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Does a Motivational Workshop Enhance the Opening of Saving Accounts among the Unbanked Village Defense Party (VDP) Members? Evidence from Randomized Controlled Trial

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Abstract: Despite the expansion of financial institutions and proliferation of mobile financial services, reaching the unbanked and bringing them under formal financial services has become a policy concern in many developing countries. Due to the lack of financial accounts, unbanked people prefer informal, risky, and inconvenient mechanisms for receiving, sending and transferring money. Previous studies rely much on common intervention like no account maintenance and opening fees, easy documentation processes and money subsidies for opening financial accounts. This study aims to examine the impact of the motivational workshop on opening savings accounts through causality among the unbanked people in a setting where the respondents are unbanked despite having all the requirements and many institutional offers for opening savings accounts. We encouraged the unbanked people through a one-hour-long motivational workshop to open saving account. Based on our cross-sectional data and randomized controlled trial experiment among 505 unbanked Village Defense Party (VDP) members at Dhubil Union under Sirajganj in Bangladesh, we have the evidence that motivational workshop positively impacts opening accounts by 32.33 percent. However, the account opening rate differs in terms of respondent's preference for financial institutions. Our study also finds that unbanked people have the highest preference for mobile financial services for opening accounts resulting in 15.33 percent. The result of the study has some policy implications for adopting effective strategies of financial access in many developing countries.

Keywords: financial inclusion; financial access; unbanked; motivational workshop; village defense party; randomized controlled trial

1. Introduction

Financial inclusion has often been termed as an instrument for economic well-being [1], women's household-decision making [2], achieving sustainable development goals [3], and women empowerment [4]. Although financial inclusion has a positive impact on reducing energy poverty [5], rural and urban income gap [6], and income inequality [7], only 53% of Bangladeshi adults have bank accounts[8]. The number of unbanked people is decreasing globally Still, a remarkable gap is observed from developed to developing countries, region to region, urban to rural, and even between males and females regarding access to financial institutions [8,9]. Despite having guidelines and policy recommendations from the World Bank, according to the Global Findex Report 2021, globally 1.4 billion people are financially excluded; Simply they do not have a financial account. Typically, in every context poor adult, marginalized people, ethnic minorities, and women are generally financially excluded [10,11]. One pertinent example of the diversified picture is that account ownership in developed countries is almost 91%, whereas it is only 41% in developing countries [11,12]. In this regard, Conroy [13] states that lower access to financial services happens in developing countries because of informal livelihood strategies. Although bank accounts are an important part of daily economic activities, developing countries are still lagging in achieving universal financial access [9]. Due to the lack of financial accounts, the unbanked people have to rely on risky and inconvenient way of receiving, sending and transferring money [9].

Literature suggest that greater financial access is closely related to low account opening and maintaining cost, proximity of financial institutions, legal rights and political stability [14]. Previous experimental studies mainly focus on zero account opening and maintaining fees, easy application process, money subsidy, physical proximity [9,15] financial education [16–18], financial literacy program, soft intervention and saving nudges [19] for opening accounts.

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respectively. We conducted our follow-up survey in November 2022. Finally, we successfully collected all data since the enumerators were chosen from each village who are acquainted with the respondents.

Table 1. Description of variables.

No	Variable	Description and measurement
1.	Age	Age of the respondent by year
2.	Gender	Gender of the respondent, 1 equals male, 0 if otherwise
3.	Education	Highest educational attainment by year
4.	Family size	Total family members, by number
5.	Agricultural land size	Agricultural land ownership of the household, by decimal
6.	Total income	Respondent's monthly total income by BDT
7.	Total expenditure	Respondent's monthly total expenditure by BDT
8.	Mobile user	Status of mobile subscription, 1equals mobile user, 0 if otherwise
9.	Internet user	Status of internet user, 1equals internet user, 0 if otherwise
10.	Bank Distance	Distance from bank to respondent's house (in meters)
11.	MFIs Distance	Distance from micro financial institution to respondent's house (in meters)
12.	MFS distance	Distance from mobile financial service points to respondent's house (in meters)
	Treatment variable	
13.	Motivational workshop, 1equals treatment group, 0 if otherwise	
	Outcome Variable	
14.	Account opening	1 if the respondent opens an account, 0 if otherwise
15.	Bank account opening	1 if the respondent opens an account in the bank, 0 if otherwise
16.	Micro financial account (MFIs)opening	1 if the respondent opens an account in MFIs, 0 if otherwise
17.	Mobile financial service (MFS) account opening	1 if the respondent opens an account in MFS, 0 if otherwise

