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Exploring the evenness of a group dynamics and communication patterns: A case study of Fadama III additional financing in Osun State, Nigeria

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ABSTRACT

The study assessed communication and group dynamic patterns in the implementation of Fadama III Additional Financing (AF), specifically identifying and describing group characteristics, analyzing communication and interaction patterns, and determining the strength of group dynamics. A multistage sampling procedure was employed to select respondents for the study. In the first stage, 50 percent of the Local Government Areas (LGAs) were purposively selected from each agricultural zone based on a higher number of participating production groups in the Fadama III AF program, resulting in 6, 4, and 3 LGAs from Osogbo, Iwo, and Ife/Ijesha zones, respectively. The second stage involved selecting 30 percent of the production groups (PGs) in each of the selected LGAs proportionally, totaling 59 PGs. In the third stage, 2 leaders and 2 members from each of the 59 selected PGs were randomly chosen for interviews, totaling 236 respondents. Results indicated that 62.5 percent of the PGs were established for economic purposes, and the majority (84.7%) of PGs had a registered cooperative society under the government. More than half (51.3%) of respondents reported a strong sense of group dynamics. A significant difference was observed in the mean scores of the strength of group dynamics among Fadama III AF beneficiaries across the selected Agricultural Development Projects zones at $p \leq 0.05$. The study concluded that more than half of the Fadama III AF group beneficiaries exhibited strong group dynamic strength.

Contribution/Originality: This study conceptualizes and measures the evenness of group dynamics and interactions that are distributed among beneficiaries of Fadama III Additional Financing in the study area. It offers an evidence-based analysis rooted in local social realities, cultural norms, and organizational structures, and provides a fresh framework for policymakers and programme designers.

1. INTRODUCTION

Groups exist in practically all human contexts, and their dynamics reflect distinct elements of the interaction of several components within their environment (Banwo, Du, & Onokala, 2015). We can differentiate several definitions of group functioning within the realm of conceptual boundaries. For Shaw, a group is two or more individuals who interact with each other in a way that each person influences and is impacted by the others (Oji, Okeke, Orisakwe, & Olemeforo, 2024).

The author provides a more detailed description of the group, comprising several definitional elements: so, the group has interaction, structure (rules, relationships, and roles among members), common goals, the necessity for the group, and dynamic interdependence. As seen through the lens of communication theories, the group has many persons who speak with each other very often for some time, and who are sufficiently limited such that everyone can talk with all others directly, not through others (Onuzulike, 2021). Rules, activities, communication, and interaction are some of the components that Homans has stressed as being vital to group life and that interact and relate to one another dynamically.

There is a barrier between the inner and exterior worlds within the group, and each member of the group must understand their place within the group to communicate with other group members. On the other hand, linkages with the outside world are developed at specific levels, with communication being a crucial component of the group's basic existence, whilst social contact and communication constitute the basis of social groups (Usman, 2024). The combination of a person's personality and prior experiences in group situations serves as the fundamental predictor of group roles.

An impatient person will move the subject forward, whereas a confident person will add more opinions. Each group has its own unique qualities. The interactions between the members are built, established, and supported by the groupings. Members of the group engage in conversations, communicate their worries, make decisions, and act (Aborisade & Adeleke, 2022). Because they minimize formation asymmetries and transaction costs, cooperative groups are considered potentially beneficial methods for improving farmers' livelihoods. Farmers are categorized into groups for engaging in efforts to alleviate poverty in multiple nations (Daudu, Abdoulaye, Bamba, Shuaib, & Awotide, 2023). Smallholders can overcome the high cost of a transaction imposed by individual sizes by establishing farmer groups, which allow them to pool resources and market their goods collectively. According to Miroro et al. (2023), farmer groups are believed to enhance negotiating leverage, accelerate certification and labeling processes, and improve members' access to resources, including inputs, credit, training, transport, and information. As a result of collective action enabled by farmer organizations, individual farmers' risks are reduced when making long-term investments, such as those required for perennial crops and capital-intensive processing technology (Ojo, 2022). Working in a group offers many advantages and drawbacks.

A group can maximize the benefits of collaboration and eliminate hurdles that limit performance by being aware of both the rewards and potential perils. The government has launched numerous developmental efforts to alleviate poverty and food insecurity in the nation. However, these policies have created a significant push for the employment of organized groups in carrying out these varied developmental objectives. Fadama is a Hausa phrase denoting irrigable ground (Salifu & Dickson, 2021). It is often a low-lying plain with shallow aquifers beneath it that can be found alongside enormous river systems. The Nigerian government began the Fadama I programme in 1993, working with the World Bank and the Agricultural Development Bank (ADB) to promote food security and reduce poverty. The software has been implemented in stages, with tweaks and improvements made at each one. Fadama I was executed between 1993 and 1999.

