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To assess the impact of agricultural technology on quality of life of farmers of periurban and rural Area

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Abstract
The present study was conducted in Dhamtari district of Chhattisgarh state. This study has an aim to assess the impact of agricultural technology on quality of life of farmers of periurban and rural area. The sample of the study has been selected through purposive sampling technique. Out of which 10 villages, 5 villages from periurban and 5 villages were selected as rural areas and total sample consisted of 120 farmers for investigation. The association of different attributes of quality of life of respondents with their level of technology use was tested by chi-square test (x^2). The study indicates that the majority of periurban respondents and majority of rural respondents. Also indicates quality of life of respondents of periurban and rural areas and assessment the impact of agriculture technology on quality of life of respondents of rural areas

Keywords: Agriculture technology, quality of life, periurban and rural area

Introduction

Agriculture has got a prime role in Indian economy so, it is considered as back bone of our country. Agriculture generally involves five stages *viz.,* production, processing, consumption, storage and marketing. For decades, agricultural science has focused on boosting production through the development of new technologies. It is time to fundamentally rethink the role of agricultural knowledge, science and technology in achieving equitable development and sustainability.

The basic technology of agricultural machines has changed little in the last century. Though modern harvesters and planters may do a better job or be slightly tweaked from their predecessors. However, technology is changing the way that humans operate the machines, as computer monitoring systems, GPS locators, and self-steer programmmes allow the most advanced tractors and implements to be more precise and less wasteful in the use of fuel, seed, or fertilizer. In the foreseeable future, there may be mass production of driverless tractors, which use GPS maps and electronic sensors. Even more esoteric are the new areas of nanotechnology and genetic engineering.

The aim of the agriculture sector is to optimize processes and uses of resources and efficient use of existing arable land. It can increase production, but it can also increase the level of quality of agriculture. The issue of technology being a part of modern life is a controversial one. Some feel that the contribution of technology has made a positive impact in modern life and that technology helps improve the quality of life.

Quality of Life (QOL) is the general well-being of individuals and societies. QOL has a wide range of contexts, including the fields of international development, healthcare, politics and employment. Quality of life should not be confused with the concept of standard of living, which is based primarily on income. While Quality of Life (QOL) has long been an explicit or implicit policy goal, adequate definition and measurement have been elusive. Diverse "objective" and "subjective" indicators across a range of disciplines and scales, and recent work on subjective well-being (SWB) surveys and the psychology of happiness have spurred renewed interest. (Robert Costanza). Quality of Life is tied to perception of 'meaning'. The quest for meaning is central to the human condition, and we are brought in touch with a sense of meaning when we reflect on that which we have created, loved, believed in or left as a legacy (Frankl VE, 1963) [5]

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The study was conducted in Dhamtari district of Chhattisgarh state. The district is surrounded by district Raipur in North and district Kanker as well as Bastar in South, part of Orissa state in East and district Durg and Kanker in West. Mahanadi is the principal river of this district and Mahanadi is so far named as Kankannadi, Chitrotpala.The investigation has been analysed to determine various factors, variable and their association. This study has an aim to assess the impact of agricultural technology on quality of life of farmers of periurban and rural area.

Material & Methods
The study was carried out in Dhamtari district of Chhattisgarh. The district has 4 development blocks; namely Dhamtari, Kurud, Nagri and Magarlod. The sample of the study has been selected through purposive sampling technique. Out of which 10 villages, 5 villages from periurban namely Aamdi, Palari, Mujgahan, Koliyari and Arjuni and 5 villages namely Bhothipar, Korra, Kurra, Dargahan and Piperchhedi were selected as rural areas.Out of which 12 farmers from each selected village, were selected on the basis of random sampling. Thus, the total sample consisted of 120 farmers for investigation. Primary data were collected through pre-tested interview schedule. In this study only six Quality of Life parameters were taken and data collection was done by the pre tested ordinal scale to measure Quality of Life.

The association of different attributes of quality of lifeof respondents with their level of technology use was tested by chi-square test (χ^2) at 5% level of significance with required degrees of freedom (D.F.).

Results and Discussion
1. Level of technology use of respondents of periurban and rural areas
The data presented in Table 1 indicate the distribution of respondents according to their technology use. It is clear that out of the total 60 periurban respondents, 68.33 per cent had high level of technology use, and 21.67 per cent had medium level of technology use and 21. 81 per cent had low level of technology use. In case of rural respondents the findings indicate that majority of the rural respondents (38.33%) had medium level of technology use, followed by 36.67 per cent of them had high level of technology use and 25.00 per cent of the respondent had low level of level of technology use.

