

The Effect of Perception of Extension Service on Small Farm Holders Agricultural Production

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Abstract

Empirical studies have suggested that agricultural extension can increase agricultural productivity. However, the increase in productivity relies largely on various auxiliary issues. Thus, this particular study was conducted among a subset group of southern-African farmers in order to examine the relationship between the provision of extension services and increased productivity in a regional context. An analysis of views in perception of these small scale farmers was used as a guide in estimating the efficacy of extension services. Perception as an indicator was then examined to access its extrapolative value in agricultural policies. The views of these farmers were analyzed using regression analysis to determine how extension services affected their performance. The findings revealed that positive perception extension services correlates to negative agricultural performance. While poor perceptions of extension services have tendencies of higher yield. Other factors of importance in the correlation identified were education, experience and exposure. These factors influenced perceptions and essentially agricultural yield.

Keywords: Poverty alleviation, perception, extension service, production performance

1. Introduction

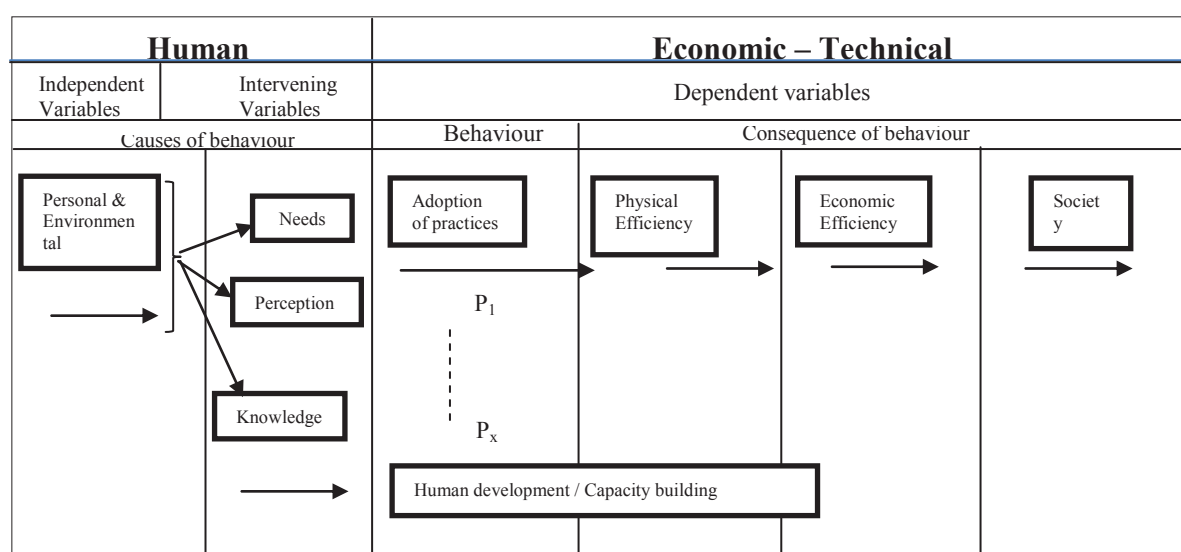
Despite being food secured (RSA guide book, 2011:38) and having high level of infrastructural development, poverty still pervades the South Africa society (Labadarios et al., 2009:11; Schwabe, 2004:1). It has been established that agricultural development reduces the incidence of poverty (Thomson, 2004:7). Hence, the South African government is set to merge the dualistic nature of agriculture and rectify the imbalance between emerging and commercial farmers (National Department of Agriculture, 2001: 7; Fraser et al., 2003:179.) This is to be achieved through poverty alleviation and wealth creation programmes that empowers the farmer to boost production thus alleviating poverty. It is anticipated that extension practitioners will work with farmers on a broader scale ranging from traditional technology transfer to research and technology development so as to effect rural development (Worth, 2010:275). One of such interventions is the Siyazondla Homestead Food Production which was carried out in the Eastern Cape Province of South Africa. The programme supported small scale farmers with training, inputs and advisory services. However it has received criticism for having a weak rural agro-logistic infrastructure support system and for failing to ensure access to information (Mashiri et al., 2010:15). In order to improve on the services offered, it is important to study the views and experiences of those benefitting from the programme. Based on that, this study seeks to investigate the role of perception with regard to extension services and the expectations of improvement of production performance held by beneficiaries. It is therefore envisaged that this study would address the main research question: "How do farmers participating in the Siyazondla Homestead Food Production Programme perceive extension services provided to them and how does their perception influence their production performance?"