The First National Fadama Development Project (Fadama I), as its name suggests, focused on tapping aquifers in low-lying Fadama I areas to boost dry-season crop yield using simple forward irrigation techniques like boreholes. As a result, the World Bank opted to finance phase II (Fadama II) of the project, which would build on phase I and be higher in scale (NFDP - National Fadama Development Program Appraisal) (Maduekwe, 2023). Consequently, phase II of the project's design includes a Community-Driven Development (CDD) strategy. The project's second phase delivered benefits to twelve of the federation's states. As a result of the second phase's significant benefits to customers, a third phase (Fadama III) was formed and operated from July 2008 to December 2013. The endeavor, which includes the 19 states that did not obtain benefits under FAADA II, is likewise based on the CDD principle. The principal goal of Fadama III was to encourage the growth of non-oil sectors by creating productive infrastructure

that would raise agricultural productivity and increase livelihood diversification. It entailed developing the social capital and capacities of participating communities to provide rural services to the underprivileged.

The Fadama III AF aims to more closely integrate the project with the new Agricultural Transformation Agenda, which the Nigerian government announced in 2011. This would increase the project's impact and development effectiveness. To boost production and productivity of the value chains for cassava, rice, sorghum, and horticulture and connect them to better-organized marketplaces within the chosen states and Staple Crop Processing Zones (SPCZs), it supports clusters of farmers in selected states with a comparative advantage and high potential.The development goal of the parent Project (Fadama l) is aligned with the Fadama III AF (Chidawa, 2022). The list of components revealed that Fadama III had many similarities with Fadama II (Olaitan, Bamidele, Ayoola, & Sennuga, 2024). Both stages followed the Community Demand Driven (CDD) strategy and continued to execute comparable components, notably productive asset acquisition, demand-driven consulting services, capacity building, the support of community-owned small-scale infrastructure, and project administration. Based on experience under Fadama II, various sub-components have also been introduced.

New sub-components were introduced under Fadama III, including Sustainable Land Management (SLM) and Monitoring and Evaluation (M&E). This was incorporated in view of the likely land degradation resulting from improved productivity if it is not matched with effective SLM support, and the prospect of wasting the vast resources committed by the project. Fadama III also learned from Fadama II that sustaining the sustainability of the most effective productive asset purchase entails the establishment of rural financing, which will benefit the poor in obtaining productive assets. Due to this, the Fadama User Equity Fund was put in place as an in-built project sustainability approach for asset maintenance and replacement. Through research, demand-driven consulting services, input assistance, ADP support, and other techniques, Fadama III likewise placed a stronger emphasis on productivity.

The initiative specified an objective of a 20% gain in agricultural productivity, which was not stipulated under Fadama II. Conflict settlement was one goal that Fadama III attempted to fulfill. It aimed to decrease conflict among Fadama users by creating efficient dispute resolution systems (traditional and contemporary). However, no specific aim was defined to achieve this goal. Resource allocation across components also reflected the variations between the two periods. While Fadama II committed 43% of its budget to community-owned infrastructure, Fadama III invested 34% of its overall budget in the purchase of productive assets. This adjustment stemmed from Fadama III's strong preference for productive assets and its components' success in focusing on the impoverished (Olaitan et al., 2024). With a competitive edge and considerable potential to boost the production and productivity of cassava, rice, sorghum, and horticulture value chains, and connect them to better-organized markets, Fadama III AF has a limited geographic concentration on clusters of farmers in particular states. It is crucial to note that sustainable agricultural yields and revenue production cannot be achieved successfully without effective group dynamics among the groups that exist in the various intervention programs. Suffice it to remark that, for most of the intervention programs that have been in place over the years in Nigeria, the area of failure comprises a lack of adequate understanding about the dynamics among their groupings.

Thus, the Fadama III AF Project has claimed to build on this vulnerability by having group interactions in place. This has to do with the social process by which the members of the cooperative groups interact and behave, referred to as group dynamics. Group dynamics is the study of how behavior, power, and personality shape group interactions. It deals with the attitudes and behavioral characteristics of a group. It can be leveraged as a tool for problem-solving, teamwork, and to become more innovative and productive as an organization. Some studies, such as Agwu and Abah (2009) and Folayan (2013), have evaluated the Fadama project in Nigeria, but nothing has been done to assess the communication pattern and the level of group dynamics, which form the basis for this research.

2. LITERATURE REVIEW

2.1. Concept of Group Dynamics

According to Gençer (2019), a group is made up of at least two individuals who interact, gather together for a specific purpose, influence one another, and rely on one another. According to Hassan, Waziri, Usman, and Ibrahim (2022), groups in the workplace have distinctive traits, including shared ideas and interactions that help them maintain their identity.

Their common ideas, beliefs, values, and customs make them predictable. According to Naveenan and Kumar (2018), each group has distinct wholeness features that are patterned into structured sub-systems through members' thoughts, feelings, and communication. To put it another way, an employee who belongs to a group is impacted by values like shared goals, sentiments, and standards that could increase his allegiance to the group. Group dynamics refers to the strengths that control the group's and its members' behavior (Katiki, Asokhan, Karthikeyan, & Patil, 2021). Accordingly, they characterize group dynamics as a social process in which individuals engage in small groups, share a goal, and work together to accomplish the goal. Using group dynamics as a teamwork technology can result in a synergistic impact of combining group efforts supported by group motivation, the group's unity in terms of beliefs and goals, and the resolution of educational and professional challenges.

