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A psychological study of the effect of microfinance on the self-esteem and self-efficacy of the poor in South Africa

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Abstract

The impact of microfinance on the lives of the poor is controversial and there is limited empirical understanding of its psychological effects. Our study endeavoured to explore the effect of microfinance on the self-esteem and self-efficacy of the poor in South Africa. The study was conducted using a non-experimental research strategy (within-subjects design) and quasi-experimental strategy (pre-post-test non-equivalent control group). Systematic and convenience sampling methods were used to select participants. Data were collected on 264 pre-test and 159 post-test participants using the Rosenberg self-esteem scale and General self-efficacy scale. The Pearson product-moment correlation coefficient, the ANOVA and the MANCOVA were used to investigate the effect of microfinance provision on self-esteem and self-efficacy. Our findings not only showed that the provision of microfinance is positively related to self-esteem, but they also showed that microfinance provision leads to an increase in the self-esteem of recipients. The results further revealed a decline in self-esteem for those who were denied microfinance. We argue that providers need to critically assess the psychological effect of their programmes especially on declined microfinance applicants.

Keywords: Microfinance; Poverty; Self-esteem; Self-efficacy; South Africa.

1. Introduction

Globally, microfinance has been hailed as a crucial poverty reduction mechanism with various researchers providing evidence of higher self-employment, increases in inventory and recipients using their savings to start small businesses (see Afrane, 2002; Augsburg, De Haas, Harmgart, & Meghir, 2015; Islam, 2012; Vincent, 2002). Microfinance is purported to play an important role in providing financial access to the poor, not only due to its material impact, but also due to its psychological effects (Kirsten, 2012). As the benefits are usually related to material gains, the psychological effects of microfinance on the lives of the poor is controversial as there is limited empirical understanding. A literature review on the benefits of microfinance indicates that confirmation has been mostly based on heart-warming anecdotes and case studies without rigorous empirical evidence of its actual impact (see Karnani, 2011; Robinson, 2001; The Center for Global Development, 2007). Advocates of microfinance have tended to dismiss criticism (Dallimore, 2013), usually depicting critics as unhelpful and deliberately oppositionist (Bateman & Chang, 2009).

In South Africa, the plight of the poor is of central importance and, as a result, there has been a proliferation of poverty alleviation strategies, empowerment strategies and coining of concepts such as the 'African renaissance', all of which are trying to address and improve the lives of the poor and under-banked communities (Ozoemena, 2010). In particular, the microfinance sector in South Africa is a large and growing sector of the national and regional economy. For the purposes of this study, microfinance is defined as a small (ranging between R 1000 and R 15000), often short-term (6-12 months) loan made to an impoverished entrepreneur, especially in rural and peri-urban areas. Increasingly the South African government views the microcredit sector as a significant part of its employment creation and economic growth targets, and has increased the capacity of its state microfinance agencies (KPMG, 2013). Microfinance is also regarded by private sector organisations as a means of rural development and an integral part of poverty alleviation strategies.

As such, microfinance initiatives have continued to flourish even though their ability to ameliorate the lives of the poor remains doubtful and highly debatable (Chowdhury, 2009; Neverson, 2013). Given its purported importance in alleviating poverty, and the debate about its impact, it is surprising that the psychological effects of microfinance have not, as yet, been investigated (Awojobi, 2013) – in spite of calls for "systematic, reliable information on the impact of its services on its clients and their households" using "well-designed,

carefully conducted, and statistically significant studies…" (Robinson, 2001, p. 123). The same sentiments were later echoed by Hermes and Lensink (2007) in their classical work when they contended that in spite of the abundance of theoretical literature, surprisingly there has been little empirical evidence of whether and how microfinance actually helps to reduce existing information asymmetries. Even though research on microfinance has grown and a more reflective stance has been taken in recent years, these reflections also lack empirical confirmation (Dallimore, 2013).

Much research has been done on microfinance and there is little doubt that the microfinance industry has globally grown in leaps and bounds, perhaps too quickly, over the past four decades fueled by its very own successes (Chakravarty & Pylypiv, 2017). In his authorative review of *Microcredit's Real Revolution* Ojong (2017) maintained that the last four decades has witnessed the global spread of microcredit as a concept in development studies and as a strategy in development policy. He further posited that the world witnessed the frequent repackaging of the concept, at first, it was called microcredit, next microfinance, and then financial inclusion. Chen, Chang, and Bruton (2017) have shown that the literature can be organised around three main themes, namely; the performance of microfinance organizations, the performance of the borrowers, and the impact of microfinance provision on women. Indeed, in this article we looked at the effect of microfinance on the self-esteem and self-efficacy of both men and women. In general, the research on both microfinance institutions and borrowers shows that the outcomes are inconsistent and borrower performances are not consistently positive (Chen *et al*., 2017).

It is in this context that we found it important to investigate the effects of the provision of financial aid, microfinance in particular, on the poor, particularly when other South African-based researchers (e.g., Van Rooyen, Stewart, & de Wet, 2012) agree that there is still "a need for rigorous impact evaluation and systematic review of the evidence to inform decisions" (p. 259). In line with this call, our study empirically investigated the psychological impacts of microfinance (specifically self-esteem and self-efficacy) on both recipients and non-recipients of funding in South Africa.

Our study showed that the impact chain of microfinance is highly variable and less straightforward than it is often purported. It suggested that microfinance leads to an increase of self-esteem for recipients, and a decrease for those who apply but are declined (do not recieve microfinance). These results suggest that declining microfinance to applicants may have negative psychological effects.

Knowledge gained in this study may lead to an enhanced understanding of the psychological factors associated with the provision of microfinance and better treatment of both recipients and non-recipients. The rest of the paper is divided into five sections. The debate on the impact of microfinance (section 2) summarises the different microfinance schools of thought and how microfinance relates to self-esteem and self-efficacy, section three provides a detailed discussion of the research methodology, section four presents the results using both descriptive and graphical representations. The last section (section 5) discusses the results, the study limitations, recommendations and conclusion made.

2. The debate on the impact of microfinance

Professor Muhammad Yunus popularised the idea of microfinance/microcredit. When announcing that Professor Yunus had won the Nobel Peace Prize, Mjos (2006) maintained that "Lasting peace cannot be achieved unless large population groups find ways in which to break out of poverty. Microcredit is one such means" (para. 2). In his Nobel Prize acceptance speech, Yunus recalled that his drive to protect poor people from loan sharks sparked the idea of microcredit by lending them money from his own pocket. He reminded the audience that people are poor not because something is wrong with them but because of the money centric and discriminatory nature of the financial system that we have built. A review of the literature shows that much of the debate about the impact of microfinance has been centred on material effects rather than psychological factors and even less so on its relation to self-esteem and self-efficacy.

In spite of the progress made in bringing microfinance to the poor, its impact on the lives of its recipients remains debatable. Thus far, empirical research of the effect of microfinance on the poor has presented controversial and inconclusive findings (Karlan & Zinman, 2010; Makina & Malobola, 2004). There are largely two opposing schools of thought on the general impact of microfinance, although there are other studies whose contingent arguments suggest that there is a third position: whether microfinance works depends, among others, on how it is designed, implemented and monitored (see Kotir & Obeng-Odoom, 2009; Neverson, 2013; Van Rooyen *et al*., 2012). The debates are, however, usually polarised between the two camps, so a short discussion of the two schools of thought is presented.

2.1. Microfinance is detrimental

Proponents of the 'microfinance is detrimental' argument maintain that microfinance destroys the social fabric of communities and leads to a cycle of

poverty. Marr (2003) captured the essence of this argument when she said:

> … microfinance not only has failed to solve the original problems of information asymmetries between borrowers and lenders but also, in its pursuit of financial sustainability, is destroying the very foundations of these schemes by disrupting the social fabric of communities, creating more poverty, and excluding the poorest and most vulnerable from any given group (para. 2).

Microfinance strategies are criticised for not reaching people who really need help and the few microfinance strategies that reach the poor do not address their needs. The reason given for this is that most microfinance strategies are implemented without understanding rural poverty, and most importantly, without identifying the needs of those they are supposed to benefit. As a result, some of the poorest borrowers become worse off because of microfinance. They are more likely to get into crises which include bankruptcy, forced confiscation of assets and unofficial pledging of their valuable possessions to other participants of a borrowing group (Hulme & Mosley, 1996). Neverson (2013) echoed the same sentiments and propounded that, along with reinforcing existing inequalities, the microfinance group lending approach promotes unprecedented levels of indebtedness and low levels of default figures that mask unprecedented misery. Reported cases of poor borrowers committing suicide (e.g. 452 instances of suicides in the Marathwada region in Maharashtra in the first half of 2018) following failure to repay loans is cited as illustrating the devastating psychological effects of microfinance on the self-esteem of recipients (New Herald, 2018). Microfinance opponents (e.g. Karnani, 2007) argue that it benefits the better-off, but is disadvantageous to the poor. They maintain that borrowers who already have assets and skills are capable of making good use of credit whereas the poor are less capable of taking risks or using credit to increase their income. In contrast, poor clients tend to take out loans cautiously to protect their subsistence, and barely invest in new technology, fixed capital or the hiring of labour.

