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Ramachari KV

Ph.D., Scholar, Department of
Agricultural Extension
Education, College of
Agriculture, UAS, Dharwad,
Karnataka, India

Bheemappa A

Professor, Department of
Agricultural Extension
Education, College of
Agriculture, UAS, Dharwad,
Karnataka, India

Scale for measuring perception of stakeholders towards Rashtriya Krishi Vikas Yojana (RKVY)

Ramachari KV and Bheemappa A

Abstract

Success of any agriculture development programme depends upon the active participation of implementers which ultimately determined by their perception towards the programme. Rashtriya Krishi Vikas Yojana (RKVY) was introduced in India during 11th Five-year Plan for rejuvenating Indian agriculture. A better understanding of perception of implementers and their determinants will be important to inform policy for future successful agricultural sector. Keeping this in view the scale for measuring the perception of implementers towards the RKVY programme was developed by employing Likert's summated rating scale technique (1932). A list of 113 statements reflecting the dimension of implementation were generated initially by consulting available literature from various sources. Further, these initially collected statements were subjected to scrutiny by an expert panel of judges to determine the relevancy and their subsequent screening for inclusion in the final scale. As a result, 82 statements out of 113 statements having a relevancy percentage more than 75 (relevancy weightage of more than 0.75), and a mean relevancy score of more than 3 were considered for the final selection of statements. Further, item analysis is to select such items which can very well discriminate between two criterions. For this critical ratio of each statement was calculated for the final selection of items. The critical ratio is a measure of the extent to which a given statement differentiates between the high and low groups of respondents (Edwards, 1957). Based on item analysis ('t' value), the statements having 't' value more than 1.75 were retained, and rejected statements with 't' value less than 1.75. Thus, 55 statements were finally retained in the final scale. The scale developed was further standardized by establishing its reliability and validity. The validity of the scale was examined with the help of content validity. The split-half method was followed for testing the reliability of the scale and the reliability coefficient of the scale was 0.73. Hence, the scale is reliable and can produce consistent results. The scale so developed finally consists of 55 statements grouped under 4 components.

Keywords: Perception, item analysis, mean relevancy score, relevancy weightage, validity and reliability

Introduction

Sustained growth in India's agricultural sector is essential for economic development and for maintaining the overall stability of the economy. However, despite a major part (42.6%) of the workforce being employed in this sector, the contribution of agriculture in the gross domestic product (GDP) has registered a steady decline from 51.9 percent in 1950-51 to 7.96 percent in 2020-21 at 2004-05 prices.

Concerned by the slow growth of the agricultural sector, Rashtriya Krishi Vikas Yojana (RKVY) was introduced in the 11th Five-year Plan (2007-2008) with the objective of achieving 4 per cent annual growth rate and to encourage states to draw up district and state agricultural plans and also increase their spending on the sector to reorient agricultural development strategies for rejuvenating Indian agriculture. (Anonymous, 2007)^[1].

The scheme has come a long way since its inception and has been implemented across two plan periods (11th and 12th). Till 2013-14, the scheme was implemented as an Additional Central Assistance (ACA) to State Plan Scheme with 100 percent central assistance. Then it was converted into a Centrally Sponsored Scheme in 2014-15 also with 100 percent central assistance. By the end of 2017-18, the RKVY programme had implemented 14504 projects with an expenditure of Rs. 56635 crores across all the states and union territories. Hence, better understanding of perception of implementers towards the implementation of RKVY is essential for measuring the success of the programme. Keeping this in view an attempt has been made to develop the scale for measuring the perception of implementers towards the RKVY programme.

Corresponding Author

Ramachari KV

Ph.D., Scholar, Department of
Agricultural Extension
Education, College of
Agriculture, UAS, Dharwad,
Karnataka, India

Materials and Method

Perception is uniquely individualized experience and a key component of several theoretical frameworks. It is the process of attaining awareness or understanding of sensory information. It refers to the way sensory information is organized, interpreted, and consciously experienced. Perception is defined as our recognition and interpretation of sensory information. It includes how we respond to the information. We can think of perception as a process where we take in sensory information from our environment and use that information in order to interact with our environment. Perception allows us to take the sensory information in and make it into something meaningful.

Perception is operationally defined as an act of being aware of “one’s environment through physical sensation about RKVY. To measure the perception of implementers towards RKVY programme a scale has been developed by following the procedure of the method of summated rating scale as given by Likert (1932) [6].

Collection and editing of items

As a first step towards identifying different dimensions of perception towards implementation of RKVY programme, a semi-structured interview and focus group discussion were conducted. After carrying out the review of secondary literature and interacting with experts in the concerned field, an item pool consisting of 113 statements about objectives and Special Features of RKVY (20), Planning of RKVY (41), Implementation of RKVY (45) and Monitoring and Evaluation of RKVY (7) was prepared. The identified items were carefully edited in the light of 14 criteria suggested by Edwards (1957) [3].

