

ORIGINAL RESEARCH ARTICLE

Innovations in savings behaviour and agricultural business support for women: The Ghanaian 'Money-Box'

DOI: 10.29063/ajrh2021/v25i5s.14

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Abstract

In Ghana, like many African countries, women are financially disadvantaged compared to men, which has encouraged women to form credit associations. This paper examined the "Pagwuni" Women's Group (PWG) in the Northern region of Ghana, where over 93 percent of members are smallholder farmers. Women make regular membership and social fund contributions with records kept in a secured 'money-box', opened at an agreed time. Members receive their money according to the amount contributed while the 'social fund' is for purchasing farm inputs. This study analysed the effect of the Pagwuni Women Group (PWG) financing activities on the financial needs of the group and their households' economic welfare. The study also examined the kind of innovation that this PWG adopts that differs from the traditional Village Savings and Loans Association (VSLA). In investigating the sustainability of this 'money-box' model, data was sourced from 150 participants and the group administrators using a mixed research method. Three significant findings were uncovered. First, 93.3 percent of the respondents are peasant farmers. Second, 86.7percent indicated that this money-box arrangement is their only form of savings. Hence, since PWG is a woman-only group, it offers a good opportunity to understand the interconnections between gender and the economic welfare, enhancing the potential benefits of such group savings associations. Third, access to the social fund component of money-box helped the female participants to acquire the equipment and services needed to modernise their farming activities. Policy recommendations to link such rural money box initiatives with formal financial institutions to help channel funds to small-scale female farmers are discussed. (*Afr J Reprod Health 2021; 25[5s]: 147-158*).

Keywords: Business support, innovations, Money-box model, women savings behaviour, Ghana

Résumé

Au Ghana, comme dans de nombreux pays africains, les femmes sont financièrement défavorisées par rapport aux hommes, ce qui a encouragé les femmes à former des associations de crédit. Ce document a examiné le groupe de femmes " Pagwuni " (PWG) dans la région du nord du Ghana, où plus de 93 pour cent des membres sont de petits agriculteurs. Les femmes font des cotisations régulières et des cotisations au fonds social avec des dossiers conservés dans une "tirelire" sécurisée, ouverte à une heure convenue. Les membres reçoivent leur argent en fonction du montant cotisé tandis que le " fonds social " sert à acheter des intrants agricoles. Cette étude a analysé l'effet des activités de financement du Pagwuni Women Group (PWG) sur les besoins financiers du groupe et le bien-être économique de leurs ménages. L'étude a également examiné le type d'innovation adopté par ce PWG qui diffère de la traditionnelle Association villageoise d'épargne et de crédit (AVEC). En étudiant la durabilité de ce modèle de " boîte à monnaie ", les données ont été recueillies auprès de 150 participants et des administrateurs du groupe en utilisant une méthode de recherche mixte. Trois résultats significatifs ont été découverts. Premièrement, 93,3% des personnes interrogées sont des paysans. Deuxièmement, 86,7% ont indiqué que cet arrangement de tirelire était leur seule forme d'épargne. Par conséquent, étant donné que le PWG est un groupe exclusivement féminin, il offre une bonne opportunité de comprendre les interconnexions entre le genre et le bien-être économique, améliorant ainsi les avantages potentiels de ces associations d'épargne de groupe. Troisièmement, l'accès au volet fonds social de la tirelire a aidé les participantes à acquérir l'équipement et les services nécessaires pour moderniser leurs activités agricoles. Des recommandations politiques pour lier ces initiatives de tirelire rurale avec des institutions financières formelles pour aider à canaliser les fonds vers les petites agricultrices sont discutées. (*Afr J Reprod Health 2021; 25[5s]: 147-158*).

Mots-clés: Soutien aux entreprises, innovations, modele de tirelire, comportement d'épargne des femmes, Ghana

Introduction

This study focuses on the financial access of women in Ghana. Specifically, it investigates the *Pagwuni* Women Group (PWG) who are mostly smallholder farmers and, in a group, pooling funds together to finance their businesses especially in the agricultural sector. This paper examines farmers Village Savings and Loans Association (VSLA) in supporting businesses and farming activities for women. The paper analysed the effect of the *Pagwuni* Women Group (PWG) financing activities on the group's financial needs and their households' economic welfare. Thus, the study examined the PWG savings behaviour and perceived benefits the members enjoy. The study further looked at a bivariate nature of group and gender, age and income of members and the kind of innovation that this PWG adopts that makes it different from the traditional VSLA. This *Pagwuni* women group is unique in the way it administers the VSLA to its members. As an innovation, they keep their savings in a locked 'money box'. The box is only opened at a predefined time for members to access the funds to support their businesses. This scheme is important as women face significant barriers in accessing financial services from formal institutions.

