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Agricultural Aid at the Touch of a Button: Assessing Respondents' Attitude Towards the Kisan Call Center

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ABSTRACT

Background: Kisan Call Center has been rising in prominence since its emergence, because of its reach to a large number of farmers indifferent zones of country, surpassing the confines of traditional extension services. Kisan Call Centre have exhibited to be a paramount link between agricultural experts and farmers, it acts as a foundation for uplifting farmers by providing them with easily assessable, personalised expert assistance. Attitude acts as an indispensable factor in fully leverage the potential of any resource, hence, this study was conducted with an objective of attitude assessment of farmers towards the tele-advisory system 'Kisan Call Center'.

Methods: A sample of 150 farmers were comprised with proportional random sampling method. Personal interviews with the help of a structured schedule were taken for data collection.

Result: The study reported that overall attitude of farmers toward the Kisan Call Centre is mixed, with positive perceptions regarding its ability to provide information, build self-reliance and help illiterate farmers. source of information, age, education, scientific orientation and family size are found to be positively and significantly correlated with the attitude of the respondents towards use of Kisan Call Center.

Key words: Attitude, Farmers, Kisan call center, Tele-advisory system.

INTRODUCTION

The nation today possesses a robust communication infrastructure in both the public and private sectors. Over 500,000 communities nationwide are equipped with to smartphones. Long-standing speculation has claimed that the farming sector may reap great benefits from the efficient utilisation of this outstanding communications network. It is very necessary to disseminate the new technologyand updated information related to agriculture, to eachand every farmer, for full utilization of technology which lead and provide support for rapid growthand improvement in liveli hood of the farmers and development of agriculturesector as well as grand domestic product (GDP) of nation (Goyal *et al*. 2019). Utilizing the most recent technology is also necessary to provide extended services given the disparity between the number of farmers and extension workers.

Marshal Mcluhan, a well-known communication scientist, prophesied in his pioneering book "Medium is the Message" that the globe would become incredibly tiny as a result of the information revolution, so small that it would be referred to as the "Global Village". His prognosis is now proving to be accurate. Information technology (ICT) is becoming as crucial as 'roti, kapra and aurmakan' (Parganiha *et al*., 2012). The Kisan Call Centre is a call center-based extension service that provides expertise and information tailored specifically to the needs of the agricultural community.

The Kisan Call Center has an effective approach to agricultural extension management that fully embraces and takes advantage of the ongoing information and communication revolution. By connecting farmers in the most remote parts of the nation to the best agricultural scientists, the Kisan Call Center serves the farming community in those regions. Additionally, this approach aids in keeping track of the expertise and information supplied to the farmers. Farmers across the country can reach the Kisan Call Centers by dialling the common toll-free number 1551 from a landline and 1800-180-1551 from any mobile phone. Except on Sundays and gazette holidays, the call centre has been continuously providing their service from 6 a.m. to 10 p.m. since June 10, 2004. Outside of these hours, calls are answered *via* an Interactive Voice Response System (IVRS).

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MATERIALS AND METHODS

The study was done in Uttar Pradesh, with a focus on the Milkipur and Haringtonganj blocks. Farmers who contacted the Kisan Call Centre (KCC) in Kanpur were selected using a proportionate random sampling approach to form a sample of 150 farmers. A organized schedule was devised for collecting data on the attitude of farmers who used the service of Kisan Call Centre.

RESULTS AND DISCUSSION

Positive sentiments

High MPS and top ranks

Statements with high MPS (Positive sentiments)

- **Statement 2:** "KCC is a potential tool for providing information to farmers".
- **Statement 4:** "KCC provides first-hand information about queries".
- **Statement 9:** "Kisan Call Centre helps in building up self-reliance of farmers".
- **Statement 10:** "The services of Kisan Call Centre are very useful for illiterate farmers".
- **Statement 7:** "I strongly feel that the advices given by Kisan Call Centre are applicable to my farm also".

Interpretation

- These statements received high MPS, indicating that farmers view KCC positively in terms of its ability to provide information, assist with decision-making and support farmers, including illiterate farmers.
- The fact that farmers find the advice applicable to their farms also suggests a strong sense of relevance in the services provided.
- Additionally, the perception that KCC helps in building self-reliance reflects that farmers see it as a tool that empowers them to make informed decisions, increasing their autonomy and confidence in their agricultural activities.