2. Theoretical Framework

The conceptual framework for the study is based on a behaviour analysis model by Tolman (1938:343) and Düvel (2007:86). With his theory of reasoned action that is based on the assumption that behaviour is intentional, Tolman (1967 cited in Düvel, 1997:55) introduces independent variables, dependent variables and intervening variables that are responsible for behaviour processes. Intervening or mediating variables can be associated with what Lewin (1951) refers to as the "forces" of change within the Life space or cognitive field" (Düvel 1998:32), Lewin' field theory (1951 cited in Msuya 2006:12) describes the life space or psychological field for behaviour. He infers that behaviour is a function of the person in the perceived environment (Lewin,1951). He thus infers that variables have a direct impact on decision making and an indirect influence through intervening variables on behaviour. According to Tolman (1967:279) independent variables are the variables causing an individual's

action. They comprise of entities in the individual’s environment which influence decision making. They could be hereditary, condition or drive or stimulus situation (Tolman 1951). From the behaviour analysis model of Düvel (1987:281), it is explained that intervening variables make up the behaviour space where the influence is made possible. They are forces directly responsible for bringing about change. The three key intervening variables mentioned “needs”, “knowledge” and “perceptions” are said to influence adoption (Düvel, 2007:85). Tolman (1938:345) refers to them as “stimuli”, “bonds” “connections” or “response tendencies”. They are postulated explanatory variables, conceived to be connected by one set of causal functions to the independent variables, on one side, by another set of functions to the dependent variables of behaviour on the other side (Sebadieta, 2007: 29). Dependent variables: Tolman (1967:281) defined the dependent variable as a combination of verbal skeletal visceral reactions to the external stimuli. They consist of the result or outcomes of the influence that independent variables has on intervening variables

Table 1: The Relationship between behavior-determining and behavior-dependent variables in agricultural development



(after Düvel, 1998:32)

3. Methodology

The study is based on the work of Düvel (1991) and Lewin (1951), who both mention that productivity and adoption are the products of independent variables exerting an influence on dependent variables (adoption of technical and economical efficiencies) via the intervening variables (need, knowledge and perception). Based on this knowledge, the study aimed at investigating the relationship the applicability of this model on the sample of small scale farmers under the Siyazondla homestead production poverty alleviation programme. The only modification made was testing for the influence of independent variables on the perception of extension services as opposed to testing for the perception of technology. This was taken from several cognitive studies which mention that perception shares a bonding relationship with behaviour.

The survey was carried out in Nelson Mandela Bay in the Eastern Cape Province of South Africa. Given that the heterogeneity of agricultural data can complicate analysis, only farmers who practice crop production were selected as part of the sample population. In addition, since respondents were beneficiaries of the Siyazondla homestead food production programme they thus had uniform land sizes, access to extension and agricultural inputs.

Primary data was collected through the use of a structured questionnaire. Secondary data relevant to the subject was used to shed light on the research questions and some other underlying questions the reader may ask. It also provided the background knowledge on which the study is built.

Calculation of Sample size: $n = Z^2 p (q) / e^2$

Where:

Z^2 = the abscissa of the normal curve that cuts off an area at the tails

$e=$ is the desired level of precision,

p = the estimated proportion of an attribute that is present in the population

o = sample size

Finite Population Correction for Proportions

Glenn (1992) explains that for small populations the sample size can be reduced slightly. He explains that this is so because a given sample size provides proportionately more information for a small population than for a large population. The sample size (n) can be adjusted using the equation below.