Across the globe, especially in Africa, women, particularly from rural areas do not save regularly and thus have no access to credit facilities from the formal financial institutions. Women and other marginalised groups rarely have legal proof of identity or employment which makes it difficult for them to obtain credit from registered lenders compared with their male counterparts. Across the globe, there have been concerted attempts to make credit available to all especially women¹⁻³. Despite these efforts, there has been limited access to basic financial services especially for women. Available evidence indicates that the majority of those not financially included or who have limited access to credit are from developing countries, especially those residing in rural areas^{1,2}.

Kendall⁴ indicated that poor persons could save more than non-poor whether through formal or informal means. For example, VSLAs as a savings and pooling model make credit available to the rural poor by creating groups of individuals mostly women who pool savings⁴. In VSLA, contributions (savings) are made by members within a regular time interval (monthly or weekly). In addition to

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their contributions, members of these conventional saving associations could borrow (at interest) from the group fund. Thus, the survival of VSLAs strongly depends on the contributions from members with associated interest accrued from extended loans. Furthermore, in some VSLAs, members receive training on financial literacy, leadership, and group management strategies to improve the likelihood of their self-sufficiency⁵. Therefore, as a self-sustaining group, VSLA has the potential to bring formalised financial services to remote areas^{5,6}. This view has also been supported by Osabuohien and Ola-David⁷ regarding *Esusu* scheme in Nigeria and Nnama-Okechukwu *et al.*⁸, on VSLA in Ogun state in southwest, Nigeria.

The VSLA is an advancement of the traditional savings schemes that are available. The association (VSLA) is usually a group of individuals, (usually unregistered) who might know each other and who decide to pool their incomes or earnings in contributions into a fund (the savings/resource pool). It requires no external funding; its formation and operations are based solely on the contributions made by its members. Members of the VSLA can borrow from the savings pool and repay the loan with interest, causing the fund to increase. However, with *Pagwuni* women group, their way of operating the VSLA is somewhat innovative in the sense that it mandates part of the amount which members contribute to the 'money box' to be used to purchase farm inputs or implements such as herbicides, spraying machines, cutlasses, and fertilisers for members.

Boosting the financial capacity of women would help to achieve wealth creation, rural development and economic empowerment. Various studies have argued that when women gain access to credit, their economic capacity improves and this can positively impact on the welfare of households^{9,10-14}. Access to credit reduces the probability of individual or household risk and vulnerability by supporting household needs such as those related to health and education, which can help to smoothened consumption in a household. It is surmised that most women, especially in SSA, are small-scale traders and farmers and often lack collaterals for large financial transactions⁹ and thus, joining an all-women credit groups enable them to manage their finance needs. This is essential as women are deemed to be trustworthy. The United Nations² have noted in a survey on bank managers

in India that women borrowers were more trustworthy and less of a default risk than men borrowers. Ramji¹⁵ noted that poor rural persons may patronise 'doorstep' banking (i.e., banking which takes place at a location which is both convenient and comfortable to the client) than non-poor. Also, Osabuohien and Karakara⁹ argued that most women save more with informal means such as mobile money, family (or friends), at home and microfinance channels more than men.

Kumar¹⁶ opined that VSLAs (self-help groups) are vital tools for poverty alleviation, human development, and social empowerment. Nevertheless, there are conflicting views in the literature on the impact of the informal groups (savings schemes). For instance, Ferrara¹⁷ asserted that individuals who have no access to formal jobs can benefit from VSLAs. As stated earlier, this paper used a mixed method approach to analyse the effect of the *Pagwuni* Women Group (PWG) financing activities on the group's financial needs and looked at the kind of innovation that this PWG adopts that makes it different from the traditional VSLA.

The rest of the paper is organised as follows: section two summarises insights from the empirical literature and analytical framework. The third section captures methodology of the study including study design and sampling selection together with instruments and data collection procedure. The fourth section presents the results, while the fifth and sixth section provides the implication of the findings and conclusion, respectively.

Insights from empirical literature and analytical framework

Empirical literature

There have been copious amounts of empirical studies on how self-help group (SHG) savings or VSLA affect the welfare of members as well as providing financial support and other supports to members. Karlan *et al.*¹⁸, indicated that in efforts to address the problem of lack of credit in rural areas, many Non-Governmental Organisations (NGOs) have begun promoting informal savings-led microfinance groups that emulate and improve on the model of informal associations often called Rotating Savings and Credit Associations (ROSCAs). Generally, most studies found that this SHG has improved the savings behaviour of

members hitherto who did not save and never thought of savings. Nsabagasani *et al.*¹⁹ noted in focus group discussions of a VSLA group in Uganda that their participation enhanced the members' ability to mobilise savings and to send their children to school. Similarly, Cosmin²⁰ evaluated women's SHG (group saving model/scheme) in Ethiopia and concluded that active participation in the group's activities has led to the women being committed to saving every week. It was added that SHG improved members' ability to source for loans which are used for household consumption and for running businesses which enhance household income.

