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Investigating the Relationship Between Livelihood Capitals and Environmental Attitude: Evidences from Rural Households in Dena County, Iran

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Abstract

Irreparable damage to the environment due to environmental degradation necessitates specific attention to the humans' environmental attitudes which is chiefly affected by individuals' livelihood capitals. Hence, this study aimed at investigating the relationship between livelihood capitals as independent variables and environmental attitude as dependent variable among rural households in the central district of Dena County, Iran. The present study was a descriptive-analytic survey. The statistical population included 2500 rural households in the studied area. Consequently, 300 households were selected by cluster random sampling. The instrument for assessing the livelihood capitals was a structured, researcher-made and by which its face validity and reliability were confirmed applying a panel of experts and calculating the Cronbach's Alpha, respectively. Furthermore, the questionnaire by Dunlop et al. (2000) were employed to measure environmental attitude. The results of Spearman coefficient indicated that the relationship between social, human and natural capital and environmental attitude was positive whereas the relationship between physical and also financial capitals and environmental attitude was negative. Nonetheless, only the relationship between financial capital and environmental attitude was statistically significant. Thus, making people with higher financial capital aware of the environmental crisis seems essential.

Keywords
livelihood capital, environmental crisis, rural households, Dena County

1. Introduction

In the late 1980s, the modern English term sustainable livelihood was coined and defined by Chambers and Conway. According to their definition "A livelihood comprises the capabilities, assets (stores, resources, claims and access) and activities required for a means of living: a livelihood is sustainable which can cope with and recover from stress and shocks, maintain or enhance its capabilities and assets, and provide sustainable livelihood opportunities for the next generation; and which contributes net benefits to other livelihoods at the local and global levels and in the short and long term". It emerged in a report on environmental sustainability in economically destitute rural communities located in the so-called developing world (Carr et al., 2024). Thus, livelihood is a way of making a living consisted of the abilities, assets as well as activities people need to survive and develop (Zhang & Xie, 2019). In other words, it can be defined as a set of measures taken by people within their capacity as well as capitals to earn a living by maintaining diverse portfolio of activities (Ding et al., 2018).

The transition of sustainable livelihoods from an approach (SLA) to a framework (SLF) occurred with the publication of Ian Scoones in 1998 (Natarajan et al., 2022). Its two-dimensional diagram consists of core variables such as vulnerability context, livelihood capital, structural and process changes, livelihood strategies and livelihood outcomes, as well as typical connection between them (Su et al., 2021). Livelihood capitals, representing a household's intrinsic assets, form the core of sustainable livelihoods which are fundamental factors for poor local communities. They include five major humans, social, natural, physical and financial capital improvement of which is considered

essential to achieve sustainable livelihood and vital to the survival of people in confronting with stresses and shocks without damaging the environment (Ding et al., 2018; Mohammadi et al., 2021; Wang et al., 2021a). Based on the livelihood approach, rural livelihood capitals are the basis of villagers' empowerment and power of intervention in their social and individual destiny (Badko et al., 2020) and they strongly determine how to strategize towards achieving its livelihood goals including revenue, shelter, security, and general wellbeing (Ding et al., 2018). In addition, livelihood capitals could be stored, accumulated, exchanged and transferred during the process of generating income at either a community or household level (Ding et al., 2018; Su et al., 2018).

One of the most important reasons leading to the specific significance of sustainable livelihood in recent years is the indiscriminate use of natural and environmental resources by humans, and their destruction. The sustainable livelihood approach is focused on the villagers' resources and its goal is to develop their livelihood towards a more sustainable direction. In fact, this approach has been formed as a combination of rural livelihood and sustainable development. The goals of sustainable rural development will not be achieved without a favorable level of livelihood assets. One of the aspects of sustainable development is conserving the environment (Asadolahi et al., 2022). Nonetheless, in recent years, the degradation of rangelands and forests in the central district of Dena county located in Kohgiluyeh and Boyar Ahmad province, Iran, has been clearly visible (Babazekri et al., 2017). This degradation could be irreparable damage to the region's environment. Considering sustainable development regardless of the environmental issues is unimaginable as any environmental problems can decelerate and delay sustainable development. One of the solutions to prevent environmental crisis and destruction is to change the humans' attitude and behavior towards naturalistic dimensions as well as eradicating poverty and in equality (Asadolahi et al., 2022). In other words, the prerequisite to the environmental preservation and behavior is changing human attitude and having a positive environmental attitude (Asadolahi et al., 2022). However, individuals' attitudes and behaviors towards the environment are chiefly affected by their livelihoods (Zhang et al., 2020) and their livelihood capitals. Hence, this research is focused on the link between individuals' livelihood capitals and environmental attitudes in the central district of Dena county located in Kohgiluyeh and Boyer Ahmad province, Iran.