Calculation $n = 01 + (0 - 1) N$

Where:

n = sample size

N = population size

In summary, a total sample of 64 would be needed to represent the total population of 184 farmers. The researcher was able to interview a total of 79 respondents and decided to make use of all the primary data available. This will therefore increase the true representativeness of the sample for the population

Perception of extension services was measured across 12 key areas some of which are frequency of visits, teaching methods among others. An independent t-test and the analysis of variance (ANOVA) was carried for independent variable age, gender, farming experience and media to investigate if a significant relationship exist. In like manner their agricultural performance was measured through perception and an independent t-test and the analysis of variance (ANOVA) was again carried out against the independent variables. A correlation analysis provided the strength of association between the perception of extension services and performance in agriculture.

4. Results and Discussions

4.1 Relationship between Independent Variables and Perception of Extension Service / Performance in Production

The relationship between the perceptions of extension of extension or the farmer's production and the independent variables is analyzed using the independent t-test for gender and the analysis of variance (ANOVA) for categorical variable such as (age, education, farming experience and media).

4.1.1 The influence of gender

Table 2: Relationship between gender and perception and between gender and the production performance

	T value	Df	Sig.	Significance
Perception	1.983	74	.017	S
Performance	2.556	74	.441	Ns

Table 2 indicates that the gender of the respondents had a significant influence on the perception of the extension services at $t(74) = 1.983$, $p = 0.17$ while the respondents' production performance was not significantly influenced by gender at $p > 0.05$. This result implies that there is a statistically significant difference between men's responses and that of the women. It was found that the gender of the respondents influenced perception of extension services but did not influence respondents' production performance. This suggests that there are gender behavioural differences between groups. If consistency is found in other research about gender influences, it may be relevant to extension officers to suggest better ways of approaching different genders.

Table 3: Distribution of the mean between the groups

Perception	N	Mean	Standard Deviation
Male	22	4.2027	0.45778
Female	54	3.8044	4.22

Table 3 shows the distribution of the responses between groups. It is observed that the mean perception of male

respondents ($M = 4.2027$, $SD = 0.45778$) was significantly higher than that of the female respondents ($M = 3.8044$, $SD = 4.22$). Therefore, it can be concluded that men were more positive about the programme than the women.

Perception is related to the perceivers' expectations (Bruner and Minturn; 1955). In psychology literature this is termed as 'perceptual bias' which is define as a predisposition or readiness to perceive particular features of a stimulus (Allport, 1955). In simpler words, it is the tendency to notice some aspects of information and ignore others. Nelson and Quick (2000:92) mentioned that characteristics of the perceiver, the object to be perceived and the context of the situation all influences perception. Contribution from further research such as Allport (1955), Bruner and Minturn (1955), Goldie (2004:249), Hudson (1960:183-208) indicate that some other factors influencing perception are needs, desires, expectation, personality, culture, experiences, motivation and emotion. While it difficult to scientifically explain why female respondents in this case had a poorer perception of the programme, there is a possibility that female emotional nature might be the reason for this disparity. However this should be subjected to further research.

4.1.2 The influence of age

Table 4: Relationship between the age and perception and between age and performance

		Df	Mean Square	F	Sig	Sig
Perception	Between Groups	3	1.055	1.644	0.187	Ns
	Within Groups	73	0.642			
	Total	76				
Performance	Between Groups	3	3.057	4.769	0.004	S
	Within Groups	73	0.641			
	Total	76				

Table 4 presents the findings of the one-way ANOVA testing for determining the relationship between respondents' ages and their perception of the services or between respondents' ages and their performances in farming. It is observed that $F(3, 73) = 1.64$, $p = 0.187$, perceptions of extension services did not differ significantly between the age groups of the respondents but with $F(3, 73) = 4.769$, $p = 0.004$, performance differed significantly between the age groups of the respondents. It is thus inferred from the result that at a significance level of 95%, there is not a significant relationship between the respondents' ages and perception of the extension service but there is a significant relationship between their age and their production performance. This means that age does not statistically relate to responses on the perception of extension services but relates to responses on production performance. Though the nature of this relationship differs across research, it is more common to find that age has an influence on the adoption of technology (Sebadieta (2006). This is because it is assumed that younger people are more susceptible to new ideas and learn faster. It should be noted that for this sample of farmers, there was higher participation (82%) of farmers above the age of 40 years. However, from these findings it is retained that there is a significant difference in the responses received from the various age groups regarding their production performance.

