

**CHAPTER III**  
**PLAN AND PROCEDURE OF THE STUDY**



## **CHAPTER III**

### **PLAN AND PROCEDURE OF THE STUDY**

---

#### **3.0 INTRODUCTION**

The methodology of research serves as the framework guiding the entire research process, providing a structured approach to addressing specific research questions or problems. In the context of this study on the Leadership Behaviour of Government Scheduled Tribe and Scheduled Caste Development High School Headmasters and School Effectiveness, the methodology played a crucial role in providing a comprehensive guide for conducting the research. It clarified the study's design, sampling strategy, and target population, ensuring the findings could be generalized accurately. Moreover, it detailed the selection and development of research tools, addressed ethical considerations, and outlined procedures for data collection, recording, and management. Additionally, the methodology specified the methods for data analysis, ensuring rigor and reliability in drawing conclusions. Overall, the methodology ensured that the research was conducted systematically, ethically, and effectively, leading to valuable insights into leadership behavior and school effectiveness within the specified context. This chapter develops the population, sample, tools and data collection.

#### **3.1 METHODOLOGY**

After the selection of the statement and definition of the problem, the investigator decides about the methods, procedures, and techniques used for collecting, analyzing, and interpreting the data that was needed for the study, hence this chapter deals with the plan and method of the study. This chapter a brief description of the tools and techniques employed for the collection of data.

#### **3.2 RESEARCH DESIGN**

The major objective of the study is to find out the relationship between leadership behaviour and school effectiveness in the Government Scheduled Tribe and Scheduled Caste Development high schools. The descriptive survey method has been used to carry on the above-mentioned quantitative research and to meet the objectives lines of the study. One of the main reasons for employing survey methodology is that it enables the researcher to draw the generalization regarding the relationship between leadership behaviour and school effectiveness.

### **3.3 POPULATION**

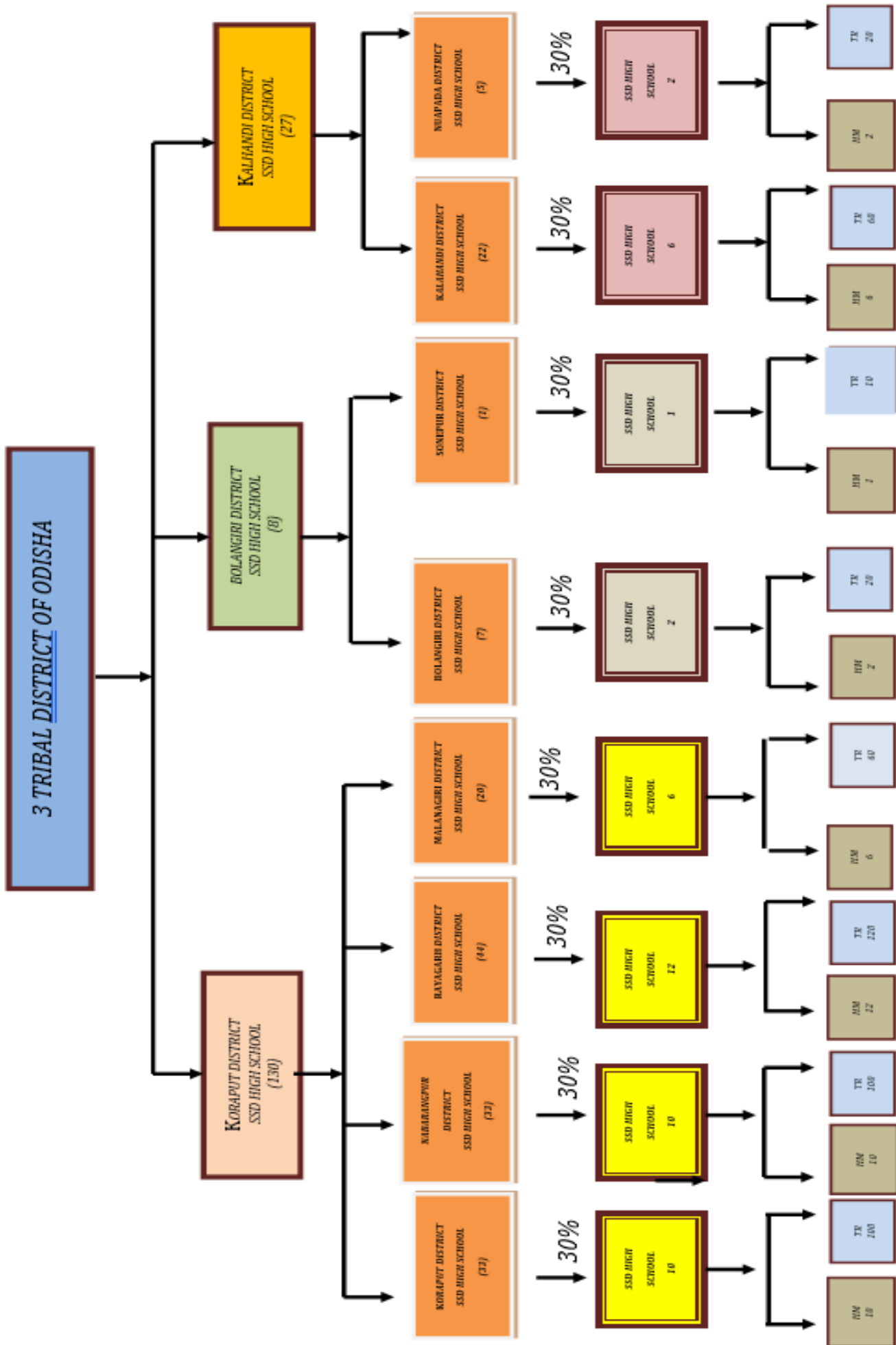
All the Headmasters and Teachers in the Government Scheduled Tribe and Scheduled Caste Development High School of Odisha were forming the population of the present study.