1.1 Literature Review

According to the sustainable livelihood framework (SLF) offered by Department for International Development (DFID), livelihood capitals are divided into five categories including social, financial, human natural and physical capitals. Livelihoods are caused by these diverse assets and activities (Sharifi et al., 2019). Social capital refers to all resources in the social structure beneficial to the household development (Wang et al., 2021b). In other words, this capital refers to the possessed social network and various social resources reflecting the close social relationship (Li & Wang, 2023). Financial capital refers to the various funds and financial assets held by individuals. Human capital refers to the knowledge, skills, number of household workers (Wang et al., 2021b), health, and other abilities possessed by an individual and are a kind of capital with the capability to create wealth, which can be improved and increased in value via continuous learning and practice (Li & Wang, 2023). This capital is also required to apply any of the other four types of capitals, in addition to its intrinsic worth (Fahad et al., 2023). Natural capital refers to natural resources that can be used for production and living. Physical capital refers to tangible goods applied to produce other products and provide sustainable livelihoods (Wang et al., 2021b)

Besides livelihood capitals, environmental attitude is another issue considered in this study. According to Ajzen, attitude can be individual judgment under an intended action which determines their either positive or negative feeling toward a particular situation (Ogiemwonyi et al., 2023). Attitudes are formed as a result of individuals' perceptions which prepares the ground for their behaviors (Gökmen, 2021). An environmental attitude involves a set of values and feelings about environmental activities or issues and a positive environmental attitude provides responsibility for environmental preservation and improvement (Han, 2023). During the decades, the relationship between human and the environment has undergone fundamental changes mentioned in the following.

In terms of human relationship with nature, the anthropocentric worldview is built on a belief in constant and unrestricted progress which increasingly requires resources, where nature is treated as a supplier of inexpensive and abundant resources. In addition, Black's Dominant Western Worldview (DWW) assumes the differentiation between humans and other creatures and belief in humans' dominant position. The Human Exceptionalism Paradigm (HEP) takes a similar approach, but focuses more on human uniqueness and supremacy due to culture and technology. The Dominant Social Paradigm (DSP) proposed by Pirages and Ehrlich in 1974 claims that nature is treated in an un-ecological and possessive way. Moreover, DSP's adherents tend to believe the environment as an unlimited source providing resources for abundant economic growth, and of science and technology as the antidote to environmental issues. The separation of humans from nature is also significant in this approach. Despite the recognition of DSP's limitations, Pirages and Ehrlich did not come up with an alternative proposal. There was, nonetheless, this belief that a new ecological view of the environment could make a contribution to the environmental preservation and conservation through a holistic approach to environmental protection. The anthropocentric approach represented by

the DSP, with its human uniqueness taking precedence over nature contradicts with the New Environmental/ Ecological Paradigm, which reflects ecological consciousness, human and nature integration, humans and nature relationship as well as "environmental concern" (Dyr & Prusik, 2020).