Relevancy test

It is quite possible that all the 113 items collected initially may not be relevant equally in measuring the perception of RKVY. Hence, these 113 items were subjected to scrutiny by an expert panel of judges to determine the relevancy and their subsequent screening for inclusion in the final scale. The list was sent to panel of 200 panel of experts drawn from various State Agricultural Universities, Indian Council of Agricultural Research (ICAR), RKVY cell, IHR, NAARM, CRIDA and National Institutions throughout India with necessary instructions to critically evaluate the statements to determine their relevancy on a four-point continuum viz., Most Relevant, Relevant, Less Relevant and Not Relevant with the score of 4, 3, 2 and 1, respectively. The judges were also requested to make necessary modifications and addition or deletion of items if they desired so.

Out of 200 judges, 60 experts could respond in-time. The relevancy score for each statement was found out by adding the scores based on the rating of experts. To find out the Relevancy Percentage, Relevancy Weightage and Mean

Relevancy score were worked out for all the items individually.

$$\text{Relevancy Percentage (RP)} = \frac{\text{MR} \times 4 + \text{R} \times 3 + \text{LR} \times 2 + \text{NR} \times 1}{\text{Maximum possible score (82} \times 4 = 328)} \times 100$$

$$\text{Relevancy Weightage (RW)} = \frac{\text{MR} \times 4 + \text{R} \times 3 + \text{LR} \times 2 + \text{NR} \times 1}{\text{Maximum possible score (82} \times 4 = 328)}$$

$$\text{Mean Relevancy Score (MRS)} = \frac{\text{MR} \times 4 + \text{R} \times 3 + \text{LR} \times 2 + \text{NR} \times 1}{\text{Number of judge's respondent}}$$

Accordingly, the statements having Relevancy Percentage of more than 75.00 per cent (Relevancy Weightage of more than 0.75) and Mean Relevancy score of more than 3 were considered for final selection of statements (items). By this process 82 statements were isolated in the first stage which were suitably modified and rewritten as per the comments of experts whatever applicable.

Item analysis

To delineate the items based on the extent to which they can differentiate the respondent perceiving RKVY as favourable or unfavourable, item analysis was carried out on the statements selected. A schedule consisting of 82 statements was prepared and used for personally interviewing a sample of 40 experts involved in implementation of RKVY from non-sampled area. The responses for the statements were obtained on a five-point continuum viz., Strongly Agree, Agree, Undecided, Disagree and strongly disagree with scores of 5, 4, 3, 2 and 1, respectively. The perception score of the respondent was obtained summing up the scores of all statements and the respondents were arranged in ascending order based on perception score. Twenty five percent of the respondents with highest total scores and twenty-five per cent with lowest total scores were selected. These two groups provided the criterion groups in terms of which item analysis was carried out. The critical ratio was calculated by t-test. The ‘t’ value is a measure of the extent to which a given item differentiates the high group from low group. Later the statements with a ‘t’ value of more than 1.75 were retained in the final scale.

Results and Discussion

Based on the item analysis 55 items under different components viz., objectives and special features of RKVY (9), planning of RKVY (20), implementation of RKVY (22) and monitoring and evaluation (4) were retained in the scale to measure the perception of stakeholders towards Rashtriya Krishi Vikas Yojana (Table 1).

Table 1: Scale to measure the perception of stakeholders towards Rashtriya Krishi Vikas Yojana (RKVY)

I. Objectives and Special Features of RKVY		RP	RW	MRS	‘t’ value
1	Programme given more emphasis for increased investments from the state government	80.00	0.80	3.20	3.02
2	States had the flexibility and autonomy in implementing the scheme	78.75	0.78	3.05	2.63
3	Programme given focus on preparation of plans based on agro-climatic situations	76.25	0.76	3.05	2.16
4	Availability of technical and natural resources were considered in preparation of agriculture plan	81.66	0.81	3.26	1.80
5	Local needs and priorities were considered in preparation of agriculture plan	77.91	0.77	3.11	1.95
6	Programme focused on increased production and productivity in agriculture and allied sectors	76.25	0.76	3.06	1.81
7	Programme emphasised increased returns to farmers in farming through increased investments	78.66	0.78	3.10	2.14
8	RKVY was state plan scheme	80.00	0.80	3.20	1.85