Table 5: Tukey HSD post-hoc test for the influence of age on performance

Age	N	Subset for alpha = .05	
		1	2
0-29 years	4	2.0625	
60and above	35		3.3714
40-49 years	28		3.6161
30-39 years	10		3.6750
Sig.		1.000	.839

Furthermore, a turkey post hoc test was carried out to identify the groups with significant differences in performance. It is revealed in table 5 that comparisons of the four groups indicate that the group of respondents

between 0-29 years of age (M = 2.0625, 95% CI [4.4172, 4.8628]) had significantly lower performance than respondents between 30- 39 years (M =3.6750, 95% CI [3.0137, 4.5023.])p = 0.006, respondents between 40-49 years (M= 3.6162 95% CI [3.4039, 4.1675]) p= 0.003 and respondents of 60 years of age and above (M=3.3714, 95% CI [3.8236, 4.2119.])p = 0.014.

Comparisons between the other three age groups above 30 years of age (M =3.6750, 95% CI [3.0137, 4.5023.]), (M=3.3714, 95% CI [3.8236, 4.2119.]), and M= 3.6162 95% CI [3.4039, 4.1675]) were not statistically significant at p< .05. In simple terms it is found using Tukey HSD test that respondent groups between the ages of 0-29 had significantly lower performance than respondents in other age groups. Also Post hoc comparisons in other age groups (30-39 years, 40-59 years 60 and above) did not differ significantly from one another.

4.1.3 The influence of education

Table 6: Relationship between education versus perception and performance

		Df	Mean Square	F	Sig	Sig
Perception	Between Groups	2	3.968	6.989	.002	s
	Within Groups	73	.568			
	Total	75				
performance	Between Groups	2	2.119	3.011	.055	ns
	Within Groups	73	.704			
	Total	75				

Findings of the one-way ANOVA carried out in table 6 for testing for differences in perception across various educational levels indicate that perceptions of the extension services differed significantly across the age categories for perception, F (2, 73) = 6.989, p = 0.002 but performance did not differ significantly across the age categories, F (2, 73) = 3.011, p = 0.055. Therefore it can be sated from these findings that there is a significant relationship between the educational level of the respondents and their perception of the extension services but there is however no significant relationship between their performance in production and their educational background. The relevance of this information influences is with the decision making process and how it applies to adoption.

Table 7: Relationship between farming experience and perception or performance

		Sum of Squares	Df	Mean Square	F	Sig	Sig
Perception	Between Groups	13.872	2	6.936	14.068	.000	S
	Within Groups	35.992	73	.493			
	Total	49.865	75				
Performance	Between Groups	6.030	2	3.015	4.487	.015	s
	Within Groups	49.045	73	.672			
	Total	55.075	75				

Furthermore, a Tukey post-hoc comparisons of the three groups in table 7 provide additional information on the nature of the significant relationship between perception of extension services and education. It is observed in table that from the three educational categories, respondents who never attended school (M =3.5437, 95% CI [3.2841, 3.8033]) had significantly more negative perceptions of extension services than the group with educational levels between grade 8 to matric (M=4.3305 95% CI [3.9496, 4.7115.]) p=0.002 at significance p< .05. This means that with increased education, respondents had more positive perceptions of the services received. Educated people are more opened-minded and likely to be more receptive to new ideas. They may also possess a better understanding of the roles of extension and hence have more reasonable expectations from the programme.

4.1.4 The influence of farming experience

Table 8: Tukey HSD post hoc test for the relationship between farming experience and perception.