Another problem is the high interest rate that is charged by microfinance organisations, some have been closed down by local authorities, partly because of their interest rates (Basharat, Hudon, & Nawaz, 2015; Kate & Van Rouen, 2004). Some microlenders charge annual rates of up to 30-60% which affects poor clients' return on investment and empoverishes them further (Karnani, 2007). This situation is further exacerbated by hefty penalty fees associated with defaulting. These recipients may then go hungry to try to pay back the loans, their children drop out of school to work to help repay the loans and sometimes, they commit suicide (Mahajan, 2011). Neverson (2013) asks:

> If access to credit is placing the poor in a cycle of borrow-repay-borrow, with limited wealth accumulation and potential for creating income generating activities (entrepreneurship); then how can this cycle lead to any true form of empowerment (economic or social)? (p. 309).

2.2. Microfinance is beneficial

In spite of criticism and concerns over whether or not microfinance is an effective means to poverty eradication, the majority of the evidence and experience to date supposes that involvement in microfinance bolsters and improves family bonds. It increase profits and reduction in consumption and savings rather than destroying them (Augsburg *et al*., 2015; Jonker & Southey, 2009). Supporters of microfinance maintain that access to microfinance helps the poor to move on even in times of marriage dissolution, displacement of a household, loss of a business, loss of a job and/or the collapse of an economy. Microfinance is hailed for having the potential to raise incomes, contributing to individual and household security, and changing social relations for the better (Chakravarty & Pylypiv, 2017; Rakodi, 2014; Swider, 2001). The subsequent growth and diversification of microfinance recipients' enterprises builds continuing and increased self-confidence (Robinson, 2001).

The benefits of microfinance interventions are regarded as being more visible in rural communities. According to Kirsten (2012) there is ample evidence suggesting that microfinance, delivered according to a specific methodology in the rural South African context, improves the livelihood security and psychological well-being of recipients. Providing credit performs critical functions for reinforcing the resilience of rural livelihoods in less favoured areas, especially in farming areas. Microfinance is purported to render the economy in farming areas dynamic due to the availability of non-farm income sources and cross border trade. It is a vehicle for creating conducive conditions for adopting income diversification and reducing labour demands in agriculture, and it reinforces food security (Augsburg *et al*., 2015; Ruben & Clercx, 2004). According to Smith and Thurman (2007) microcredit is on its way to changing the world and is a powerful tool that can be used to solve many of humanity's most difficult problems. Sultana, Jamal, and Najaf (2017) support this view by concluding that the impact of microfinance is appreciable in bringing confidence, courage, skill development and mpowerment.

In light of the presented merits and demerits of microfinance, it is unclear whether the impact of microfinance is transformative or disastrous. Some

researchers take a neutral stance: "The available evidence shows that microfinance does harm, as well as good, to the livelihoods of the poor" (Van *et al*., 2012, p. 1). The positive stance, supported by many researchers, is that even if it does not reduce poverty immediately, mere access to finance is a workable solution to assist the poor in becoming entrepreneurs (Geetamma & Bulla, 2013). Chakravarty and Pylypiv (2017) maintain this stance, but caution that while there is no doubt that the microlending movement has been an overall success globally, there are increasing emerging signs that all might not be well with the microfinance industry.

2.3.Microfinance, self-esteem and self-efficacy

As alluded to in the preceding sections, microfinance has the potential to be used for the good of the poor or equally to their detriment. Cases of poor borrowers committing suicide after failing to repay loans (Hulme & Mosley, 1996) illustrate the possible devastating psychological effects of microfinance on those who are supposed to benefit from it. It underlines the importance of conducting empirical studies to understand the psychological effects on the poor by not just looking at materialistic gains, but by engaging with recipients about their psychological well-being. In this research, two psychological factors are of particular importance, self-esteem and self-efficacy.

Some observations on the impact of microfinance on self-esteem and self-efficacy regard the relationship as positive. For example, the United Nation (2012) posited that "Perhaps the greatest contribution of microfinance is that it empowers people, providing them with confidence, self-esteem, and the financial means to play a larger role in their development" (p. 5). Smith and Thurman (2007) proposed that some of the crucial benefits of microcredit are far more than financial and cannot be measured on a balance sheet. They maintained that the true benefits of microcredit are dignity and self-esteem, along with respect for family and community. Becchetti and Castriota's (2007) impact evaluation of the December 2004 tsunami (which left many poor) in the southern part of Sri Lanka found that the change in income and the material damages from the disaster negatively affected life satisfaction and self-esteem.

Our study focuses specifically on self-esteem and self-efficacy due to their importance in understanding the psychological impart of microfinance. Self-esteem was defined by Rosenberg (1965, p. 15) "as a favourable or unfavourable attitude toward the self". According to Emler (2001), a distinctive feature of the modern usage of self-esteem is that self-esteem is a kind of resource or asset that

humans possess. Self-efficacy generally refers to a person's sense of competence or general ability in specific domains (Busch, 1995). It is the belief in one's abilities to successfully execute a certain course of behaviour. People desire high self-esteem and high self-efficacy, just as they may be expected to desire prosperity, good physical health or freedom of thought. Emler maintained that this aspiration is made legitimate and admirable by the human sciences, which encourages the belief that high self-esteem or self-efficacy is not only good for the individual, but also good for society. Baumeister, Campbell, Krueger, and Vohs (2003) supported this view and contended that as the net effect of high self-esteem or self-efficacy reinforces both good behaviour and self-improvement, the outcomes thereof contribute to both the happiness of the individual and the betterment of society. Thus, it is good for the psychological well-being of both the individual and society at large. Hewitt (1998) pointed out the importance of self-esteem in the business sector by advising that customers' self-esteem should be nurtured because this will significantly contribute to the latter's net worth; customers with high self-esteem or high self-efficacy are more likely to repay loans and bring good returns to the business or enterprise. It is believed that people with high self-esteem or high self-efficacy are less likely to misuse drugs, commit crimes, drop out from school, get involved in unsafe sexual practices that could pose a risk to health or result in unwanted pregnancies. In line with this belief, Baumeister *et al*. (2003) maintained that high self-esteem inoculates people, and in particular, the young and poor, against vulnerability to a wide range of social ills.

Given this set of unsettled beliefs about self-esteem and self-efficacy, our study explores the psychological effects of microfinance by investigating the self-esteem and self-efficacy of both recipients and non-recipients of funding in a specific case in South Africa.

3. Methodology

3.1. Research method and designs

Minniti and Koppl (1999) maintained that previous microfinance studies are characterised by a range of methodological limitations, including a lack of control groups and cross-sectional designs that are relevant to consider. As observed by Hulme (2000), one of the difficulties associated with getting valid control groups in microfinance studies is finding a location at which the control group's economic, physical and social environment matches that of the treatment group. In their seminal research work on the impact of microfinance,

Banerjee, Duflo, Glennerster, and Kinnan (2013) highlighted the self-selection bias bycontending that microfinance clients are self-selected and therefore, not comparable to non-clients. Microfinance borrowers are more likely to have more drive, ambition, skill and entrepreneurial abilities than non-borrowers. Banerjee *et al*.'s (2013) findings are used in the last section to discuss and contextualise the results of this study.

Firtly, to address, or rather minimise, the effects of lack of random assignment in this study, we included only those who applied for microfinance. Thus, they all intended to be clients and had the same motivation. The participants followed the financial service provider's usual procedures to apply for microfinance without the researcher's intervention; thus, they represented the spread and characteristics of microfinance applicants as they naturally exist in their specific areas. A period of three months was allowed to lapse between the pre-test and post-test to ensure that the approved participants had enough time to receive and use their microfinance, going back to the same environment and being exposed to the same conditions as before. To qualify to participate in the study, a participant whose application was approved should have received the funds. If for some reason a participant did not take up the loan she/he would not have qualified to participate in the study. Thus, emphasis is on the receipt or non-receipt of microfinance rather than on the notion of being approved or rejected. It is for this purpose that we prefer to use received or not received microfinance (application declined and no funds given) instead of accepted or rejected. Secondly, to further minimise the effects of lack of random assignment in this study, the pre-test and post-test measure were added. According to Gravetter and Forzano (2016, p. 291), "the addition of the pre-test measurement allows researchers to address the problem of assignment bias that exists with all non-equivalent group research". In this study, we compared the pre-test-post-test differences between the two non-equivalent groups to establish the pattern and direction of change (Graziano & Raulin, 2010).

We used a quantitative research approach and employed two research strategies in line with Gravetter and Forzano (2016). This approach was chosen to help establish if there is a cause-and-effect relationship between the microfinance, self-esteem and self-efficacy variables. Through this research approach we were able to measure the difference in quantity (size, magnitude, duration, or amount) and summarise, analyse and interpret the obtained scores by using standard statistical procedures. We employed both a non-experimental strategy (pre-test and post-test design) and a quasi-experimental strategy (pre-test post-test non-

equivalent control group design). The non-experimental research strategy was relevant in this research to determine the existence of a relationship between microfinance, and self-esteem and self-efficacy. This strategy was not used to produce a cause-and-effect explanation (see Gravetter & Forzano, 2016) or to explain the relationship but to establish if there was a relationship between the variables before further analysis could be undertaken. A measure was taken before microfinance was given or denied (pre-test) and after microfinance was received (post-test) or declined.