2.2. Group in A Social System

According to Butu, Hashim, Ahmad, and Hassan (2023) define a group is a collection of individuals who are highly dependent on one another because of their relationships. According to the writers, a "group" is a class of social entities whose members are interdependent. Joshua, Usman, and Oguche (2024) define a group as a collection of individuals arranged in particular descriptive (i.e., observable) relationships. Naturally, different relationships are shown based on the type of group: a family, an audience, a committee, a labor organization, or a crowd (Adu, 2024). A few characteristics of the group should be mentioned in relation to this definition. For a group of people to be deemed a group, they must be clearly connected (Ossai-Ugbah & Sadoh, 2025). A group's members are a collection of individuals, while its components are individuals.

However, it is untrue to say that any arbitrary group of people for example, all students whose last names begin with a particular letter constitutes a group. To qualify as a group, a collection of people must have obvious ties to one another (Adelani, 2024). In a similar vein, Mustapha and Halliru (2025) clarified that a group consists of individuals who collaborate to accomplish a shared goal since each member's actions that are pertinent to the group's purpose increase the likelihood that the other members will also accomplish the goal. Furthermore, let's assume that society treats a group of people equally regardless of their race, religion, or other traits. As a result, individuals may start to connect and create an interdependent community (Yemisi, Abiodun, Olalekan, & Bolajoko, 2025). According to Nwanmuoh, Dibua, and Friday (2024), family members often form an influential group because of their close bond over a range of concerns that are significant to them all. A group is a social structure that organizes interrelated elements and reactions to react to its environment. Two or more people who work together to accomplish common goals and who share a common identity and purpose are referred to as a group. Put differently, a group is made up of people who have a common identity, communicate, and take on obligations as members (Godbles & Amaluwa, 2022). The group has several broadly descriptive meanings.

Here's a simple explanation: Two or more people who are socially connected make up a group (Akinroluyo, 2023). Rogers (2002) provides a more thorough explanation, stating that a group must have a distinct internal structure, some interaction among its members, and a shared identity (often a shared goal) for all of its members. According to Oladele and Afolayan (2005), a group is a gathering of people who communicate with one another. According to Olaifa, Mohammed, Alao, Ibrahim, and Ayoku (2024) farmers' organizations are social formations whose asset configurations, composition, and characteristics influence the success of their collective action projects. Ntamu, Balunywa, Nsereko, and Kwemarira (2023) state that a variety of factors determine the success of collective action.

Small group sizes, well-defined boundaries, common norms, past achievements, suitable leadership, interdependence among group members, members with varying material worth but similar identities and interests, and low levels of poverty are some of these factors. Social networks in rural areas have been shown to indirectly increase agricultural output through knowledge sharing via networks (Olarinde et al., 2020).

2.3. Factors Influencing Group Cohesiveness

According to Okpara (2023), factors that affect group cohesiveness include group size, degree of dependency, physical distance, time spent together, intensity of initiation, collaboration, threat, and prior accomplishments. These factors affect the cohesiveness of groups within an organization.

Group size: A Small group size is more likely to be cohesive than large groups in an organization. When team size increases, the possibility of agreement towards the common goal and mutual interaction decreases. As a team grows, communication between and within groups is restricted, and subgroup creation is encouraged.

Degree of dependency: The relationship between an organisation's level of dependence and cohesion is favourable. It requires more excellent attractiveness towards goals in an organisation. Increased dependence results in greater attractiveness, which, in turn, increases group cohesiveness within an organization.

Physical distance: It is crucial because individuals who work closely together are more likely to have meaningful opportunities for engagement inside an organisation. It improves the open discussion of issues and opportunities inside an organisation. As a result, it fosters a sense of closeness among the team members, increasing cohesion.

Time spent together: Time spent together, and cohesiveness are favourably associated with social interaction and attraction between persons who meet frequently and spend time together. Team members foster relationships and communication inside an organisation.

The severity of initiation is positively correlated with cohesiveness when stringent entrance requirements are established for membership in an organisation; this intensifies initiation.

In this situation, the group distinguishes itself as superior to other teams inside the organisation.

It results from a natural human propensity to share with teammates and profit from their labours within a company.

Cooperation: It is the team spirit that all team members develop. It encourages them to express their thoughts on group projects, a team incentive scheme, and teamwork. Greater cooperation is encouraged by a well-designed organizational structure, and this strengthens cohesion.

Status: Status and cohesiveness are related in an organisation. Status is the identification of a team, its members, and the responsibilities they hold within an organisation. Status will be determined by the organisation's commitment, successes, and overall growth and development.

Threat: It is considered a determining factor. Internal threat can be predictable and manageable in terms of its impact on the group, its identity, and its processes within an organisation. External cohesiveness is unpredictable and uncontrollable. Threats within an organisation can be easily handled by a strong and cohesive team.