### **3.4 SAMPLE**

Stratified Random sampling technique has been used in the study. The Undivided tribal districts of Odisha are divided into three strata: Undivided Koraput, Bolangiri and Kalahandi. The undivided Koraput districts have four districts: Koraput, Nabarangpur, Rayagarh and Malkangiri . Out of the four districts 30% had Government Scheduled Tribe and Scheduled Caste Development High schools of all Headmasters and Teachers has been taken. Similarly the undivided Boangiri have two districts: Bolangiri and Subarnapur. Out of two districts 30% had Government Scheduled Tribe and Scheduled Caste Development High schools of all Headmasters and Teachers has been taken. Similarly, the undivided Kalahandi districts have two districts: Kalahandi and Nuapada. Out of two districts 30% had Government Scheduled Tribe and Scheduled Caste Development High schools of all Headmasters and Teachers has been taken. Out of Eight districts, the sample consisted of 50 Headmasters and 324 teachers from Government Scheduled Tribe and Scheduled Caste Development High Schools.

The data was collected randomly from selected Government Scheduled Tribe and Scheduled Caste Development High Schools of Tribal Districts of Odisha, and the sample distribution is provided in flow chart 3.1

#### **Flow Chart 3.1 Tribal Districts of Odisha**



### **3.5 TOOLS USED**

The various tools on the variables of the study namely, leadership behaviour scale, school effectiveness scale were reviewed.

- (i) Leadership Behaviour Scale for Headmasters and Teachers
- (ii) School Effectiveness Scale for Headmasters and Teachers

### **3.6 DESCRIPTION OF THE TOOLS**

Several steps were undertaken for the development of the tools. The tools Leadership Behaviour Scale and School Effectiveness Scale explain and detailing separately into two proper respective sections as b and c. The following sections describe the construction of the tool.

#### **3.6.1.0 CONSTRUCTION OF LEADERSHIP BEHAVIOUR SCALE FOR HEADMASTERS AND TEACHERS**

The scale for headmasters and teachers were constructed separately to achieve objective no. one and three of the study. The aim of scale for headmaster was to get data in order to understand the leadership behaviour.

