
The Impact of Microcredit on Women's Empowerment in Anuradhapura District

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Abstract

Promote gender equality and empower women is one of the Millennium Development Goals of Sri Lanka and microfinance NGOs provide credit facilities to empower women. So the study was conducted to examine the impact of microcredit on women's empowerment in the Anuradhapura district. For this purpose, women who received credit, living in Anuradhapura, Thirappane, Thambuththegama, Horowpothana and Kekirawa divisional secretarial divisions of Anuradhapura were selected for sample using random sampling technique. The study was quantitative in nature and the survey method was applied. A structured questionnaire and interviews were used to collect relevant data from women respondents. Women respondents who engaged with microcredit were divided into two groups as control and treatment by using duration with microcredit as proxy, and 121 and 116 questionnaires are brought forward for the control group and treatment group respectively. The concept microcredit is analyzed by using three indicators namely; the amount of loan, loan disbursement and the repayment period. To measure women's empowerment five determinants namely; decision making, mobility, savings, education, and health condition were considered. Correlation, independent sample t-test, and binary logistic regression analysis were performed to evaluate the impact of microcredit on women's empowerment by using SPSS software. Finally, the results of the study confirmed that microcredit positively impacts on women's empowerment in the Anuradhapura district. But it needs to improve by providing leadership skills and time management skills. Consequently, non-credit aspects highly influence the success of microcredit programs on women's empowerment.

Keywords: Anuradhapura district, microcredit, microfinance NGOs, women empowerment

1. Introduction

Microfinance Institutions Network(2017),showed that in Asia the countries such as Bangladesh, India, Philippines, and Indonesia are mature for microfinance. But the countries such as China, Myanmar, Russia and Laos are still establishing microfinance itself. Especially, India has grown microfinance aggressively over the last five years. The total loan portfolio of the microfinance sector reached \$ 8.4 billion with a compounded annual growth rate of around 25% in 2016. The microfinance institutions provide their services to around 4 million customers in India. The microfinance industry has contributed significantly to the improvement of financial inclusion in Sri Lanka, Vietnam, Nepal, Bangladesh, Thailand, and the Philippines because of attractive business opportunities and tools for social good.

There are various types of international institutions which provide microcredit such as;

- Deposit-taking non-banking financial companies (NBFC- D)
- Non-deposit taking NBFCs (Non-Banking Financial Companies)
- Banks
- Co-operatives
- Digital finance companies
- Non-governmental organizations (NGOs)

When considering the history of the microfinance industry in Sri Lanka in 1906s, Thrift and Credit Co-operative Societies (TCCSs) established its first co-operative in Sri Lanka under the Co-operative Societies Ordinance introduced by the British colonial administration (Fernando, 2009). But in the 1970s, the network of TCCSs was declined. For that reason, the government replaced it as SANASA. After that 17 Regional Rural Development Banks were established with the concept of microcredit under Act of Parliament to reach remote rural areas and small-holders that lacked access to financial services from commercial banks. Those covered all-districts in Sri Lanka except for the North and East. But their success was limited because of internal structural weakness and excessive geographical fragmentation. Therefore, in 1998-1999s, the Regional Rural Development Banks were recapitalized and consolidated into six Regional Development Banks that exist today. The late 1980s and 1990s saw several international and local NGOs entering into the microfinance business and those combined microfinance activities such as microcredit with other social and community development activities. However, later some of those NGOs separated as microfinance and non-microfinance activities. The government played a major role by providing microcredit in the microfinance industry with the Samurdhi Development Program which was introduced in 1995, replacing the previous Janasaviya Program. Now Sri Lanka's microfinance sector is served by a diverse range of institutions namely;

- Regional Development Banks and other licensed specialized banks
- Co-operative Rural Banks and other co-operatives
- Thrift and Credit Co-operative Societies (TCCSs)
- Samurdhi Bank Societies (SBSs)
- NGO-Micro Finance Institutions
- Other financial institutions including commercial banks, registered finance companies that offer some microfinance services

However, when considering microfinance outlets, there is the minimum number of microfinance outlets in North Central Province (3.9%) and the maximum number of outlets in the Southern Province (24%) in 2005. An investigation of the sectoral distribution of outlets, the rural estate and the urban sector has 89.4%, 9.6% and 1% respectively (Fernando, 2009). Although the concept of microcredit was considered for credit enhancement in the beginning, now it is considered only as an instrument for credit enhancement to the poor borrowers, but also a movement to release them, especially women to reduce their poverty, improve their quality of life, built their capacity and awareness, to integrate them economically and socially into the mainstream of the economy. Microcredit enables poor people to gain economic stability as well (Sultana & Hasan, 2010). The annual report of the Ministry of Finance in Sri Lanka showed that Poverty Head Count Index reduced by 2.5 in 2016 than 2012/2013 years. Consequently, it represented that microcredit and other facilities helps reduce poverty in Sri Lanka (Ministry of Finance Sri Lanka, 2017) and it helps to achieve the first millennium development goal.