History of Past Successes: It is a significant factor that affects group cohesiveness in an organization. Past results, performance, growth, and development are major factors towards the future goals, mission, and vision of an organization. The team will evaluate the past results and analysis, and interpret the future results for survival, growth, and development of an organization.

3. MATERIAL AND METHODS

The study was conducted in Osun State, Nigeria, which comprises three ADP zones: Osogbo, Iwo, and Ife/Ijesa. A total of twenty-four Local Government Areas (LGAs) participated in Fadama III AF, with 12 LGAs from Osogbo zone, including Ede South, Ede North, Egbedore, Boluwaduro, OdoOtin, Orolu, Osogbo, Ila, Boripe, Ifelodun, Olorunda, and Irepodun; 7 LGAs from Iwo zone, such as Ayedire, Ejigbo, Iwo, Olaoluwa, Ayedaade, Irewole, and

Isokan; and 5 LGAs from Ife/Ijesa zone, namely Ife Central, Ife North, Ife East, Obokun, and Oriade. Each participating LGA was divided into Production Groups (PGs) by Fadama III AF. A multistage sampling procedure was employed to select respondents. In the first stage, 50 percent of the participating LGAs were purposely selected from each zone, resulting in 6, 4, and 3 LGAs from Osogbo, Iwo, and Ife/Ijesa zones, respectively. These included Ede South (26 PGs), Egbedore (21 PGs), Ede North (6 PGs), Ila (6 PGs), Orolu (9 PGs), and Osogbo (5 PGs) from Osogbo zone; Ayedire (21 PGs), Ejigbo (44 PGs), Olaoluwa (27 PGs), and Ayedaade (16 PGs) from Iwo zone; and Ife Central (3 PGs), Obokun (3 PGs), and Oriade (8 PGs) from Ife/Ijesa zone. In the second stage, 30 percent of PGs within each selected LGA were proportionally sampled, totaling 59 PGs: 8 from Ede South, 6 from Egbedore, 3 from Orolu, 2 from Ede North, 2 from Ila, 1 from Osogbo, 6 from Ayedire, 13 from Ejigbo, 8 from Olaoluwa, 5 from Ayedaade, 1 from Ife Central, 1 from Obokun, and 2 from Oriade LGAs. In the third stage, 2 leaders and 2 members from each of the 59 selected PGs were randomly chosen for interviews, resulting in a total sample size of 236. Data collection was conducted using a structured interview schedule to gather quantitative data, which were then analyzed using appropriate descriptive and inferential statistics. The sample size selection is presented in Table 1, while the map of the study area is illustrated in Figure 1.

Table 1. Sample selection for the study.

Zones	No of participating LGAs	No of selected LGAs (50%)	Name of selected LGAs	No of PGs	No of selected PGs (30%)	No of selected respondents (2 leaders & 2 members per PGs)
Osogbo	12	6	Ede South	26	8	32
			Ede North	6	2	8
			Egbedore	21	6	24
			Ila	6	2	8
			Orolu	9	3	12
			Osogbo	5	2	8
Iwo	7	4	Ayedire	21	6	24
			Ejigbo	44	13	52
			Olaoluwa	27	8	32
			Ayedade	16	5	20
Ife/Ijesha	5	3	Ife Central	3	1	4
			Obokun	3	1	4
			Oriade	8	2	8
Total	24	13		195	59	236

Source: Osun ADP, 2025.