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2.3 Research design

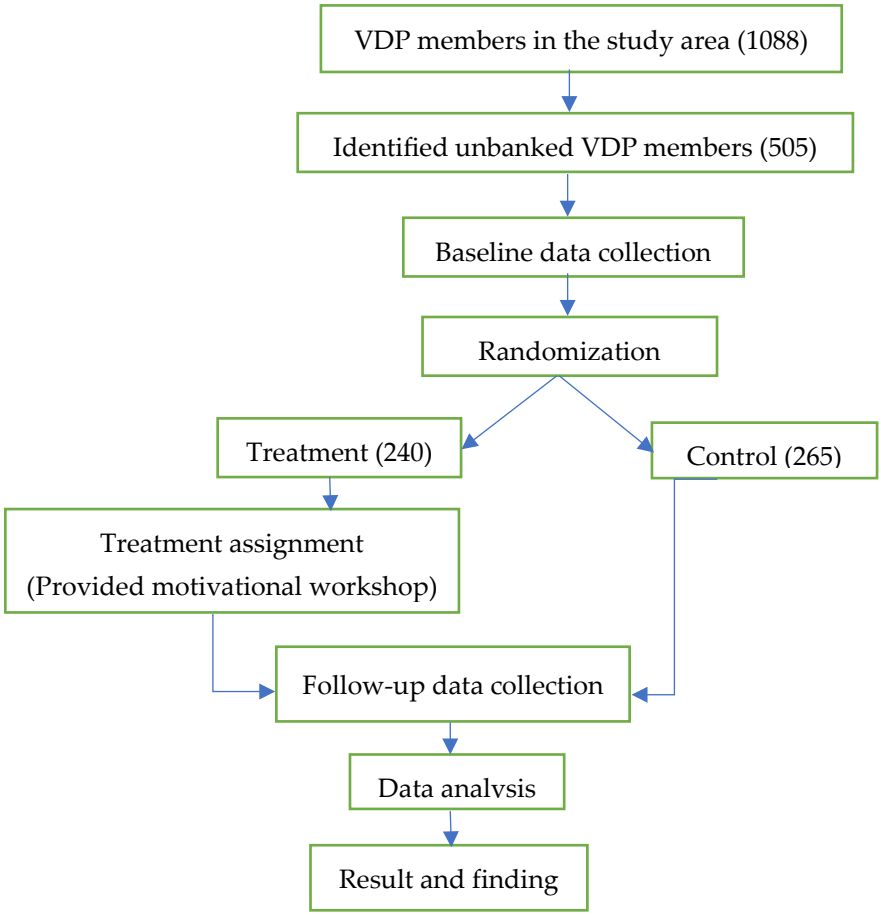

Figure 2. Research Design

2.4. Treatment Assignment

We send messages to the treatment group to attend the motivational workshop. Before the treatment assignment, the union VDP leaders communicated with all the treatment group members so that they were well-informed about joining the workshop. The treatment group members were invited to a school one time for the treatment assignment. The session was successful since all the members attended the session. The attendance rate is cent percent due to the union leader's communication and treatment group members' acknowledgment of the session.

The local NGO manager and agent bank representative were invited to conduct the workshop. They are well-informed about the national financial inclusion strategy before they conduct the workshop. The synopsis of the workshop is shown in Table 2. They conducted a one-hour workshop. The workshop was highly interactive followed by questions and answers during and after the session. The local NGO manager and agent bank representative explained about the institutional offer, benefits, process, and required documents for opening a savings account such as application forms, NID card, and passport-size photographs. In conclusion, they emphasized that opening a savings account depends on their willingness and they could apply now or later for opening a savings account. However, no restriction was imposed on them in choosing financial institutions for opening savings accounts.

Table 2. Intervention session synopsis

Intervention time	One hour
Workshop mode	Oral, interactive discussion, question and answer session.
Discussion issue	Institutional and government offers for opening accounts, process of opening accounts, benefit and advantages of saving
Intervention provider	Local NGO manager, and agent bank employee.