According to the Central Bank Annual Report, Sri Lanka is a developing country with 21.4 million mid-year population whereby women are left behind regarding the economic position. But women are contributing indirectly through household work, agriculture, etc. (Central Bank of Sri Lanka, 2017). Women contribute to the agricultural sector by 53.2%, whereas the male contribution is only 48.7%. (Department of Census and Statistics, 2016). So women are an essential part of society because they contribute to the national income of the country and maintain a sustainable livelihood of the families and communities. But they have less access to credit and other financial services and they face many socio-cultural attitudes, legal barriers, lack of education and personal difficulties, while most of them have few opportunities to lift themselves out of poverty and achieve self-determination because of property and economic rights.

Therefore, the microcredit institutions are targeting women to bring the women into economic activities by providing small loans through start businesses and to help them become independent from depending on the male-dominated economic environment. The microcredit institutions engaged with the empowerment of women provides them with skills

and knowledge. Hence lots of women are involved with microcredit institutions. According to the data from the District Coordinating office, there are 12 microfinance/microcredit NGOs working in Anuradhapura district with the vision of reducing poverty and women empowerment. So, this study aims to find the impact of microcredit on women's empowerment in the Anuradhapura district.

1.1. Problem Statement

Women empowerment improves women's income, health and nutrition, education and employment, savings and investment, and the ability to participate in decision making at household and community levels (Hassan, 2011). It is a very difficult task to measure women's empowerment because it is related to the field of social sciences. It is conceptually complex and methodologically challenging to analyze because the goals of empowerment differ according to the cultural, regional, social and political context. Women's empowerment has been one of the top priorities of development agencies and governments around the world. International aid donors, governments, scholars, and other development experts have shifted their attention to microcredit as a strategy capable of reaching women and involving them in the development process.

Although there are many more previous international researches attempting to find out the impact of microcredit towards the empowerment of women, poor people, and their livelihood, there are no sufficient researches in Sri Lanka. Consequently, it is difficult to identify how the product of microcredit achieves its primary objectives in Sri Lanka. Women's empowerment is needed to improve poor people's access to opportunity and to enable economic growth and poverty reduction. Hence under microcredit facilities, the woman is the main category who is benefited by the conventional financial system in the rural areas in Sri Lanka. But there also no such evidence to prove that women are highly empowered or not empowered through products of microcredit. So there is a gap between microcredit and women's empowerment. Therefore, this study intends to present evidence of the important contribution made by microcredit by evaluating the impact of microcredit on women's empowerment in the Anuradhapura district.

1.2. Research objectives

1. To examine the impact of microcredit on women's empowerment in the Anuradhapura district.
2. To study the demographic profile variations of women respondents in the Anuradhapura district.

3. To suggest some possible solutions for improving women's empowerment in the Anuradhapura district.

2. Literature Review

2.1. Microcredit

The concept microcredit is the main component of microfinance and defined as small loans for people who need money for self-employment projects to generate income or for family needs, health, problems, and education likewise. It helps to forward people's quality of life by lending them a small amount of money for a short period (Zoynul & Fahmida, 2013).

Microfinance and microcredit are very similar concepts. But there are a few conceptual differences. The microfinance includes a broader range of financial services such as credit, savings, insurances, housing loans, remittance, money transfers, and other financial products. But microcredit is a primary component of microfinance that provides loans and the credit needs of the poor client (Rahman, Khanam, & Nghiem, 2017). As well as, Yogendrarajah (2012), defined microcredit as improving people's quality of life by lending them a small amount of money for a short period and expressed microcredit dimensions through the research journal such as the amount of credit, loan disbursement and repayment of the period.