The New Environmental Paradigm (NEP) was created and developed by Dunlap and Van Liere in the early 1970s. The NEP presented a challenge to un-ecological paradigms because it considered human technology, faith in science and progress to be restricted and insufficient for "governing" the world. The NEP shifts from perceiving the environment as an unlimited source dominated by humans, to perceiving it as limited and fragile. It emphasizes on a high valuation of nature, compassion toward other species, the avoidance of environmental risks and respect for the limits of nature and growth. Instead of belief in human dominance over nature, the NEP introduces the concept of a human-nature relation neither of which side is dominant (Dyr & Prusik, 2020). Reviewing the background revealed that some studies investigated the sustainability of livelihood capital including Badko et al (2020), Sharifi et al (2019). Furthermore, livelihood capitals were measured in some studies including Su et al (2019), Liu et al (2021), Saeedi Rad et al (2021), Yang et al (2021), Rahimi & Karami Dehkordi (2022), Tong et al (2023). Some of the previous researchers studied the livelihood capital in order to weight them (Sharifi & Nooripoor, 2018; Issa Zehi & Sharifzadeh, 2021). In addition, NEP has been employed in a bountiful number of studies (Varah et al., 2020; Eren & Düzenli, 2021; Karpudewan, 2021; Joshi et al., 2022; Savari et al., 2022; Spínola, 2020; Tan et al., 2022; Wilkie & Trotter, 2022; Wyss et al., 2022; Ajayi & Tichaawa, 2023; Colombo et al., 2023; Sumitro & Rohman, 2023; Ymeri et al., 2023; Wibowo et al., 2023;) to measure environmental attitudes.

Nonetheless, studies on the relationship between livelihood capitals and environmental attitudes have not received much attention some of which are in the following:

Lin et al (2023) pointed out that farmers' livelihood capital played a significant role in implementing energy-saving behaviors. Specifically, physical capital and social capital were conducive to implement energy-saving behaviors while natural capital and human capital had a significant negative effect on energy-saving behaviors. Financial capital effected energy-saving behaviors variedly.

The findings of Asadolahi et al. (2022) indicated that villagers had weak environmental attitude. Furthermore, there was a positive and significant relationship between livelihood capital and environmental attitudes. The results of multiple linear regression also showed that among the livelihood capital, financial and physical capital were the most important explainers of the villagers' environmental attitude.

Ren et al (2022) found out that farmers' livelihood capital could significantly affect farmers' green production. Specifically, human capital and social capital had a positive contribution to both farmers' green production decision and the degree of green production. Natural capital and financial capital had no significant effect on green production decision, whereas had a significant positive effect on the degree of green production behavior; physical capital did not significantly affect farmers' green production behavior.

Hajilou et al (2020) found that social capital had no significant effect on the environmental concerns of students at Tabriz University. Hao et al. (2019) noted that social capital influenced people's environmental concern in China.

Masud et al (2014) pointed out that human assets and environmental assets had positive and significant effects on attitudes towards environmental conservation behavior. In addition, human, environmental, social and financial assets had positive effects on environmental conservation behavior mediated by their attitudes.

The results of Banifatemeh et al (2014) showed that there was a significant positive relationship between cultural and economic capitals and environmental attitudes. The Regression analysis also indicated that the cultural capital could explain approximately eleven percent of the variance of environmental attitudes.

Salehi & Imam Gholi (2012) investigated the role of cultural capital on environmental behavior. The findings revealed that the correlation coefficient between environmental attitude and education as well as cultural capital acquired very weak and not statistically significant.

Mennatizadeh & Zamani (2012) studied factors influencing farmers' environmental attitudes towards protection of water and soil resources in Shiraz County. The results showed connection with agricultural experts, participation in training classes, literacy level, amount of agricultural land, agricultural yield and farmers' agricultural work background had the highest correlation with their attitudes towards environmental protection, respectively. Nonetheless, other variables including age, household size and distance from the field to the service center had no significant relationship with their environmental attitude.

Thuy et al. (2011) noted that social capital as a significant determinant of the overall conservation attitude of locals. All components of social capital, except trust, were significant in explaining indicators of conservation attitude. As mentioned, a considerable number of previous studies have focused on either livelihood capitals or environmental attitude. To authors' best knowledge, there have been a few quantitative studies investigating the relationship between livelihood capitals and environmental attitude. Thus, this study attempted to fill this gap which is the innovative aspect as well. Accordingly, the present study contributes to providing novel insights about the relationship between livelihood capitals and environmental attitude to enhance the knowledge about it. In addition, the paper makes a

contribution to growing and expanding the available literature on the link between livelihood capitals and environmental attitude. The framework of this study is shown on figure 1. As demonstrated, the relationship between five livelihood capitals and environmental attitude is investigated.