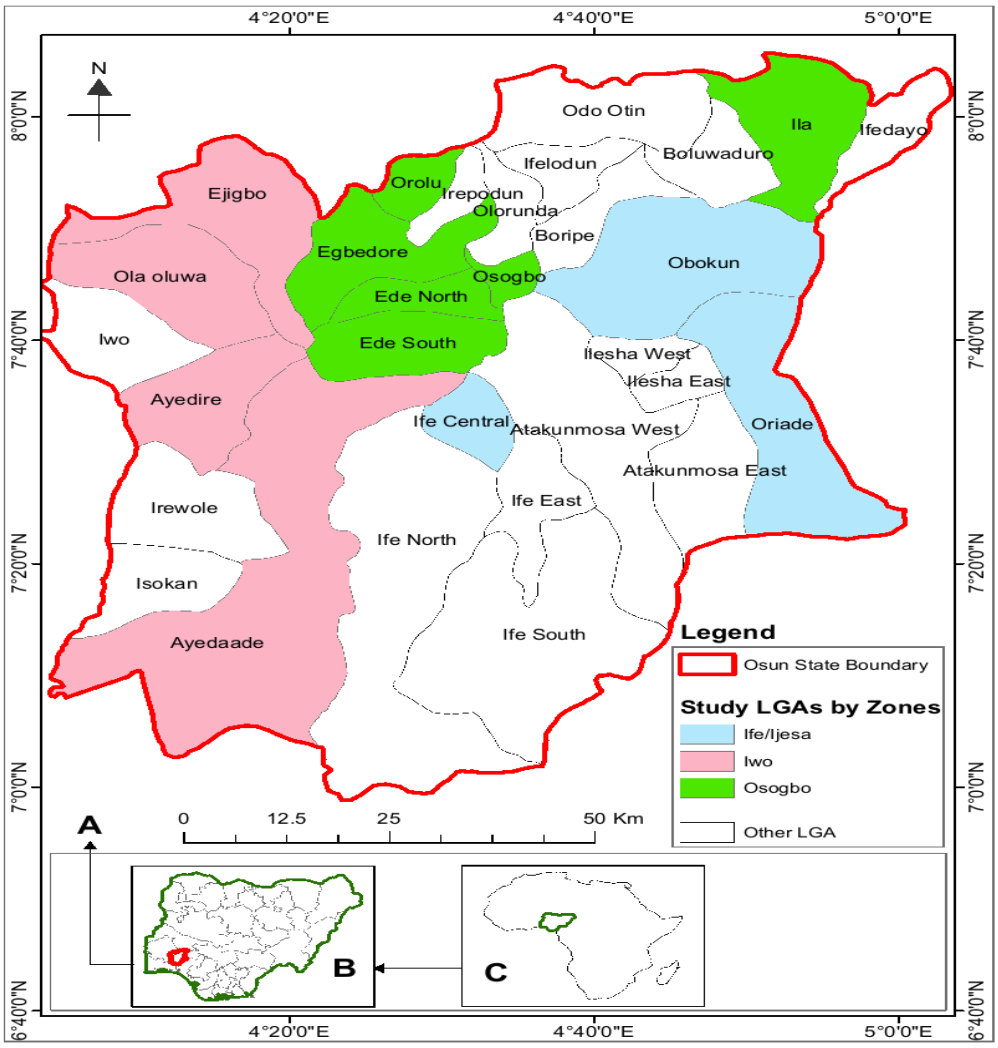

Figure 1. Map showing the study area, Agricultural zones, and the selected LGAs.

Source: Geo-Spatial Unit, Obafemi Awolowo University, Ile-Ife, Nigeria, 2025.

4. RESULTS AND DISCUSSION

4.1. Description of Fadama III AF Beneficiaries' Socioeconomic Characteristics

A characterization of the socio-economic variables used in this survey is seen in Table 2. Male respondents were mostly beneficiaries of the Fadama AF program; the majority of the respondents were married, with a household mean size of 6, mean years spent in formal education of 12, and mean estimated monthly income of ₦110,233 by the respondents. More than half of the respondents indicated Christianity as their religion, while half of the respondents were still in their active working age of production. This implies that the majority of the beneficiaries of the Fadama AF were mostly male gender. This agrees with the findings of Filusi and Ayinde (2019) that the majority of development program beneficiaries are mostly male gender.

Table 2. Socio-economic characteristics of the beneficiaries of Fadama III AF.

Variable	Frequency	Percentage	Mean	Std.Dev
Age (Years)				
20-40	106	44.9	**43.46**	**10.87**
41-60	118	50		
61-80	12	5.1		
Sex				
Male	144	61		
Female	92	39		
Religion				
Islam	95	40.3		
Christian	134	56.8		
Traditional	7	3		
Marital Status				
Single	12	5.1		
Married	222	94.1		
Separated	2	0.8		
Household size				
10-Jan	229	97	**6.26**	**2.33**
20-Nov	7	3		
Years spent in formal education				
0-10	77	32.6	**11.55**	**3.95**
20-Nov	158	66.9		
Above 20	1	0.4		
Category of income				
100,000- 200,000	55	23.3	**110,233**	**46,721**
200,001-400,000	136	57.7		
400,001-600,000	32	13.6		
600,001-800,000	11	4.7		
800,001-1,000,000	2	0.8		

Source: Field survey, 2025.

4.2. Group Characteristics of the Fadama III AF Beneficiaries

Results in Table 3 show the group characteristics of Fadama III AF beneficiaries. As indicated by 25.4 percent of the respondents, the groups were established between 2009 and 2011. Forty-four point one percent indicated 2012-2014, and 35.0 percent indicated between 2015 and 2017. From the findings, the majority of the groups were formed between 2012 and 2014. Regarding sources of finance, 61.0 percent of the respondents indicated the government as their source of funding, while 39.0 percent specified monthly savings. It can be inferred from the research that the government was the major source of finance for the Fadama III AF programme. This aligns with the research of Filusi, Ayinde, Ale, and Ogungbemi (2022), who asserted that the government was the primary source of funding for development programmes in Nigeria. Concerning the purpose of group establishment, results in Table 2 show that 8.9 percent of the groups were formed for religious purposes, 28.6 percent for social purposes, and 62.5 percent for production and economic purposes. This implies that the Fadama AF programme was mainly established to improve the economic standards of the beneficiaries. Similarly, a majority (84.7%) of the respondents indicated that the groups registered with the government as cooperative societies. This registration likely enhances their commitment to the programme and facilitates access to loans from the government, thereby supporting their economic activities and development.

Table 3. Group characteristics of the Fadama III AF beneficiaries.