##### **3.6.1.1 Review of instruments used in relevant research**

To construct the Leadership Behaviour Scale various scales on 'Leadership Behaviour' have been reviewed. The questions or items which have been included in the scale pertained to various grounds that relate to leadership. A study conducted by Walker (2009) on the Impact of principal leadership behaviours and used Teacher sense of efficacy scale (TSES) developed by Bandura (1997), Gibson and Dembo (1984), and Hoy and Wool folk (1993) for the study. In another study which has been conducted by Daugherty (2021) on Leadership style, which was evaluated quantitatively using a 45-item Likert scale questionnaire, where participants scored items in the 0-4 range. In another study which has been conducted by Darji (1975) on leadership behaviour and in his study, LBDQ were determined and calculated leadership behaviours were HH, HL, LH, and LL. A study conducted by Sinha (2009) on Principals' Leadership Skills and using Principal Instruction Management Rating Scale (PIMRS) (Hallinger, 1983) for his study. Deodas (2016) conducted a study on administrative behaviour of secondary school heads. The study used Dr. (Mrs) Haseen Taj's Administrative Behaviour Scale (ABS-TH) for School Heads.

Reviewing the related scales on Leadership Behaviour available in previous researches, there has been no reported availability of tools to measure Leadership behaviour in the context of India generally for principal working in tribal areas. Hence, the objectives of the study included the preparation of the Leadership Behaviour Scale.

### **3.6.1.2 LEADERSHIP BEHAVIOUR SCALE FOR HEADMASTERS**

In order to study the Leadership Behaviour of the Government Scheduled Tribe and Scheduled Caste Development High School Headmasters, a number of studies were reviewed. The available standardized tools/scales/inventories/questionnaires were thoroughly studied. It was observed that most of these instruments were available to study leadership behaviour (LBDQ). All these tools were found to be addressing to different areas and objectives and had no utility in the present study. It was therefore thought that a relevant scale be developed to study the leadership behaviour of the headmasters. Therefore, Leadership Behaviour Scale for headmasters were constructed to collect data from the headmasters about leadership behaviour in terms of traits and skills. The scale for headmasters was constructed including different dimensions traits and skills, whereas traits were cooperation, courage, trust, and skills were decision-making, problem-solving, motivation, and communication of the Government Scheduled Tribe and Scheduled Caste Development high school headmasters. It was a likert type scale there were five close-ended alternatives. The five alternatives ranged from strongly positive polarity to strongly negative polarity.

The scale was also translated into Odia language for headmasters to overcome the barrier of language and could examine different leadership behaviour running in the schools. The same scale was using in all schools.

### **3.6.1.3 LEADERSHIP BEHAVIOUR SCALE FOR TEACHERS**

In order to study the Leadership Behaviour of the Government Scheduled Tribe and Scheduled Caste Development High School Headmasters a number of studies were explored. The available standardized tools/scales/inventories/questionnaires were thoroughly studied. It was observed that most of these instruments were available to study leadership behaviour (LBDQ). All these tools were found to be catering to different areas and objectives and had no utility in the present study. It was therefore thought that relevant scale be developed to study the leadership behaviour of the headmasters. Therefore, Leadership Behaviour Scale for teachers were constructed to collect data from the teachers related to the headmasters

leadership behaviour. The leadership behaviour is being seen in terms of traits and skills. The scale for teachers was constructed including different traits and skills, whereas traits are cooperation, courage, trust, and skills are decision-making, problem-solving, motivation, and communication of the Government Scheduled Tribe and Scheduled Caste Development high school headmasters. It was a likert type scale there were five close-ended alternatives. The five alternatives ranged from strongly positive polarity to strongly negative polarity.

The scale was also translated into Odia language for teachers to overcome the barrier of language and could examine different practices running in the schools. The scale was similar for all schools.

#### **3.6.1.4 SCORING OF LEADERSHIP BEHAVIOUR SCALE FOR HEADMASTERS AND TEACHERS**

In order to explain the scoring for the scale, it is once more important to mention that the scale has been divided into 7 dimensions. There have been both positive and negative statements in Leadership Behaviour Scale. The answering options have ranged from ‘Strongly Positive Polarity’ to ‘Strongly Negative Polarity’. In order to avoid ambiguity in construing the dwindling motive of the participants ‘Neutral’ option has been there in the scale. For the positive statements, the answering options has ranged from ‘*Strongly Positive Polarity*’ to ‘*Strongly Negative Polarity*’, where the score for Strongly Positive Polarity=5; Positive polarity=4; Neutral= 3; Negative polarity=2; strongly negative polarity=1. According to the options chosen by the participants and the weight age of that item the scoring has been tabulated. The following tables 3.1 have given the scoring Pattern.