The change maker of poor people to become financially stable through the use of the loan on investment or environmental activities called microcredit. It helps the poor people to make a significant difference in their lives offering the financial discipline. In general, microcredit is allowing poor people to have access to monetary services that they are not able to obtain from usual banks due to lacking guarantee requirements. The system of microcredit is not only upgrading the standard of living of the society. It helps the poor people to become entrepreneurs, supports the participation of women in politics, enables the poor to receive education, medical treatment and enhances the decision making of family and society (Chowdhury & Salleh, 2017).

2.2. Women's Empowerment

Women's empowerment means improving women's income, health and nutrition, education and employment, savings and investment, the ability to participate in decision making at household and community levels (Hassan, 2011). Women's absolute well-being and women's relative well-being are the dimensions of women's empowerment. For absolute well-being, women's empowerment is defined as the process improving the welfare of women which is

indicated by outcomes that measure current status regarding literacy, health and nutrition, labor force participation, contraceptive use, mobility and ownership of clothing and assets. The relative well-being of women's empowerment can be understood as the process of improving the position of women relative to men within the household that is discovered by women's involvement in the intra-household process such as decision making, control over household income and, assets and loan that have been taken. The concept of women's empowerment is very complex and methodologically difficult and challenging to measure and analyze (Ali & Hatta, 2012).

Two different mechanisms that can result in various effects of credit program participation by genders such as empowerment effects and standard income and substitution effects. Household decision making produces one way of understanding empowerment. In simple, collective decision making and the household's social welfare is some function of the individual utility functions (Pitt, Khandker, & Cartwright, 2003). On the other hand, empowerment is a multidimensional process by which women have been denied the ability to build strategic life choices, take control and ownership of their choices. There are three inter-related dimensions of choice namely; resources (material, human and social resources), agency (the process of decision making, as well as less measurable manifestations of an agency such as negotiation, deception, and manipulation) and achievements (well-being outcomes). So the agency, awareness of gendered power structures and self-esteem and self-confidence can be defined as core elements of empowerment (Goel, 2015).

2.3. Microcredit and Women's Empowerment

Graflund (2013), expressed within the study that women have invested the microcredit in their income generating activities, in micro-enterprises or any other income generating activities which is controlled by themselves. It means the involvement of these kind of activities should be translated into greater control and economic empowerment. Therefore, women's economic empowerment helps themselves and their families. The researcher also showed a theory that the term microcredit increases women empowerment through increasing decision making. The collective decision-making model shows that if the behavior in the household is Pareto efficient, the household's objective function takes the form of a weighted sum of individual utilities.

That weight represents the bargaining power of the women in the household in determining the allocation of resources in the household, with relative to men. Agreeing to that increases the relative value of the women's time and income weight, as well as the bargaining power of women. The comprehensive microcredit programs focusing on the capacity and increasing the productivity of women plays a vital role in increasing their sense of empowerment. The

microfinance helped to increase building capacity. The building capacity means people realizing their potential, increasing their choices and enjoying the freedom to lead better lives. Therefore, the building capacity is empowering women and engaging them in transforming their lives by allowing them to form partnerships with leaders and institutions to bring about social changes. For instance, social development activities such as education, technical and vocational training enhances women's income generating activities and empowering women to reduce poverty (Ali & Hatta, 2012).

According to Pitt et al. (2003), the microcredit programs helped women to increase their empowerment leading women clients to take a greater role in household decision making, have greater access to financial and economic resources, have great freedom of mobility, have greater bargaining power and also increasing women client's spousal communication in general about family planning and parenting concerns. In an economy, most women do not work in the labor market. As a result, they are engaged with group-based credit programs which increases the shadow value of the female time providing full-size production of goods for the market by the self-employed. But mostly, men work in the labor market. So, the shadow value of their time is unaffected by program participation. Hence, women's self-employment activities encouraged by microcredit may generate different demand effects (Microfinance Institutions Network, 2017). It means women are benefited, empowered and acknowledged for having a productive and active role and it is a gateway to obtaining freedom for them.

3. Methodology

This research is a quantitative and explanatory type of study. David Hulme's conventional model has been applied to the study because the study compares two groups such as treatment and control. So, new comers into microfinance institutions are treated as the control group, and individuals who consume microcredit more than three years are treated as the treatment group. The research approach is deductive and the unit of analysis is an individual. The population is identified as all women who are engaged with microcredit from microfinance NGOs in the Anuradhapura district. Sample size identified as 237 by using a random sampling technique under a probability sampling design from Anuradhapura, Thirappane, Horowpothana, Thambuththegama and Kekirawa divisional secretarial divisions where microfinance NGOs are widely distributed. The primary source of data was collected through the questionnaire survey method by using a close-ended questionnaire. 121 of the questionnaires were brought forward for the control group and 116 of questionnaires brought forward for treatment groups separately through Berendina Micro Investment Company and Paragathi Sewa Foundation in Anuradhapura district that has a higher population of women.