A quasi-experimental strategy (pre-test-post-test non-equivalent control group design) was employed to bring more rigour and to account for extraneous factors, in particular maturation, history, statistical regression and instrumentation (Gravetter & Forzano, 2016). It was used to investigate the effect of microfinance on self-esteem and self-efficacy. Shadish, Cook, and Campbell (2002) regarded quasi-experimental designs as experiments that have treatment, outcome measures and experimental units, but do not use random assignment to create the comparisons from which treatment-caused change is inferred. They further posited that assignment to conditions is by means of self-selection, by means of administrator selection, by which teachers, bureaucrats, legislators, therapists, physicians or others decide which persons get which treatment. To this extent, the groups are nonequivalent as we could not use random assignment or matching and could not assure that there are no differences between the two groups or that the two groups are equivalent in all respects. It was practically and ethically impossible for us to randomly assign participants to experimental and control group. Thus, we could not withhold microfinance to qualifying participants and relied on a division of a major South African bank that provides microfinance's (ABSA Micro-Enterprise Finance or AMEF) administration processes which entailed representatives using prescriptions and guidelines in a scorecard to approve loans.

It is essentially impossible for a single research study to eliminate all threats to validity (Gravetter & Forzano, 2012). A researcher must decide which threats are most important for the specific study and address those threats. Given the aim of this study, we believe that by using the pre-test and post-test design and the addition of a control group, we reduced most of the threats to internal and external validity.

3.2. Sampling

AMEF applicants AMEF were approached as potential participants. The study targeted individuals aged between 20 years and 70 years who received

microfinance funds and those who did not receive (application declined) microfinance funds. The wide age gap was chosen to achieve a maximum sample size. Due to the global economic downturn and legal restrictions, fewer people qualified for microfinance and many applications were being turned down at the time of the study. As a result, some of AMEF centres in some of South Africa's nine provinces, in particular the Eastern Cape, Mpumalanga and Limpopo, were closed. Subsequently, pre-test and post-test interviews were confined to three South African provinces namely North West, Gauteng and Kwazulu Natal (KZN). There are no notable differences in terms of access to microfinance except that Gauteng has more urban areas, is the economic hub of the country and domination of isiZulu, Sesotho and English languages (Bembe & Beukes, 2007; Morojele *et al*., 2006). North West is more a Tswana speaking area, KZN predominantly Zulu-speaking while Gauteng has more diverse languages.

Two ways of recruiting participants were employed. The first was probability sampling – recruiting from a sample frame using systematic sampling and the second method was non-probability sampling (convenience sampling) at the AMEF centres. Probability sampling involved randomly choosing participants from a list of microfinance applicants whereby progression through the list is treated circularly, with a return to the top once the end of the list is passed (Keyton, 2006). Convenience sampling, on the other hand, involved approaching and recruiting participants who applied for microfinance in AMEF branches immediately after they had applied. Thus, they were not on the list but share the same environment and similar characteristics as any microfinance applicant in the chosen areas. The use of these two recruiting methods allowed us to increase the sample size given the constraints (e.g. travel distance due to scattered spatial distribution of applicants, cost, unanswered calls, untraceable participants due to changed contact numbers etc.) that had to be overcome in this study. Participants sourced from the AMEF list and those intercepted at the branches were grouped into one list of pre-test participants. After the pre-test, participants went back to their natural environments without any interruption. They were contacted after a period of three months, post-test interviews were conducted with participants sourced from the pre-tests list. All efforts were made to contact everyone who participanted in the pre-test.

3.3. Data collection procedures

Data was collected in the form of structured face-to-face interviews or telephonic interviews. Participants who preferred not to be interviewed immediately after applying in the AMEF offices were asked if they could be contacted

telephonically at a later stage within the same week. Those who agreed were contacted telephonically and telephonic interviews were conducted with them. Questions were translated into four main vernaculars: Zulu, Tswana, Northern Sotho and Xhosa in accordance with the languages spoken by the majority of the people in the provinces used in the study. The questionnaires were scripted and piloted on CAPI (Computer Aided Personal Interviewing) to ensure that questions were properly routed and that no question was skipped by the trained fieldworkers.

3.4. Measuring instruments

The Rosenberg self-esteem scale was used to measure self-esteem while the General self-efficacy (GSE) scale was used to measure self-efficacy. They are essentially structured questionnaires consisting of 10 items each answered on a four-point Likert scale from strongly agree to strongly disagree. Answers to questions are scored and grouped into an individual's total score. These scales have been used and continue to be used among various populations and are widely accepted as having good psychometric properties (see Ethier *et al.*, 2006; Niemz, Griffiths, & Banyard, 2005; Schwarzer & Scholz, 2000; Sukmak, Sirisoonthon, & Meena, 2002). We analysed the psychometric properties of the data collected on both the scales to check and verify its validity and reliability in this study's context before proceeding with further statistical analysis.

4. Results

4.1. Description of the sample

The achieved sample consisted of individuals with an average age of 45 with a range from 20 to 70 years. The median age group achieved in the sample was 40-49 years. The pre-test yielded a sample size of 264 (75% probability and 25% non-probability sampling) with a post-test sample size of 159. To reduce the effect of attrition, we used data from individuals who participated in both the pre-test and post-test (159 individuals). The post-test sample consisted of 78% of those who received microfinance (experimental group) and 22% of those who were declined microfinance (control group). Participation in the post-test was based on having received microfinance or not received microfinance. The study consisted only of participants who participated in both the pre-test and post-test interviews as it enables comparison of pre and post-test scores of the same individuals within groups. Even though the experimental and control groups are non-equivalent, they came from the same population and environment

which constituted of the same characteristics in terms of gender, age, language, household income, area and race. The control group consisted of individuals who applied for, but did not receive, microfinance. The sample achieved consisted of the demographic profile depicted in Figures 1 to 12.