**Table 3.1 Scoring pattern of Leadership Behaviour Scale for Headmasters and Teachers**

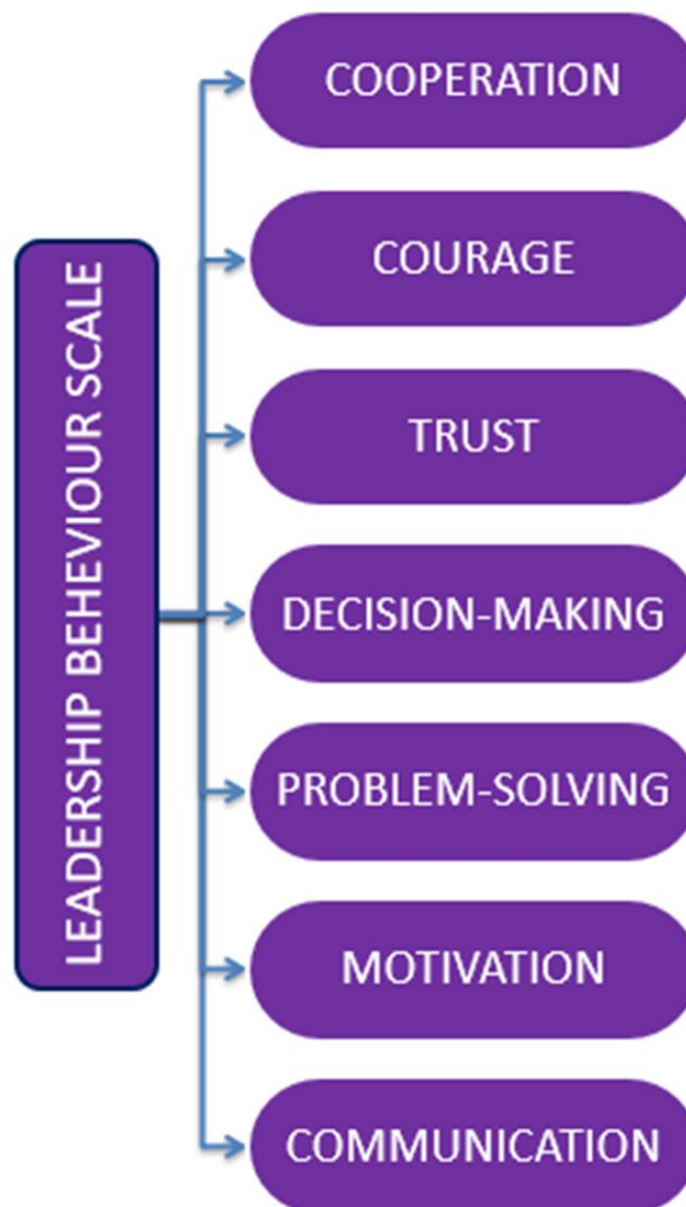
<b>Scale</b>	<b>Items Responses</b>	<b>Strongly Positive Polarity</b>	<b>Positive Polarity</b>	<b>Neutral</b>	<b>Negative Polarity</b>	<b>Strongly Negative Polarity</b>
<b>LBS</b>	1	5	4	3	2	1

The Maximum Score which could be obtained for Leadership behaviour is 5. The minimum could be obtained score for Leadership behaviour items is 1.

**3.6.1.5 TIME LIMIT:** There has been no time limit to fill the scale, but it has been perceived by headmaster and teacher generally took 30 minutes to complete the Scale.

**Flow Chart 3.2 Dimensions of Leadership Behaviour in Leadership Behaviour Scale**

Dimension of Leadership Behaviour in Leadership Behaviour Scale



**Table 3.2: List of dimensions and descriptions with their respective item numbers in the Leadership Behaviour Scale for Headmasters and Teachers**