The benefits of women groupings and pooling are enormous. Asset accumulation by households was also found to be as a result of women participating in SHGs in various geographical locations. Ksoll *et al.*²¹ indicated that VSLA has the potential to improve household welfare and reduce poverty, while Brannen and Sheehan-Conner⁶ posited that VSLA improves household welfare such as increasing asset expenditure levels, income-generating activities, expenditure on education, health and nutritional levels, and improving quality of housing and women empowerment. Ranjula and Adel²² revealed that old membership in SHGs correlate positively with the ability to accumulate asset. It was also noted by the author that the training provided by NGOs also helps in asset creation drive of members. Anyango *et al.*²³ on VSLA participants in Tanzania asserted that household assets and means of transport of VSLA members are better off than the average Tanzanian population. Brannen²⁴ noted similar observation on asset accumulation of VSLA participants.

Access to finance through this model of group savings has also been found to have affected members' welfare concerning healthcare financing and nutrition. For example, Cosmin²⁰ found that a woman who participated in group savings and have received health education has improved lives by providing better food, nutrition, and education materials to their school age children. Kumar¹⁶ found that participation in SHG activities has led to rural households earning more income and improving social awareness, and thus helps in achieving higher nutritional security for the household. The author studied a participatory group and a control group and established that the participants experienced a 19.34 percent increase in

their income over non-participants in SHGs. Thus, participation in SHG significantly and positively influences household incomes. Dagnelie and LeMay-Boucher²⁵ concluded that people participate in such group savings in order to secure their incomes.

From the literature, it can be deduced that participation in VSLA brings some benefits to participants beyond their initial capacities^{8,20,25-27}. The benefits range from increase in income, welfare financing (like children education, healthcare, social support), to asset accumulation. Thus, self-help group (SHG) savings could be harnessed as a tool to increase financial inclusion and make access to finance by the rural poor easier. The mechanism on how SHG can be better achieving its objectives is further explored in this study by providing empirical evidence using the case of PWG in Ghana.

Analytical framework

This study anchors its discourse on the analytical framework shown in Figure 1. Stemming from the literature^{3-6,18,20,24}, it is noted that self-help group savings (VSLA) has the ability to finance various needs of participants. The group examined by this paper had their main motive of coming together and pooling funds to help finance their businesses (mainly farming). This has been the objectives of most VSLAs^{6,16}. However, this current study opined that the group members have benefited beyond this initial intention of financing their businesses. As shown in Figure 1, as one joins the PWG with the intention of accessing some finance to support his/her business, at the end such a person also gets other benefits aside from the intended group benefits.

Furthermore, in Figure 1, the group intended benefit is tied to other benefits. As an individual engages in the group, he/she have access to finance his/her business, this leads to expansion of business and subsequently increase in income. This increase in income leads to financing of healthcare, education, asset accumulation, and social support. This is what this study presupposes that self-help group savings has enormous benefits beyond what group members could have imagined at the onset of joining the group. The analyses are in line with other studies^{6,8,14,18,24} that had similar conclusions.