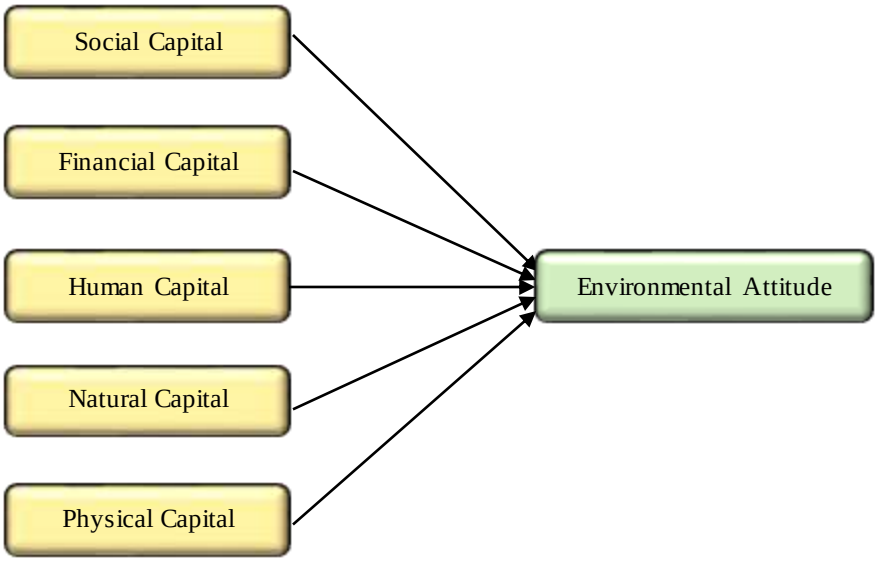

Figure 1. The theoretical framework of the study (Designed by the authors)

2. Materials and Methods

Dena County is located in the north of Kohgiluyeh and Boyer Ahmad province with an area of 1577 square kilometers (Figure 2). This county is bounded by the city of Semirom in Isfahan province and Lordegan County in Chaharmahal and Bakhtiari province from the north, and Boyer Ahmad County from the south. In Dena County, there are two protected areas namely Dena and Sivak (Ghorbannia et al., 2019).

