

## RURAL COMMUNITY'S PARTICIPATION RATE AND PERCEIVED BENEFITS IN A RURAL AREA IN SAUDI ARABIA

Abdulaziz Thabet Dabiah 

Department of Agricultural Extension and Rural Society, College of Food and Agriculture Sciences, King Saud University – Riyadh

\*Corresponding author: [adabiah@ksu.edu.sa](mailto:adabiah@ksu.edu.sa)

### ABSTRACT

The study aimed to investigate farmers' participation, perceived benefits from local extension activities, and identified barriers to participation. A Simple Random Sampling technique was used for data collection. A personal interview was conducted, and 219 responses were usable for research analysis. The results showed that more than a half of the respondents (63.5%) have not participated in any agricultural extension activity. However, 36.5% of the respondents reported that they have participated in at least one agricultural extension activity. Regarding non-agriculture activities, only 11.9% of the respondents have not participated in any local activity, most of them (88.1%) participated in at least one local activity. Participation and perceived benefits from agricultural extension had negative significant relationships with "Low direct financial returns from activities", "Uncertainty about the feasibility of local extension services", "Not suitable for my schedule", "The activities places are too far", and with "Lack of confidence in the agricultural extension agents". Participation and perceived benefits from non-agricultural activities had negative significant relationships with "No advertisement for activities", "Not suitable for my schedule", "Difficult to reach locations of the activities" and with "The activities places are too far".

**Keywords:** Community Engagement, Rural Development, Local Participation, Participation Barriers

---

Article History (2023-0128) || Received: 15 Apr 2023 || Revised: 30 Apr 2023 || Accepted: 02 May 2023 || Published Online: 05 May 2023

This is an open-access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

### 1. INTRODUCTION

Participation in local activities, whether agricultural or non-agricultural extension activities, is the cornerstone of bringing about integrated rural development. As a result of the negative effects that resulted from the centralization of rural development processes, developing countries and communities have realized the importance of local participation in activities. Based on this importance, laws and legislations have been enacted, seminars and conferences have been held, and a trend has emerged that gives importance to the human side by virtue of the fact that the human being is originally the one who laid the foundations for rural development and at the same time is the ultimate goal and goal of those development programs.

Rural development does not mean only agricultural development despite its importance as an essential element for all different rural development programs. Globally, rural development is also linked to a general reformation of the economy, which has led to extensive changes in the patterns of collaboration between society and the firm.

The agricultural sector is of great importance in the income of most developing countries, and it is the dominant and most important sector among other sectors in the life of those countries. In providing sources of income to members of the rural community in a sustainable manner and providing job opportunities for a large segment of them, while most of the rural people engage in agricultural activities, many of them who depend for their income on non-agricultural activities in order to increase them and provide all their needs (World Bank 2008).

Engaging rural people is one of the best and most successful methods in development processes, as it means the process of involving rural people and stakeholders in an equitable way in planning, implementing, and evaluating all development activities (Al-Suwailem 2008; McDonough 2019; Board 2019; Shrestha 2021). The participation of rural people in the various local activities is an indication of their conviction and understanding of the importance of collective rural work and the extent of raising their capabilities, developing their knowledge and ideas, and raising their standard of living. Extension plays a critical role in diffusion of innovation so that farmer's participation improves aware and increase their productivity (Eastwood et al. 2017; Lagat 2021; Afranaa Kwamong and Ankrah 2023; Reis et al. 2023). Rural people have the privilege of knowing their local community and its

context, which is critical in planning and implementing development programs. Kilpatrick (2009) stated that time and effort should be invested in effective community engagement plans that accommodate multifaceted strategies at multiple phases of the overall engagement framework.

In the Kingdom of Saudi Arabia, development programs in general and rural development programs in particular are of an integrated type, aiming to include all regions and governorates of the Kingdom, including the governorate of Ahad Rafidah, the research area, which focuses on development and coordination between all technical services, and it has an organization aimed at achieving Participate, stimulate and coordinate all efforts in order to contribute to the development of society in general and the rural community in particular, and to provide technical and financial resources to achieve the objectives of integrated rural development.

### 1.1. Literature Review

Literature on this topic can be divided into two groups: traditional and contemporary Studies. While traditional studies focused on participation levels in agricultural extension activities and the types of activities that the rural people are attending, contemporary studies, on the other hand, discussed the impact, benefits, and barriers that prevent the rural people from participating in local agricultural activities, besides participation levels.

