



## INTERPERSONAL LEADERSHIP SKILLS OF THE POSTGRADUATE STUDENTS OF SCIENCE STREAM IN URBAN AND RURAL SETTINGS

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### ABSTRACT

*The leadership skills of the postgraduate students of the science stream play a very important role in shaping the progress of the future scientific community. The progress of research, scientific organisations and academic institutions are very much dependent on the leadership skills of the persons working in those organisations. Leadership skills are broadly categorized into Administrative, Interpersonal and Conceptual skills. The present paper is aimed to compare the Interpersonal leadership skills of the postgraduate science students studying in rural and urban settings in Kozhikode District. The study was conducted on a sample of 77 science stream students from two major Government owned Higher Education Institutions (HEIs) of the district i.e., Government college Madappally and Government Arts and Science College Meenchantha. A Questionnaire with 6 items touching the major 3 dimensions of interpersonal leadership skills were used to conduct the research. The 3 dimensions are (1) being socially perceptive, (2) showing emotional intelligence, and (3) managing interpersonal conflicts.*



**KEYWORDS :** *scientific organisations and academic institutions , science stream.*

### INTRODUCTION

Leadership is the process of influencing people by providing purpose, direction, and motivation to accomplish the mission and improve the organization (ADP 6-22). In short, it's the act of leading a group of people or an organization. Leadership is a developable skills that can be improved over time. Individuals who possess a higher level of self-awareness regarding their personality traits, such as their values and views, and demonstrate less prejudice when evaluating material that is important to themselves are more inclined to be recognized and embraced as leaders.

Interpersonal leadership skills are very essential for teamwork in research and laboratory experiments in Scientific organisations. While some people downplay the importance of interpersonal skills or disparage them as “touchy-feely” and inconsequential, leadership research has consistently pointed out the importance of interpersonal skills to effective leadership (Bass, 1990; Blake & McCause, 1991; Katz, 1955). Leadership in science is similar to leadership in business or politics. There is now considerable agreement that young scientists should develop their leadership skills for a career in science (Hendrix, 2024). Scientists should be influential leaders at all levels of their careers. Most of the skills that make one a good leader is obtainable, so following the right educational path is critical (The Importance of Scientific Leadership Skills, 2023).

Kozhikode district of Kerala state homes major Central, State, and private owned scientific research institutes like Indian Council for Agriculture Research-Indian Institute of Spices Research (ICAR IISR), Central Marine Fisheries Research Institute (CMFRI), Zoological survey of India, Centre for

Water Resource Development (CWRDM), Regional Analytical Laboratory (RAL), National Institute for Research and Development in Defence Shipbuilding, Koliyot Institute of Energy and Research. These organisations offer research and career opportunities for science students. Hence for the successful development of scientific research in Kozhikode district and above all the global scientific community, it is imperative that the students must possess a higher level of Interpersonal leadership skills.

### NEED OF THE STUDY

Post-graduate studies are often considered a form of professional education, especially when they are directly related to advancing knowledge and skills in a specific profession or field. Education, particularly professional education, provides students with the necessary skills and competences to confront life's difficulties as they emerge in their professional and personal lives. As a result, higher education institutions play an important role in shaping students and making substantial changes in the lives of many people. A new employability report says that all University students must gain leadership skills. A new research report, the 21st-century leadership report, published by Chartered Management Institute with the support of the Chartered Association of Business Schools and Institute of Student Employers, has found that employers want all higher education students to enter work with practical management and leadership skills. Hence, for the better employability of the science students, and for the development of the scientific organizations it is very important to assess the strengths and weaknesses of the students to provide them with apt opportunities to develop their Leadership skills. In addition to that this study will help the HEIs to set up a curriculum focusing on the need for the development of Leadership skills in their students.

### REVIEW OF RELATED LITERATURE

**ETZONI (1964)** defined leadership as the ability based on the personal qualities of the leaders to influence the subordinates' voluntary compliance in broad range of matters. Leadership involves other people, that is, subordinates or followers. Without subordinates, all the leadership qualities of a leader will be irrelevant. The leader's major duty as an influential person is to influence the behaviour of the subordinates. The way the subordinates are influenced makes them have the urge to work in an extra ordinary way than he is naturally willing to perform. This suggests that the essence is cooperative followership.

**AIBIEYI (2015)** states that Leadership cannot have impact if it is not in interaction with the environment. Leadership behaviour is described here in terms of the skills that the leader may exhibit. Included here are technical, human and conceptual skills. The second kind of skill is the human skill. Human skills are important throughout all management levels. They are concerned with the interpersonal relationship between the manager and those with whom the manager comes in contact.

**Thinking (2024)** opines that the modern scientist is more than just a discoverer and innovator; they are also a leader, influencer, and visionary. However, the move from specialist or researcher to leader does not happen automatically. It necessitates a set of skills that are rarely covered in the intense academic and technical training that scientists get. This is where leadership training comes in, helping to bridge the gap and prepare scientists for the responsibilities they are expected to perform in society.

### STATEMENT OF THE PROBLEM

The problem selected for the present study is "Interpersonal leadership skills of the postgraduate students of science stream in urban and rural settings".

### OBJECTIVES OF THE STUDY:

The following objective was set forth for the study. -

1. To compare the interpersonal leadership skills of postgraduate science students studying in HEIs in the rural and urban areas of Kozhikode district.

## HYPOTHESES OF THE STUDY

The following hypothesis and Sub hypothesis were set forth for the study.

H1: There is significant difference in interpersonal leadership skills among postgraduate science students studying in HEIs in the rural and urban areas of Kozhikode district.