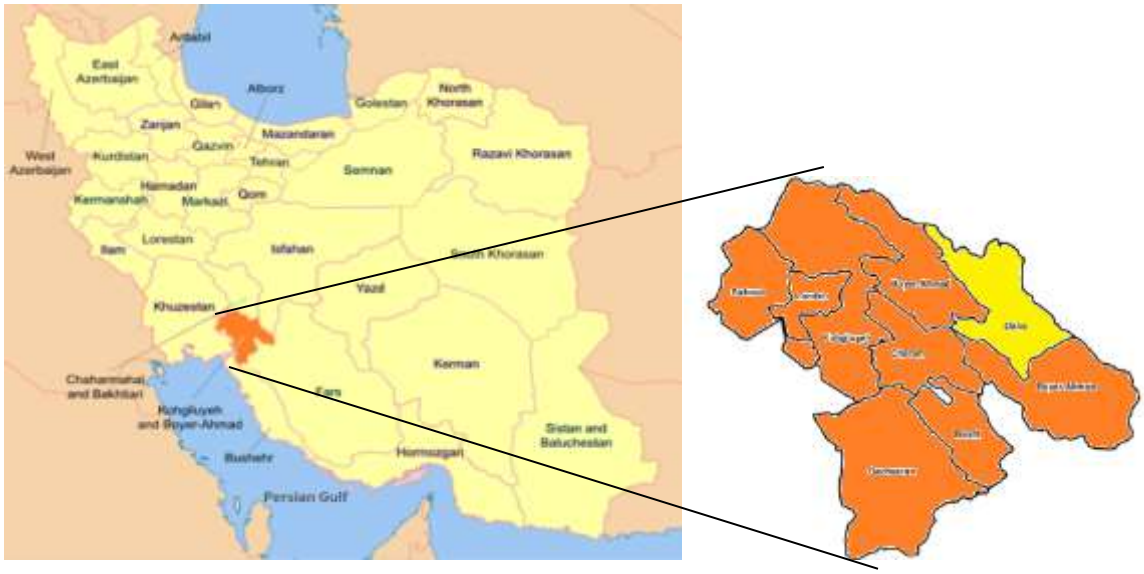

Figure 2. The geographical location of the study area

The present study was a descriptive-analytic study accomplished through a survey method. The statistical population comprised of 2500 rural households in the central district of Dena County, by which 300 households were determined as the sample applying Krejcie and Morgan's (1970) table. Samples were selected through cluster random sampling. The instrument for assessing the livelihood capitals was a structured and researcher-made questionnaire, whose face validity and reliability were confirmed using a panel of experts and calculating the Cronbach's Alpha,

respectively. In addition, 15 questions designed by Dunlop et al. (2000) were used to measure environmental attitude. It consists of five dimensions including limit to growth, balance of nature, anti-exemprionalism, anti-antrophocentrism and eco-crisis. Since the respondents of this study included the villagers of the study area, who usually have a lower level of education, therefore, the spectrum answers were designed in a way that their responses would be easier. According to this, the questionnaire items were measured with a 3-point Likert scale (disagree, neutral and agree). Descriptive and inferential analysis such as mean, standard deviation, Spearman correlation were applied to analyze data.

3. Results and Discussion

The respondents' demographic characteristics are illustrated in Table 1. The findings showed that the respondents' age ranged from 20 and 87 with an average of 44.16 and a standard deviation of 13.39. Most of the respondents (29.2%) aged between 41 and 50 years and only 17.2% are below 30 years. Also, 27.1 and 26.5 percent are in the age group of 31-40 and over 51 years, respectively.

considering that the statistical population of the research was the head of rural households, 97.0 % of the respondents were male and 3.0 % were female. The educational status of the respondents also indicates that 36.5% of them have a diploma. Then, 16.8%, 16.8%, and 16.4% were in elementary, university, and middle school levels of education, respectively, However, 13.5% were illiterate. The average of the household size was 5.08 people with a standard deviation of 2.14.

Table 1. Rrespondents' demographic characteristics

Variable	Level	Frequency	Valid percent	Mean	Standerd deviation
Age	Below 30	50	17.2	44.16	13.39
	31-40	79	27.1		
	41-50	85	29.2		
	Over 50	77	26.5		
Gender	Male	291	97.0	-	-
	Female	9	3.0		
Education	Illiterate	37	13.5	-	-
	Elementary	46	16.8		
	Secondary school	45	16.4		
	Diploma	100	36.5		
	University	46	16.8		
Household size	-	-	-	5.08	2.14

(Source: Authors, 2024)

Spearman correlation coefficient was employed to investigate the relationship between social capital components and environmental attitudes. The results in Table 2 indicate that the correlation coefficient value between environmental attitude and social trust, social network, social cohesion, social norm and social participation obtained positive. This illustrates that changes in environmental attitudes and components of social capital are in the same direction. In other words, improving environmental attitudes is associated with increased social trust, social network, social cohesion, social norm, and social participation. Nonetheless, the results of the level of significance show that the obtained level of significance is higher than 0.05 and as a result these changes are not statistically significant. In addition, the findings of this table show that Spearman correlation coefficient between social capital and environmental attitude is not significant ($p = 0.154$, $r = 0.083$). Therefore, it can be concluded that there is generally no significant relationship between the two variables of social capital and environmental attitudes. Of course, the significance level is close to 5% and if the significance level can be increased to 10%, the relationship will become significant. This point shows that although the desired relationship is not at a significant level, its closeness to the significant level makes it possible to speak cautiously about the positive and significant relationship between environmental attitude and social capital.