Extension activities connects rural farmers to innovative knowledges and educate them on alternative practices, thereby reducing the information irregularity often related with innovative technologies (Ghimire and Huang 2015). Awad (1993) reported that 51.8% of the respondents have resorted to an extension agent or the local extension office when they faced certain problems or need help in applying new farming practices in their fields.

The results came as the following: office visits (38.8%), field visits (43.7%), extension meetings (50%), and extension fields (52.3%). The result showed that participation of farmers in extension activities is high (77.42%) and majority (Anwarudin and Dayat 2019). The respondents in the study indicated that the most barriers are “don’t know about upcoming activities”, “work responsibilities” and, “there is not enough time to participate”. Many other factors revealed that limit participation on extension activities as Suvedi et al. (2017) revealed that age, education, household size, and distance to the extension office. Some farmers stated that unsuitable schedule of extension events decreased their participation in extension activities (Altarawneh et al. 2012).

Acker and Gasperini (2008) reported a new set of knowledge and skills that rural people seek in extension programs. Skills regarding self-employment, food supply, and life skills became more popular among rural communities. Also, the same study indicated that the most important standards that should be taken into consideration when developing extension programs are relevance, flexibility, local input, and scheduling. Thus, they concluded that these standards are critical to support program participation. In the same direction, Kassem et al. (2018) highlighted the importance of providing opportunities for rural community engagement, not only as receivers and consumers but also, as developers and providers. Borrón et al. (2019) concluded that engaging rural communities in developing local programs is critical on both sides, program quality and participation rate. Extension program material should be delivered according to the needs of farmers (Anwarudin and Dayat 2019; Riwakore and Habaora 2019; Abdullah et al. 2021). The studies of Borrón et al. (2019) emphasized moving from the traditional practices of developing extension and educational programs to more sustainable strategies for developing and implementing such programs.

The importance of this study comes from two aspects: the research and the applied aspects. Whereas, previous studies on this subject were divided into two directions; 1) the traditional way, looking at the level of participation and the type of activities, and 2) the contemporary studies that focus on the benefits and obstacles to participating in local activities. These studies come as an attempt to bridge the gap between traditional and contemporary studies, as it targets interests in terms of the level of participation and the types of activities, in addition to benefiting from participation and the obstacles that limit participation and their relationship to other variables in this study.

As for the practical aspect, this study can provide a scientific reference for those working on designing and implementing extension programs and local activities that require a degree of active participation by the rural community groups, whose participation in local activities, whether agricultural or non-agricultural, is closely related to its social and economic situation.

### 1.2. Research Aims

This research aims mainly to identify the degree of participation of rural people in local activities in the villages of Uhud Rafidah Governorate in the Asir region. The main goal was achieved through the following objectives:

1. Personal characteristics of the respondents.
2. The degree of respondents' participation in local extension activities.
3. The degree to which respondents benefit from participating in local activities.

The most important problems that limit the respondents' participation in local activities.

## 2. MATERIALS AND METHODS

### 2.1. Procedural Definitions

1- Participation: It means the degree of participation of the rural community members in the research area in local activities, whether agricultural or non-agricultural extension.

2- Rural: They are meant here villagers who engage in various agricultural, commercial and industrial activities in their rural environment.

3- Local activities: It means all agricultural extension activities and non-agricultural activities practiced by members of the rural community in the research area.

This study was conducted in the governorate of Uhud Rafaida (Fig. 1), which is one of the governorates in Asir region (southwestern Saudi Arabia). The population of this governorate is 14,299. This governorate was chosen for the presence of agricultural activities, both plant and animal production, and some commercial and industrial activities related to agriculture. Therefore, this governorate was considered a suitable community to conduct such a study to investigate the degree of benefit and participation in local activities. A random sample of 326 individuals was selected from the research community and 219 responses were usable for research analysis (67% of the sample).



Fig. 1: Map of study region.

### 2.2. Instrumentation

A personal interview questionnaire was used to collect data. The questionnaire consists of four parts: the first includes some questions related to personal characteristics, the second part focuses on the level of participation in local agricultural extension activities, and the third includes the degree to which respondents benefit from participating in activities. The fourth part of the questionnaire includes items related to the most important problems that limit the respondents' participation in the various local activities. In terms of validity and reliability, the questionnaire was verified and reviewed by a panel of experts in the field of this study at the College of Food and Agriculture Sciences at King Saud University. Editing and changing were made according to the panelists' opinions. The Cronbach Alpha coefficient for the questionnaire reached (0.83), which is a good indicator of the stability.