Methods

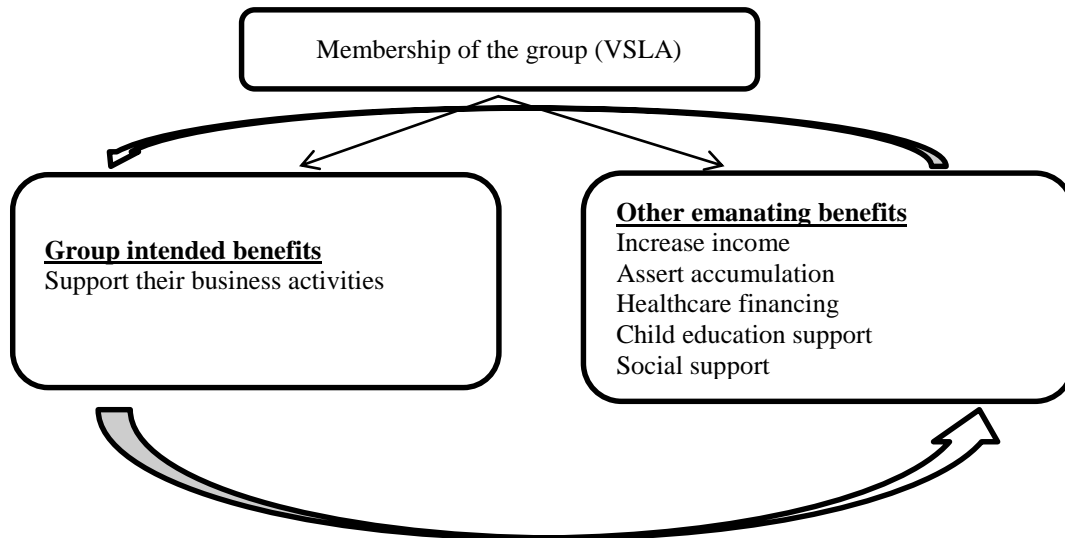
Study design

This study used mixed method approach (qualitative and quantitative) to study the behaviour of members of PWG in the Bimbilla Municipal and its environs in the Northern region of Ghana. In the qualitative approach, we engaged respondents to verbally express their experiences by words which described the group attitudes, behaviour, and actions in an ordinary situation²⁸. We used the qualitative approach, in one hand, basically because of the need for a complex and detailed understanding of the issue from the perspective of the participants in the group.

We obtained this detailed information by talking directly to the group members in an interview-administered questionnaire and carrying out focus group discussions which allowed the group members to give the information pertaining to their experiences with the group finances. In the quantitative approach, we analysed the information given by respondents in a form of charts, tables and figures. We did a bivariate analysis of the group type (Bimbilla, Jo-U and Bakpaba) a respondent is from and other variables (age bracket of respondent, gender of respondent and the monthly income of respondent). Age bracket is the age range that a respondent falls within and gender is whether a respondent is a male or female. While monthly income is the income respondent realises in a month for engaging in economic activities. Quantitative approach is a research technique that relies on figures and numbers that also captures opinions or concepts in a study²⁸. It was used to provide the numbers and figures needed to better explain the interconnections between the issues uncovered through the aforementioned qualitative approaches. Thus, a mixed method (quantitative and qualitative) was used in this study.

Study setting

Bimbilla Municipality has a population of 141,584 as at 2010²⁹. The municipality lies between latitudes 8.5° N and 9.25° N and longitudes 0.57° E and 0.5°E. It was created as a separate district from the then Nanumba District in 2004 under Legislative Instrument – LI 1754. The municipality has a land



Source: The authors'

Figure 1: Benefits of group savings (PWG)

area of 2260.8 sq./km. It is bounded to the North by Yendi Municipal, the South by Nanumba South District, the East by the neighbour Togo and the West by East Gonja District²⁹. Agriculture (mainly yam and cereals) is the main occupation for the majority inhabitants. Incidence of poverty and vulnerability to hunger in the municipality is widespread and has pronounced effects on the disadvantaged especially children, women and the disabled. Households with female heads are said to be poorer than households headed by men in the municipality²⁹. Women and the youth residing in the Bimbilla Township have better poverty coping strategies than their men and rural counterparts who also depend primarily on agriculture as means of livelihood²⁹.

Sample selection, instruments and data collection procedure

The study used purposive sampling techniques as respondents are those who are group members of the PWG. Actual respondents were randomly selected by means of simple random sampling technique. We meet the respondents at their meeting site to collect the data. At the meeting ground as respondents sat in a row, we count and select the second person in a one-two counting system. Counting was done until we reached the desire number for the data. This system was done in all the three groupings (Bimbilla, Jo-U and Bakpaba). At the Bimbilla group a total of 71 was selected and in Jo-U a total of 33 and a total of 46

in Bakpaba. This numbers are according to proportion of membership to the overall PWG population. Overall, 150 respondents across the three different groups (Bimbilla, Jo-U, and Bakpaba) were selected for the study. The sample was weighted based on the total number that each group has. Equal opportunity was given to each group to ensure fair representation. For the focus group discussion, 12 respondents were selected to participate and at the end 8 actually participated. Respondents were enlightened on the purpose and objectives of the study before they were asked to consent for participating in the study. They all indicated high acceptance to be part of the exercise.

The purpose of the study was explained well to the respondents to seek their concern before they participate. Seeking informed consent from respondents to ensure participation based on the respondents' will has enabled us to explain what the study is about and how it is purely a research exercise. The respondents were assured of their anonymity and the freewill to participate and to freely provide information for the study. We assured respondents that sensitive information will not be explored anyhow unless the respondent consented to provide such information. Also, in focus group discussions (FGDs), the researchers mapped the room and used numbers not names in taking notes to improve security and confidentiality of information. Finally, respondents were be given the opportunity to ask questions during the data gathering process to clarify their possible concerns.