Table 2. Spearman correlation coefficient between social capital components and environmental attitude

Social capital components	Social trust	Social network	Social cohesion	Social norm	Social participation	Social capital
Spearman correlation (r)	0.081	0.025	0.076	0.071	0.073	0.083
Level of significance (P)	0.162	0.672	0.190	0.224	0.206	0.154

(Source: Authors, 2024)

The results of Spearman correlation coefficient between the components of financial capital and environmental attitudes are shown in Table 3. The correlation coefficient between the components of financial capital, including income and access to credit, and environmental attitude obtained negative. This suggests that changes in environmental attitudes and components of financial capital are reversed. In other words, people with higher incomes and more access to credit have a lower environmental attitude. However, the results show the level of significance only for access to loans obtained less than 0.05. Therefore, it can be deducted that with a 95% confidence level, there is a significant negative relationship between environmental attitudes and access to credit, which indicates that in fact, those who have more access to credit are less likely to believe in environmental protection. The findings of this table also show that Spearman correlation coefficient between financial capital and environmental attitude is significant ($p = 0.046$, $r = -0.116$). Therefore, it can be concluded that with a 95% confidence level, there is a significant negative relationship between financial capital and environmental attitudes. This may indicate that people with higher financial levels are less likely to believe in protecting the environment. This may be due to the fact that people with higher financial levels are likely to believe that environmental damage can be compensated through financial resources. In other words, maybe the reason for this finding is that some people think that money is the solution to all problems.

Table 3. Spearman correlation coefficient between financial capital components and environmental attitude

Financial capital components	Income	Access to credit	Financial capital
Spearman correlation (r)	-0.082	-0.115*	-0.116*
Level of significance (P)	0.186	0.046	0.046

(Source: Authors, 2024)

Spearman correlation coefficient between human capital components and environmental attitude is illustrated in Table 4. It shows that the correlation coefficient between all components of human capital including education, number of people over diplomas in the family, health, skills and tendency to innovation and environmental attitude is positive. This indicates that changes in environmental attitudes and components of human capital are in the same direction. In other words, the more educated, the greater number of people over diplomas in the family, the better health, the higher skills and tendency to innovate people have, the higher environmental attitude they have. Nevertheless, the results of the level of significance indicate that it is obtained over 0.05 and as a result these changes are not statistically significant. Furthermore, the findings of this table illustrate that Spearman correlation coefficient between human capital and environmental attitude is not significant ($p = 0.092$, $r = 0.097$). Therefore, it can be concluded that despite the positive and co-directional changes of the two variables of human capital and environmental attitude, there is generally no significant relationship between them.

Table 4. Spearman correlation coefficient between human capital components and environmental attitude

Human capital components	Education	Number of people over diplomas in the family	Health	Skills	Tendency to innovation	Human capital
Spearman correlation (r)	0.091	0.027	0.074	0.057	0.055	0.097
Level of significance (p)	0.132	0.665	0.201	0.322	0.338	0.092

(Source: Authors, 2024)

The correlation between the components of natural capital and environmental attitudes is shown on table 5. According to this table, the correlation coefficient between the size of garden, soil quality and vegetation quality and environmental attitude is positive which illustrates that changes in environmental attitudes and the three components of natural capital are in the same direction. In contrast, the correlation coefficient between the amount of arable land, water quality and environmental attitude obtained negative. However, the results of the level of significance show that for all components of natural capital as well as natural capital in general it is higher than 0.05. Therefore, these changes are not statistically significant. In other words, having higher level of natural capital do not lead to more favorable environmental attitude. The reason behind it could be that people with higher natural capital may believe in human supremacy over the environment.