After putting the questionnaire in its final form, (4) assistants from the people of the selected villages were hired, who have sufficient knowledge of the research requirements and have the appropriate experience in conducting interviews, which helped to conduct interviews and collect valid interview data from 219 individuals from the research population accurately and easily, and this was done during the months of April and May 2021 and then processing the data statistically using some statistical methods such as frequencies, percentages, and statistical analyses were performed using the SPSS statistical program.

## 3. RESULTS AND DISCUSSION

### 3.1. The Personal Characteristics of the Respondents

Table 1 shows that 52.1% of the respondents are concentrated in the age group (40 years and less than 55 years), 33.3% of them are in the age group (25 years and less than 40 years), and the rest of the respondents (14.6%) are 55 years old and older. Also, it was found that 124 individuals (56.6%) of the respondents are married, while 71 of them (32.5%) are single, and 24 of the respondents (10.9%) are divorced, widower or widows.

**Table 1:** Distribution of respondents according to their personal characteristics (n=219)

Properties	Categories	Frequency	%
Age (Years)	25-40	73	33.3
	41-55	114	52.1
	55	32	14.6
Social Status	Married	124	56.6
	Divorced	15	6.8
	Single	71	32.4
	Widower/ widow	9	4.1
Educational level	Illiterate	9	4.1
	Elementary	19	8.7
	Secondary	69	31.5
	High school	73	33.3
	University	42	19.2
	Postgraduate	7	3.2
Occupation	Employee	108	49.3
	Farming	11	5.0
	Small business	53	24.2
	Medium business	44	20.1
	Family business	3	1.4
Income (Saudi Riyals)	less than 7000	23	10.5
	7000-14000	164	74.9
	More than 14,000	32	14.6

In terms of education, Table 1 shows that 161 of the respondents (73.5%) has completed some education before college level. 49 individuals (22.4%) possess a university or postgraduate degree. However, the results show that 9 of the respondents (4.1%) have not got any formal education. The same table shows that 108 of the respondents (49.3%) are employees, and 97 of them (44.3%) run different levels of business. 11 respondents (5%) stated “farming” as their job. Only 3 of the respondents (1.4%) indicated that they work in family business. Regarding the respondents’ income, results show that the income of 164 (74.9%) of them ranges from 7000 S.R. to less than 14000 S.R., 14.6% of the respondents make 14000 S.R. or more in a month. However, 10.5% of them make less than 7000 S.R. a month.

### 3.2. Participation Level and Local Activity Types

Data in Table 2 indicates low participation levels in agricultural extension events (mean=0.71). The results show that more than half of the research sample (63.5%) have not participated in any agricultural extension activity. On the other hand, 36.5% reported that they have participated in at least one agricultural extension activity. The respondents who stated that they have attended one agricultural extension activity were 17.8%. The respondents who indicated that they have attended two or more agricultural extension events were 18.7%. Regarding non-agriculture related activities, the situation was better (mean=1.31). Only 11.9% of the respondents have not participated in any local activity, 47.9% of them have attended only one activity, and 40.2% have attended at least two of non-agriculture local events. Regarding to participation rate in agricultural extension activities, the result from this study (participation rate is 36.5%) is higher than the findings of Suvedi et al. (2017) where it was found that 24% of the sample households participated in extension programs.

**Table 2:** Participation level in local activities (n=219)

Participation	Categories	Frequency	%	Mean	S.D
Agricultural extension activities	One activity	39	17.8	0.71	1.11
	Two activities	6	2.7		
	Three or more activities	35	16.0		
	None	139	63.5		
non-Agricultural extension activities	One activity	105	47.9	1.31	0.71
	Two activities	83	37.9		
	Three or more activities	5	2.3		
	None	26	11.9		

Local activity types in Table 3 are sorted by the numerical value that represents the level of participation for each activity. Regarding agricultural extension activities, the results show that the respondents tend to participate in collective extension events like campaigns, exhibitions, and extension meetings more than involve in individual events such as field or office visits. On the other hand, the respondents tend to participate in non-agriculture activities that close to them first. The results from Table 3 show that the respondents prefer to participate in activities related to their families and small community, and then they seek volunteer opportunities in the society. Very low number of them participated in NGOs work.