FIGURE 1:
ACHIEVED PRE-TEST GENDER SPLIT

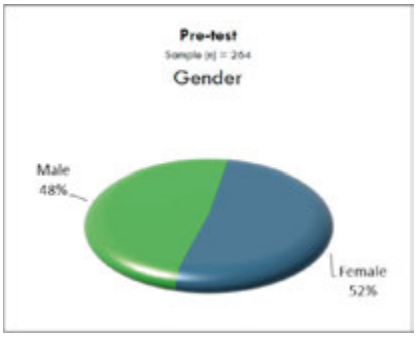


FIGURE 2:
ACHIEVED POST-TEST GENDER SPLIT

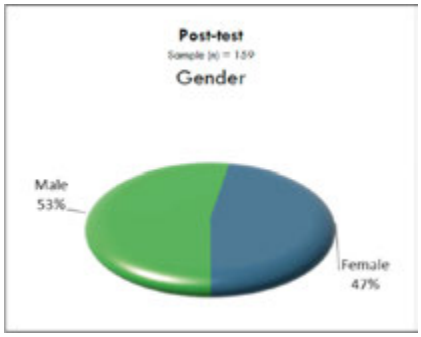


FIGURE 3:
ACHIEVED PRE-TEST AGE GROUP SPLIT

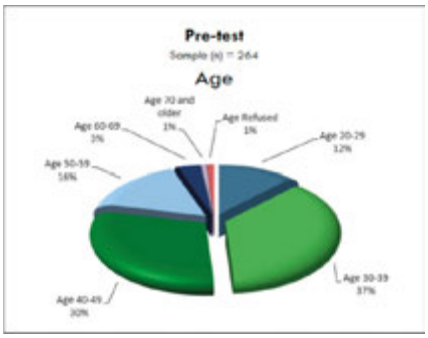


FIGURE 4:
ACHIEVED POST-TEST AGE GROUP SPLIT

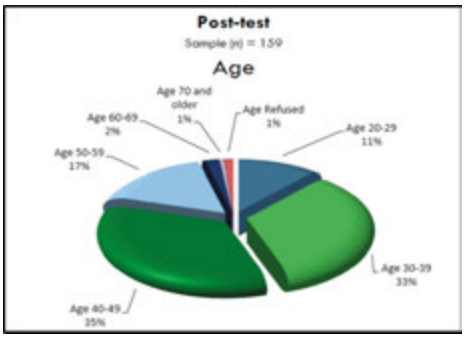


FIGURE 5:
PRE-TEST RACIAL COMPOSITION

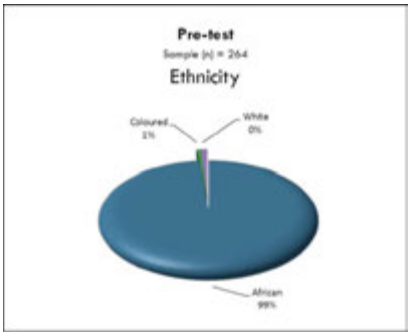


FIGURE 6:
POST-TEST RACIAL COMPOSITION

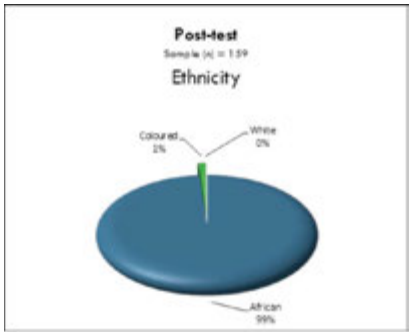


FIGURE 7:
REGIONS PRE-TEST REPRESENTATION

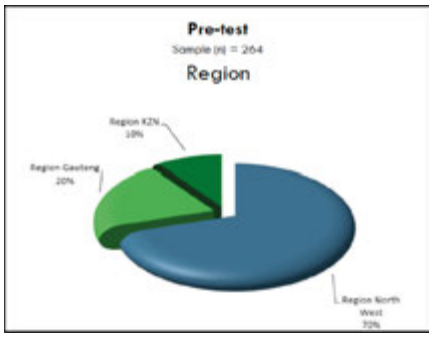


FIGURE 8:
REGIONS POST-TEST REPRESENTATION

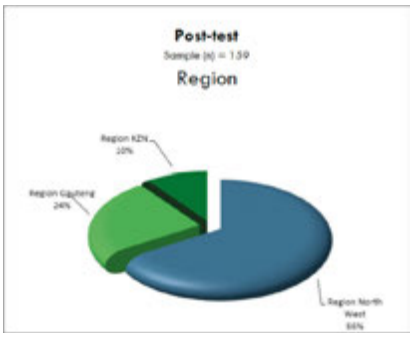


FIGURE 9:
PRE-TEST NUMBER OF LOANS APPLIED FOR

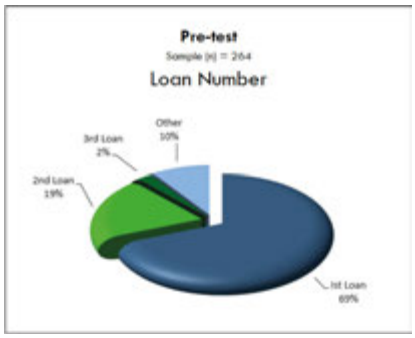


FIGURE 10:
POST-TEST NUMBER OF LOANS APPLIED FOR

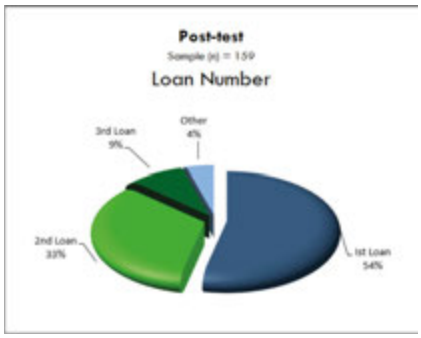


FIGURE 11:
LOAN AMOUNT APPLIED FOR

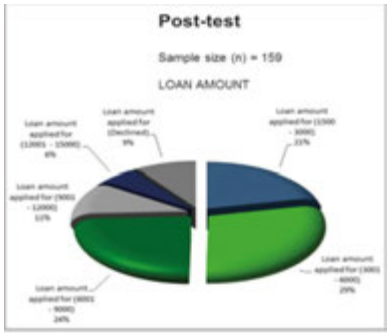


FIGURE 12:
LOAN RECEIVED (APPROVED) VERSUS LOAN DECLINED POST-TEST PERCENTAGES

4.2. Psychometric properties of the Rosenberg self-esteem and GSE scales

The Rosenberg self-esteem scale achieved an $\alpha = .75$ while the corresponding GSE scale achieved an $\alpha = .87$ both of which are acceptable outcomes (Bryman

& Bell, 2015). In the case of the Rosenberg self-esteem scale two factors could be extracted (a person of worth and a failure). However, only two items loaded on a second factor (I can't solve most problems and I can't always manage to solve difficult problems). Careful analysis of these factors showed that they did not form a coherent factor (confidence to solve problems). The removal of the two items in question led to a marginal increase in reliability, and we decided on theoretical grounds to use the scale as a uni-dimensional scale in line with Rosenberg's findings and recommended usage.

4.3. Distributional properties of the data

The normal distribution test was done for data on both of the scales. The Rosenberg self-esteem scores and the GSE scores are diagrammatically represented in Figures 13 and 14.

FIGURE 13: DIAGRAMMATICAL REPRESENTATION OF THE ROSENBERG SELF-ESTEEM DATA

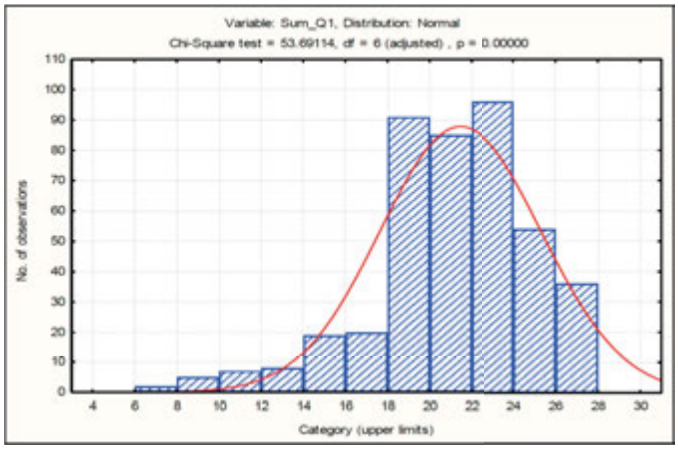
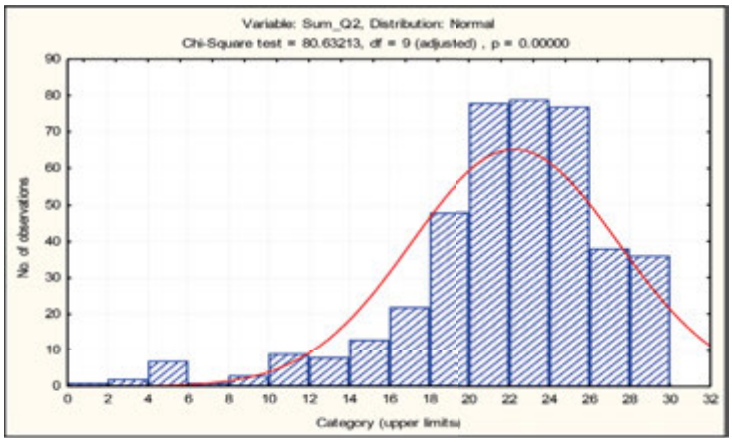


FIGURE 14: DIAGRAMMATICAL REPRESENTATION OF THE ROSENBERG SELF-ESTEEM DATA



Figures 13 and 14 show some evidence of departure from the normal distribution. Hair *et al.* (2014) maintain that normality can have critical consequences on smaller sample sizes (less than 50), but its effect diminishes as the sample size increases. Afifi *et al*. (2012) posited that some investigators examine how far the normal probability plot is from the straight line and if the amount of the curvature is slight, one should not bother to transform the data. Based on the achieved values, achieved sample size and the multivariate test (MANCOVA) conducted, there was reason for us to believe that the deviation from the normal distributional assumption was unlikely to change the study's results and the conclusions (Afifi *et al*., 2012; Everitt, 2010).

4.4. The impact of post-test attrition on the results

Shadish *et al*. (2002) maintained that the goal of all attrition analysis is to understand how it threatens the validity of a conclusion about treatment effectiveness. To ascertain whether there was a significant difference between the two groups due to attrition, they were compared on the demographic variables using a chi-square analysis and a t-test for the dependent variables.

Table 1: Chi-square Analysis of the effects of attrition on post-test results using demographic variables

Age				**Income**			
Statistic	Chi-square	df	p	Statistic	Chi-square		
Pearson Chi-square	7.575	df=6	p=.271	Pearson Chi-square	6.267	df=5	p=.281
M-L Chi-square	7.639	df=6	p=.266	M-L Chi-square	6.957	df=5	p=.224
Loan amount applied				**Gender**			
Statistic		Chi-square		Statistic	Chi-square		
Pearson Chi-square	5.683	df=5	p=.338	Pearson Chi-square	3.022	df=1	p=.0821
M-L Chi-square	6.382	df=5	p=.271	M-L Chi-square	3.032	df=1	p=.082
Number of loans taken				**Region**			
Statistic		Chi-square		Statistic	Chi-square		
Pearson Chi-square	5.301	df=3	p=.151	Pearson Chi-square	3.644	df=2	p=.162
M-L Chi-square	5.203	df=3	p=.158	M-L Chi-square	3.769	df=2	p=.152

As can be seen from the results in Table 1, non-significant differences ($p \geq 0.5$) were found with regard to all of the demographic variables.

4.5. Relationship between microfinance and self-esteem and self-efficacy

The Pearson product-moment correlation coefficient and analysis of variance (ANOVA) statistical methods were employed as a measure of the correlation between microfinance provision, and self-esteem and self-efficacy. A correlation of r_{XY} = .33 was found between microfinance provision and self-esteem for those who received microfinance. Given this value, a one-tailed significance test was performed to determine the presence of the relationship and its significance based on the calculated correlation coefficient. The achieved result (r_{XY}= .33, N = 124, $p < .001$) at a 95% confidence level indicates a statistically significant, medium effect size and positive relationship between microfinance provision and self-esteem.