SL No.	Item Number	No. of Item Allotted	Dimension	Description
1	1 to 8	8	Cooperation	Allow them, Help, respect each other Idea, Teamwork, needs assistance, contribute to the group goal, Accept, and take the necessary action, work together to achieve a common goal
2	9 to 16	8	Courage	Stand of for others, stick to your principles, have your Own style, Asking Questions/ Explanation, Great determinations, not afraid to honesty, Receive Feedback, Admit Mistake
3	17 to 24	8	Trust	Faith, Loyalty, valuing long-term relationships, creating a belief among staff, striving to be helpful, incorporating accountability, relying on someone else to do the right thing, trustworthy
4	25 to 32	8	Decision-Making	Compare Alternatives that meet the requirement, commit to a decision, compile a list of requirements, construct a clear picture, Choices Made by using one's judgement, Take disciplinary action
5	33 to 40	8	Problem-Solving	Negotiation, Adaptability, Make Solution, Investigation, Disciplinary Action, find out the cause of insecurity, Sharing information with all, Timely Communication
6	41 to 48	8	Motivation	Be Available, give them Praise, encourage others, include staffs in strategic planning, respect their time, Recognize achievement, By Training Program
7	49 to 56	8	Communication	Clarity, Convey, Listing, By Orally, Up Communication, By Issue Notice, By SMS, Email

**3.6.1.6 VALIDATION OF LEADERSHIP BEHAVIOUR SCALE:** Validity refers to the extent that an instrument accurately assesses what it is intended to measure (Broniatowski & Tucker, 2017). Further, valid instruments provide a measurement that will address and accurately measure the construct they were designed to measure (Frongillo, Baranowski, Subar, Tooze, & Kirkpatrick, 2019). The prepared tool was given to the seven subject experts in field of Education for validation of content for its relevance and appropriateness to the study and its language. The tool was reviewed and accordingly, inclusion, omission and modification of the items in the tool has been done. The list of experts who validated the tools is attached in the appendix. The validated tool is also attached in the appendix. The first draft of the tool was shown to the expert requesting for their suggestions/modification if any. The following suggestions were incorporated in the tools. Initially the first draft of the scale for headmasters and teachers was common for all the headmasters and teachers of government Scheduled tribe and Scheduled caste development high schools. Therefore, the tool was too lengthy and many statements and options were not applicable to all. According to the suggestions of the experts' changes were made and the common tool for collecting data from the headmasters and teachers. After the selection of items based on the review of related literature, the items have been subjected to content analysis explained below.

The tool was sent to seven subject experts from NCERT(Shillong), NCERT(Bhubaneswar), Sambalpur University, The Maharaja Sayajirao University of Baroda (Vadodara), Kalahandi University (Odisha), Smt. K.B. Dave College of Education (Mehsana), Reliance Foundation Schools, Mumbai. The content was validate in terms of content validity, objectivity, clarity & understandability and accuracy. The subject experts have been requested to mark (√) Appropriate /Inappropriate against each item and, put their remarks for further revision or modification. The indices have been calculated with the formula total number of selected item responses/ total number of responses. The items with the indices greater than 0.5 have been accepted and less than 0.5 have been rejected. The following Table 3.3 shows the content validity of the statements.

**Table 3.3 Content Validity of The Statements for Leadership Behaviour Scale**

<b>State ments No</b>	<b>APR/INAPR</b>	<b>Index</b>	<b>Selected</b>	<b>Suggestions</b>
1	APR	0.85	Yes	Option c and e are same
2	APR	0.71	Yes	Option e is double barrel, Headmaster should guide not assist
3	APR	0.85	Yes	Use The Word 'them' Instead of him
4	APR	1	Yes	
5	APR	0.85	Yes	Option c, d and e looks the same
6	APR	0.85	Yes	Option c and d are same
7	APR	1	Yes	
8	APR	0.85	Yes	no difference between d and e
<b>Code</b>	<b>APR/INAPR</b>	<b>Index</b>	<b>Selected</b>	<b>Suggestions</b>
9	APR	0.85	Yes	Write Annual examination instead of examination
10	APR	0.85	Yes	Option c and d are same
11	APR	0.85	Yes	Modify the statement
12	APR	1	Yes	
13	APR	1	Yes	
14	APR	0.85	Yes	Modify the option
15	APR	1	Yes	
16	APR	0.85	Yes	b and d are almost same
17	APR	1	Yes	
18	APR	1	Yes	
19	APR	1	Yes	
20	APR	1	Yes	
21	APR	0.85	Yes	Option c and d are same
22	APR	1	Yes	
23	APR	0.71	Yes	Modify the statement
24	APR	1	Yes	
25	APR	0.85	Yes	Modify the statement