**Table 3:** Distribution of respondents according to the participation levels in local activities (n=219)

Local activities	Local activity type	Participation Level							
		High		medium		low		Nothing	
		N	%	N	%	N	%	N	%
Agricultural extension activities	Campaigns	10	4.6	18	8.1	61	27.9	130	59.4
	Exhibitions	9	4.1	13	5.9	69	31.5	128	58.4
	Meetings	9	4.1	21	9.6	53	24.2	136	62.1
	Field visits	10	4.6	15	6.8	55	25.1	139	63.5
	Office visits	9	4.1	12	5.5	55	25.1	143	65.3
non-agricultural activities	Family business	28	12.9	115	52.4	30	13.7	46	21.0
	Community events	66	30.1	106	48.4	32	14.6	15	6.9
	Volunteer work	24	11.0	112	51.1	35	16.0	48	21.9
	NGOs	-	-	3	4.1	-	-	216	98.6

4-Point Likert scale (High=3, Moderate=2, Low=1 and Nothing=0).

It can be seen from the results that rural people tend to participate in non-agricultural activities. In this regard, Webster and Ganpat (2006) tried to understand “community engagement” from rural people perspective. They found that adults in rural areas identify the concept of “community engagement as being good community members and involve in the community to create positive civic experiences. Maina and Maina (2012) found that youth in Kenya and Africa is less likely to participate in agricultural activities. It may be due to poor infrastructure and lack of appropriate inputs as Onuekwusi and Ottah (2006) pointed out that lack of institutional support and inputs barricaded youth participation in rural development and agricultural activities. On the other hand, Washburn et al. (2017) provided recommendations to enhance the agricultural extension work. She suggested that effective extension effort should facilitate the learning transfer process, recognize the norms of local communities, and partner with the community to tackle relevant challenges and find applicable solutions. Flynn et al. (2010) highlighted the role of community leaders as a strategy to increase participation rate in extension programs in rural communities. Lack of infrastructure and essential inputs also hinders youth’s participation in agricultural and rural development activities (Onuekwusi and Ottah 2006).

### 3.3. Perceived benefit from participating in local activities

Table 4 shows the distribution of the respondents according to their perceived benefit from participating in local activities. Although “Office visits” and “Field visits” are the least two agricultural extension activities that the respondents participate in, these two activities provide the most beneficial according to the respondents' opinion. On the other hand, the respondents perceive less benefit from collective activities such as “Campaigns” and “Exhibits”. Regarding to non-agricultural activities, the perceived benefits were consistent with the participation. The respondents perceive benefits from “Community events” (68.9%, high) and “Family business” (27.9%, high), which are the most non-agricultural activities that they participate in, higher than the rest activities in this category.

**Table 4:** Distribution of respondents according to their perceived benefit from participating in local activities

Local activities	Local activity type	Perceived Benefit					
		High		Medium		Low	
		N	%	N	%	N	%
Agricultural extension activities	Office visits	16	7.3	64	29.2	139	63.5
	Field visits	15	6.8	65	29.7	139	63.5
	Meetings	13	5.9	66	30.1	140	63.9
	Exhibitions	12	5.5	64	29.2	143	65.3
	Campaigns	13	5.9	56	25.6	150	68.5
Non-agricultural activities	Community events	151	68.9	56	25.6	12	5.5
	Family business	61	27.9	106	48.4	52	23.7
	Volunteer work	55	25.1	116	53.0	48	21.9
	NGOs	-	-	7	3.2	212	96.8

3-Point Likert scale (High=3, Moderate=2 and Low=1).

According to results in Table 4, the respondents perceived low benefits from their participation in agricultural extension activities, the rate who indicated the benefits were low ranged between 63.5% to 68.5%. This contradicts with findings of Radhakrishna and Sinasky (2005). Participants in his study perceived their involvement in extension activities as positive experiences and reported that the extension events had a great impact on them. Also, the results contradict with the findings of EL-Sayed (2002), where it was found that the benefit of the sample members from participating in the office visits and field visits activity was high by 37.4%. Regardless of the immediate or perceived benefits, Glen et al. (2014) conclude that benefits of extension work may reflect not only on



skills and knowledge but also, on behavior and attitudes of the participants. They stated that highlighting such benefits after concluding each activity help to increase participation rate for next events. The findings of Kelling and Hoover (2005) revealed that some unintended benefits from different programs, the benefits include working in a team, developing communication skills, and awareness. That is why participants in this study tend to perceive benefits from non-agricultural activities greater than they do toward agricultural extension activities.