The results between microfinance provision and self-efficacy for the microfinanced participants showed a correlation of r_{XY} = .19. The achieved result (r_{XY}= .19, N = 124, $p < .03$) was significant at a 95% confidence level. The absolute value of th e correlation (.19) is greater than the minimum p-value (.03) and the results indicated a significant, small effect and positive relationship between microfinance provision and self-efficacy. The critical value table for Pearson's correlation coefficient, which gives a critical value of .164, is less than the absolute correlation coefficient (r_{XY} = .19). The result achieved r_{XY} (123) = .19, $p < .05$ is statistically significant. Thus, the results suggest that there is a relationship between microfinance provision and self-efficacy.

We then used the ANOVA to verify and further explore the achieved results of the Pearson product-moment correlation coefficient to establish if there was a relationship between microfinance, self-esteem and self-efficacy.

Table 2: Analysis of the relationship between loan received versus loan declined and the dependent variables

ANOVA: Loan Received vs Declined						
		Sum of Squares	df	Mean Square	F	Sig.
Rosenberg: Post-test	Between Groups	189.158	1	189.158	16.324	0.000
	Within Groups	1819.232	157	11.587		
	Total	2008.39	158			
Rosenberg: Pre-test	Between Groups	45.332	1	45.332	2.976	0.086
	Within Groups	2391.624	157	15.233		
	Total	2436.956	158			
GSE: Post-test	Between Groups	105.516	1	105.516	5.233	0.024
	Within Groups	3165.818	157	20.164		
	Total	3271.333	158			
GSE: Pre-test	Between Groups	81.146	1	81.146	2.512	0.115
	Within Groups	5072.527	157	32.309		
	Total	5153.673	158			

Table 2 shows that there was no statistically significant difference between the pre-test means of the two groups as determined by the one way ANOVA ($F(1,157) = 2.976$ $p = .086$) and ($F(1,157) = 2.512$ $p = .111$) on both the Rosenberg and GSE scales. It also shows a significant difference between the post-test means of the group that received loans (microfinance) and the group that was declined loans as determined by the one way ANOVA ($F(1,157) = 16.324$ $p = .001$) ($F(1,157) = 5.233$, $p = 024$) on both the Rosenberg and GSE scales. Since there is a significant difference due to having received or being declined a loan on both scales, this variable warranted further investigation. Our findings are in accordance with previous research studies (see e.g. Afrane, 2002; Chowdhury, 2009; Vincent, 2002) showing, at most, a medium to small effect size association between microfinance provision, and self-esteem and self-efficacy. We will be explaining this assertion further in the discussion section.

We used the ANOVA again to determine if the demographic variables (age, gender, region, loan amount, number of loans and ethnic group) had any relationship or influence on the dependent variables; that is, if any of them was a covariate in this study. The analysis revealed that region, whether microfinance was received or declined, number of loans and loan amount had significant relationships with both dependent variables. The other demographic variables (gender, age and ethnic group) did not show any significant relationship with

the dependent variables and were excluded in the multivariate analysis. Having identified non-metric covariates and two continuous dependent variables, we used the MANCOVA as the best measure to analyse the actual effects of covariates and to remove their effect on the dependent variables (see Hair *et al*., 2014).

4.6. The effect of microfinance and covariates on self-esteem and self-efficacy

Our study identified non-metric covariates and had two continuous dependent variables, and thus the MANCOVA became the best measure to use. According to Tabachnick and Fidell (2014), the MANCOVA analyses and its derivatives are robust to modest violations of multivariate normality when dealing with unequal samples of at least 20 observations in cells. Before the MANCOVA can be calculated, there are three critical assumptions that need to be checked. The assumption of normal distribution, which was discussed earlier, the independence of the observations and homoscedasticity assumptions.

According to Hair *et al*. (2014), violation of the independence of observations comes from lack of independence among observations, meaning that responses in each group are not made independently of responses in any other group. In this study, we individually recruited and interviewed participants on a one-to-one basis. We calculated and reported results by using group average scores instead of individual scores. Based on these steps, it was safe for us to assume independence of observations (Afifi *et al*., 2012).

Homoscedasticity literally means having data values that are scattered or spread out to about the same extent (Howell, 2013). The assumption is concerned with the substantial differences in the amount of variance of one group compared to another for the dependent variables. Fulfilling this assumption allows direct interpretation of results without having to consider group sizes and the level of covariance in groups. Table 3 captures the obtained results of the Box's M calculations.

Table 3: Test for homoscedasticity

Box's Test of Equality of Covariance Matrices	
Box's M	20.064
F	1.828
df1	10
df2	3986.786
Sig.	.051

Tests the null hypothesis that the observed covariance matrices of the dependent variables are equal across groups.

The Box's M result is not lower than the set level of significant value of .05. ($p > .05$), but marginally above it. Hair *et al*. (2014) advised that although these statistical assumptions are important, the researcher must use his/her judgment to interpret the test for each assumption and when to apply remedies. The obtained Box's M test score is not less than (marginally above) the .05 significant value and indicates a close association between self-esteem and self-efficacy; thus, one cannot argue that the variances between groups are different. Based on this result, we regarded the groups as homogeneous and thus, the assumption of homoscedasticity was met.

Given the size of the sample, the achieved homoscedasticity and the use of the robust MANCOVA test, we did not use data transformation remedies as we believed they would not significantly change the study's results or the conclusions. In the section that follows we present the results of the MANCOVA.

The MANCOVA was used to remove the effect of any uncontrolled metric independent covariates on a linear combination of the dependent variables. Pillai's trace, which is considered by most statisticians to be the most powerful and most robust to violations of MANCOVA assumptions (Carey, 1998), was used and the results are summarized in Table 4.

The tests of between-subjects effects in Table 4 show that there was a significant main effect as a result of receiving loans and being declined loans ($p < .05$). This implies that there were significant differences between the group that received microfinance and those who did not receive microfinance on the two dependent variables. It showed that region ($p = .001$) and income ($p = .002$) contributed quite strongly to the dependent variables, while the loan amount ($p = .051$) and number of loans ($p = .059$) did not have a significant main effect on the dependent variables.

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TABLE 4: PILLAI'S COMPARISON FOR GROUP DIFFERENCES ON DEPENDENT VARIABLES

Multivariate Tests[a]								
Effect			Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Between Subjects	Intercept	Pillai's Trace	0.625	95.828[b]	2	115	0.000	0.625
	Region	Pillai's Trace	0.109	7.027[b]	2	115	0.001	0.109
	Number of loans	Pillai's Trace	0.048	2.902[b]	2	115	0.059	0.048
	Loan Received vs Declined groups	Pillai's Trace	0.09	5.714[b]	2	115	0.004	0.09
	Income	Pillai's Trace	0.102	6.542[b]	2	115	0.002	0.102
	Loan amount	Pillai's Trace	0.05	3.045[b]	2	115	0.051	0.05
Within Subjects	Time	Pillai's Trace	0.013	.749[b]	2	115	0.475	0.013
	Time * Region	Pillai's Trace	0.116	7.575[b]	2	115	0.001	0.116
	Time * Number of loans	Pillai's Trace	0.044	2.627[b]	2	115	0.077	0.044
	Time * Loan Received vs declined	Pillai's Trace	0.01	.558[b]	2	115	0.574	0.01
	Time * Income	Pillai's Trace	0.125	8.183[b]	2	115	0.000	0.125
	Time * Loan amount	Pillai's Trace	0.214	15.641[b]	2	115	0.000	0.214

The three covariates, region, income and loan amount showed significant interaction with time while number of loans had a non-significant interaction with time. The univariate within-subjects analysis results in Table 5 captures the essence of the preceding findings.

TABLE 5:UNIVARIATE ANALYSIS OF THE EFFECT OF CO-VARIATES ON DEPENDENT VARIABLES

Tests of Within-Subjects Contrasts							
Source		Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Time	Self-esteem	7.037	1	7.037	0.955	0.330	0.008
	Self-efficacy	7.522	1	7.522	0.468	0.495	0.004
Time * Region	Self-esteem	0.455	1	0.455	0.062	0.804	0.001
	Self-efficacy	245.849	1	245.849	15.282	0.000	0.116
Time * Number of loans	Self-esteem	32.695	1	32.695	4.437	0.037	0.037
	Self-efficacy	17.991	1	17.991	1.118	0.292	0.01
Time * Received vs declined	Self-esteem	4.09	1	4.09	0.555	0.458	0.005
	Self-efficacy	10.297	1	10.297	0.64	0.425	0.005
Time * Income	Self-esteem	0.004	1	0.004	0	0.983	0
	Self-efficacy	264.375	1	264.375	16.433	0.000	0.124
Time * Loan amount	Self-esteem	27.065	1	27.065	3.673	0.058	0.031
	Self-efficacy	426.84	1	426.84	26.532	0.000	0.186
Error(Time)	Self-esteem	854.826	116	7.369			
	Self-efficacy	1866.158	116	16.088			

The results show that when the pre-test and post-test means of the same group (within-subject) were compared there was a non-significant mean difference, but when the mean scores of the two groups (between-subjects scores) were compared a significant main effect was obtained. Table 5 further shows no significant interaction between time of measurement and receipt of the loan and refusal thereof. This means that the pattern of scores for these two groups were not different from pre- to post-test.