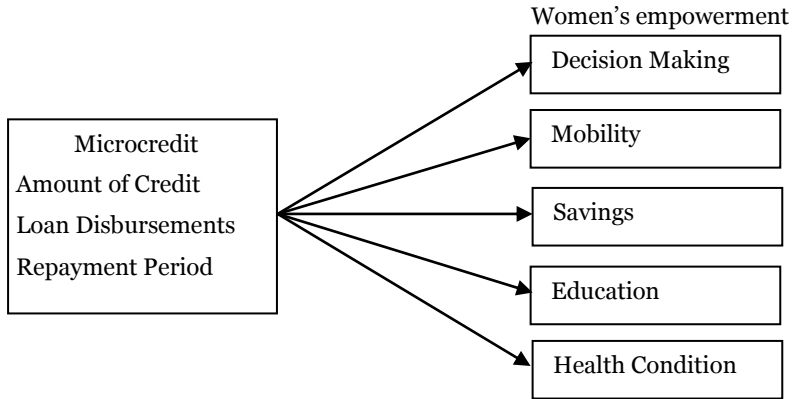


Figure 1: Conceptual Framework

Table 1: Operationalization Variables

Variable	Researchers	Dimension	Item	Que.
Microcredit	(Pitt, Khandker, & Cartwright, 2003), (Graflund, 2013), (Hassan, 2011), (Jinia, 2016) (Mamun, Wahab, Mazumder, & Su, 2014) (Yogendrarajah, 2012)	Amount of credit	Satisfaction with various loan products	Q.10
			Satisfaction about the frequency of taking loans	Q.11
			Agreement with terms, conditions, and guarantees	Q.12
		Loan disbursement	Ability to generate income from loans	Q.13
			Ability to save money from loans	Q.14
			Ability to repay within a given time duration	Q.15
Repayment period	Knowledge about nominal and effective rate	Q.16		
Decision Making	(Pitt, Khandker, & Cartwright, 2003)	Borrowing or lending	The decision to get borrowing or lending	Q.17
				Q.18

	(Steele, Amin, & Naved, 1998)		The decision regarding how much borrowing and lending	
	(Rahman, Khanam, & Nghiem, 2017)	House repair	The decision to decide issues and spending	Q.19
			Managing expenses for housing repair	Q.20
		Sale/Buy livestock	A decision about spending on livestock	Q.21
		When to have children	Decide birth timing	Q.22
		Number of children	Decide the number of children to birth	Q.23
			Decision about children	Q.24
Mobility	(Steele, Amin, & Naved, 1998)	Seeing a movie	Ability to go picnic	Q.25
			Ability to participate in festivals	Q.26
	(Graflund, 2013)	Going to the health center	Able to go alone	Q.27
			Able to go outside	Q.28
		Shopping	Family shopping	Q.29
			Personal shopping	Q.30
		Visiting friends	Visit friends' special occasions	Q.31
		Engage with societies	Q.32	
Savings	(Burney & Khan, 1992)	Own savings	Save money on hand	Q.33
		Group savings	Save money in groups	Q.34
	(Sultana & Hasan, 2010)	Savings as crops	Save money as crops	Q.35
			Save money for cultivations	Q.36
		Savings in NGOs	Save money on NGOs	Q.37
		Invest in NGOs	Q.38	

		Savings in Bank	Save money to face immediate situations	Q.39
			Save money for children	Q.40
Education	(Dewey, 1897)	Children's education	Send children for education	Q.41
	(Pitt, Khandker, & Cartwright, 2003)		Buy school equipment for children	Q.42
	(Hassan, 2011)	Personal education	Personal development	Q.43
			Knowledge about day to day life	Q.44
			Use of new technology	Q.45
			Increase vocational education	Q.46
		Social education	Better relationship with others	Q.47
			Leadership skills increase	Q.48
Health condition	(Chowdhury & Salleh, 2017)	Healthy foods	Healthy foods	Q.49
			Healthy drinks	Q.50
	(Hassan, 2011)	Medical treatments	Better treatment for family	Q.51
			Engage with medical treatment from the government	Q.52
		Sanitation	Healthy sanitation of family	Q.53
			Personal healthy sanitation	Q.54
		Mental health	Freedom of mental	Q.55