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Treatment frequency	Once only for treatment group

2.5. Data Analysis approach

The main focus of this study is to examine the impact of motivational workshop on opening saving accounts among unbanked VDP members. Since we randomly assigned our treatment, the mean difference in outcome between the treatment and the control is the unbiased estimation of the average treatment effect (ATE). Theoretically,

ATE=E[Y_1 |T=1]- E[Y_0 |T=0]

This study applies the following equation to estimate the impact of motivational workshop on opening saving accounts:

$Y_i = a_i + \beta_1 T_i + u_i$ ……..(1)

Here Y_i denotes opening saving accounts, 1 if the respondent opens a saving account and 0 otherwise. a_i , the intercept, represents the constant value of the depending variable (Y_i) when all other independent variables are zero. T_i denotes the treatment variable; attending a motivational workshop 1 if the respondent is in the treatment group and 0 if the respondent is in the control group. β_1, the coefficient will measure the average treatment effect. The error term will be captured by u_i. Moreover, the following equation is used to measure the impact of motivational workshop on opening a saving account with covariates:

$Y_i = a_i + \beta_1 T_i + \beta_2 D_i + u_i$ ……(2)

Here D_i denotes the pre-treatment covariates. The covariates include age, gender, education, total income, total expenditure, agricultural land ownership, family size, distance from financial institutions, and mobile phone and internet connection possessions.

We calculate the estimation by OLS regression since the direction of the effect of treatment on outcome is always the same for the logit and probit regression [59]. However, we also do probit and logit regression for robustness checking (See Appendix A: Table A1).

2.6. Summary statistics

Table 3 demonstrates summary statistics of the total sample, the treatment, and the control group based on respondents' demographic and household data at baseline.

Table 3. Summary statistics of the total sample, the treatment, and the control group

Variables	Total sample		Treatment (240)		Control (265)	
	Mean	Std Dev	Mean	Std Dev	Mean	Std Dev
Age (year)	33.71	8.34	34.12	8.15	33.34	8.51
Gender (1=male, 0= female)	.74	.44	.76	.43	.72	.45
Education (year)	9.17	1.6	9.25	1.63	9.1	1.57
Family size (number)	4	1.16	4.06	1.2	3.95	1.13
Agricultural land size (decimals)	28.42	23.53	29.81	22.98	27.17	24
Total income (BDT)	12592.08	3474.15	12594.58	3526.65	12589.81	3432.6
Total expenditure (BDT)	10242.97	3266.02	10067.5	3299.87	10401.89	3233.08
Bank distance (meters)	4509.21	2307.55	4403.13	2336.68	4605.28	2281
MFIs distance (meters)	1668.32	1128.57	1661.58	1126.19	1674.42	1132.82
MFS distance (meters)	588.19	510.68	568.65	534.9	605.89	488.06
Mobile user (1=user, 0= otherwise)	.98	.12	.99	.091	.98	.15
Mobile type (1= smart phone, 0= otherwise)	.41	.49	.44	.50	.39	.49
Internet user (1= user, 0=otherwise)	.41	.49	.44	.50	.38	.49

Source: Field survey

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The average age of the respondent is more than 33 years. From the demographic dividend's perspective, the respondent belongs to the active age group. Their educational attainment is more than nine years on average, indicating that all the respondents have at least primary education in the Bangladesh context. In terms of income, the summary table shows the average income is 12,592 BDT. The average monthly household income is 26,163 BDT in rural areas which is much higher than the respondent's monthly average income. Furthermore, the monthly average expenditure in rural areas is 26,842 BDT whereas the respondent's average expenditure per month is 10,242 BDT [60]. The higher difference in income and expenditure indicates the respondents' economic status. Regarding gender, the treatment group has 76% male and 24% female. The control group consists of male 72% and female 28%. In terms of possession of a mobile, almost 97% in the control group and 99% in the treatment group have mobile phones. However, compared with the possession of mobile, the rate of internet users is much lower in both groups; 38% in the control group and 44% in the treatment group use internet. The respondents have diversified occupations, among them, farmers (39.89%) and housewives (26.47%) are predominating.