Group Characteristics	Freq	%
Year of Establishment		
2009-2011	15	25.4
2012-2014	26	44.1
2015-2017	18	35.0
Purpose of group establishment		
Religion	8	8.9
Social	16	28.6
Economic	35	62.5
Cooperative registration		
Registered	50	84.7
Not registered	9	15.3
Areas of economic interest		
Crop production	43	72.9
Livestock	16	27.1
Group sources of finance		
Monthly savings	23	39.0
Government	36	61.0

Source: Field survey, 2025.

4.3. Communication and Interaction Patterns among Fadama III AF

Results in Table 4 show that the communication and interaction patterns among the beneficiaries of Fadama III AF. The Table show that, group members are willing and they excellently raise questions regarding the group activities ($\bar{x}$=3.60), each member of the group initiated good discussions about the group ($\bar{x}$=3.42), there was a good listening to what other members are saying in the group ($\bar{x}$=3.36), during discussion, there was a good tone talk with a proper gesture amidst group members ($\bar{x}$=3.32), each of the members try to analyse, evaluate problems in a good manner and give possible suggestions ($\bar{x}$=3.23), all our members take turns to speak at meetings in a good "Round Robin pattern" ($\bar{x}$=3.05), the group leader is the central figure, and a good communication occurs from leader to member and from member to leader "maypole pattern" ($\bar{x}$=2.97), the facilitation of conversation by the group leader is good and allows the group members to talk among themselves "free-floating pattern" ($\bar{x}$=2.89) and in the meeting, the group leader averagely speaks to one group member per time "hot seat pattern" ($\bar{x}$=1.79). The grand mean communication and interaction pattern among the group members was 2.55. This implies that the communication and the interaction pattern among the beneficiaries of Fadama III AF was good and this could enhance the achievement of the programme objectives of improving the economic standard and group performance of the beneficiaries. Additionally, the results in Figure 2 illustrate the levels of communication and interaction patterns among the beneficiary groups. Approximately two-thirds (57.6%) of respondents reported good communication and interaction patterns, while 37.7% indicated that there are fair communication and interaction patterns. A small percentage (4.7%) of respondents reported poor communication and interaction patterns. This suggests that the majority of Fadama III AF beneficiaries perceive the communication and interaction among group members as effective and positive.

Table 4. Communication and interaction patterns among Fadama III AF beneficiaries.

Variables	Poor Freq (%)	Fair Freq (%)	Average Freq (%)	Good Freq (%)	Excellent Freq (%)	Ranked Mean
During the discussion, members are willing to raise questions.	1(0.4)	2(0.8)	20(8.5)	44(18.6)	169(71.6)	3.60
Each member of my group initiated discussions.	-	1(0.4)	19(8.1)	95(40. 3)	121(51.3)	3.42
Members listen patiently to what others say	2(0.8)	6 (2.5)	21(8.9)	83(35.2)	124(52.5)	3.36
During the discussion, members talk in a moderate tone with a proper gesture	-	8(3.4)	34(14. 4)	69(29.2)	125(53.0)	3.32
Each member tries to analyse evaluate problems and give suggestions	-	22(9.3)	28(11.9)	60(25.4)	126(53.4)	3.23
All our members take turns to speak at meetings (Round Robin pattern)	4(1.7)	11(4.7)	41 (17.4)	94(39.8)	86.(36.4)	3.05
Our group leader is the central figure, and communication occurs from the leader to the member and from the member to the leader, following a maypole pattern.	1(0.4)	22(9.3)	50(21.2)	73(30.9)	90(38.1)	2.97
The group leader facilitates the conversation but allows the group members to talk among themselves, following a free-floating pattern.	6(2.5)	30(12.7)	42(17.8)	6(27.1)	94(39.8)	2.89
In the meeting, our group leader speaks to one group member at a time (hot seat pattern).	79 (33.5)	24(10.2)	44(18.6)	45 (19.1)	44(18.6)	1.79

Note: Grand $\bar{x}$ = 2.55.

Source: Field survey, 2025.