Source: Develop by the researchers (2018)

3.1. Methods of Data Analysis

Correlation test, independent sample t-test, and binary logistic regression analysis were applied for the study to analyze the data by using SPSS (Statistical Package for Social Science) software. When applying binary logistic regression analysis, it needs to record independent and dependent variables into binary numbers. So, the researchers used duration with microcredit as a basis for record independent variable into a binary number. According to that, duration with microcredit less than one-year data recorded into 0 and considered as the control group. Duration with microcredit more than three years' data recorded into 1 and treated as the treatment group. To record dependent variables into binary numbers, 1-3 answers of each question of Likert scale (mean values are less than 3.5) are recorded into 0 and considered as the not improved category. 3-5 answers of each question (mean values are more than 3.5) are recorded into 1 and treated as the improved category.

4. Results and Discussion

According to table 2 shown above, all demographic factors of respondents were divided into two main groups such as the control group and the treatment group. When considering about age of the respondents, most of the respondents (47) of both two groups are between the 31-35 age limit. The minimum number of members (4) in between the 15-20 age limit and those four members have represented the control group. The higher number of women respondents (21.5%) of the control group represented the 31-35 age limit and (21.6%) the treatment group represented the 36-40 age limit. The majority of respondents (204) of the two groups are married and only a few are single (15) and widowed (14). Although there were 3.3% of divorced women in the control group, there were no divorced women in the treatment group. 138 of both control and treatment groups are ordinary level passed respondents and the considerable number of respondents are passed grade 8 and advanced level. Few respondents indicated the other three categories such as literate, primary and degree level.

Table 2: Results of Demographic Factor Analysis

		Control Group		Treatment Group		Total	
		Freq.	%	Freq.	%	Freq.	%
Age	15-20	4	3.3	0	0.0	4	1.7
	21-25	13	10.7	4	3.4	17	7.2
	26-30	18	14.9	19	16.4	37	15.6
	31-35	26	21.5	21	18.1	41	19.8
	36-40	19	15.7	25	21.6	44	18.6

	41-45	13	10.7	12	10.3	25	10.5
	46-50	15	12.4	15	12.9	30	12.7
	Above 50	13	10.7	20	17.2	33	13.9
Marital Status	Single	8	6.6	7	6.0	15	6.3
	Married	105	86.8	99	85.3	204	86.1
	Divorced	4	3.3	0	0.0	4	1.7
	Widowed	4	3.3	10	8.6	14	5.9
Level of education	Literate	3	2.5	3	2.5	6	2.5
	Primary	8	6.6	4	3.4	12	5.1
	grade 8	21	17.4	22	19.0	43	18.1
	O/L	67	55.4	71	61.2	138	58.2
	A/L	20	16.5	14	12.1	34	14.3
	Degree	2	1.7	2	1.7	4	1.7
Family members	1-3	38	31.4	40	34.5	78	32.9
	4-6	69	57.0	68	58.6	137	57.8
	7-9	12	9.9	7	6.0	19	8.0
	10-12	2	1.7	1	0.9	3	1.3
Nature of occupation	Housewife	93	76.9	94	81.0	187	78.9
	Entrepreneur	2	1.7	7	6.0	9	3.8
	Businessmen	7	5.8	3	2.6	10	4.2
	Service provider	8	6.6	5	4.3	13	5.5
	Other	11	9.1	7	6.0	18	7.6
Source of Income	Husband's income	82	67.8	91	78.4	173	73.0
	Business	9	7.4	11	9.5	20	8.4
	Service	8	6.6	5	4.3	13	5.5
	Remittance	4	3.3	3	2.6	7	3.0
	Other	18	14.9	6	5.2	24	10.1
Reason to engage with microcredit	For agriculture	50	41.3	47	40.5	97	40.9
	To start a business	30	24.8	44	37.9	74	31.2
	To pay debt	13	10.7	1	0.9	14	5.9
	For education	5	4.1	3	2.6	8	3.4
	Other	23	19.0	21	18.1	44	18.6
Average expenditure	less than 10000	24	19.8	25	21.6	49	20.7
	10000-20000	64	52.9	49	42.2	113	47.7
	20000-	20	16.5	24	20.7	44	18.6

30000						
30000-40000	8	6.6	12	10.3	20	8.4
40000-50000	2	1.7	4	3.4	6	2.5
Above 50000	3	2.5	2	1.7	5	2.1

Source: Developed by the researchers (2018)

The higher numbers of women (137) of both two groups have 4 to 6 family members and a considerable number of women (32.9%) have family members in between 1-3. A few respondents have family members between 7-9 and a minimum number of respondents of the two groups have 10-12 family members. When considering about nature of the occupation, the majority of women (187) of the two groups were housewives and there were a few number of women who were entrepreneurs, businessmen, service providers, and 7.6% of respondents had various other occupations that were different from the above mentioned four categories.