### 3.4. The Most Important Barriers

**3.4.1. Agricultural Extension Activities:** Table 5 shows some statistically significant correlations between participation and benefit of both agricultural extension activities and non-agricultural activities as dependent variables and the most important barriers from participation in these activities as independent variables. The results show that the barriers in Table 5 have statistically negative significant relationships to participation and perceived benefit of both activity categories.

Participation in agricultural extension has negative significant relationships with “Low direct financial returns from activities” ( $r=-0.332$ ), “Uncertainty about the feasibility of local extension services” ( $r=-0.290$ ), “Not suitable for my schedule” ( $r=-0.203$ ), “The activities places are too far” ( $r=-0.185$ ), and with “Lack of confidence in the agricultural extension agents” ( $r=-0.159$ ). Perceived benefit from participating in agricultural extension activities has negative significant relationships with “Low direct financial returns from activities” ( $r=-0.361$ ), “Uncertainty about the feasibility of local extension services” ( $r=-0.316$ ), “Not suitable for my schedule” ( $r=-0.272$ ), “Lack of confidence in the agricultural extension agents” ( $r=-0.264$ ), and with “The activities places are too far” ( $r=-0.250$ ).

**Table 5:** Correlations between participation and benefit of agricultural extension activities and the most important barriers from participation

Barriers from participation (Independent)	Agricultural extension activities (Dependent)	
	Participation	Benefit
Low direct financial returns from activities	-0.332**	-0.361**
Uncertainty about the feasibility of local extension services	-0.290**	-0.316**
Not suitable for my schedule.	-0.203**	-0.272**
The activities places are too far	-0.185**	-0.250**
Lack of confidence in the agricultural extension agents	-0.159*	-0.264**

\* $P<0.05$ . \*\* $P<0.01$ .

**3.4.2. Non-Agricultural Activities:** Table 6 shows some statistically significant correlations between participation and benefit of both agricultural extension activities and non-agricultural activities as dependent variables and the most important barriers from participation in these activities as independent variables. The results show that the barriers in Table 6 have statistically negative significant relationships to participation and perceived benefit of non-agricultural activities.

**Table 6:** Correlations between participation and benefit of non-agricultural activities and the most important barriers from participation

Barriers from participation (independent)	Non-agricultural activities	
	Participation	Benefit
No advertisement for activities	-0.548**	-0.443**
Not suitable for my schedule.	-0.409**	-0.428**
Difficulties in reaching the locations of the activities	-0.400**	-0.349**
The activities places are too far	-0.274**	-0.050

\*\* $P<0.01$ .

Participation in non-agricultural activities has negative significant relationships with “No advertisement for activities” ( $r=-0.548$ ) “Not suitable for my schedule” ( $r=-0.409$ ), “Difficult to reach locations of the activities” ( $r=-0.400$ ) and with “The activities places are too far” ( $r=-0.274$ ). Perceived benefit from participating in non-agricultural activities has negative significant relationships with “No advertisement for activities” ( $r=-0.443$ ) “Not suitable for my schedule” ( $r=-0.428$ ), and with “Difficult to reach locations of the activities” ( $r=-0.349$ ). However, there is not statistically significant relationship was found between perceived benefit from non-agricultural activities and “The activities places are too far”.

The barriers that are reported in this study are not new. In fact, most study that focused on the same issues found some of these barriers. Muddassir et al. (2020) Highlighted the importance of building a solid reputation for the extension services among any rural community members, and that can be accomplished by developing effective programs and building trusted relationship with the local community. The trust between local people and extension

office has emerged in a set of studies such as Awad (1993). There are other barriers that may cause the “trust” issue. While some of the barriers are related to the program planning, other barriers related to extension agents’ competencies. (Acker 2008) mentioned that lack of relevance, flexibility, and local input may negatively impact the local engagement with programs. Washburn et al. (2017) indicated that the effective extension agent should be a facilitator that helps clients to set and reach their learning goals. This barrier can be in difficulties in reaching the location or the distance of the location. Aldosari et al. (2019) suggested online extension system to reduce location barrier in participation.