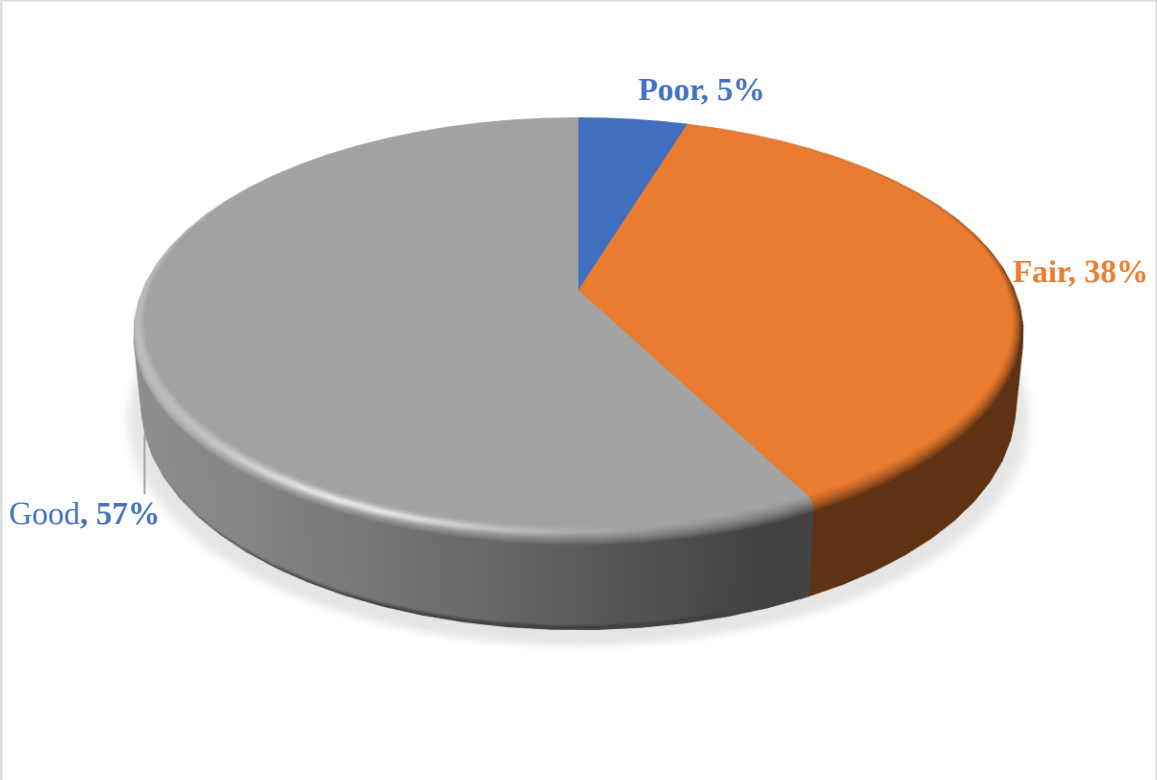

Figure 2. Level of communication and interaction pattern among beneficiaries of Fadama III AF.

Source: Field survey, 2025.

4.4. Strength of Group Dynamics among Beneficiaries of Fadama III AF

Results in Table 5 show the strength of group dynamics among the beneficiaries of Fadama III AF. Three indicators were used to measure the strength of group dynamics: group decision-making, group constitution usage, and the regularity of meetings. In terms of decision-making, group members predominantly make decisions consensually ($\bar{x}$ = 3.33), followed by consultative ($\bar{x}$ = 3.03), executive ($\bar{x}$ = 2.44), and authoritative ($\bar{x}$ = 2.15). This suggests that consensus and consultative decision-making are the primary methods among Fadama III AF beneficiaries. Decision-making by authoritative and executive methods is less common, which is indicative of good group dynamics that can promote group development.

Table 5. Group decision making.

Variables	Rarely Freq (%)	Sometimes Freq (%)	Often Freq (%)	Always Freq (%)	Ranked $\bar{x}$
Consensus	15(6.4)	14 (5.9)	86(36.4)	121(51.3)	3.33
Consultative	9(3.8)	45(19.1)	113(47.9)	69(29.2)	3.03
Executive	52(22.0)	75 (31.8)	61(25.8)	48(20.3)	2.44
Authoritative	99(41.9)	50(21.2)	39(16.5)	48(20.3)	2.15

Source: Field Survey, 2025.

4.5. Group constitution usage

The results in Table 6 show that all respondents (100.0%) indicated that the group has a constitution that guides every activity of its members. Regarding the frequency of using the constitution for effective activities within the group, the majority (71.6%) reported that they always use the constitution. Additionally, 16.5% indicated that they often use the constitution, while a small percentage (8.9% and 3.0%) stated that they sometimes and rarely use it, respectively. This suggests that most members of the Fadama III AF group regularly read their constitution during meetings, which helps guide their activities and supports the achievement of the group's objectives.

Table 6. Group constitution usage.

Group constitution usage	Freq	%
Availability of Constitution	236	100.0
Frequency of Constitution Usage		
Rarely	7	3.0
Sometimes	21	8.9
Often	39	16.5
Always	169	71.6

Source: Field survey, 2025.

4.6. Regularity of Meetings

Results in Table 7 show how regularly the meetings are held by the group members. Respondents indicated that general meetings are held monthly ($\bar{x}$ = 3.14), committee meetings monthly ($\bar{x}$ = 2.96), executive meetings monthly ($\bar{x}$ = 2.70), and ad-hoc meetings quarterly ($\bar{x}$ = 2.10). This suggests that general, committee, and executive meetings are held regularly on a monthly basis. Such regular meetings can enhance group cohesion and dynamics. Further results in Figure 3 show that more than half (51.3%) of the respondents indicated a strong group dynamic, while 48.7% indicated a weak group dynamic. It can be inferred that the majority of respondents perceive a strong group dynamic within the group.