We used an interview-administered questionnaire to collect data for the quantitative analysis. Interview-administered questionnaire was used for the study mainly because of high illiteracy rate among the respondents. Kothari³⁰ and Kumar³¹ acknowledged that this is a more suitable method to collect reliable data from respondents who could neither read nor write. The copies of the questionnaire were read out to the respondents in the local language (Dagbani), and their responses were recorded. The data was subjected to validation checks and cross-checks to maintain the chronological responses. The edited quantitative data was analysed using Stata. Descriptive statistics was performed to describe the nature and distribution of the data. The results were organised and presented in form of pie charts and tables (with frequencies and percentage counts).

Focus Group Discussion (FGD) was used to collect the qualitative data. The focus group discussion was based on an in-depth explanation given by respondents when a question is posed to them in the FGD. We transcribed the qualitative information and analysed it with quotations from respondents in a content analysis format.

Results

Background information about the group

The group was started in March 2017 with the name *Pagwuni*, which literally means 'great woman'. The formation was an idea that the group manager brought up in a discussion with a friend on how to help these group of rural illiterate females.

I initially thought of how these women suffer in order to secure some small amount of money to help them whenever the farming season sets in. So, I decided that if after the season we can bring these women together for them to make some contribution every week or say some four days interval and if this sustains, then the coming season they can use such contribution for their farming needs (The group manager).

Initially, the group was formed with only 20 members who were women. The group has now grown and has membership of over 200 residing in the Bimbilla Township and two neighbouring villages (Jo-U and Bakpaba). The success of the group has prompted some men to express interest to join. Initially the women resisted but as times passed a handful of men joined the group. However, the group's name still remains PWG.

The group is managed by the CEO (Chief Executive Officer) and two others who are secretary and the keeper. These managers are all men. The group meets once every week and contributions are made by members for any amount they could afford. Aside the member contribution, each member pays a mandatory amount into a separate social/welfare fund. Records are kept and the money realised after every weekly meeting is kept in a wooden 'money box' locked with key. The keys as well as padlocks are duplicates of which the CEO, the secretary and two other women keep a copy each.

The 'money box' is officially opened after every six months and the amount realised in the name of every member's contribution is given to each individual and the total amount realised from the social/welfare payment is used to manage the group needs and for the purchase of farming items such as herbicides, pesticide, spraying machines, cutlasses, wellington boots and weedicide for members according to their request. Unlike other VSLA, this group does not give loans and other borrowings. However, the amount each member contributes is the same amount she will receive when the box is opened. New members could only join after the box is opened and a new period of contribution kick starts. The managers of the group stated that, they observed that unlike other VSLA where loans are given, the 'loan takers' most at times default and which can lead to the collapse of such groups. Hence, this informed their group (PWG) to operate a bit differently from other traditional VSLAs.

Descriptive statistics and distribution of variables

Descriptive statistics and the distribution of variables are captured in Table 1. Majority (86%) of the group members are females with few (14%) males as group members. Most VSLA comes with female dominated groups⁸. The PWG group was initially a female group until a handful of men saw the benefit and decided to join. On the occupation of respondents, 93.3% are peasant farmers and remaining is either a petty trader or engaged in other form of employment. The group members are largely illiterates as a significant proportion (82%) had no formal schooling and the remaining 12% having only primary education. The distributions of respondent's age brackets indicate that majority (68%) are within the age range of 30 to 40 years of age. This is followed by 19.3% that are within 20 to 30 years with the rest either between 40 to 50

Table 1: Descriptive statistics and distribution of variables

Variable	Measurement	Response	Obs.	Percentage
Group	The group in which the respondent is from	Bimbilla	71	47.33
		Jo-U	33	22.00
		Bakpaba	46	30.67
Gender	The gender type of the respondent	Female	129	86.00
		Male	21	14.00
Occupation	The occupation of the respondent	Farming	140	93.33
		Petty trading	7	4.67
		Other work	3	2.00
Education	The educational level of respondent measured by school completion	No formal schooling	123	82.00
		Primary	19	12.67
		Secondary	8	5.33
		Higher	0	0.00
Age	Age of the respondent in years	20 – 30	29	19.33
		31 – 40	102	68.00
		41 – 50	10	6.67
		Above 50	9	6.00
Income	The income level of respondent (Monthly income)	GHC1 – GHC50	31	20.67
		GHC51 – GHC100	90	60.00
		GHC101 – GHC200	21	14.00
		Above GHC200	8	5.33
Marital status	The marital status of the respondent	Single	16	10.67
		Married	111	74.00
		Widowed	14	9.33
		Divorced	9	6.00