Table 1: Distribution of respondents according to their technology use

S. No.	Categories	Periurban		Rural	
		Frequency	Percentage	Frequency	Percentage
1	Low	6	10.00	15	25.00
2	Medium	13	21.67	23	38.33
3	High	41	68.33	22	36.67
	Total	60	100.00	60	100.00

2. Quality of life of respondents of periurban and rural areas
The study indicates that the majority periurban respondents were of good physical health (58.33%), having good psychological health (61.70%), had good social relationship (50.00%), having good environment (71.67%), had high freedom (73.34%), high happiness (56.67%).In case of rural respondents that the majority were in good physical health (41.67%), having moderate psychological health (45.00%), had moderate social relationship (48.33%), having good environment (43.33%), had high freedom (45.00%), high happiness (35.00%).

3. Assessment the impact of agriculture technology on quality of life of respondents of rural areas.
The physical health, psychological health, social relationship, environment and happiness had significantly associated with level of technology use. Therefore, it can be concluded that there is impact of agricultural technology. While the freedom had non-significant association with the level of technology use. Therefore, it can be concluded that there is no impact of agricultural technology on freedom of respondents.

Table 2: Association between physical health, Psychological health and Social relationship of periurban respondents and their level of technology use

Physical health	Level of technology			Psychological health	Level of technology			Social relationship	Level of technology		
	Low	Medium	High		Low	Medium	High		Low	Medium	High
Poor	3 (33.33)	4 (44.45)	2 (22.22)	Poor	2 (40.00)	2 (40.00)	1 (20.00)	Poor	2 (18.18)	5 (45.45)	4 (36.37)
Moderate	2 (12.50)	4 (25.00)	10 (62.50)	Moderate	3 (16.66)	5 (27.78)	10 (55.56)	Moderate	1 (5.26)	6 (31.58)	12 (63.16)
Good	1 (2.86)	5 (14.28)	29 (82.86)	Good	1 (2.70)	6 (16.22)	30 (81.08)	Good	3 (10.00)	2 (6.67)	25 (83.33)

Table 3: Association between Environment, freedom and happiness of periurban respondents and their level of technology use

Environment	Level of technology			Freedom	Level of technology			Happiness	Level of technology		
	Low	Medium	High		Low	Medium	High		Low	Medium	High
Poor	2 (50.00)	1 (25.00)	1 (25.00)	Poor	1 (50.00)	1 (50.00)	0 (00.00)	Poor	4 (44.44)	4 (44.44)	1 (11.12)
Moderate	3 (23.08)	4 (30.76)	6 (46.16)	Moderate	3 (21.42)	3 (21.42)	8 (57.16)	Moderate	1 (5.88)	5 (29.42)	11 (64.70)
Good	1 (2.32)	8 (18.60)	34 (79.08)	Good	2 (4.54)	9 (20.46)	33 (75.00)	Good	1 (2.94)	4 (11.77)	29 (85.29)

Significant at 0.05 level of probability with 1 d.f., table value is 3.841.

Table 4: Association between physical health, Psychological health and Social relationship of rural respondents and their level of technology use

Physical health	Level of technology			Psychological health	Level of technology			Social relationship	Level of technology		
	Low	Medium	High		Low	Medium	High		Low	Medium	High
Poor	7 (58.33)	3 (25.00)	2 (16.67)	Poor	5 (55.55)	3 (33.33)	1 (11.12)	Poor	5 (62.50)	2 (25.00)	1 (12.50)
Moderate	5 (21.74)	11 (47.82)	7 (30.44)	Moderate	8 (29.63)	12 (44.44)	7 (25.93)	Moderate	6 (20.69)	15 (51.72)	8 (27.59)
Good	3 (12.00)	9 (36.00)	13 (52.00)	Good	2 (8.33)	8 (33.33)	14 (58.34)	Good	4 (17.39)	6 (26.08)	13 (56.53)

Table 5: Association between Environment, freedom and happiness of rural respondents and their level of technology use

Environment	Level of technology			Freedom	Level of technology			Happiness	Level of technology		
	Low	Medium	High		Low	Medium	High		Low	Medium	High
Poor	8 (42.11)	6 (31.57)	5 (26.32)	Poor	7 (70.00)	1 (10.00)	2 (20.00)	Poor	10 (52.64)	7 (36.84)	2 (10.52)
Moderate	4 (26.67)	9 (60.00)	2 (13.33)	Moderate	4 (16.00)	13 (52.00)	8 (32.00)	Moderate	3 (15.00)	10 (50.00)	7 (35.00)
Good	3 (11.54)	8 (30.77)	15 (57.69)	Good	4 (16.00)	9 (36.00)	12 (48.00)	Good	2 (9.52)	6 (28.58)	13(61.90)

Significant at 0.05 level of probability with 1 d. f., table value is 3.841

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