Table 7. Regularity of Meetings

Variables	Yearly Freq (%)	Quarterly Freq (%)	Monthly Freq (%)	Fortnightly Freq (%)	Ranked $\bar{x}$
General meeting	28(11.9	26(11.0)	67(28.4)	115(48.7)	3.14
Committee meeting	8(3.4)	57(24.2)	108(45.8)	63(26.7)	2.96
Executive meeting	25(10.6)	76 (32.2)	70(29.7)	65(27.5)	2.70
Ad -hoc meeting	170(45.3)	44(18.6)	32(13.6)	53(22.5)	2.10

Source: Field Survey 2025i.

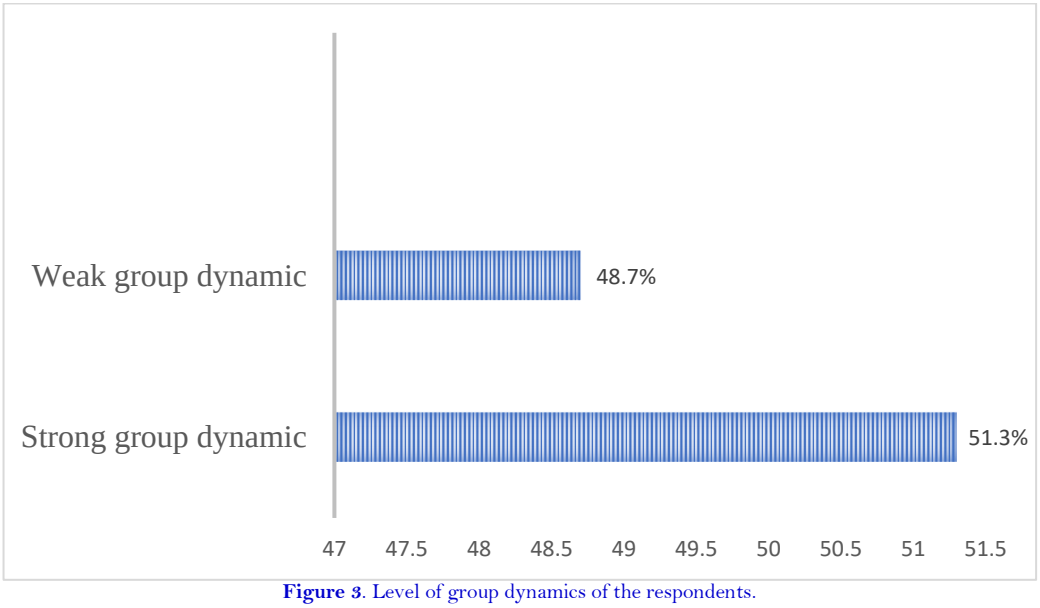

Figure 3. Level of group dynamics of the respondents.

4.7. Hypothesis Testing

H_o1: There is no significant difference in the strengths of group dynamics among Fadama III AF beneficiaries across the selected ADP zones. The results in Table 8 indicate a significant difference in the mean scores of the strengths of group dynamics among Fadama III AF beneficiaries across the selected ADP zones at $p \leq 0.05$. This

suggests that the strengths of group dynamics vary among different ADP zones. In other words, the strength of group dynamics in one ADP zone differs from that in other ADP zones.

Table 8. Analysis of variance showing the differences in the strength of group dynamics across the selected ADP zones.

Overall group dynamic score					
	Sum of squares	**df**	**Mean square**	**F**	**Sig.**
Between groups	1298.834	2	649.417	2.342	0.05
Within groups	64599.335	233	277.250		
Total	65898.169	235			

Source: Field survey, 2025.

5. CONCLUSION AND RECOMMENDATIONS

The study concluded that there was a high level of interpersonal communication and interaction patterns, with strong group dynamics among Fadama III AF beneficiaries in the study area. Additionally, the study provided insights into how the strengths of group dynamics vary across different ADP zones, and how these variations in group interaction and communication influence the effectiveness of the objectives of Fadama III AF among beneficiaries. To enhance teamwork, it is recommended to hold regular workshops focused on improving interpersonal connections, especially on how individuals communicate with each other, both one-on-one and in groups. Such initiatives will foster a welcoming environment, encourage open communication, and promote mutual understanding. Leaders should facilitate discussions, ensuring that everyone has an opportunity to speak and that no individual dominates the conversation. To ensure timely and accurate information sharing, organizations should establish clear communication channels, such as regular check-ins, online tools, and feedback mechanisms. It is also essential to develop a plan for promptly addressing issues as they arise to prevent escalation. Project leaders should monitor team interactions, identify potential problems early, and provide support to resolve them effectively.

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Institutional Review Board Statement: This study was approved by the Institutional Review Board of Department of Agricultural Extension and Rural Development, Obafemi Awolowo University, Ile-Ife, Nigeria, under protocol number (AGP16/17/H/1494), dated (13 March 2024). Informed verbal consent was obtained from all participants, and all data were anonymized to protect participant confidentiality.
Transparency: The authors state that the manuscript is honest, truthful, and transparent, that no key aspects of the investigation have been omitted, and that any differences from the study as planned have been clarified. This study followed all writing ethics.
Competing Interests: The authors declare that they have no competing interests.
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