Areas of concern

Low MPS and lower ranks (Negative perceptions)

- **Statements with Low MPS (Negative Sentiments)**
- **Statement 14:** "KCC can't meet the location-specific needs of farmers".
- **Statement 15:** "I would not advise my friends to contact `Kisan Call Centre for seeking information".
- **Statement 19:** "Calling at Kisan Call Centre is a wastage of time".
- **Statement 18:** "Kisan Call Centre services are only for progressive and big farmers".
- **Statement 17:** "KCC don't change farmers' own decision-making".

Interpretation

- These statements received low MPS values, which reflect negative perceptions of KCC. Farmers may feel that the service is not tailored to their specific needs, especially for those in remote or geographically unique areas (Statement 14).
- The advice is seen as ineffective or not worth the time for some farmers (Statements 15 and 19), leading to a general disinterest in recommending the service.
- Additionally, the perception that KCC is more beneficial for progressive or large-scale farmers (Statement 18) could indicate a feeling of exclusion among smaller, traditional, or resource-limited farmers.
- Non-impact on decision-making (Statement 17) suggests that for some farmers, KCC may not significantly influence their choices, which could be due to a lack of personalization or inapplicability to certain farming contexts.

Neutral or mixed sentiments

Statements with moderate MPS

- **Statement 3:** "Kisan Call Centre system is aninnovative source to get agricultural information".
- **Statement 6:** "Expert advice makes the farmers' enterprise/ activities productive".
- **Statement 8:** "Women can also use the service of KCC effortlessly".
- **Statement 13:** "Existing infrastructure of KCC is not enough to meet the needs of the farming community".

Interpretation

- These statements show neutral or mixed responses, where moderate MPS suggests that farmers have an ambivalent or balanced view on certain aspects of KCC.
- Innovation and expert advice were rated positively, but perhaps not as strongly as other statements (Statement 3 and Statement 6), indicating that while farmers see KCC as a valuable tool, they may still have reservations about its practical implementation or real-world effective-ness in all cases.
- Women's access to KCC services (Statement 8) received a moderate MPS, suggesting that while some farmers see KCC as accessible to women, there could be challenges in terms of cultural or logistical barriers.
- The infrastructure (Statement 13) of KCC was seen as insufficient by some farmers, indicating that the system may need upgrades to better support the diverse needs of the farming community.

Suggestions for improvement

- **Location-specific support**

  Given the concern over location- specific needs (Statement 14), KCC could consider introducing more region-specific services or offering tailored advice based on local farming conditions, climates and crop types.

- **Better personalization**

  The fact that some farmers feel KCC doesn't change their decision-making (Statement 17) implies that personalized advice could enhance its impact. KCC could improve by offering more customized consultations based on each farmer's individual situation.

- **Addressing perceived inefficiency**

  Low MPS for statements about wasting time (Statements 15 and 19) suggests that improving the efficiency of communication and making the services faster and more user-friendly could increase satisfaction.

- **Inclusivity for all farmers**

  KCC may need to work on its image as being for only progressive or large-scale farmers (Statement 18). Ensuring that the service is accessible and beneficial to small-scale and marginal farmers is crucial for its success in the farming community as a whole.

Conclusion

- The overall attitude of farmers toward the Kisan Call Centre is mixed, with positive perceptions regarding its ability to provide information, build self-reliance and help illiterate farmers. However, concerns about its lack of personalization, location-specific solutions and perceived inefficiency highlight areas that need improvement.

According to the data presented in Table 1, 50.00 percent of respondents had a moderate attitude towards the use of Kisan Call Centre, followed by 20.67 per cent who had an unfavorable attitude, 15.33 per cent who had a favorable attitude, 12.67 per cent who had a strongly favorable attitude and only 1.33 per cent who had a strongly unfavorable attitude. Furthermore, was revealed that the majority of respondents (50.00%) had a somewhat favorable attitude towards the utilisation of Kisan Call Centre.

The findings are similar to the findings reported by Sharma *et al.* (2012); Verma *et al.* (2012); Arora and Rathore (2013).

Relationship between the profile of the respondents with their attitude towards the use of Kisan Call Center

The data relevant to the association between the profile of the respondents and their attitude towards the usage of Kisan Call Centre are reported in Table 2 .