The most important role of the covariates in the study was to enhance the overall effect, improve the statistical power of the tests and reduce within-group variance (see Hair *et al*., 2014). These results called for further exploration or second level analysis. Tabachnick and Fidell (2014) maintained that when there are two levels in a multivariate main effect and when a dependent variable is important to the main effect, the researcher often engages in a second level of analysis to pinpoint the source of the significant difference. We took note of the fact that a significant main effect did not guarantee that every one of the group differences was also significant. It was possible that a significant main effect could be due to a single group difference (e.g., group 1 versus group 2) while all the other comparisons were not significant.

Given the achieved results, we conducted post hoc test and used the Scheffé's least significance difference (LSD) to examine potential statistical differences among all possible combinations of group means. This method adjusts significance levels in a linear regression analysis to account for multiple comparisons. It is particularly useful in analysis of variance. In the discussion that follows we present the results obtained from the Scheffé test.

Region, income and loan amount contributed to the significant main effect. Table 6 captures the post hoc results of regional comparisons.

Table 6: Regional Scheffé test comparisons

Pairwise Comparisons: Region							
Dependent variables	Regions comparison		Mean Difference (I-J)	Std. Error	Sig.[d]	95% Confidence Interval for Difference[d]	
						Lower Bound	Upper Bound
Self-esteem	Gauteng	KZN	2.443[*,b,c]	1.070	.025	.310	4.576
		North West	1.773[*,b,c]	.678	.011	.421	3.125
	KZN	Gauteng	-2.443[*,b,c]	1.070	.025	-4.576	-.310
		North West	-.670[b,c]	1.007	.508	-2.676	1.337
	North West	Gauteng	-1.773[*,b,c]	.678	.011	-3.125	-.421
		KZN	.670b[,c]	1.007	.508	-1.337	2.676
Self-efficacy	Gauteng	KZN	1.009[b,c]	1.192	.400	-1.366	3.384
		North West	-1.377[b,c]	.755	.072	-2.882	.128
	KZN	Gauteng	-1.009[b,c]	1.192	.400	-3.384	1.366
		North West	-2.386[*,b,c]	1.121	.037	-4.620	-.152
	North West	Gauteng	1.377[b,c]	.755	.072	-.128	2.882
		KZN	2.386[*,b,c]	1.121	.037	.152	4.620

The results show that the source of the significant difference comes from the difference between KZN and North West for self-efficacy, and between Gauteng, and North West and KZN for self-esteem. The source of the difference in regions is alluded to in the results discussion section. To complement the empirical data in Table 6 and provide a visual representation of the basic relationships between the groups, we included graphical representations. The figures that follow depict the graphical representations of the group per region on self-esteem and self-efficacy separately.

FIGURE 15: REGIONAL PRE-TEST AND POST-TEST DIAGRAMMATICAL REPRESENTATION OF SELF-ESTEEM MEANS

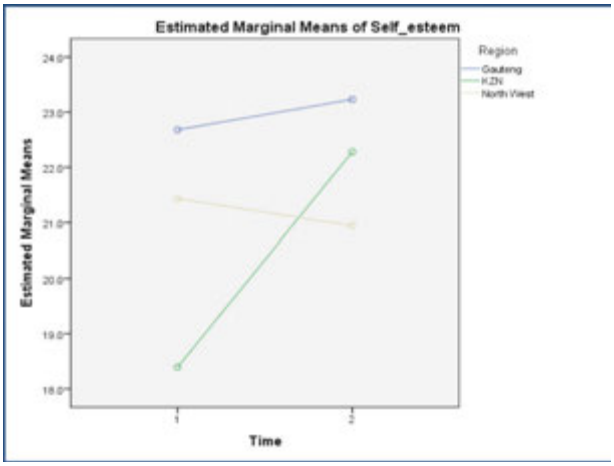


FIGURE 16: REGIONAL PRE-TEST AND POST-TEST DIAGRAMMATICAL REPRESENTATION OF SELF-EFFICACY MEANS

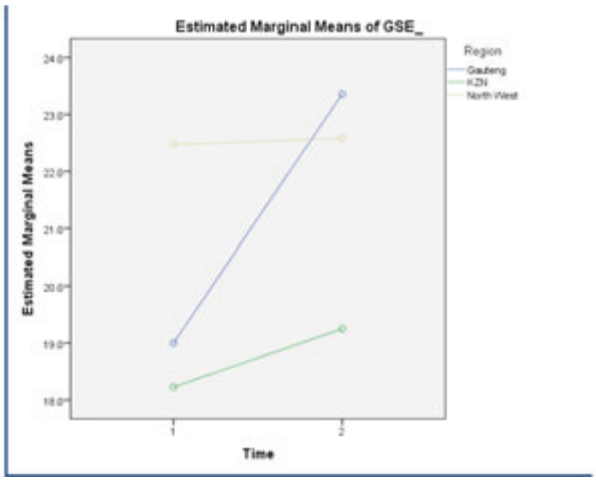


Figure 15 shows an increase in self-esteem scores from pre-test to post-test in KZN and Gauteng while there was a slight decrease in North West. Figure 16 shows the same pattern: there was an increase for KZN and Gauteng while North West remained essentially the same.

TABLE 7: INCOME SCHEFFÉ TEST COMPARISONS

Pairwise Comparisons: Income							
Dependent Variables	**Groups compared**		**Mean Difference (I-J)**	**Std. Error**	**Sig.[d]**	**95% Confidence Interval for Differenced**	
						Lower Bound	Upper Bound
Self-esteem	Less than R4 000pm	R4 001 to R8 000pm	-2.803[*,b,c]	.752	.000	-4.302	-1.304
		R8 001 to R15 000pm	-3.037[*,b,c]	.835	.001	-4.700	-1.374
	R4 001 to R8 000pm	Less than R4 000pm	2.803[*,b,c]	.752	.000	1.304	4.302
		R8 001 to R15 000pm	-.234[b,c]	.746	.754	-1.722	1.253
	R8 001 to R15 000pm	Less than R4 000pm	3.037[*,b,c]	.835	.001	1.374	4.700
		R4 001 to R8 000pm	.234[b,c]	.746	.754	-1.253	1.722
Self-efficacy	Less than R4 000pm	R4 001 to R8 000pm	-.245[b,c]	.838	.771	-1.914	1.424
		R8 001 to R15 000pm	2.378[*,b,c]	.929	.013	.526	4.229
	R4 001 to R8 000pm	Less than R4 000pm	.245[b,c]	.838	.771	-1.424	1.914
		R8 001 to R15 000pm	2.622[*,b,c]	.831	.002	.966	4.278
	R8 001 to R15 000pm	Less than R4 000pm	-2.378[*,b,c]	.929	.013	-4.229	-.526
		R4 001 to R8 000pm	-2.622[*,b,c]	.831	.002	-4.278	-.966

The source of the difference is mainly when those earning less than R4 000 per month are compared with the group earning R4 001 to R8 000 per month and those in the upper salary bracket of between R8 001 and R15 000 per month. This pattern was revealed for both self-esteem and self-efficacy. Figures 17 and 18 show the mean pattern per income brackets.

FIGURE 17: INCOME PRE-TEST AND POST-TEST DIAGRAMMATICAL REPRESENTATION OF SELF-ESTEEM MEANS

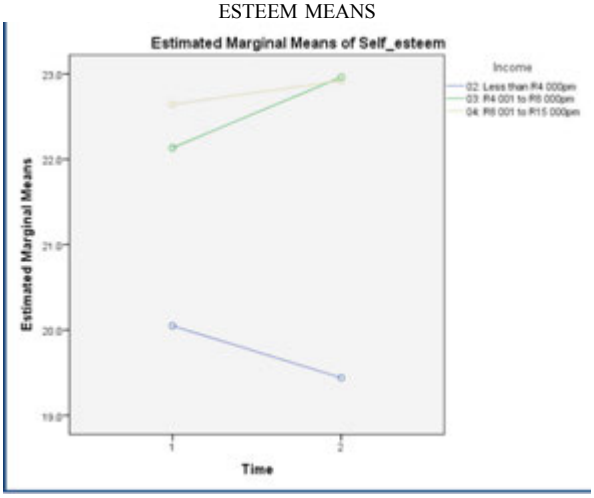
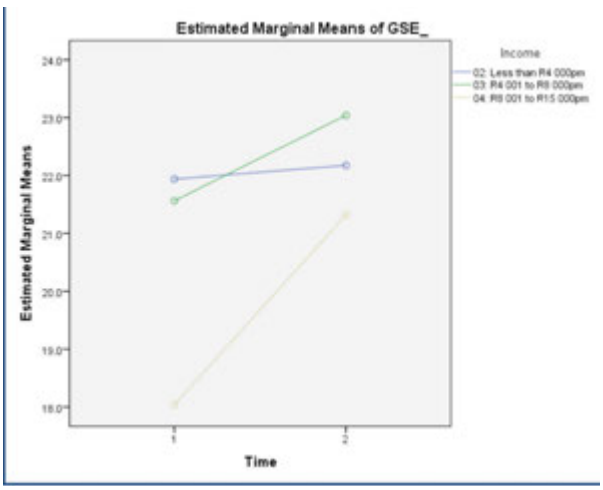


FIGURE 18: INCOME PRE-TEST AND POST-TEST DIAGRAMMATICAL REPRESENTATION OF SELF-EFFICACY MEANS



For self-esteem, there was a slight increase for the two higher income groups while for the lowest income group, the mean decreased from pre-test to post-test. Compared to the self-esteem scores, all three income groups showed an increase in self-efficacy scores, with the sharpest increase being in the highest income group.