Experience	N	Subset for alpha = .05	
		1	2
0-10 years	15	3.0773	
16-19 years	36		4.1197
11-15 years	25		4.1888
Sig.		1.000	.942

When the ANNOVA test is carried out for determining the influence of farming experience on the perception of extension services and its production performance, it is revealed that from Table 8 farming experience significantly influenced perception at $F(2, 73) = 14.068, p = 0.000$. Likewise, there is also a significant relationship between years farming experience and the respondents' performance in production across the categories of years of experience, $F(2, 73) = 4.487, p = 0.015$. It is necessary to further investigate the relationship between these variables to further understand human behavioural dynamics.

Table 9: Tukey HSD post hoc test for relationship between production performance and farming experience

Experience	N	Subset for alpha = .05	
		1	2
0-10 years	36	3.2292	
16-19 years	25	3.4300	3.4300
11-15 years	15		3.9833
Sig.		.693	.069

The Tukey post-hoc comparisons of the three groups seen in table 9 indicate that the group with 0 to 10 years of experience ($M = 3.0773[2.5278, 3.6269]$) had a significantly lower perception of extension services than the group with 16 to 19 years of experience ($M = 4.1197[3.9732, 4.2663]$) $p = 0.00$ and the group 11 to 15 years of experience ($M = 4.1888[3.8556, 4.5220]$) $p = 0.00$. However, the perceptions of groups of respondents with 16 to 19 years of experience ($M = 4.1197[3.9732, 4.2663]$) and 11 to 15 years of experience ($M = 4.1888 [3.8556, 4.5220]$) did not vary significantly with $p < .05$. From the findings we observe that respondents with 16 to 19 years of experience and those with 11 to 15 years of experience had significantly more positive perceptions of extension services than those with 0 to 10 years of farming experience. Therefore with more experience in farming, there is less criticism of extension services probably because respondents have experienced hurdles and inconsistencies, which enables them to appreciate the value of the assistance received.

Table 10: Relationship between print media and perception and between print media and performance

	T value	Df	Sig.	Sig
Perception	1.780	75	.000	S
Performance	-1.119	75	.059	Ns

In addition table 9 also indicate that the group with 0 to 10 years of experience ($M = 3.2292, 95\% \text{ CI } [2.9092, 3.5491]$) had significantly lower production performance compared to those with 11 to 15 years of experience in farming. ($M = 3.9833, 95\% \text{ CI } [3.9011, 4.0655]$) $p = 0.10$. The other group with 16 to 19 years of experience ($M = 3.4300 [3.0781, 3.7819]$) did not significantly vary from the group with 0 to 10 years of experience ($M = 3.2292 [2.9092, 3.5491]$) or from the group with 11 to 15 years of experience ($M = 3.9833, 95\% \text{ CI } [3.9011, 4.0655]$) at $p < 0.05$. The result shows that farmers who had 11 to 15 years of experience had significantly increased their production in terms of yield, quality and income while respondents with 0 to 10 years of farming experience were more pessimistic about their production as compared with the previous year. Finally, the production performance of respondents with 16 to 19 years of experience did not differ significantly from the other two groups. From this results, it can be deduced with increased years in experience produced better than farmers with less years of experience given the same inputs and cultivating on identical land size.

4.1.5 The influence of media

Table 11: Descriptive statistics for the influence of print media on perception

Perception	N	Mean
Received pamphlets	37	4.1030
Did not receive pamphlets	40	3.7775

In the table 10, it is observed that the use of media had a significant relationship with respondents' perception of the extensions services at $t(75) = 1.780$, $p = 0.00$ while it had no significant relationship with respondents' performance in agricultural production at $p > 0.5$. Therefore, it can be concluded that print media influenced the way in which respondents perceived extension services but did not influence their performance. From this findings above, it can be suggested to programme developers that media is a useful tool for influencing public perception in agricultural programme. A similar study carried out in the United States of America revealed that the media influenced public perception of welfare programmes (Yarbourg, 2008:243). The relevance of this information is that though print media may not guarantee production increase, it should be harnessed to influence perceptions.