### Sub Hypothesis

H1a: There is significant difference in interpersonal leadership skills between Male and Female postgraduate science students.

H1b: There is significant difference in interpersonal leadership skills between Male and Female postgraduate science students studying in HEIs of rural area.

### Definition of important terms used

1. Interpersonal Leadership skills: - Interpersonal skills are people skills—those abilities that help a leader to work effectively with subordinates, peers, and superiors to accomplish the organization's goals.
2. Postgraduate science students: - A postgraduate science student is a student who has already earned a degree and is studying for a more advanced degree, such as a master's degree.
3. HEIs: - Higher-educational institutions include universities, colleges, various professional schools that provide postgraduate degree or diploma in the fields of Engineering, Science, Social Work, Management Studies, Arts and Commerce in Kozhikode District of Kerala state.

### Variables of the Study

The main dependent variable of the study was "Interpersonal leadership Skills of the postgraduate science students studying in HEIs in the rural and urban areas of Kozhikode district". The independent variables of the study were Urban, Rural, and Gender.

### Method of the Study

Questionnaire survey method was used to conduct the study.

### Population of the study

All the postgraduate science students of the Government owned HEIs in Kozhikode District

### Sample of the study

A total of 77 samples were taken from 2 Government owned HEIs for the study. All the samples were divided into male and female categories.

### Tools

A total of 6 questions are included in the questionnaire-based 5-point Likert scale.

### Procedure

The tool was administered to 77 postgraduate science students studying in HEIs in the rural and urban areas of Kozhikode district requesting them to fill in the questionnaire with utmost care and sincerity. The filled in questionnaires were collected afterwards.

### Plan of action. -

The study was carried out through the following steps-

1. Selection of HEIs.
2. Selection of Postgraduate Students.
3. Construction of tools and standardization.
4. Administration of tools on the selected groups.
5. Collection of data.

6. Analysis and interpretation of data.

**Statistical approaches of the study**

The following statistical approaches were used for the Analysis of data-

1. Mean
2. Standard Deviation
3. Critical ratio test (t)

**Analysis of Data and Interpretation**

**Analysis Pertaining to H1**

**There is significant difference in interpersonal leadership skills among postgraduate science students studying in HEIs in the rural and urban areas of Kozhikode district.**

	Type of College	N	Mean	SD	SED	t TEST	Level of Significance
Interpersonal skills	Urban-GA&SCC	43	22.63	3.84	0.823	-1.5149	0.134
	Rural-GCM	34	23.91	3.38			

- The mean interpersonal skills score for students from Urban-GA&SCC colleges is 22.63, while the mean score for students from Rural-GCM is 23.91.  
This suggests that, on average, students from rural government colleges have higher self-perceived interpersonal skills compared to students from urban government colleges.
- The t-test results show a t-value of -1.5149 with a p-value of 0.134. This p-value is greater than the typical significance level of 0.05. Therefore, the difference in mean scores between the two groups is not statistically significant.

**H1a: There is significant difference in leadership skills between Male and Female postgraduate science students.**

	Gender	N	Mean	SD	SED	t TEST	Level of Significance
Interpersonal skills	M	12	24.17	2.41	0.844	-0.9837	0.328
	F	65	23.02	3.86			

- The mean interpersonal skills score for male students is 24.17, while the mean score for female students is 23.02.  
This suggests that, on average, male students perceive themselves as having slightly higher interpersonal skills compared to female students.
- The t-test results show a t-value of -0.9837 with a p-value of 0.328. This p-value is greater than the typical significance level of 0.05. Therefore, the difference in mean scores between the two groups is not statistically significant.

**H1b: There is significant difference in Interpersonal leadership skills between Male and Female postgraduate science students studying in HEIs of urban area.**

Interpersonal skills	Gender	N	Mean	SD	SED	t TEST	Level of Significance
	M	11	24.45	4.85	1.628	-1.859	0701
	F	32	22	4.05			

- The mean interpersonal skills score for male students is 24.45, while the mean score for female students is 22.

This suggests that, on average, male students perceive themselves as having slightly higher interpersonal skills compared to female students.

- The t-test results show a t-value of -1.859 with a p-value of 0.0701. This p-value is very close to the typical significance level of 0.05. While not statistically significant at the conventional 0.05 level, it is approaching significance.

**FINDINGS OF THE STUDY**

1. It was found from the study that there is no significant difference in interpersonal leadership skills between postgraduate science students studying in HEIs in the rural and urban areas of Kozhikode district. So, the result says that the postgraduate science students studying in HEIs in the rural and urban areas of Kozhikode district have same interpersonal leadership skills.
2. There was no significant difference in interpersonal leadership skills between Male and Female postgraduate science students. So, the result says that the Male and Female postgraduate science students have same interpersonal leadership skills.
3. There was no significant difference in interpersonal leadership skills between Male and Female postgraduate science students studying in HEIs of urban area. It means that the Male and Female postgraduate science students studying in HEIs of urban area have same interpersonal leadership skills.

**CONCLUSION**

It has been observed that the location of the HEIs or gender does not have a significant impact on the interpersonal leadership skills of the postgraduate science students studying in HEIs in the rural and urban areas of Kozhikode district. The result of the study may suggest that intense urban agglomeration that is happening in Kerala could be a reason for same level of performance in their interpersonal leadership skills irrespective of the location of the HEIs or their Gender. Further study is suggested to understand whether this is an independent case or if this phenomenon is prevailing throughout the state of Kerala.

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