The majority of respondents (173) of control and treatment groups depended on their husband's income and a considerable number of respondents received money from businesses, providing services and from other sources. Remittance is the source of income of a few number of respondents (3%). After considering the reasons to engage with microcredit, the table above shows the highest number of women of both control and treatment groups (97) who engaged with microcredit for agriculture purposes. But 31.2% of respondents of both two groups engaged with microcredit to start a business. The considerable number of women engaged with microcredit for other purposes, and few respondents were engaged with microcredit with purposes to pay debt and to pay for education. Agreeing to table 2, the average monthly expenditure was categorized into six categories. Most of the respondents (113) of both control and treatment groups' monthly average expenditure are between 10,000-20,000 rupees. 20.7% of respondents of both two groups spend money less than 10,000 rupees and 18.6% of respondents' monthly expenditure is between 20,000-30,000 rupees. The few respondents spend money more than 30,000 rupees as their monthly expenditure.

Table 3: Results of Descriptive Statistic Analysis

	Mean	Std. Deviation	Skewness	
			Statistic	Std. Error
Microcredit	3.5075	.57675	-.930	.158
Decision Making	3.0665	.71191	-.066	.158

Mobility	3.3080	.59175	-.165	.158
Savings	3.2521	.59637	-.824	.158
Education	3.5206	.61746	.278	.158
Health Condition	3.8324	.68537	-1.039	.158

Source: Developed by the researchers (2018)

According to the descriptive statistics represented in table 3, the mean value for microcredit indicates that selected respondents are highly involved with microcredit ($M=3.5$, $SD=0.57$). The mean values of respondents' education and health condition are 3.51, 3.81 respectively. It indicates that women have a relatively higher involvement in education and health condition. The mean value of mobility was 3.30. It revealed that women have a moderate involvement in mobility. However, the mean values of decision making and savings were 3.06 and 3.25 respectively. It represented those women having a relatively low involvement in decision making and savings.

The association between independent and dependent variables was measured through the correlation analysis. According to the table 4, the correlation coefficient for the relationship between microcredit and decision making, mobility, savings, and health condition are 0.269, 0.178, 0.341 and 0.178 respectively and those are significant at 0.01 ($p < 0.01$). The correlation coefficient for the relationship between microcredit and education is 0.105. But it is not significant at 0.01 ($p > 0.01$).

Table 4: Results of Correlation Analysis

	MC	DM	MB	S	ED
Microcredit	1				
Decision Making	.269**	1			
Mobility	.178**	.453**	1		
Savings	.341**	.514**	.545**	1	
Education	.105	.280**	.426**	.480**	1
Health Condition	.178**	.293**	.387**	.547**	.575**

** . Correlation is significant at the 0.01 level (1-tailed).

Source: Developed by the researchers (2018)

The independent sample t-test used to evaluate whether there is a significant difference between the control group and treatment group on independent and dependent variables. According to table 5, the treatment group has taken a higher mean value than the control

group for all variables. Further clarification about the t-test reveals that there is a significant difference between these two groups on decision making, mobility, savings, education and health condition ($p < 0.05$).

Table 5: Results of Independent Sample T-Test Analysis

		Mean	Std. Deviation	t	Sig.
Microcredit	C.G	3.4357	.63964	-1.982	.049
	T.G	3.5825	.49457		
Decision Making	C.G	2.8647	.69421	-4.650	.000
	T.G	3.2769	.67058		
Mobility	C.G	3.2014	.59081	-2.877	.004
	T.G	3.4192	.57442		
Savings	C.G	3.0992	.68502	-4.207	.000
	T.G	3.4116	.43583		
Education	C.G	3.4070	.60693	-2.938	.004
	T.G	3.6390	.60854		
Health Condition	C.G	3.7450	.75508	-2.029	.044
	T.G	3.9236	.59380		

Source: Developed by the researchers (2018)

The binary logistic regression analysis measured the impact of the independent variable on the dependent variable and it showed a statistical difference between the control group and treatment group. Agreeing to the results shown above table 6, all variables are significant at 0.05. It is concluded that there is a statistically significant association between microcredit and all dependent variables. Positive β values of all variables revealed that microcredit has positively affected the treatment group due to microcredit programs. This positive impact is in favor of the treatment group higher than the control group because odd ratios of all variables are positive values.