Table 11 shows the distribution of the responses between groups who received print media and those who did not. It is observed that the mean value for perception of extension services for respondents who received print media ($M = 4.1030$, $SD = 0.41775$) is significantly higher than for those who did not receive print media ($M = 3.7775$, $SD = 1.03694$). In short respondents who received print media had significantly more positive perceptions of the services than those who did not. The group with access to print media were less critical of the extension services than the group who did not have access to print media. It may be that the use of print media improved their understanding and regulated their expectations of the extension programme.

4.2 Respondents' Production Performance

Farmers' assessments of the production performance is relevant, seeing that the sample of farmers selected had access to the same amount of input, extension services, agricultural training and planted on the same size of land. For this study, respondents described their production in terms of yield, quality, income, cost of production, management skills, damage, record keeping, saving, use of fertilizers, rainfall, irrigation, use of pesticides and seed usage by comparing it to the previous year's production. It was found that 76.9% of the respondents mentioned they had increased their yield, 74 % recorded a better quality of produce in the appearance of the legumes and 68% mentioned they had increased income from their production. However 14 % of the respondents experienced a relapse in the habit of keeping records while 53.8% admitted that records were not kept at all. Very few of the farmers (24.6%) used pesticides. Organic fertilizers were used for natural conservation purposes and 43.6% of respondents mentioned that they increased their use of fertilizers. A total of 58.2% of respondents indicated that they used less fertilizer while 19.2% did not use fertilizers at all.

On the whole respondents had increased output in terms of yield, quality and income as compared to the previous year. They also increased income from farming as compared to the previous year. However respondents in general had problems with pest infestation and damaged crops. These concerns should be attended to in subsequently in the programme. Also, record keeping is yet to be fully adopted among the respondents. It is possible that farmers do not fully understand what it entails and what is expected of them. Small scale farming is heavily dependent on the rain, therefore farmers' claim of an increased production could simply as a result of higher rain outpour for the current year of the study, this however does not make it is the sole factor for the increased production.

Farmers' responses on production were compared across locations to highlight differences between community farmers and isolated farmers. For urban agriculture, land is often a very scarce resource, hence farmers under the programme community gardens equally shared, were allocated to eligible participants of the programme. The study revealed that who had cultivated on the community garden had better production output than farmers who had access to a backyard piece of land for cultivation.

4.3 Respondents' perception of agricultural extension services

The questionnaire, respondents' perception of the extension service was investigated. This was done using twelve affirmative statements spread across a five-point rating scale; strongly disagree, disagree, neutral, agree and strongly agree, how they felt about the statements. The statements were formulated based on the Bennett

hierarchy of programme evaluation. They capture the seven levels of programme evaluation namely inputs, activities, KASA (knowledge, aspirations, skills, and attitude), change, reaction, adoption and impact. To derive an overall perception for each individual respondent, the statements were analysed for internal reliability. The statements 1, 2, 3, 4, 5, 6 and 7 were found to be internally reliable. They were then used to compute a mean value for overall perception which was used in further comparative analyses.

Table 12: Respondents' assessment of extension grouped in percentages

STATEMENTS	DISAGREE & STRONGLY DISAGREE	NEUTRAL	AGREE & STRONGLY AGREE
Agricultural extension is effectively increasing agricultural productivity in my community	0%	17%	83%
I have benefitted from agricultural extension programmes.	17%		83%
I have changed my farming practice due to agricultural extension programme	18%	22%	60%
I have acquired useful skills from agricultural extension training	1%	1%	98%
I am willing to participate more actively in extension activities	0%		100%
There are enough extension services from the Department of Agriculture	38%	18%	44%
I have received input (e.g. farming manuals, seeds, grants etc..) from agricultural extension services	17%		83%
The information I receive from extension meeting groups are helpful	7%	7%	86%
There is adequate advisory support from the extension department	21%	6%	73%
There is an adequate number of visits from the extension officers	22%	27%	51%
The departmental office provides answers to farmers respondents whenever he/she ask	1%	17%	82%
I enjoy the teaching methods used during workshops and training	0%	13%	87%

The results in table 12 reveal that generally, participants were pleased with the services. However, only 43% consented to the statement 'there is sufficient reaching out and services provided from the Department of Agriculture'. It was also observed that 70% indicated that they have been visited adequately and after having received training and visitations, 60% indicated that they changed their farming practice as a result of extension. With regard to willingness to participate in any similar programme in the future, there was unanimous agreement to participate. In total, about 15% of the total sample had a negative perception, 30% had a neutral perception and 55% had a positive perception of the programme. Also, respondents did not agree with the statement "there are enough extension services from the Department of Agriculture".