Table 3 presents the correlation coefficients (rrr) between several independent variables and a dependent variable. The values of the correlation coefficient range from -1 to +1, indicating the strength and direction of the relationship between the variables. A positive value suggests a positive relationship, while a negative value suggests an inverse relationship. The significance of these correlations is indicated by the asterisks (*, **), with the following interpretations:

- **(0.01 significance level)** – denoted by **
- **(0.05 significance level)** – denoted by *

Detailed interpretation

Age (r = 0.0179)*

- The correlation coefficient for age is very low (0.0179), indicating a very weak positive correlation with the dependent variable. The asterisk suggests that this relationship is statistically significant at the 0.05 level, but the weak strength of the correlation implies that age has a negligible effect on the dependent variable.

Education (r = 0.0434)**

- Education shows a similarly weak positive correlation (0.0434) with the dependent variable. It is statistically significant at the 0.05 level. This indicates that higher levels of education may slightly increase the dependent variable, although the effect is minimal.

Table 1: Attitude of respondents towards the use of kisan call center.

Statements	MPS	Rank
All agricultural problems of the farmers are solved by Kisan Call Centre.	51	XV
KCC is potential tools for provide information to the farmers.	91	I
Kisan Call Centre system is an innovative source to get agricultural information	62	XI
KCC provide first hand information about queries.	88	II
Regular contact with Kisan Call Centre leads to increase crop yield.	49	XVI
Expert advice makes the farmers enterprise/activities productive	59	XII
I strongly feel that the advices given by Kisan Call Centre are applicable to my farm also.	84	IV
Women can also use service of KCC effortless.	57	XIII
Kisan Call Centre helps in building up self reliance of farmers.	86	III
The services of Kisan Call Center are very useful for illiterate farmers also.	81	V
Farmers feedback is fast through Kisan Call Center than traditional methods	47	XVII
Kisan Call Center avoids the personal extension contact.	41	XVIII
Existing infrastructure of KCC is not enough to meet the needs of the farming community	53	XIV
KCC can't meet the location specific need of farmersthe year	76	VI
I would not advice my friends to contact Kisan Call Centre forseeking information.	73	VII
The Kisan Call Centre advice is suitable only for those farmers who have irrigation facilities.	39	XIX
KCC don't change farmers own decision making.	71	VIII
Kisan Call Centre services are only for progressive and big farmers.	69	IX
Calling at Kisan Call Centre is wastage of time.	66	X

Family size (r = 0.0400)*

- Family size has a small positive correlation (0.0400), indicating a weak relationship with the dependent variable. Like age and education, this correlation is statistically significant at the 0.05 level, but its practical significance remains limited.

Landholding (r = -0.0729)

- The negative correlation coefficient (-0.0729) for landholding suggests a very weak inverse relationship with the dependent variable. However, there is no statistical significance (no asterisk), implying that this relationship is not strong enough to be considered meaningful.

Occupation (r = -0.0367):

- Occupation also shows a weak negative correlation (-0.0367), suggesting a slight inverse relationship with the dependent variable. The absence of statistical significance indicates that occupation does not have a meaningful impact on the dependent variable.

Annual income (r = -0.2807)**

- A significantly stronger negative correlation is observed for annual income (-0.2807), which is statistically significant at the 0.01 level. This suggests that as annual income increases, the dependent variable tends to decrease. The relationship is moderate in strength and highly significant.

Innovativeness (r = -0.0637)

- Innovativeness shows a weak negative correlation (-0.0637) with the dependent variable. This relationship is not statistically significant, implying that innovativeness does not have a significant impact on the dependent variable.

Extension contact (r = -0.0157)

- Extension contact has a very weak negative correlation (-0.0157), indicating an almost negligible relationship with the dependent variable. This correlation is not significant, suggesting that extension contact does not significantly affect the dependent variable.

Social participation (r = -0.0569)

- Social participation also demonstrates a weak negative correlation (-0.0569) with the dependent variable, with no statistical significance. This indicates that social participation has a very minor and statistically insignificant influence on the dependent variable.

Source of information (r = 0.1230)*

- The source of information has a weak positive correlation (0.1230), indicating a slight relationship with the dependent variable. The asterisk suggests that this correlation is statistically significant at the 0.05 level, though it remains weak in practical terms.