9	RKVY was incentive scheme	77.08	0.77	3.08	1.97
II. Planning of RKVY		RP	RW	MRS	't' value
A. Institutional Arrangement					
1	State agriculture department act as the nodal department for implementation of programme	85.41	0.85	3.41	3.25
2	State Agriculture Department ensured preparation of district agriculture plan (DAP)	81.26	0.81	3.26	2.13
3	Implementing agency of programme would be identified by state government	77.08	0.77	3.08	1.78
4	Projects under the programme were prepared from grass root level	78.75	0.78	3.15	2.22
5	State level sanctioning committee (SLSC) sanction projects to the implementing agency	76.25	0.76	3.05	1.83
6	Sanctioned projects were being monitored by SLSC	75.42	0.75	3.02	1.77
B. Emphasis under RKVY					
1	Programme helps in production and distribution of seeds	91.25	0.91	3.65	2.36
2	Programme provided assistance for agriculture mechanization	88.75	0.88	3.55	3.72
3	Programme extended desirable support to state seed farms	76.25	0.76	3.05	1.78
4	Programme undertaken enhancement of soil health activities	75.41	0.75	3.01	1.85
5	Programme promoted integrated farming system among farmers	88.75	0.88	3.55	2.18
6	Enhancement of horticulture production had been emphasized	77.08	0.77	3.08	2.07
7	Programme focused on animal husbandry and fisheries development	85.41	0.85	3.41	1.87
C. Benchmark under RKVY					
1	The programme emphasized preparation of comprehensive district agriculture plan	92.91	0.92	3.71	3.76
2	States given increased fund allocation to agriculture and allied sectors	88.33	0.88	3.53	1.97
3	States encouraged to converge the scheme with other programme like NREGA, BRGF & SGSY etc	87.91	0.87	3.51	2.05
D. Release of funds					
1	Distribution of funds to states was done by Department of Agriculture and Cooperation (DAC)	76.66	0.76	3.11	1.79
2	Funds were available to the states in two streams	82.08	0.82	3.28	2.21
3	Seventy five percent of funds earmarked for specified new projects/programmes	81.66	0.81	3.26	1.94
4	Twenty five percent of funds to be utilized for ongoing projects	84.58	0.84	3.38	2.52
III. Implementation of RKVY		RP	RW	MRS	't' value
A. Activities undertaken to motivate farmers under RKVY					
1	Programme conducts training to encourage farmers for sustainable farming	90.83	0.90	3.63	2.01
2	Educational tours to farmers being arranged under the programme	76.66	0.76	3.06	1.81
3	Programme encourages farmers innovativeness	77.50	0.77	3.08	1.99
4	Programme train farmers through FFS on pest management practices	87.08	0.87	3.48	1.86
5	Programme encourage farmers to take up organic farming	85.41	0.85	3.41	2.13
6	Conducting group discussion and training programme to create awareness about sustainable farming	75.83	0.75	3.03	1.95
7	Organizing skill development and trainings for stakeholders	77.91	0.77	3.11	1.89
B. Input supply under RKVY					
1	Programme provide subsidy on seeds/planting materials	86.66	0.86	3.46	2.09
2	Programme provide subsidy on farm implements	78.33	0.78	3.13	2.19
3	Programme provide subsidy on fertilizers and plant protection chemicals	82.50	0.82	3.30	1.90
4	Programme provide fifty percent subsidy on micro nutrients, bio-fertilizers and bio-control agents	85.00	0.85	3.40	1.97
5	Programme provide assistance for purchase of drip and sprinkler irrigation	87.50	0.87	3.50	2.31
6	Programme provide milch animals at subsidized rate	77.91	0.77	3.11	1.88
7	Programme provide subsidy for purchase of sheep/goat	76.00	0.76	3.03	1.83
C. Creation of infrastructure and assets under RKVY					
1	Programme provide assistance for establishing/ erecting greenhouse/shade net/poly house/nurseries	86.25	0.82	3.45	2.93
2	Provides assistance for establishing custom hiring centres	85.41	0.85	3.41	2.75
3	Programme aims at providing ware houses and food storage facilities	86.11	0.86	3.45	2.86
4	Under minor and micro-irrigation assistance was given to opening shallow wells, dug wells, ponds, sprinkler and drip irrigation systems	76.66	0.76	3.06	2.31
5	Storage unit, cooling unit and cold storage facilities erected for post-harvest management	75.41	0.75	3.01	1.84
6	Establishment of breeding farms, vaccine production units, diagnostic labs, cold storage and mobile units were encouraged for strengthening animal husbandry	77.50	0.77	3.10	1.93
7	Assistance is provided for testing labs and storage godowns	91.66	0.91	3.66	3.12
8	Fish pond, reservoirs, cold storage and ice plants were created for promoting fisheries	76.25	0.76	3.05	2.12
IV. Monitoring and Evaluation of RKVY		RP	RW	MRS	't' value
1	At state level, projects activities were monitored by State Level Sanctioning Committee (SLSC)	84.58	0.84	3.38	1.84
2	Web based management information system (MIS) was created for collecting information about programme	75.41	0.75	3.01	1.78
3	Online updating of project details was done by states	87.50	0.87	3.50	2.07
4	State performance were being monitored and judged based on RKVY-MIS reports	76.66	0.76	3.06	1.91