It was observed from understudying farmers' responses to the question that there were some inconsistencies. Farmers agreed that the programme is effective but denied that services were adequate. This might indicate that there is a misconception of the role of extension, thus leading to unrealistic expectations. Misperceptions are corrigible with clear identification of expectations and should inform all parties of the roles and goals of the programme. Also, the researcher believes that the programme should guard against dependency on help from the respondents. Gilens (1999:5) explains that an individualistic person will value personal effort above community benefit.

4.4 Relationship between Perception and Performance

In order to investigate the relationship between perception and performance a correlation analysis was carried out. The results in table 13 show that there is a significant negative correlation between the respondents' perception of the extension services and their performance in production ($r = -0.415$ and $p=0.00$). This implies that farmers who had a positive perception of extension services responded to have had less production in terms of yield output and quality than the previous year.

Table 13: relationship between perception and performance

		Perception	Performance
Perception	Pearson Correlation	1	-.415(**)
	Sig. (2-tailed)		.000
performance	Pearson Correlation	-.415(**)	1
	Sig. (2-tailed)	.000	

Bem (1970:55) has carried out experiments which deduce that behaviour is consistent with beliefs. Social perception which is the activation of a perceptual representation has a direct effect on social behavior (Dijksterhuis, & Bargh, 2001; Dijksterhuis & Van Knippenberg, 1998). Hence it is expected that with a good perception of extension services adoption would have occurred which would reflect in improved performance in production. However, the findings in this study shows a strong inverse relationship between perception of extension services received and agricultural production. This means that respondents who had positive perceptions of extension services experienced a poorer outcome in production as compared with the previous year and vice versa. There are several proposed explanation for this anomaly. The first being that it may be that the introduction of certain additional services such as the provision of a starter pack could have disrupted the core principles and philosophies that make up effective extension. One of the core principles of extension is encouraging "self-help" (Terreblanche 2008:72). In the studies of Deci, & Ryan (2000), it explained that self-determination is higher with intrinsically motivated behaviors because they are performed out of interest and satisfy the innate psychological needs. Another important principle mentioned by Terreblanche (2008:70) is community involvement in forming linkage structures. This can be achieved through group facilitation. Without active participation of the recipient in the programme, respondents will lose the sense of ownership of the project. Their keen enthusiasm at the beginning of the programme may begin to dwindle over time. Expectations of participants may also provide an explanation for this result. It is possible that respondents had a misconception of the objectives of the programme and of their roles and the roles of the extension officer. It has been established in literature that clear identifications of goals is a precursor of the effectiveness of agricultural extension programmes. In addition, goals as well as participant roles in the programme must be known to all parties involved. Respondents may have developed a sense of entitlement and likewise a misperception of their rights. If this is so, it will lead to a relaxed attitude towards work and a form of laziness.

5. Conclusions and Recommendations

The surveys indicate that there is an inverse relationship between the perception of extension services and their production performance. In other words, the farmers who were positive about services also mentioned that they were less productive than the previous year while those negative about the programme mentioned that they increased production in terms of output, income and quality compared to the previous year. It was suggested that this inverse relationship could be an indication of dependency from the respondents on government's help instead of adopting the concept of self-help. Furthermore, it is observed that the gender, level of education, farming experience and exposure to print media influenced the perception of extension services while age, farming experience influenced their performance in agricultural production.

Understudying perceptions provides insight into the behaviours that precedes adoption of a technology. It is suggested that incorporating competition in programme design can foster productivity. The human nature is prone to dependency when assistance is overwhelming and consistent. Hence the "self-help" concept is essential to sustainable behavioural change.

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