and because this number is less than 0.05, so there is a significant relationship between two variables including agricultural activities and the social dimension of quality of life of farmers. Also, according to the calculated correlation intensity which is equal to 0.231, there is a positive, moderate, and direct correlation between the two variables including agricultural activities and the social dimension of the quality of life of a farmer. Thus, the more agricultural activities there are among farmers, the higher the overall quality of life regarding social dimension among them. The research's third sub-hypothesis is confirmed accordingly.

The fourth sub-hypothesis test: There is a relationship between agricultural activities and the family dimension of quality of life.
Pearson correlation coefficient is used for testing this hypothesis. The findings are as follows:
H_0: $\rho = 0$
H_1: $\rho \neq 0$

Table 11- correlation coefficient of agricultural activities and family dimension of quality of life

family dimension of quality of life		
Agricultural activities	Relationship intensity	0.175
	Significance level	0.001
	number	376

According to the calculated significance level between the two ranges which is equal to 0.001 and because this number is less than 0.05, so there is a significant relationship between two

variables including agricultural activities and family dimension of quality of life of farmers. Also, according to the calculated correlation intensity which is equal to 0.175, there is a positive, moderate, and direct correlation between the two variables including agricultural activities and the family dimension of the quality of life of a farmer. Thus, the more agricultural activities there are among farmers, the higher the overall quality of life regarding family dimension among them. The research's fourth sub-hypothesis is confirmed accordingly.

Regression analysis: how much is the level of the independent variable's impact on the dependent one?
Linear regression is used for testing this hypothesis. The findings are as follows:
H_0: $\beta = 0$
H_1: $\beta \neq 0$

"The linear regression between agricultural activities level and quality of life of farmers"

Table 12- Correlation indicators status

Correlation coefficient	Determination coefficient	Balanced determination coefficient	Standard deviation of estimation
0.547	0.299	0.298	0.33422

The calculated correlation coefficient is equal to 0.547 which indicates a strong correlation between the predictive variable (agricultural activities) and the standard variable (quality of life of farmers). According to obtained results, the level of balanced determination coefficient for the model is equal to 0.298 and so we can conclude that 2.8 percent of changes in the standard variable can be determined through its linear relationship with the predictive variable.

Table 13- Analysis of variance related to model

Topics	Sum of squares	Degree of freedom	Mean of squares	f-Statistic	p-value
Regression	53.357	1	53.357	477.680	0.001
Remainders	66.797	374	0.112		
sum	120.154	375			

As it can be observed in variance analysis table 13, the p-value for testing is very less than the error level of 0.05. So, the H_0 hypothesis based on the fact that the standard variable "agricultural activities" and the predictor variable (quality of life of farmers) are not correlated in society is rejected and we can conclude that the standard variable and the predictor variables are correlated.

Table 14- The status of effect coefficients of components entered in the model

variables	Effect coefficient		standard effect coefficient	Coefficient testing	
Fixed value	Coefficient (Beta)	Standard deviation		t-statistic	p-value
	4.518	0.064		556.70	0.001
Agricultural activities	0.423	0.019	0.666	856.21	0.001

According to information inserted in table 14, the agricultural activity level has a significant impact on the quality of life of farmers. The regression equation is as below in which existing variables are as follows X is agricultural activities level and Y is quality of life of farmers.
X =4/518 + 0/423 Y

So, we can say that agricultural activity level has a significant and positive effect on the quality of life of farmers.

Suggestions

As it is observed, there is a relationship between the independent variable (agricultural activities) and all the dimensions of quality of life-based on the research's results. In this way that agricultural activities increase different dimensions of quality of life. Meanwhile, the most affected one is related to the physical and psychological dimension of quality of life because more physical activity also improves the physical condition. The present study's findings based on the relationship between agricultural activities and quality of life are consistent with the research findings of Safi Jahanshahi et al. (2017), Bashaq et al. (2014), and Ghaneh et al. (2015). Each one of the above-mentioned researchers found out in their research the relationship between agriculture and quality of life. Also, the findings of the present study are consistent with the theories of Landes, Bates, Bond, and Corner. According to Landes, each of the different natural factors affects the quality

of life of individuals. Agriculture is one of the most important natural factors related to the quality of life. The agricultural system is one of the basic institutions in the process of institutional and human transformation of rural society. Hence, the quality of life of human resources working in the agricultural sector is affected by agricultural products. Therefore, it is necessary to select its attributes and characteristics in order to determine and evaluate this situation. Some items are directly measurable. Some of them can be ranked based on the importance and severity of the effects as ascending or descending. It is necessary to determine the state of the environment with the presence or absence of some traits if it is necessary. In this case, the statistical population under study must be determined. For statistical population determination, the status of ecosystems, etc., the number and location of samples can be determined based on regions and geographical areas. According to the fact that natural phenomena have random cycles and components in addition to being dynamic and consequently they are always connected to the quality of life of individuals, therefore, it should be possible to estimate the future situation with the quality of agricultural products in order to provide the necessary basis for evaluating the impacts of natural factors on the quality of life in the future. Unlike previous theorists, Bond and Corner examined factors affecting the quality of life instead of dealing with different dimensions of quality of life. Bund and Corner listed the most important factors which influence the quality of life including personal satisfaction, physical environment factors, social support, cultural factors, health status factors, personality factors, and individual independence factors. One of the important physical factors is the physical environment standard which is one of the important factors in the quality of life research. The quality of the space of living is assessed by the area of housing, the presence or absence of basic facilities, the surrounding natural views, the agricultural situation, etc. Therefore, the findings of the present study are consistent with the above theories. So, some suggestions for increasing the quality of life and also some guidelines for future research are presented according to the results of this research.

- The results of the present study showed that there is a relationship between agricultural activities and quality of life in different dimensions, so it is suggested that:

The main hypothesis of the present study indicated that there is a positive and direct relationship between agricultural activities and quality of life. Therefore, agricultural activities should be increased in order to increase the quality of life. So, some suggestions are presented as follows:

- Irrigation of agricultural lands by creating a dam and also providing advanced irrigation systems for farmers in the way that farmers avoid using the traditional irrigation system and irrigation systems should be updated using sprinkler irrigation equipment. Therefore, the quality of life will be increased by increasing the quality of agricultural products.
- Provide subsidies to farmers for providing suitable fertilizers and seeds so that they can improve their crops.
- Giving vermicomposting soils to farmers at low prices, especially in greenhouses and summer crops, and vegetable farms.
- Holding some training classes for farmers the government by applying agricultural experts (agricultural jihad, agricultural engineering graduates, agriculture education and promotion).
- Development of more applied and high-value agricultural activities and guiding surplus labor. Statistics show that the sub-sector of agriculture is superior to sub-sectors such as horticulture and it is more possible to increase productivity through mechanization. In other words, agriculture requires less labor and therefore it would be illogical to direct and retain manpower in this sub-sector. Therefore, policies and programs should be designed in such a way that eventually the surplus population is replaced from agriculture sub-sectors to sub-sectors because of the impossibility of full mechanization of the sub-sectors operations such as horticulture and their greater need for labor.
- Expanding side industries related to high value products through small and medium businesses.

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