2.7. Balance check

We conducted a t-test to better understand the demographic characteristics between the treatment and the control groups; the result is presented in Table 4. Statistically, no significant differences are observed in the balance check after randomly assigning the samples to treatment and control groups. The average age difference between the treatment (34.12) and the control (33.34) is statistically non-significant. However, the higher age of the treatment group indicates that the control group is a little bit younger than their counterpart. There is no significant difference between educational attainment, family size, and agricultural land ownership between the treatment and the control group. Moreover, no observable and statistically significant differences are found in total income, total expenditure, distance from banks, micro-financial institutions, and mobile financial service points from the respondents' houses.

Table 4. Balance check between the treatment and the control group

Variables	Treatment n=240		Control n=265		Diff & Std err
	Mean	Std Dev	Mean	Std Dev	
Age (year)	34.12	8.15	33.34	8.51	-0.78 [0.74]
Gender (1= male, 0= female)	.76	.43	.72	.45	-0.04 [0.04]
Education (year)	9.25	1.63	9.1	1.57	-0.16 [0.14]
Religion (1= Islam, 0= otherwise)	1	0	.99	.09	-0.01 [0.01]
Child (number)	1.29	.88	1.18	.78	-0.11 [0.07]
Adult (number)	2.42	.84	2.4	.8	-0.03 [0.07]
Old people in family (number)	.35	.6	.37	.63	0.03 [0.06]
Family size (number)	4.06	1.2	3.95	1.13	-0.11 [0.10]
Agricultural land size (decimals)	29.81	22.98	27.17	24	-2.64 [2.10]
Agricultural income	5222.92	3884.31	5174.72	4093.56	-48.20 [356.03]
Non-agricultural income (BDT)	6718.75	4116.04	6749.06	3571.01	30.31 [342.14]
Other income (BDT)	652.92	984.01	666.04	836.28	13.12 [8104]
Total income (BDT)	12594.58	3526.65	12589.81	3432.6	-4.77 [309.88]
Food expenditure (BDT)	5360.42	1321.81	5779.25	1553.14	418.83*** [129.01]
Educational expenditure (BDT)	930.83	856.8	941.51	781.66	10.68 [72.91]
Health expenditure (BDT)	1387.08	843.5	1432.08	828.77	44.99 [74.48]
Agricultural expenditure (BDT)	1507.29	1383.25	1444.53	1419.26	-62.76 [124.95]
Other expenditure (BDT)	881.88	734.42	804.53	645.58	-77.35 [61.42]
Total expenditure (BDT)	10067.5	3299.87	10401.89	3233.08	334.39 [290.94]
Bank distance (meters)	4403.13	2336.68	4605.28	2281	202.16 [205.63]
MFIs distance (meters)	1661.58	1126.19	1674.42	1132.82	12.83 [100.66]
MFS distance (meters)	568.65	534.9	605.89	488.06	37.24 [45.52]
Mobile user (1=user, 0=otherwise)	.98	.15	.99	.09	-0.01 [0.01]
Mobile type (1=smart phone, 0=otherwise)	.39	.49	.44	.5	-0.05 [0.04]

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Internet user (1=user, 0=otherwise)	.38	.49	.44	.5	-0.06 [0.04]

Note: Standard errors are in brackets; level of significance: *** p< 0.01. Source: Authors own calculation

Although all the demographic and household variables are balanced, we observe an imbalance in food expenditure between the control and the treatment groups at a 1% level of significance. The imbalanced variable "food expenditure" is the segment of total expenditure. We observe total expenditure in both the groups are balanced, so we can claim that our randomization is almost successful.

3. Results

3.1. Account opening take up rate

Table 5 represents account opening frequency and percentage in different financial institutions (take-up rate) among the treatment group members. Total saving account opening (take-up rate) is 38.75% among the treatment groups. The highest take-up rate is observed through mobile financial service 18.33% which is 44 in number. The second highest rate is found for MFI accounts 26 in number (10.83%) and the bank account opening rate is 25 (10.42%).

Table 5. Account opening take up rate

Outcome variables	Frequency	Percentage
Total account opening	93	38.75
Account opening in Bank	25	10.42
Account opening in MFIs	26	10.83
Account opening in MFS	44	18.33

3.2. Average Treatment Effect (ATE)

The mean differences of opening saving account in different financial institutions are presented in Table 6.