RP- Relevancy Percentage, RW- Relevancy Weightage, MRS- Mean Relevancy Score

Reliability of the perception scale

The reliability of the scale was tested by employing split-half method. Accordingly, the statements were divided into two halves based on odd and even number of items and were administered to 40 experts in RKVY. The obtained correlation coefficient 0.61 was further corrected by using

Spearman Brown formula and obtained the reliability coefficient of whole set. The 'r' value of the scale was 0.73, which was highly significant at one per cent level indicating the high reliability of the scale.

Validity of the perception scale

According to Kerlinger (1976) ^[5] the content validity is representativeness of sampling adequacy, of the content, the substance, the matter and the topics of measuring instrument. In the present study, indicators and sub indicators included in the scale were arrived at only after wide and critical validation by panel of judges. It is concerned with whether or not the test covers a representative sample of behaviour domain to be measured. This ensured while selecting perception statements. Due care was exercised in selecting and wording the statements so as to cover all the relevant aspects of RKVY, thus ensuring a fair degree of content validity. The calculated "t" value was significant for all the finalized statements of the score indicated that the perception statements of the scale have discriminating values. Hence, it seems reasonable to accept the scale as a valid measure of the perception.

Administration and scoring of perception scale

The scale finally arrived at was consisted of 55 statements representing four components. The responses were recorded on a five-point continuum representing strongly agree, agree, undecided, disagree and strongly disagree with scores of 5, 4, 3, 2, and 1, respectively. The perception score of each respondent can be calculated by adding up the scores obtained by him/her on all the items. The perception score on this scale ranges from a minimum of 55 to a maximum of 275. The higher scores obtained by a respondent on this scale indicate that he/she has perceived RKVY as more and vice-versa.

The earlier researcher Bharamagoudar and Angadi (2015) ^[2] developed a scale to measure job perception of Panchayat development officers of north Karnataka which consisted of 4 components and 22 statements. Geeta *et al.* (2016) ^[4] developed a scale to measure the impact of entrepreneurship development programmes, which is useful for studying the impact of entrepreneurship development programmes. Supriya and Natikar (2018) ^[8] developed a scale consisting of 4 components and 40 statements to measure the performance of Grama Sabha in the implementation of rural development programmes. Manjunath and Bheemappa (2021) ^[7] developed a scale to measure attitude of rural youth towards farming as a livelihood consisted of 33 statements grouped under 5 components.

Conclusion

The scale developed for measuring perception of stakeholders towards Rashtriya Krishi Vikas Yojana was administered in non-sample area to analyse the perception of stakeholders towards implementation of RKVY. It was found that the scale was reliable and valid hence, the scale can be employed by the policy makers and programme implementers to assess the perception of stakeholders and fine tuning of appropriate strategies for strengthening of the programme.

References

1. Anonymous. Guidelines for national agriculture development programme (NADP)- Rashtriya Krishi Vikas Yojna (RKVY), department of agriculture and Cooperation, Ministry of Agriculture, New Delhi, 2007, 1-21.
2. Bharamagoudar MV, Angadi JG. A scale to measure job perception of panchayat development officers (PDOs). *International Journal of Agricultural Statistical Science*. 2015;11(1):185-187.
3. Edwards AL. Techniques of attitude scale construction,

Ed 1, Appleton-Century-Crofts, New York. 1957;1:1-280.

4. Geeta PC, Natikar KV, Yadav VS. A scale for measurement of impact of entrepreneurship development programmes. *International Journal of Agricultural Statistical Science*. 2016;12(2):491-501.
5. Kerlinger FN. *Foundations of behavioural research*, Ed 2, Holt, Rinehart and Winston, New York, 1976;1:1-741.
6. Likert RA. A technique for the measurement of attitude, Ed 1, *Archives of Psychology*, New York. 1932;1:1-53.
7. Manjunath M, Bheemappa A. Scale for measuring attitude of rural youth towards farming as a livelihood. *Journal of Experimental Zoology India*. 2021;24(2):000-000
8. Supriya BB, Natikar KV. Development of a scale to measure the performance of Gram Sabha in implementation of rural development programmes. *Journal of Experimental Zoology India*. 2018;21(2):777-781.