Table 5. Spearman correlation coefficient between natural capital components and environmental attitude

Natural capital components	The amount of arable land	The size of garden	Soil quality	Water quality	Vegetation quality	Natural capital
Spearman correlation (r)	-0.031	0.023	0.010	-0.028	0.102	0.036
Level of significance (P)	0.627	0.716	0.862	0.635	0.078	0.533

(Source: Authors, 2024)

The results of Spearman correlation coefficient between the components of physical capital and environmental attitude is depicted in Table 6. It shows that except the component of essential life instruments, the correlation coefficient between other components of physical capital (quality and quantity of housing, housing facilities, access to vehicles, access to energy, access to communication media and agricultural machinery) and environmental attitudes is negative. This suggests that changes in environmental attitudes and the five components are in opposite directions. However, despite the negative correlation coefficient between environmental attitudes and these components, the level of significance shows that only in the component of access to vehicles, the level of significance is less than 0.05 and therefore with 95% confidence can be said that there is a significant negative relationship between access to vehicles and environmental attitudes. This can indicate that people who have access to vehicles believe in human superiority over other creatures and the absence of crises in nature. Furthermore, the Spearman correlation coefficient between physical capital and environmental attitude, despite being negative, is not significant ($p = 0.233$, $r = -0.069$). Therefore, it can be concluded that there is no significant relationship between physical capital and environmental attitudes. To put it in other words, people with higher physical capital do not show more favorable environmental attitudes. The reason could be that the more people have access to tangible goods and facilities, the more they may think that humans have dominant position in the universe to exploit it.

Table 6. Spearman correlation coefficient between physical capital components and environmental attitude (Source: Authors, 2024)

Physical capital components	Quality and quantity of housing	Housing facilities	Essential life instruments	Access to vehicles	Access to energy	Access to communication media	Agricultural machinery	Physical capital
Spearman correlation (r)	-0.001	-0.081	0.010	-0.129*	-0.038	-0.011	-0.080	-0.069
Level of significance (P)	0.987	0.160	0.858	0.028	0.513	0.854	0.172	0.233

Figure 3 illustrated the field framework. As shown, 3 capitals including social, human and natural had positive relationship with environmental attitude and 2 others namely financial and physical had negative correlation with environmental attitude. Among all of which, just the correlation between financial capital and environmental attitude was statically significant.

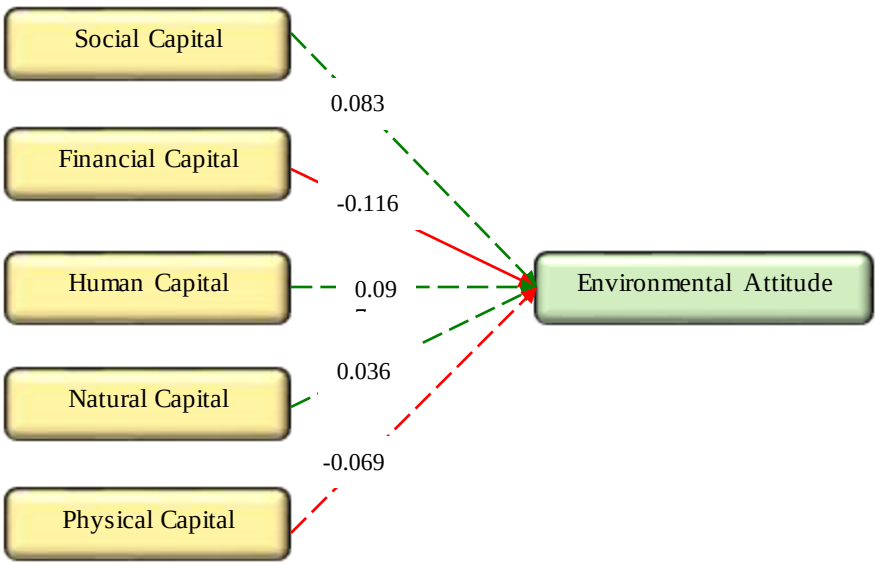

Figure 3. The field framework
(Source: Authors, 2024)

4. Conclusion and Recommendations

This study aimed at investigating the relationship between livelihood capitals and environmental attitude among rural households in Dena County, Iran. The findings indicated that Pearson correlation coefficient between social capital and environmental attitude was positive which is consistent with Asadolahi et al. (2022). In addition, Ren et al (2022) noted that farmers' social capital had a positive contribution to both farmers' green production decision and the degree of green production. Thuy et al. (2011) also implied social capital as a significant determinant of the overall conservation attitude of locals. However, in the current study the positive correlation was not statistically significant which is consistent with the result of Hajilou et al (2020) finding that social capital did not have a significant effect on the environmental concerns. In contrast, Hao et al (2019) which showed that there was a relationship between social capital and environmental concern in China. Considering that social capital is one of the characteristics of social life, networks, norms and trust that enable participants to pursue their common goals more effectively, and because in this study no significant relationship was observed between the two variables of social capital and environmental attitude. This may indicate that environmental issues are not among the common goals and concerns.