Table 6. Mean differences between the treatment and the control

Outcome variables	Treatment	Control	Mean diff
Total account opening	.3875 [.4882]	.0642 [.2455]	.3233*** (.0349)
Account opening in bank	.1042 [.3061]	.0038 [.0614]	.1004*** (.0201)
Account opening in MFIs (Micro-financial institution)	.1083 [.3115]	.0302 [.1714]	.0781*** (.0227)
Account opening in MFS (Mobile financial service)	.1833 [.3877]	.0302 [.1714]	.1531*** (.0272)

Note: Robust standard errors are in parentheses; standard deviations are in brackets level of significance: *** p< 0.01

The ATE estimation with and without covariates are shown in Table 7 for checking robustness. The impact of a motivational workshop on opening savings account is shown in the second column. The third column shows ATE estimation with controlling variables. We use household and respondent's demographic variables such as age, gender, education, total income and total expenditure, family size, agricultural land size, respondent's house distance from financial institutions such as banks, micro-financial institutions, mobile financial services, possession of mobile and an internet connection, and type of mobile used by respondents as controlling variables. The last column represents results with imbalanced variables (food expenditure). The treatment effect of the motivational workshop is persistent and significant in three cases. Besides, measuring the treatment effect on total account opening, we also calculated the treatment effect based on respondents' preference of financial institutions for opening accounts (rows 3,4,5). In this regard, we also observed a positive and significant impact of the motivational workshop on opening savings accounts. Furthermore, we also check robustness of our findings by doing probit and logit regression (see Appendix A, Table A1).

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Table 7. ATE estimation with, without covariates, and imbalanced variable

Outcome	ATE	ATE	ATE
Total account opening	.3233*** (.0349)	.3166*** (.0359)	.3149*** (.0359)
Bank account opening	.1004*** (.0201)	.099*** (.0203)	.1023*** (.0210)
MFIs account opening	.0781*** (.0227)	.0835*** (.0232)	.0721** (.0230)
MFS account opening	.1531*** (.0272)	.1437*** (.0278)	.1491*** (.0278)
Covariates	No	Yes#	With imbalanced variables##
Observation	505	505	505

Note: Robust standard errors are in parentheses; level of significance: ** p< 0.05, *** p< 0.01. # Age, gender, education, marital status, total income, total expenditure, family size, land size, distance from banks, MFIs, MFS, mobile, internet user are used as controlling variables

The treatment induced a 32.33 percent increase in opening savings account total. The increasing rate is consistent in terms of some pre-treatment controlling variables and with imbalanced variables which are 31.66 percent and 31.49 percent, respectively. The intervention improves bank account opening by 10.04 percent. It is also consistent in terms of covariates and with an imbalanced variable which is 9.9 percent and 10.23 percent respectively. It is at a 1% level significant in all conditions. We find similarities in opening savings account in micro-financial institutions after intervention. The third row of the table represents the result. It increases MFI accounts by 7.81 percent. However, the increasing rate is 8.35 percent (1% level significant) and 7.21 percent (5% level significant), respectively, with covariates and imbalanced variables. The fourth row represents the highest increase rate for mobile financial services among the respondents, which is 15.31 percent significant at the 1% level. Similarly, with covariates and imbalanced variable, the impact of a motivational workshop on opening savings accounts is 14.37 percent and 14.91 percent and both of them are at 1% level significant.

3.3. Conditional average treatment effect on opening savings accounts

Policymakers are more interested in adopting policies by targeting populations. Therefore, sub-sample analysis is necessary to identify the most appropriate groups where the treatment impact is most effective. For this, we do a sub-sample analysis to understand the treatment effect on a particular group. In this regard, we segregated the samples based on some observable characteristics from the summary statistics. Finally, we estimate the conditional average treatment effect (CATE) concerning age, educational attainment, gender, total income, total expenditure, occupation, family size, and agricultural land size.

Table 8 represents sub-sample analysis. We observe the intervention motivational workshop has a persistent and significant impact on opening savings accounts in different groups regardless of with and without control variables.

Table 8. Conditional Average Treatment Effect on opening saving account.