**Conclusion:** The study aimed to investigate farmers’ participation, perceived benefits from local extension activities, and identified barriers to participation, the results showed that more than a half of the respondents have not participated in any agricultural extension activity. We extended the literature about the problems and perceived benefits regarding participation in extension activities. Current study provides a clear situation of the study area regarding agricultural extension activities and delivers valuable implications for policymakers. As to difficulties for participation in extension activities, policymakers should create an appropriate environment for farmers to motivate them to participate. The study was limited to a specific area. The results of the study may not be generalized to farmers who are living in other areas. Present study contributes to the ongoing literature in different ways.

### Recommendations

Based on the research results, the following can be recommended:

#### A. Recommendations for Practice

1. Adopting a new model in developing extension programs, that ensures sustainability, flexibility, relevance, and local community input in the developing process.
2. Developing promoting strategies for extension services within the rural community to build a trust. In addition, put a marketing plan for each individual extension program and event. The marketing plan should address the subject of the program, the targeted audience, the benefits, and the importance of the program. Also, the marketing plan should include where and when the event would be held.
3. Establishing social organizations that facilitate and organize local community involvement. Such organizations could represent the local community at any official agency that aims to develop and implement social program in the rural areas.
4. Establishing a database for all agricultural or non-agricultural extension programs. This would help to keep documentation regarding all aspects related to events and activities in each rural area. The information could include the number of activities, the participation rates, and evaluations from providers or participants perspectives. Information like this will be helpful in designing new programs for the rural communities.

#### B. Recommendations for Research: More studies could be conducted regarding:

1. The social and economic impacts of the local community engagement in the rural areas.
2. Suitable approaches and models for designing and implementing extension program in the rural community that includes local community inputs.
3. Compare and contrast rural with urban communities in terms of participation rates, perceived benefits, and obstacles. In addition to program developing process in these vary communities.

### Conflicts of Interest

The authors declare no conflict of interest.

### Acknowledgement

The authors wish to thank King Saud University, Deanship of Scientific Research, College of Food and Agricultural Sciences, Research Center for supporting the research work.

### ORCID

Abdulaziz Thabet Dabiah

<https://orcid.org/0000-0002-9540-1127>

### REFERENCES

Abdullah, A., Mustabi, J., Asnawi, A., & Jamil, M. H. (2021). Strategy analysis of extension of performance in transfer of livestock technology innovation for farmer empowerment. In *IOP Conference Series: Earth and Environmental Science* (Vol. 886, No. 1, p. 012002). IOP Publishing.