26	APR	1	Yes	
27	APR	1	Yes	
28	APR	1	Yes	
29	APR	1	Yes	
30	APR	0.85	Yes	a and b almost same
31	APR	1	Yes	
32	APR	1	Yes	
33	APR	1	Yes	
34	APR	0.85	Yes	Modify the statement
35	APR	0.85	Yes	Modify the statement
36	APR	0.71	Yes	Modify the statement, a and c option
37	APR	1	Yes	
38	APR	0.85	Yes	Modify the statement
39	APR	1	Yes	
40	APR	1	Yes	
41	APR	1	Yes	
42	APR	1	Yes	
43	APR	0.85	Yes	Modify the statement
44	APR	0.71	Yes	Modify the statement
45	APR	1	Yes	Modify the statement
46	APR	0.85	Yes	Modify options no d and e
47	APR	0.85	Yes	Modify the options no d
48	APR	0.85	Yes	Modify the options no d
49	APR	0.85	Yes	Modify options no c and e
50	APR	1	Yes	
51	APR	0.85	Yes	Modify options no d and e
52	APR	1	Yes	
53	APR	0.71	Yes	Modify the statement, d and e option

54	APR	0.85	Yes	All the options needed to modify
55	APR	1	Yes	
56	APR	0.85	Yes	All the options needed to modify

APR= Appropriate

INAPR= Inappropriate

Based on the above table, fifty-six (56) items were included information on leadership behaviour from the respondents. The headmasters and teachers from the government scheduled tribe and scheduled caste development high school, The items prepare in the scale are based on the day to day situation face by headmasters and teachers. All the items are under the Indian government scheduled tribe and scheduled caste development high school context.

The grouping of the finalized items has been given below in the Table 3.4

**Table No. 3.4 Finalised items of Leadership Behaviour with their Dimensions**

<b>SL No.</b>	<b>Item Number</b>	<b>No. of Item Allotted</b>	<b>Dimension</b>
<b>1</b>	1 to 8	8	<b>Cooperation</b>
<b>2</b>	9 to 16	8	<b>Courage</b>
<b>3</b>	17 to 24	8	<b>Trust</b>
<b>4</b>	25 to 32	8	<b>Decision-Making</b>
<b>5</b>	33 to 40	8	<b>Problem-Solving</b>
<b>6</b>	41 to 48	8	<b>Motivation</b>
<b>7</b>	49 to 56	8	<b>Communication</b>

**3.6.1.7 RELIABILITY:** Reliability refers to the replicability of a study, or in other words, the study will show similar results if repeated under the same conditions (Frongillo et al., 2019). Further, reliability is the consistency of results over time (Hayashi, Abib, & Hoppen, 2019). The reliability of Leadership Behaviour Scale was analyzed through internal reliability test with the help of SPSS (Statistical software for the Social Sciences) version 20.0 and Cronbach alpha has been used which gave internal reliability of the Leadership Behaviour Scale as 0.867, which according to Cronbach (1951) signified a 'Good' reliability attribute of a scale.

### **3.6.2.0 CONSTRUCTION OF SCHOOL EFFECTIVENESS SCALE**

The School effectiveness scale had been constructed by the researcher. To achieve objective no. two and three of the study, the researcher developed School Effectiveness Scale for Headmasters and Teachers.

### **3.6.2.1 SCHOOL EFFECTIVENESS SCALE FOR HEADMASTERS AND TEACHERS**

The School Effectiveness scale for headmasters and teachers were constructed separately. The aim of scale for headmaster was to get data in order to understand their leadership behaviour, whereas the aim of scale for teachers was to collect data on their perceptions on their headmasters leadership behaviour.

### **3.6.2.2 REVIEW OF INSTRUMENTS USED IN RELEVANT RESEARCHES**

To construct the School Effectiveness Scale various scales on 'School Effectiveness Scale' have been reviewed. The questions or items which have been included in the scale pertained to various dimensions that related to School Effectiveness. Downs (2017) conducted a study on 'Principal leadership development plans and the perceived impact on school culture.' The study used T-PESS says good culture leaders have a campus vision, high expectations, family and community participation, school safety, and student discipline. Reviewing the related scales on school effectiveness available in previous researches, there had been no reported availability of tool to measure school effectiveness in the context of India.