Category	Sub sample	Result	Result
Education	Primary education (n= 296)	.2890*** (.0455)	.2905*** (.0480)
	Secondary education (n=123)	.4023*** (.0690)	.4024*** (.0702)
	More than higher secondary education (n=86)	.3139*** (.0883)	.2954** (.0999)
Age	Age ≤ 33 (n=260)	.3658*** (.0510)	.3342*** (.0520)
	Age > 33 (n=245)	.2857*** (.0478)	.2827*** (.0498)

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Total Income	Income ≥ 12592 (n=233)	.3415***	.3295***
		(.0490)	(.0520)
	Income< 12592 (n=272)	.3097***	.2922***
		(.0495)	(.0523)
Total expenditure	Expenditure≥10292 (n=237)	.3305***	.3380***
		(.0520)	(.0548)
	Expenditure<10292 (n=268)	.3144***	.2963***
		(.0478)	(.0497)
Occupation	Farmer (n=207)	.3202***	.3187***
		(.0565)	(.0587)
	Housewife (n=123)	.3423***	.3399***
		(.0758)	(.0745)
	Other occupation (n=175)	.3226***	.3253***
		(.0543)	(.0597)
Gender	Male (n=374)	.3252***	.3245***
		(.0402)	(.0413)
	Female (n=131)	.3184***	.3249***
		(.0713)	(.0712)
Agricultural Land size	Land ≤ 28 decimals (n=260)	.3130***	.3128***
		(.0485)	(.0500)
	Land size > 28 decimals (n=245)	.3324***	.3186***
		(.0505)	(.0530)
Family size	Family members ≤ 4 (n=157)	.3746***	.3447***
		(.0593)	(.0650)
	Family members > 4 (n=348)	.2997***	.3050***
		(.0430)	(.0445)
Covariates		No	Yes
Observations		505	505

Note: Robust standard errors are in parentheses; level of significance: *** p< 0.01. # Age, gender, education, marital status, total income, total expenditure, family size, land size, distance from banks, MFIs, MFS, mobile, and internet users are used as controlling variables, n= number of respondents in the group

The CATE point is persistent and statistically significant whether we control pre-treatment variables or not. Regarding primary and secondary education, total expenditure (Expenditure≥10292), other occupations, female, and family size category, we observe a slight increase in treatment impact results with covariates. However, the significance level is almost identical except "more than secondary education" group, which has 5% level of significance.

Table 9 represents the descriptive statistics of outcome variables for the whole sample, treatment, and control group. The impact of the motivational workshop on opening a savings account for the whole sample is 21.78 percent, institutionally 5.15 percent for bank accounts, 6.73 percent for micro-financial accounts, and 10.30 percent for mobile financial services accounts. The intervention effect has 13.55 times, 2.24 times, and 3.42 times higher magnitude for the total sample in terms of opening saving accounts in bank, MFI and MFS than the control group.

Table 9. Descriptive statistics for outcome variables

Outcome variable	Total sample n=505		Treatment n=240		Control n=265		Magnitude
	Mean	Std dev	Mean	Std dev	Mean	Std dev	
Total account opening	.2178	.4132	.3875	.4882	.0642	.2455	3.39
Account opening in Bank	.0515	.2212	.1042	.3061	.0038	.0614	13.55
Account opening in MFIs	.0673	.2508	.1083	.3115	.0301	.1714	2.24
Account opening in MFS	.1030	.3042	.1833	.3877	.0301	.1714	3.42

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Note: Magnitude= $\frac{\text{Total sample mean}}{Controlled\ group\ mean}$

4. Discussion

The motivational workshop enhances opening account 32.33% percent among the unbanked VDP members. The intervention "motivational workshop" is statistically significant in terms of whether we control some pre-treatment variables or not. Moreover, our findings are statistically persistent and consistent even in terms of imbalanced variables. Account opening take-up rate differs in terms of choosing different financial institutions. The respondents were free to choose financial institutions for opening accounts. We observe the bank accounts opening rate of 10.04% followed by micro financial institution accounts at 7.81%. However, the highest take-up rate is observed for mobile financial services (15.31%) for various reasons such as easy account opening options, availability, less documentation process, 24/7 service even from a feature phone, zero account opening fee, and physical proximity of mobile financial services. Moreover, Khatun et al [61] explore various reasons for the popularity of mobile financial services in Bangladesh and find that cash in and out facilities, person-to-person pay (P2P), government-to-person pay (G2P), utility payment facilities, receiving government subsidies, and salary payment accelerate its popularity.