- Acker, D., & Gasperini, L. (2008). Education for Rural People: What have we learned? *Journal of International Agricultural and Extension Education*, 15(1), 25-34.
- Afranaa Kwapong, N., & Ankrah, D. A. (2023). Understanding innovation process within an interactive social network: Empirical insights from maize innovations in southern Ghana. *Cogent Social Sciences*, 9(1), 2167390.
- Aldosari, F., Al Shunaifi, M. S., Ullah, M. A., Muddassir, M., & Noor, M. A. (2019). Farmers' perceptions regarding the use of information and communication technology (ICT) in Khyber Pakhtunkhwa, Northern Pakistan. *Journal of the Saudi Society of Agricultural Sciences*, 18(2), 211-217.
- Al-Suwailem, S. (2011). Behavioural complexity. *Journal of Economic Surveys*, 25(3), 481-506.
- Altarawneh, M., Altahat, E., & Al-Sharafat, A. (2012). Evaluation of vegetables farmers participation in agricultural extension activities. *American journal of Agricultural and biological sciences*, 7(2), 201-206.
- Anwarudin, O., & Dayat, D. (2019). The effect of farmer participation in agricultural extension on agribusiness sustainability in Bogor, Indonesia. *International Journal of Multicultural and Multireligious Understanding*, 6(3), 1061-1072.
- Awad, F. K. (1993). Distribution of Some Trace Elements in the River Nile From Isna to Al-Kanater Al-khyria Egypt".
- Board, A. F. (2019). PROPOSAL FOR IRAN (ISLAMIC REPUBLIC OF). *Agenda*, 7, 9.
- Borrón, A., Lamm, K., Darbisi, C., & Randall, N. (2019). Social impact assessment in the cooperative extension system: Revitalizing the community capitals framework in measurement and approach. *Journal of International Agricultural and Extension Education*, 26(2), 75-88.
- Eastwood, C., Klerkx, L., & Nettle, R. (2017). Dynamics and distribution of public and private research and extension roles for technological innovation and diffusion: Case studies of the implementation and adaptation of precision farming technologies. *Journal of rural studies*, 49, 1-12.
- El-Sayed, M. K. (2009). The participation of farmers in extension activities in sharkia and ismailia goverorates (In Arabic). *Journal of Productivity and Development*, 14(1), 147-169.
- Flynn, A., Frick, M., & Steele, D. (2010). Relationship between participation in 4-H and community leadership in rural Montana. *Journal of Extension*, 48(2), 1-11.
- Ghimire, R., & Huang, W. C. (2015). Household wealth and adoption of improved maize varieties in Nepal: a double-hurdle approach. *Food Security*, 7, 1321-1335.
- Glen, C. D., Moore, G. E., Jayaratne, K. S. U., & Bradley, L. K. (2014). Use of demonstration gardens in Extension: Challenges and benefits. *The Journal of Extension*, 52(4), 4.
- Kassem, H. S., Aldosari, F., Muddassir, M., & Kayani, A. S. (2018). Attitudes of the Rural People towards Social Entrepreneurship in the Punjab Province, Pakistan. *Asian Journal of Agricultural Extension, Economics & Sociology*, 27(4), 1-11.
- Kelling, E., & Hoover, T. (2005). A comparative leadership development study within student collegiate clubs and organizations at an agrarian university in Ukraine and a university within the United States. *Journal of Leadership Education*, 4(2), 4-15.
- Kilpatrick, S. (2009). Multi-level rural community engagement in health. *Australian Journal of Rural Health*, 17(1), 39-44.
- Lagat, R. J. (2021). *Effectiveness Of Participatory Extension Approach In Dissemination And Adoption Of Upland Rice Among Smallholders In Elgeyo Marakwet County, Kenya* (Doctoral dissertation, University of Eldoret).
- Maina, W. N., & Maina, F. M. P. (2012). Youth engagement in agriculture in Kenya: Challenges and prospects. *Update*, 2.
- McDonough, C. P. (2019). *The Application of Participatory Extension through Agricultural Innovation Systems in the Middle East* (Doctoral dissertation).
- Muddassir, M., Al Shenaifi, M. S., Kassem, H. S., & Alotaibi, B. A. (2020). Adoption of improved maize production technologies in Punjab Province, Pakistan. *Journal of Agricultural Extension*, 24(2), 1-11.
- Onuekwusi, G. C., & Ottah, U. U. (2006). Participation of Youths in Agricultural and Rural Development activities in Edda, Ebonyi State. In *Repositioning Agriculture for sustainable Millennium Development Goals in Nigeria. Proceedings of the 40 th Annual Conference of the Agricultural Society of Nigeria (ASN), Umudike, Abia State* (Vol. 16, pp. 245-249).
- Radhakrishna, R. B. (2005). Influence of 4-H program on former 4-H members' career and life experiences. *Agricultural Education*, 42(2), 46-55.
- Radhakrishna, R. B., & Sinasky, M. (2005). 4-H experiences contributing to leadership and personal development of 4-H alumni. *People*, 165(4.56), 0-66.
- Reis, J. A. V. D., Hoshide, A. K., Vreyens, J. R., Oliveira, A. S. D., Barros, V. A. M. D., Silva, W. M. D., ... & Oliveira, R. A. D. (2023). Training Sources and Preferences for Agricultural Producers and Professionals in Middle-North Mato Grosso, Brazil. *Sustainability*, 15(6), 4712.
- Riwukore, J. R., & Habaora, F. (2019). Perception of farmers on the performance of extensionist in the pasture agroecosystem of Timor Tengah Utara District. *hand*, 1, 4.
- Shrestha, N. (2021). *The Potential of Agritourism in Nepal* (Doctoral dissertation, Pulchowk Campus).
- Suvedi, M., Ghimire, R., & Kaplowitz, M. (2017). Farmers' participation in extension programs and technology adoption in rural Nepal: a logistic regression analysis. *The Journal of Agricultural Education and Extension*, 23(4), 351-371.
- Washburn, L. T., Cornell, C. E., Traywick, L., Felix, H. C., & Phillips, M. E. (2017). Barriers and facilitators to adoption of a lay-delivered community-based strength training program for women in rural areas. *American Journal of Health Education*, 48(3), 156-166.
- Webster, N., & Ganpat, W. (2006). Exploring youth development workers in the process of civic youth engagement in Trinidad and Tobago. *Journal of International Agricultural and Extension Education*, 13(2), 15-25.
- World Bank (2008), *Agriculture for Development*, World Development Report, Washington, USA.