Even though the loan amount did not show a highly loaded main effect, it was involved in a significant interaction with time. Table 8 captures the post hoc analysis of the comparisons of groups based of loan amounts.

Table 8: Loan amount Scheffé Test Comparisons

Pairwise Comparisons - Loan amount							
Dependent Variables	**Loan amounts compared**		**Mean Difference (I-J)**	**Std. Error**	**Sig.[d]**	**95% Confidence Interval for Differenced**	
						Lower Bound	Upper Bound
Self-esteem	R1500 - 3000	R3001 - 6000	-1.784[*,b,c]	.823	.034	-3.425	-.143
		R6001 - 9000	-2.911[*,b,c]	.851	.001	-4.607	-1.215
		R9001 - 12000	-1.981[b,c]	1.101	.076	-4.174	.213
	R3001 - 6000	R1500 - 3000	1.784[*,b,c]	.823	.034	.143	3.425
		R6001 - 9000	-1.127[b,c]	.773	.149	-2.667	.414
		R9001 - 12000	-.197[b,c]	1.042	.851	-2.273	1.879
	R6001 - 9000	R1500 - 3000	2.911[*,b,c]	.851	.001	1.215	4.607
		R3001 - 6000	1.127[b,c]	.773	.149	-.414	2.667
		R9001 - 12000	.930[b,c]	1.064	.385	-1.190	3.050
	R9001 - 12000	R1500 - 3000	1.981[b,c]	1.101	.076	-.213	4.174
		R3001 - 6000	.197[b,c]	1.042	.851	-1.879	2.273
		R6001 - 9000	-.930[b,c]	1.064	.385	-3.050	1.190
Self-efficacy	R1500 - 3000	R3001 - 6000	-1.561[b,c]	.917	.093	-3.388	.266
		R6001 - 9000	-2.605[*,b,c]	.948	.008	-4.493	-.717
		R9001 - 12000	-2.283[b,c]	1.226	.066	-4.726	.159
	R3001 - 6000	R1500 - 3000	1.561[b,c]	.917	.093	-.266	3.388
		R6001 - 9000	-1.044[b,c]	.861	.229	-2.759	.671
		R9001 - 12000	-.722[b,c]	1.160	.535	-3.033	1.589
	R6001 - 9000	R1500 - 3000	2.605[*,b,c]	.948	.008	.717	4.493
		R3001 - 6000	1.044[b,c]	.861	.229	-.671	2.759
		R9001 - 12000	.322[b,c]	1.184	.787	-2.038	2.682
	R9001 - 12000	R1500 - 3000	2.283[b,c]	1.226	.066	-.159	4.726
		R3001 - 6000	.722[b,c]	1.160	.535	-1.589	3.033
		R6001 - 9000	-.322[b,c]	1.184	.787	-2.682	2.038

The results showed that the source of the difference was when the group that was loaned the lowest amount (R1500 – R3000) was compared mainly with the group that was loaned R6001 – 9000, followed by the comparison of the same group with the group that was loaned R3001 – 6000.

FIGURE 19: DECOMPOSITION OF INDIRECT COST BY TYPE

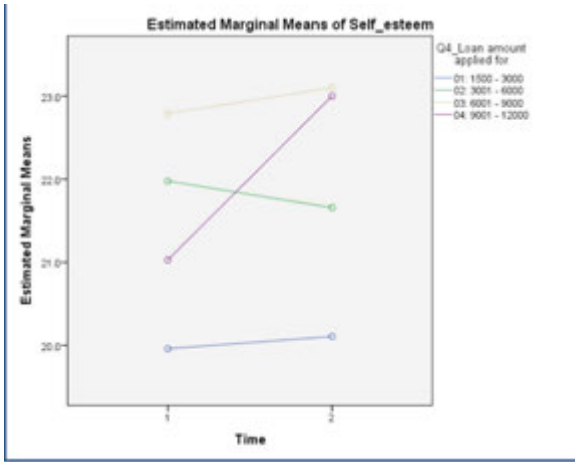


FIGURE 20: LOAN AMOUNT PRE-TEST AND POST-TEST DIAGRAMMATICAL REPRESENTATION OF SELF-EFFICACY MEANS

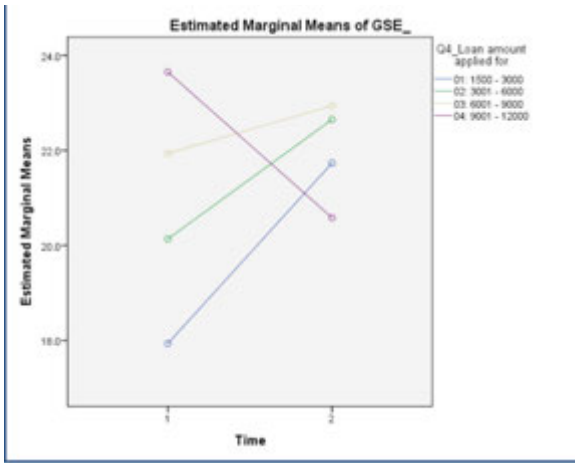


Figure 20 shows that except those who were loaned an amount of R 3001 and R 6000, there was an increase in the self-esteem of participants from pre-test to post-test. The increase was sharper in the group that received the highest loan than in the other groups. As captured in Figure 19, the self-efficacy scores of the group that received the highest loan decreased from pre-test to post-test while all of the other scores increased.

We carried out a post-hoc test on the loan received vs loan declined group independent variable. The results in Table 9 show that the main source of the significant main effect in the multivariate test was due to the difference between the groups on the self-esteem variable and the collective main effect of covariates.

TABLE 9: LOAN RECEIVED VS LOAN DECLINED TEST COMPARISONS

Pairwise Comparisons: Loan received vs Loan declined							
Dependent variables	Groups compared		Mean Difference (I-J)	Std. Error	Sig.[d]	95% Confidence Interval for Differenced	
						Lower Bound	Upper Bound
Self-esteem	Approved	Declined	2.132[*,b,c]	.854	.015	.430	3.834
	Declined	Approved	-2.132[*,b,c]	.854	.015	-3.834	-.430
Self-efficacy	Approved	Declined	1.210[b,c]	.951	.207	-.685	3.106
	Declined	Approved	-1.210[b,c]	.951	.207	-3.106	.685

Having established that the source of the significant main effect in the multivariate test was mainly due to the difference between the groups on the self-esteem variable, it was important for us to understand the pattern of difference. Figures 21 and 22 present the nature of the difference between the microfinanced group and the microfinance declined group.

FIGURE 21: LOAN RECEIVED VS LOAN DECLINED PRE-TEST AND POST-TEST DIAGRAMMATICAL REPRESENTATION ON SELF-ESTEEM

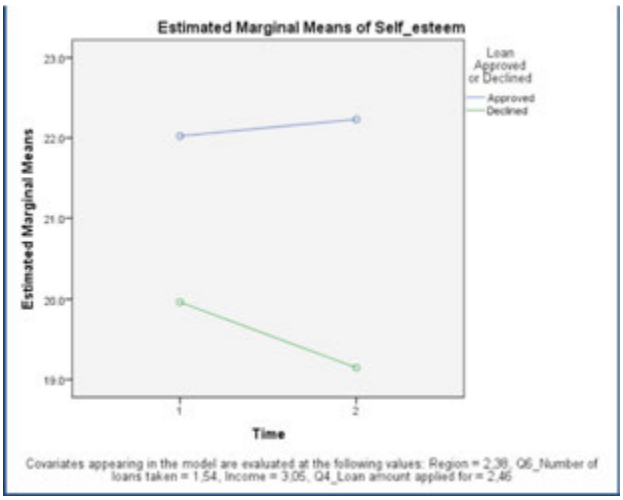


Figure 22: Loan Received vs Loan Declined pre-test and post-test Diagrammatical Representation on Self-efficacy

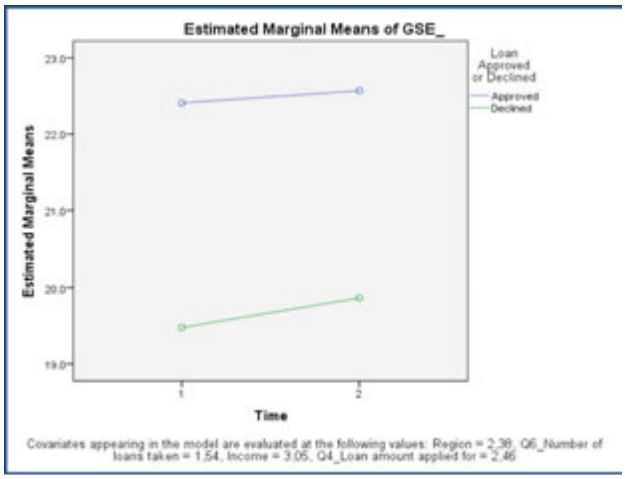


Figure 22 shows an increase in the mean of those who received microfinance and a sharp decrease in the self-esteem of those who did not receive microfinance. This marked difference in the two means of self-esteem scores is the source of the difference between those microfinanced and those not microfinanced. This is an important finding on which we base some of our recommendations in the next section. Unlike the self-esteem scores, and as captured in Figure 10, the self-efficacy scores showed a slight increase in both groups and the difference between the means was non-significant.