The findings of this study are consistent with [8,15,19,36] in terms of the positive direction of opening saving accounts, although their intervention is different from this study. Prina [15] found an 84% take-up rate by providing zero account opening, no maintenance fee, and physical proximity to the slum dwellers women house heads in Nepal. Hoy et al. [19] found a 70% take-up rate after offering zero opening and maintenance fees, a literacy workshop, and an easy application process for opening a bank account. In comparison with some previous studies, our treatment effect and take-up rate are a little bit low for several reasons. Firstly, we observed the impact of a one-hour-long motivational workshop on only opening savings accounts. Secondly, we rely only on a motivational workshop without any monetary subsidy and assistance for easing the documentation process since the impact of monetary subsidy, easy account opening process, and zero account opening and maintenance fee have already been experimented with in many developing countries. Finally, in comparison with the studies of Dupas et al, and Prina [9,15,62], we provided a short period for collecting the follow-up data on opening savings account just after 45 days of assigning intervention. Dupas et al. [9] conducted three round follow-ups after 6, 12, and 18 months in their study and found a take-up rate of 69% in Malawi, 54% in Uganda, and 17% in Chile after providing the intervention of zero account opening fee by offering vouchers to the respondents. Chin et al. [25] provided *Matricula* cards, one type of identity card, among the Mexican migrants in the USA as a treatment and observed that the intervention enhanced 38% more likely of opening bank accounts among the migrants. One possible interpretation of less treatment effect in our study may be the different setting, intervention, and context. Despite having a short intervention with existing conditions of opening saving accounts, we find that motivational workshops can enhance financial access among the unbanked people and bring them under the umbrella of financial inclusion. The findings have some policy implications as the intervention is cost-effective and replicable. The low-cost interventions are viable for policymakers in developing countries [20].

Our CATE analysis is consistent with those of [63–65] in terms of exploring the determinants of financial inclusion and account ownership. From our sub-sample analysis, it is observed that CATE estimation is higher than ATE estimation without covariates for several categories, such as 1.24 times higher for the secondary education group, 1.05 times higher for the income group (Income $\geq$ 12592), and the housewife category. Furthermore, CATE is 1.06 times higher for the younger age group (Age $\leq$ 33). The highest magnitude is observed at 1.15 times higher for a family with more than four members. Women, poor adults, less educated and people outside of the labor market are still far from financial access [8]. In this situation, the CATE analysis provides an insightful and significant impact on opening accounts through motivational workshops, especially for housewives, and younger age groups. Considering the higher magnitudes of CATE on opening savings accounts, policymakers can adopt the right policy from this finding.

Another interpretation of the significant increase in opening savings account is that the necessary documents for opening an account are similar to those of being a VDP member. Thus, the respondents have no shortage of documents for opening accounts. Moreover, the significant increase in opening accounts within a short time may be due to a good understanding of the content of motivational workshops. All the respondents are more than 18 years; thus, they are psychologically mature enough to understand and make positive decisions. The motivational workshop helps demonstrate a planned behavior among the treatment group because any expected outcome can be possible if the weightage of motivation is higher than other issues [66]. Motivation is the key element for behavior change as it initiates, and guides towards a goal-oriented change [67].

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5. Conclusions

Despite having a good number of options for opening accounts in financial institutions, only 53% of adults in Bangladesh have financial accounts. Still, many people are financially excluded. As a result, the financially excluded have to adopt risky and inconvenient mechanisms for saving, sending, and receiving money. Based on our study, we have evidence that motivational workshop has a positive impact on opening savings accounts in financial institutions among unbanked people. Motivation triggers a changing positive mindset. The motivational workshop is successful since it has enhanced the take-up rate among the unbanked VDP members by 38.75 percent. The effectiveness of the intervention is much higher in opening saving accounts through mobile financial services by 15.31% followed by bank account at 10.04% and micro-financial institution accounts at 7.81%. Our CATE analysis is also statistically significant for different target groups.

The findings of this study have significant policy implications for adopting financial inclusion strategies for developing countries. Effective policy on financial access can move unbanked people from financial exclusion to financial inclusion. The motivational workshop has a positive impact on different subgroups, we can suggest policymakers adopt motivational workshops for the financially excluded people. This finding can be implacable for the implementation of the National Financial Inclusion Strategy of the Bangladesh government with the collaboration of the Ministry of Finance and Bangladesh Bank. NFIS-B has a target to bring the typically unbanked and marginalized people in terms of little income and educational attainment among tea laborers, physically impaired people, third gender, floating communities, slum dwellers, people in geographically remote areas such as forest, coastal, *haor* (vast marshy wetland), *char land* (sandy island beside the river) under financial inclusion [30]. Furthermore, our intervention is pertinent as it is easily replicable and less expensive than the studies provided money subsidy. Bangladesh government targets to ensure universal financial inclusion by 2026. NFIS-B proposed financial literacy and an annual program for achieving the goal. In line with the strategies of NFIS-B, the stakeholders may adopt our intervention "motivational workshop" for the unbanked population as an annual program. In addition, Bangladesh Ansar and VDP organization has much scope for adopting motivational workshops for the unbanked VDP members to open saving accounts. Ansar and VDP can incorporate motivational workshops in its village-based training program to achieve the goal of NFIS-B.