Source: Authors' computation based on field work data

Table 2: Cross tabulation of group type and other variables

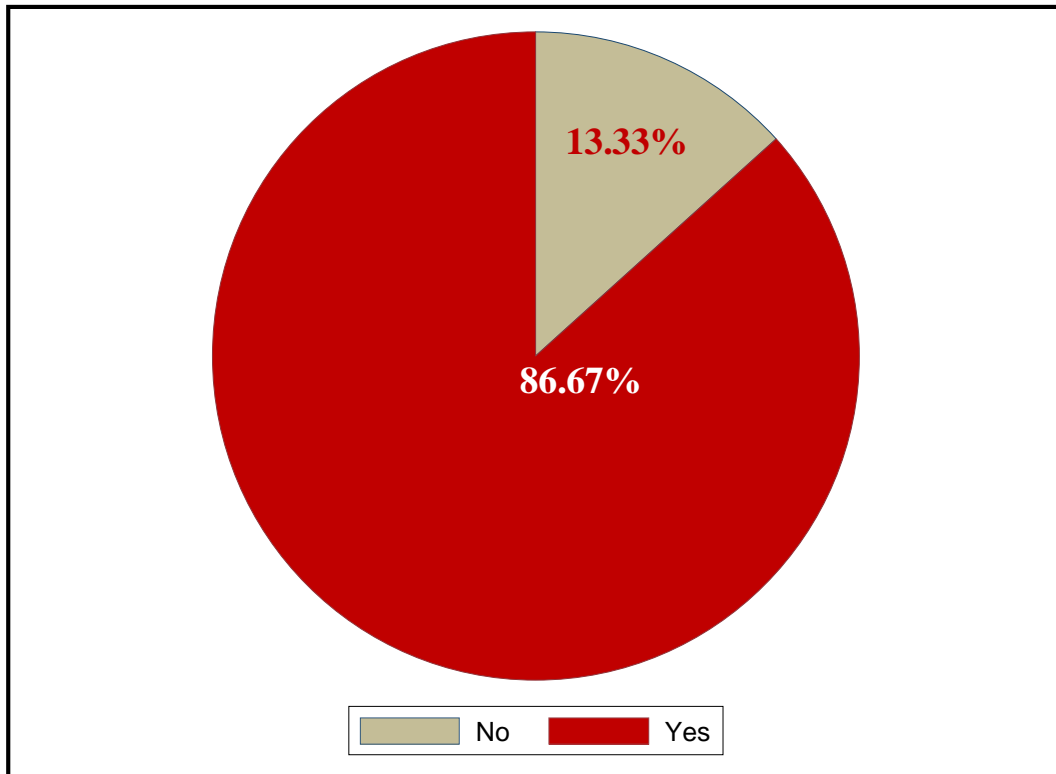
Group	Gender		Age brackets				Monthly income (GHC)			
	Male (%)	Female (%)	20-30 (%)	31-40 (%)	41-50 (%)	Above 50 (%)	1 – 50 (%)	51 – 100 (%)	101 – 200 (%)	Above 200 (%)
Bimbilla	6.90	57.02	62.07	43.14	50	44.44	38.71	49.44	57.14	33.33
Jo-U	18.18	22.31	20.69	22.55	20	22.22	22.58	21.35	19.05	33.33
Bakpaba	72.41	20.66	17.24	34.31	30	33.33	38.71	29.21	23.81	33.33
Total Obs.	29	121	29	102	10	9	31	89	21	9
Pearson Chi ²	32.8782 (2) *		3.9648 (6) *				3.0586 (6) *			
Pr	0.000		0.681				0.801			

Source: Authors computation. **Note:** * degrees of freedom; Obs: observations

years bracket or above 50 years of age. A large percentage (80.7%) of the respondents have their income levels that range between GHC1.00 to GHC100.00 (US\$0.2 to US\$20.00) and the remaining earns above GHC100.00 with only 5.3% earning beyond GHC200.00 (US\$40.00). With regards to marital status, 74% of the respondents are married with the rest being single, widowed or divorced. This distribution shows that most of the PWG members are middle aged, illiterate poor married women.

A cross tabulation of the grouping and other variables is shown in Table 2 with Chi-square statistics. The Chi-Square statistic is commonly used to tests the independence of variables or responses from data in a cross-tabulation analysis

(known as a bivariate table). The test of independence helps indicate whether there is a relationship between the two responses by comparing the pattern of response observed as against the expected pattern if the variables were truly independent of each other. In Table 2, it is shown that majority (57%) of the females is from Bimbilla group and 72.4% of the males are from Bakpaba. The Pearson Chi² value of 32.9 with degrees of freedom (2) and probability value 0.00 indicates that there is statistically significant association between the gender of respondents and the PWG group the respondent belong This means that the variation between these two variables is not due to chance alone and thus they (the two variables) are not independent from each other.