Table 6: Results of Binary Logistic Regression Analysis

Dependent variable	Explanatory variable	B	S.E.	Wald	Odds Ratio	Goodness of Fit	Sig.
Decision making	T.G (1)	1.048	.296	12.558	2.853	Nagelke	.076
	C.G (0)					Square	

	Constant	- 1.397	.228	37.530	.247	Cox & Snell R Square	.054	.000
Mobility	T.G (1)					Nagelke rke R Square		
	C.G (o)	.524	.264	3.931	1.689		.022	.047
Savings	Constant	-.524	.188	7.763	.592	Cox & Snell R Square	.017	.005
	T.G (1)					Nagelke rke R Square		
Education	C.G (o)	.699	.266	6.917	2.012		.039	.009
	Constant	-.596	.190	9.830	.551	Cox & Snell R Square	.029	.002
Health Condition	T.G (1)					Nagelke rke R Square		
	C.G (o)	.603	.269	5.034	1.828		.029	.025
Health Condition	Constant	.116	.182	.405	1.123	Cox & Snell R Square	.021	.525
	T.G (1)					Nagelke rke R Square		
Health Condition	C.G (o)	.689	.312	4.897	1.993		.031	.000
	Constant	.820	.197	17.267	2.270	Cox & Snell R Square	.021	.000

Source: Developed by the researchers (2018)

Some previous researchers also proved that microcredit positively impacts on decision making, mobility and savings, education and health condition of women. The researchers, Mamun et al. (2014), Graflund (2013), showed from their research that microcredit remains a powerful tool in promoting women's empowerment on various aspects such as a role in household economic decision making, family decision, and mobility. Pitt et al. (2003), proved that microcredit has positive impact implication on their saving capacity and helped them indirectly to incorporate banking practices and subsequently made them eligible for bank loans. Zoynul & Fahmida (2013), explained that after analyzing the survey, microcredit has a positive impact on women's education. And also Sultana & Hasan (2010), were found within the research there is satisfactory differences between Bangladesh Rural Advancement Committee (BRAC) women and non-BRAC women in their level of economic empowerment and it was concluded that BRAC women acquired more knowledge about health and nutrition having involvement with BRAC.

5. Conclusion

According to the results of the correlation test, microcredit has a statistically significant association with decision making, mobility, savings, and health condition, but women's education was not statistically correlated with microcredit. The independent sample t-test identified that there is a significant difference between the control group and treatment group due to involvement with microcredit and it explained that microcredit favorably impacts on treatment group than the control group.

The results of binary logistic regression analysis indicated that microcredit has a positive impact on decision making, mobility, savings, education, and health condition and it revealed that all the hypothesis are significantly supported to the study. According to that, and similarly to the previous researchers, the study can be concluded that after all explanation, microcredit has a positive impact on women's empowerment in the Anuradhapura district. But it needs to improve women empowerment moreover by providing credit plus facilities. So that non-credit aspects can highly influence the success of microcredit programs on women's empowerment.

5.1. Policy Implications

1. The client should regularly monitor whether the allocated loans are being used for its proper causes and they have full control over it.
2. The government should regularly monitor rules and regulation which apply to microfinance institutions. And also polices and standards governed by government lead to prevent oppressive causes and should be applicable to designing new products etc.
3. MFIs should reduce the interest rate and extend the loan repayment period, providing donation and introduce new self-employment opportunities that would increase the savings capacity of women.
4. The researchers recommended that the microfinance institutions improve credit plus facilities as follows;
 - Provide educational opportunities, decision-making skills, entrepreneurial skills, skills training, new job opportunities, social security, home finance skills, and communication skills.
 - Organize events and festivals to improve women's mobility and increasing freedom of movement, and new technologies can be introduced.

- Provide knowledge about health and physical education because it will involve improving women’s sanitation while reducing environmental pollution and affording healthy foods.
- Offer some opportunities for women to work as team leaders and should arrange seminars and programs to increase leadership and time management skills.

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