5.3. Limitations of the study

This study has some limitations. Spillover is one of them since we did our randomization at the individual level. Moreover, our study area is small and samples have almost homogenous occupations. Thus, there is higher probability of exchanging intervention message from the treatment group to the control group. As a result, our estimation is underestimated. Despite having underestimated results, our finding is still positive and statistically significant. We acknowledge that our intervention time is only one hour. As a result, there is much scope for measuring the long-term intervention effect in further research. Those limitations may pave the way for further research. Firstly, we also encourage further research to examine the long-term effect of motivational workshops among unbanked people. Secondly, the impact of motivational workshops in geographically challenged areas in Bangladesh needs to be explored. Finally, it is pertinent to observe the saving volume and active account usage tendency after opening accounts for better understanding the impact of motivational workshops.

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Informed Consent Statement: All the respondents (Unbanked VDP members) provided their informed consent.

Data Availability Statement: The data presented in this study are available on request from the corresponding author.

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Appendix A

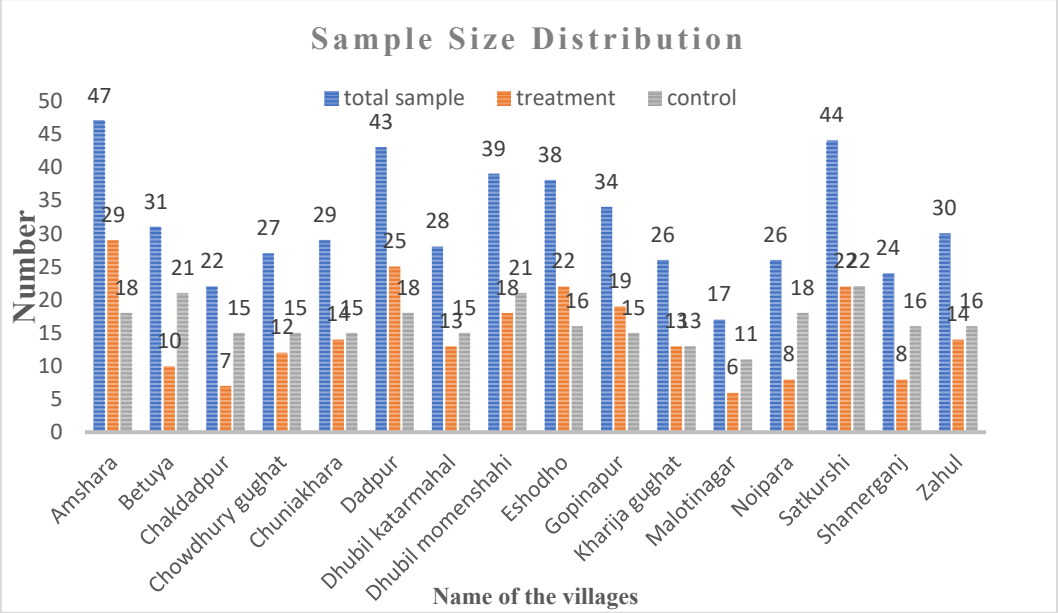

Figure A1. Village-wise sample size distribution

Table A1. Logit and probit estimation for checking the robustness

Outcome	Coefficient and Std err	Coefficient and Std err
Total account opening	2.22*** (.2838)	1.23*** (.1455)
Bank account opening	3.42*** (1.025)	1.41*** (.3526)
MFIs account opening	1.36*** (.4151)	.6426*** (.1879)
MFS account opening	1.98*** (.3962)	.9753*** (.1804)
Regression	Logit	Probit
Observation	505	505

Note: Robust standard errors are in parentheses; level of significance: *** p< 0.01

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