The correlation coefficient between financial capital and environmental attitude was negative as well as significant indicating that there is a significant negative relationship between financial capital and environmental attitudes. In other words, the higher financial capital the respondents have, the less environmental attitudes they have. This could imply that affluent respondents are less concerned about environmental issues and less supportive of environmental preservation. This may be rooted in the belief that environmental damage can be repairable and compensatory through pecuniary sources. Furthermore, according to Environmental Kuznets Curve hypothesis, economic growth can initially result in enhancing environmental degradation, before reaching a turning point where environmental concerns start to take more sustainable measures (Sarkodie & Strezov 2019). Nonetheless, this finding is incongruous with Banifatemeh et al (2014) noting that there was a significant positive relationship between economic capital and environmental attitudes.

The correlation coefficient between all components of human capital and environmental attitude was positive, but not statistically significant. Asadolahi et al. (2022) and Masud et al (2014) also found that human assets had positive and significant effects on environmental attitudes and attitudes towards environmental conservation behavior, respectively. In contrast, Salehi & Imam Gholi (2012) pointed out that correlation coefficient between environmental attitude and education was negative and very weak and not statistically significant. In addition, the results are inconsistent with the findings of Mennatizadeh and Zamani (2012) which showed that the level of farmers' literacy was correlated with their attitudes toward environmental protection.

The correlation coefficient between some components of natural capital including the amount of garden, soil quality and vegetation quality and environmental attitude was positive. In other words, people who have better natural resources such as gardens, better soil quality and better vegetation have a more favorable environmental attitude. Nevertheless, the correlation coefficient between the amount of arable land, water quality and environmental attitude acquired negative. In other words, the less arable land the respondents have, the more favorable environmental attitude they have. Since people with more arable land are likely to consume more chemical fertilizers and pesticides, this might cause them have less favorable environmental attitude. In addition, those whose water quality is in a worse condition have more favorable environmental attitude. This may be because such people, due to the lack of favorable water conditions, are more aware of the importance of the environment and the need to preserve it, and consequently have a higher environmental attitude. All correlation coefficients between components of natural capital and environmental attitude, however, were not significant. Ren et al (2022) also found natural capital with no significant effect on green production decision. In contrast, Lin et al (2023) pointed out that farmers' natural capital had a significant negative effect on energy-saving behaviors.

The correlation coefficient between environmental attitude and six components of physical capital (quality and quantity of housing, housing facilities, access to vehicles, access to energy, access to communication media and agricultural machinery) were negative. To put it in other words, the respondents who had higher quality and quantity of housing, housing facilities, access to vehicles, access to energy, access to communication media and agricultural machinery, their environmental attitude was in a more unfavorable situation. In fact, people who benefited from these components of physical capital had fewer environmental concerns. On the contrary, there was positive correlation between essential life instruments and environmental attitude. In addition, even though the correlation between physical capital and environmental attitude was negative, it was not statistically significant. Ren et al (2022) also pointed out that physical capital had significant effect on farmers' green production behavior. In contrast, Asadolahi et al. (2022) also noted a positive link between physical capital and environmental attitude. Lin et al (2023) also found out that farmers' physical capital was conducive to implement energy-saving behaviors.

The acquired results of this study could pave the way for achieving sustainability as well as sustainable livelihood. Perceiving the relationships between livelihood capitals and environmental attitude can provide worthwhile knowledge for policymakers and planners in order to identify capitals affecting environmental attitude in order to

improve individuals' environmental attitude and consequently prevent environmental degradation. However, it can be suggested that the whole SLF variables be studied in relationship with environmental attitude to achieve a comprehensive perception in the future studies.

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