Source: The authors'

Figure 2: Is this your only means of savings

This is so because the group (PWG) is a women group with 93.3% members being female.

Furthermore, the majority of the respondents (44.4%) that are above 50 years of age are from Bimbilla group and 62% of respondents within the age bracket of 20 to 30 years are also from Bimbilla. A χ^2 value of 3.96 with degrees of freedom (6) and probability value of 0.68 indicates that group type of respondent and age are independent from each other. The group (PWG) has no age limit for membership and hence this could be the cause of this association between respondent group and age. Also, 57% of respondents whose monthly income are within GHC101 to GHC200 are from Bimbilla while 19% are from Jo-U. Respondents, whose income falls between GHC51 to GHC100, had 49.4% of them from Bimbilla group and 29.2% are from Bakpaba group. A χ^2 value of 3.0586 with degrees of freedom (6) and probability value 0.80 shows that respondent group and monthly income are independent from each other. This is so partly because group membership does not depend on how much one earns. One can contribute any amount he/she can afford to contribute.

Looking at the savings behaviour of members, the participants were asked whether they save in other form aside this group savings they make. In essence, 86.7% indicated that they have no savings means or effort in anyway other than this group savings as against 13.3% who contribute with other savings groups. Thus, this group savings is the sole source of their savings and income expectation.

PWG's ability to support members' business

This study found that most of the respondents are happy about joining this group as it helps them to set funds aside for their farm inputs. Many of them responded that their participation has brought some benefit to them compared to when they were not in the group.

I remember last year when I struggled to buy some farm inputs and thank God with my participation in this group at least this year the story was different. I received some inputs like weedicide and some quantity of fertiliser and even cash that helped me...yes am happy (FGD discussant from Bakpaba, Female)

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Another participant acknowledged that her participation has actually helped her in expanding her farm which she has been wanting to but had been limited by lack of finance.

My farm was just one acre before I joined this group. But for now, am able to increase it to three acres, just because I joined this group. Since I expect some farm inputs of my choice and some little cash, I always look for ways to increase my farm (FGD discussant from Jo-U, Female).

However, few of the participants maintained that the benefits were not what they had expected. A participant from Bimbilla had this to say.

Though it has some benefits, but I think I am wasting my time always coming to meetings and only to receive some inputs like weedicides, pesticides, spray machine or what have you. I thought we could have contributed so much to acquire tractor or other farming equipment like combine harvester. That will have been real feelings (FGD discussant from Bimbilla, Male).

One interesting finding is that majority of the participants see the group as more than a mere support to their business (mainly farming). They viewed it as a total financial support system, providing an all-round sustenance for their livelihood. Aside the business support, they are able to use some of the money to acquire assets, pay for their children educational needs, healthcare financing, and social responsibilities. Some of the group participants said that the monies they get at the end are not simply used to support their farming activities but also helped to maintain their social associations.

Aside the farm inputs which I deemed very important, the cash helps me not only in the farming expenses, but also in my social expenses like attending my friend's child naming ceremony and funerals and make some form of cash donation (FGD discussant from Jo-U, Female).

Yeah, my participation in this group activity has even helped me to acquire some radio set, which I used not to have. I always listen to programs from "Gbantambu" radio every

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evening. This is good (FGD discussant from Bimbilla, Male).

Talking about benefiting in a different way aside the farm support, I will say yes, because I remember I used part of the money received to help my husband in buying some books for my son's school. This group helps a lot (FGD discussant from Bapkaba, Female).

Discussion

Formal financial institutions like Banks and Microfinance institutions in most cases do not reach the rural poor with their services³. Therefore, the poor devise their own mechanisms using locally formed associations or groups that are self-initiated, self-managed, and unregistered in order to meet their demand for financial services and ultimately improve their livelihood and/or living conditions. This study looked at the PWG to understand the operation and behaviour of members of this savings group. The study found that this savings group has giving its members access to credit that is significant.

Access to finance by women could help reduce poverty, vulnerability and achieve economic empowerment¹². This study found that most of the members were able to finance their farming needs and thus increase their farm size leading to increase in incomes. Also, majority acknowledged that being a member has enabled them to acquire some assets, finance their children education, healthcare payment and social support to them. This finding is in line with those of Nnama-Okechukwu *et al.*⁸ and Dagnelie and LeMay-Boucher²⁵ and Kumar¹⁶.