### **3.6.2.3 SCHOOL EFFECTIVENESS SCALE FOR HEADMASTERS**

In order to study the school effectiveness of the Government-Scheduled Tribe and Scheduled Caste Development High School, a number of studies were reviewed. The available standardized tools/scales/inventories/questionnaires were thoroughly studied. It was observed that most of these instruments were available to study School Effectiveness. All these tools

were found to be addressing to different areas and objectives and had no utility in the present study. It was therefore thought that a relevant scale be constructed to study the school effectiveness of the government scheduled tribe and scheduled caste development high schools. Therefore, School Effectiveness Scale for headmasters were constructed to collect data from the headmasters about school effectiveness. The scale for headmasters was constructed including different dimensions such as school culture, resource management, academic achievement, pupil development, teacher effectiveness, and pupil-teacher relationship for the government scheduled tribe and scheduled caste development high schools. The school effectiveness scale was a Likert type five-point scale with five close-ended alternatives ranging from strongly agree to strongly disagree. The scale was also translated into Odia language for headmasters to overcome the barrier of language and could perceive different practices in the schools. The scale was similar for all schools.

#### **3.6.2.4 SCHOOL EFFECTIVENESS SCALE FOR TEACHERS**

In order to study the school effectiveness of the Government Scheduled Tribe and Scheduled Caste Development High School, a number of studies were explored. The available standardized tools/scales/inventories/questionnaires were thoroughly studied. It was observed that most of these instruments were available to study School Effectiveness. All these tools were found to be addressing to different areas and objectives and had no utility in the present study. It was therefore thought that a relevant scale be constructed to study the school effectiveness of the government scheduled tribe and scheduled caste development high school. Therefore, School Effectiveness Scale for teachers were constructed to collect data from the teachers about school effectiveness. The scale for teachers was constructed including different dimensions such as school culture, resource management, academic achievement, pupil development, teacher effectiveness, and pupil-teacher relationship of the government scheduled tribe and scheduled caste development high school. The school effectiveness scale was a Likert type five-point scale with five close-ended alternatives ranged from strongly agree to strongly disagree. The scale was also translated into Odia language for teachers to overcome the barrier of language and could perceive the different practices of the schools. The scale was similar for all schools.