The results imply that region, income and loan amount as covariates of microfinance provision led to a significant increase in particular, the self-esteem variable. Given this result, we concluded that there was a significant difference in the self-esteem of the group that received microfinance than the group that did not receive microfinance. We discuss the achieved results in the section that follows.

5. Discussion, implications, limitations, recommendations and conclusion

5.1. Discussion of results

Our results showed a significant weak to moderate and positive relationship between microfinance, self-esteem and self-efficacy. This significant positive relationship between microfinance, self-esteem and self-efficacy is in line with previous research findings (see Afrane, 2002; Chowdhury, 2009; Vincent, 2002). Some of the positive effects ascribed to microfinance include enhanced public

respect and acceptance, increased self-esteem, participation in community activities, monetary contributions to social projects, empowerment of women and increased reputation (Chowdhury, 2009).

Given the findings, the two chief contributors to the main effect are region and income. Although the study could identify where regional differences were, it could not provide in-depth information on how and why the two covariates contribute to increased self-esteem. Compared to North West and Gauteng, KZN has more co-operative financial institutions or CFIs (see Bank Seta, 2013). A CFI is the umbrella term for member based deposit taking and loan granting financial co-operatives that are owned and controlled by their members. Co-operatives are a good source of financial education and information for members. Thus, participants from that region may have received the benefits of financial education and empowerment programs gained from CFI initiatives. Given this, there was reason to believe that the regional differences are mainly the result of factors such as different levels of poverty, cultural dynamics within regions, level of micro-financing penetration and socio-political dynamics in the regions. This limited insight into regional differences calls for more research to be conducted in order to understand the factors that contribute to self-esteem and self-efficacy in South African regions or provinces.

Recent studies (see Bechetti & Conzo, 2013; Geetamma & Bulla, 2013) purport that even if microfinance does not reduce poverty immediately, mere access to finance is a workable solution to enable the poor to become entrepreneurs and enhance their self-esteem. It gives them more freedom, confidence and a strong voice in household matters as they become financially independent and are able to contribute to the family's income (Magugui, Kogei, & Chepkemei, 2013). They gain public respect and acceptance, increased self-esteem, participation in community activities, monetary contributions to social projects, empowerment and increased reputation. According to Baumeister *et al*., (2003) high self-esteem or self-efficacy reinforces both good behaviour and self-improvement, and the outcomes thereof contribute to both the happiness of the individual and the betterment of society. Bechetti and Conzo (2013) provided empirical findings from a sample of poor borrowers in the suburbs of Buenos Aires that supports the notion that microfinance membership positively affects dignity, self-esteem, social recognition and life satisfaction.

The results of our study support an assertion that participating in microfinance boosts self-esteem (Kato & Kratzer, 2013). Kato and Kratzer used both quantitative and qualitative data to compare female members and non-members

of microfinance institutions (MFIs) in three regions in Tanzania. Although their study can be criticized for self-selection bias (see Banerjee, Duflo, Glennerster, & Kinnan, 2015) the results showed a significant positive difference between the microfinance clients and non-clients. Balkenhol, Guézennec, Lainé, and Nouaille-Degorce's (2014) study on microcredit and employment, found that jobs created through microcredit positively contribute to entrepreneurs' income, motivation, level of optimism and self-esteem.

Our findings lend empirical evidence to the argument that microfinance has a positive psychological effect on recipients, in this case an increase in the self-esteem of the recipients. The results not only support a significant positive relationship, but a causal link between microfinance, and self-esteem in the context of this study. Unlike self-esteem scores, the self-efficacy scores showed a slight increase in both groups with a non-significant mean difference. According to Torrey, Mueser, McHugo, and Drake (2000) the trait-like nature of global self-esteem and self-efficacy make them insensitive to life changes. We assume that self-efficacy, as measured by the GSE scale may be a relatively stable trait and reflect general life satisfaction and is more unlikely to show marked improvement in the period under observation within the same group. Another view is that self-efficacy, unlike self-esteem, might be too distant from microfinance-induced functional improvements to register a change even when microfinance does lead to a highly significant difference within the same group. Further, these different findings regarding self-esteem and self-efficacy scores need to be further investigated to produce conclusive results.

5.2 Implications of the results

Practical implications for microfinance providers and/or practitioners stem mainly from the fact that the findings of the present study suggest that the effects of microfinance may not be one directional. Thus, while receiving microfinance may be experienced positively by recipients, it may also impact those who did not receive funding (application declined) negatively. This underpins the importance of arming microfinance applicants with knowledge through educational and empowerment financial programmes relevant to self-esteem. Thus, it is suggested that microfinance be offered as part of a concerted effort that includes education, empowerment and inclusion of those supposed to benefit from a financial programme. Educational elements may consist of training that will inculcate entrepreneurial skills, give borrowers more motivation, confidence, ambition and financial skills. This will ensure that those

who received loans use them better and reap the benefits of their microfinance and, in line with the results of the current study, this will ultimately lead to theincrease of self-esteem. Most importantly, given that the results suggest a decline of self-esteem on those whose applications are declined, it is important that microfinance providers continuously assess the effects of their programmes on both recipients and non-recipients.

5.3. Limitations of this study

The data collection method used measurement scales which rely on self-report. The biggest limitation of all measures of self-esteem (including self-efficacy) is their susceptibility to socially desirable responding (Adler & Stewart, 2004). Self-report measures depend on the participants' willingness to give accurate answers and they could lie or may not understand the questions (Breakwell *et al*., 2012).

In this study, participants were chosen on the basis of having applied for microfinance with AMEF and were not asked if they applied at other institutions during the same period or refused participation if they had. Thus, it is possible that a participant might have applied for microfinance or received microfinance from other institutions and may have brought bias into the participant's responses.

Perhaps the most glaring limitation of this study is the generalisability of the results due to the sampling method used and sample size. In particular, the lack of random assignment (randomisation) of participants into the experimental and control groups. This is a flaw inherent in all quasi-experimental strategies and true control or comparison groups cannot be achieved. The microfinance application process used in this study may have resulted in systematic relationships between extraneous variables and the independent variable, thus allowing extraneous variables to become confounding variables.

In the present study, random assignment or matching could not be used to eliminate the individual differences between groups; there was no assurance that the two groups were equivalent. Both probability and non-probability sampling techniques were employed which limited the generalisability of this study. Neuman (2014) argues that validity and reliability in research are "ideals we strive towards but it is not possible to have perfect reliability and validity" (p. 212). We thus acknowledge that our study is fallible as it does not eliminate all threats or alternative explanations, but we used research methods and designs aimed at minimizing the threats we deemed to be important in this study.

5.4. Recommendations and future research

The major flaws in microfinance studies have been problems of sample selection bias (see Hulme, 2000) and the lack of large random samples. We recommend that in order to increase the generalizability of microfinance studies researchers should as much as possible, incorporate random sampling methods and bigger sample sizes.

We also recommend that further empirically sound, longitudinal research projects that concentrate on the psychological effect of microfinance on the self-esteem and self-efficacy of recipients be conducted. As maintained by Gravetter and Forzano (2016), such studies will enable researchers to eliminate generation or cohort effects and to determine how individuals' self-esteem and self-efficacy is impacted over time.

We further suggest that the impacts of microfinance be studied on both the recipients and those who were declined microfinance. Particular focus should be given to the latter as current research gravitates mostly towards those whose applications were approved. This will not only help give a balanced view of the impacts of microfinance, but will enable both researchers and practitioners to fully comprehend the psychological effect of microfinance on different individuals and contexts. In line with Ojong and Obeng-Odoom's (2017) finding that the informal financial institutions have adopted and adapted in terms of both lending and saving practices, we further recommend that the impact of microlending programmes be broadly studied to include both formal and informal financial institutions.

5.5. Conclusion

The existing empirical research on the impact of microfinance suggests that the nature of these impacts and the causal impact chain are highly variable and less straightforward than often portrayed in the promotional brochures of microfinance institutions (Woller & Parsons, 2002). The evidence shows that microfinance has the ability to do good, as well as harm, to the poor. This suggest that microfinance impacts may vary from programme to programme depending, among others, on its design, implementation and monitoring (Kotir & Obeng-Odoom, 2009; Neverson, 2013; Van Rooyen *et al.*, 2012). Our results show that microfinance lead to an increase of self-esteem on recipients, but a decrease for those who apply but are declined (do not recieve microfinance). These results suggest that declining microfinance to applicants may have negative psychological effects.

In light of this findings, we recommend that future research focus on understanding the effects of microfinance and that of informal indeginous financial programmes on both recipients and those declined by using various research approaches. Given these findings, we argue that microfinance has the potential to lead to increased self-esteem of poor recipients, but more has to be done (by researchers, providers and applicants) to understand the true impacts on those who have not received financial assistance. It is thus important that microfinance providers continuously and critically assess the impact of their programmes.

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