Most other VSLA groups that have operated have tended to collapse, presumably because of the inefficient way the group is being managed. An interesting outcome that was uncovered in this study was that members of PWG acknowledged that its distinguishing feature lies in the fact that unlike the other savings associations in the area, it did not give loans. Anecdotal evidence shows that savings groups which provided loans at interest experienced high default rates leading to their collapse.

The global attention on the fight against extreme poverty and vulnerability as captured in the first goal of the Sustainable Development Goals (SDGs) has necessitated the implementation

of programmes and policies, which might enhance financial inclusion for the rural poor. With a view to contributing to the debate, this study assessed the activities of the PWG as they engaged in self-help group savings and financing of their agriculture businesses. The study focuses primarily on the operation of this group activity and how it affected the welfare of group members. The separation of membership and social funds which is used to finance the purchase of farm related inputs in the PWG model is novel and differentiates it from the traditional Village Savings and Loans Association (VSLA) groups. The PWG system of self-help group savings has helped its members acquire farming equipment and services which enhanced productivity with related improvement in household income and other welfare indicators. Majority of the respondents are appreciative of the benefits of membership PWG group compared with traditional savings association. In particular, they commented that the PWG model better promotes access to credit and farm inputs. The group's activities also serve as a means to increase their income and improvement in welfare. Some participants were able to acquire some real assets such as land upon becoming member of the PWG group. Others funded their children's education with the cash they received and still some members used the cash received to finance their healthcare needs.

The 'money box' model has afforded the participating women with savings and thus, helped them achieve financial inclusion. The policy implication is that governments should formulate similar initiatives which encourage the formation of PWG-type model in the most deprived areas. Such support could be in terms of providing training on good record keeping, leadership and management as well as a proper use of the member's savings. Also, business related trainings should be supported in order to strengthen the development of income generating activities amongst the PWG participants to ensure that the cash they receive is invested in profitable ventures. Moreover, respondents from PWG members indicate there is a need to closely integrate other agricultural productivity enhancing activities like extension services into the operations of the group.

Conclusion and Recommendation

The findings of the study relate to gender on women empowerment as it looked at the finance access of

women and their business support. If when have access to finance it helps to reduce inequality as most of these women turn to cater for children in their households. Brannen and Sheehan-Conner⁶ noted that women access to finance has led to educational access to their children. This was also stated earlier by Nsabagasani *et al.*¹⁹ that VSLA group in Uganda enhanced the members' ability to mobilise savings and to send their children to school. Women self-finance has implications sustainable development as it is argued that when women gain access to credit, their economic capacity improves and this can positively impact on the welfare of households⁹⁻¹³. In addition, the rules and regulations underpinning the management of the PWG could be formally documented to ensure that the group's ethical standards and principles are systematically monitored, and offenders are punished^{10,32,33}. Also, there is the need to integrate the PWG savings model into the formal microfinance banking system. Such would mean that the group's savings would management be deposited in the bank to yield interest. Moreover, this will secure the funds against unforeseen circumstances like theft or burglary of the 'money-box'. Thus, when the time comes to open the metaphoric "money box", the management team would withdraw the funds from the bank for distribution to members in the usual manner.

A suggestion for further research will be to examine other kinds of women savings groups in other parts of Ghana (e.g., South) with a view to compare their performance with the PWG model in the Northern part of the country. Further, a future study could investigate the possibility of replicating the PWG model in the other parts of Ghana. Accordingly, the results obtained in this study could be scaled-up to achieve a national perspective. Such will provide more evidence-based policy recommendations. In a future prospective country-wide research study, it will be advisable to examine how the money box idea might be transformed into savings accounts in the formal financial sector which could be used to collateralise loans to contributors. It is expected that the presence of collateral will improve PWG member's access to larger sized loans are a much lower interest rate.

Acknowledgements

The helpful comments from the reviewers are appreciated. The authors are grateful for publication

support from Covenant University Centre for Research, Innovation and Discoveries (CUCRID). The first draft of the paper was presented at the 1st International Conference on Africa Entrepreneurship and Innovation at De Mount Fort University, UK (June 2019) where it won the Overall Best Paper Presentation Award. The authors appreciate the support from the organisers for covering the cost of participation and the valuable comments from the participants. The second author acknowledges the supports from Alexander von Humboldt Foundation's equipment subsidy grant [REF: 3.4-8151/19047] awarded to the Centre for Economic Policy and Development Research (CEPDeR) of Covenant University that facilitated the revision of the paper. The views expressed are those of the authors.

Contribution of authors

The first author conceived, designed interview guide and led data collection with guidance from the second and third authors. The analysis of data was done by the first and second authors. The manuscript was written by all the authors. All authors read and approved the final copy before publication.

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