Scientific orientation (r = 0.0272)*

- Scientific orientation shows a very weak positive correlation (0.0272) with the dependent variable. Despite the low strength of the correlation, it is statistically significant at the 0.05 level.

Risk orientation (r = -0.0181)

- Risk orientation has an extremely weak negative correlation (-0.0181) with the dependent variable, which is not statistically significant. This suggests that risk orientation has an almost negligible effect on the dependent variable.

Summary

- **Significant correlations**

  Annual income (r=–0.2807** r =-0.2807** r=-0.2807**), Age (r=0.0179* r=0.0179* r =0.0179*) Education (r=0.0434* r= 0.0434* r=0.0434*), Family size (r=0.0400* r =0.0400* r=0.0400*), Source of information (r=0.1230* r =0.1230* r=0.1230*) and Scientific orientation (r=0.0272* r =0.0272* r=0.0272*) all show statistically significant correlations with the dependent variable.

- **Negative correlations**

  Annual income stands out with a moderate negative correlation, while other variables like landholding, occupation, innovativeness, extension contact, social participation and risk orientation show weak negative or negligible relationships.

Table 2: Distribution of the respondents according to their attitude towards the use of Kisan Call Center. n=150

Level of attitude	Frequency	Per cent
Strongly unfavorable	02	1.33
Unfavorable	31	20.67
Moderate	75	50.00
Favorable	23	15.33
Strongly favorable	19	12.67
Total	150	100.00

Table 3: Relationship between the profile of the respondents with their attitude towards the use of Kisan Call Center. n=150

Independent variables	Correlation coefficient ('r' value)
Age	0.0179*
Education	0.0434*
Family size	0.0400*
Land holding	-0.0729
Occupation	-0.0367
Annual income	-0.2807**
Innovativeness	-0.0637
Extension contact	-0.0157
Social participation	-0.0569
Source of information	0.1230*
Scientific orientation	0.0272*
Risk orientation	-0.0181

- **Weak relationships**

  Most of the correlations are weak and even those that are statistically significant (except for annual income) do not suggest strong practical relevance.

The results are somewhat comparable to those published by Sharnagat (2008); Goswami (2012); Lal (2012) and Sharma *et al.* (2012).

CONCLUSION

Attitudes, shaped by experience, influence actions and help individuals interpret information efficiently. To enhance the use of Kisan Call Centres (KCC), it is essential to understand farmers' attitudes towards them. A study on "Impact of COVID-19 on Agriculture and Allied Sectors" found KCCs highly dependable, offering solutions to 95% of farmer queries during the pandemic. Attitudinal distribution showed 50% had a moderate attitude, 20.67% unfavourable, 15.33% favourable, 12.67% strongly favourable and 1.33% strongly unfavourable. Among twelve variables, source of information had a strong positive association (0.01 level), while age, education, scientific orientation and family size showed significant positive correlation (0.05 level). Annual income had a significant negative correlation (0.01 level). Thus, source of information and income notably influenced attitudes-farmers tend to trust known sources, which positively affects their perception and use of KCCs.

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Disclaimers

The findings and opinions presented in this research paper are those of the author(s) and do not necessarily reflect the views of any institutions, organizations, or individuals mentioned herein. While every effort has been made to ensure the accuracy and reliability of the information provided, the author(s) do not assume responsibility for any errors, omissions, or discrepancies that may exist in the research data or analysis.

This study is based on data collected from respondents and the results reflect their views at the time of the survey. The opinions expressed by the respondents may not be universally applicable and the study should not be interpreted as representative of all agricultural communities or Kisan Call Center users.

The research does not claim to provide comprehensive solutions to the challenges faced by farmers or to make definitive conclusions regarding the overall effectiveness of the Kisan Call Center, but instead aims to provide insights based on a limited sample of respondents.

This research does not receive any financial or other material support from the Kisan Call Center or any related organizations, ensuring that the findings are presented impartially.

Data availability statement

The corresponding author has access to the study's raw data.

Ethical statement

The paper reflects the author's research and analysis in a truthful manner. This work has not been published previously elsewhere.

Informed consent

All procedures for Data Collection and other procedures were approved by the Committee of Advisory Committee and Data Collection were approved by the University Director Research Committee.

Conflict of interest

The authors declare that there are no conflicts of interest regarding the publication of this article. No funding or sponsorship influenced the design of the study, data collection, analysis, decision to publish, or preparation of the manuscript.

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