#### **3.6.2.5 SCORING KEY OF SCHOOL EFFECTIVENESS SCALE**

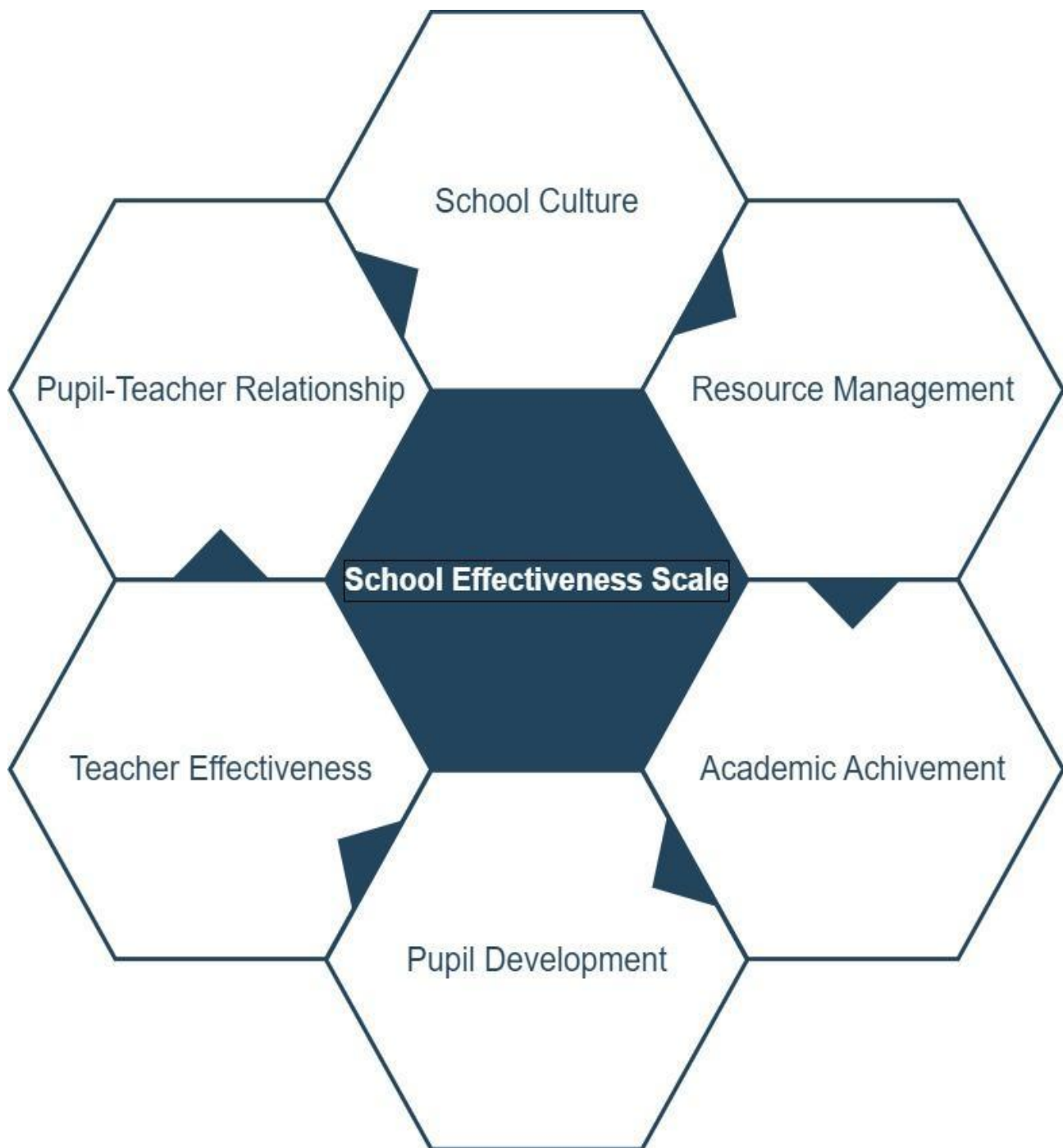
In order to explain the scoring key for the scale, it is once more important to mention that the scale has been divided into 6 dimensions. There have been both positive and negative statements in School Effectiveness Scale. The answering options have been ranged from ‘Strongly Agree’ to ‘Strongly Disagree’, where the score for Strongly Agree=5; Agree=4; Undecided= 3; Disagree=2; Strongly Disagree=1. Thus, the maximum tabulated score has been 5 and the minimum tabulated score has been 1. According to the options chosen by the participants and the weight age of that item the scoring has been tabulated. The following tables 3.5 have given the scoring Pattern.

**Table 3.5 Scoring pattern of School Effectiveness Scale**

Scale	Items Responses	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
SES	1	5	4	3	2	1

**3.6.2.6 TIME LIMIT:** There has been no time limit to fill the scale, but it has been observed that headmaster and teacher generally took 30 minutes to complete the Scale.

**Chart 3.3 Dimensions of School Effectiveness in School Effectiveness Scale**



**Table 3.6 List of Dimensions and Components with their respective item Numbers in**

### School Effectiveness Scale for Headmaster and Teachers

SL No.	Item Number	No. of Item Allotted	Dimension	Description
1	1 to 12	12	School Culture	Respect to each other, Discipline, honesty in communication, staff meeting conducted regularly, Physical safe, students are actively participate, clean & hygienic environment, punctuality behaviour, Professional Satisfaction, healthy behaviour, Cooperation among each other, Trust
2	13 to 24	12	Resource Management	financial resources, Physical resources, teaching-learning resources. teaching learning materials, curricular and co-curricular activities, ICT resources, organizes health services
3	25 to 36	12	Academic Achievement	school formulates a plan of action, school recognizes and acknowledges all academic achievement, satisfied with school activities, exams are administered, apply for scholarships, parent-teacher meetings are held to get feedback, regular meetings of the school management committee
4	37 to 48	12	Pupil Development	helps students in discovering their strengths, physical development, cultural development, career counseling programmes, develop their sense of accountability, students attend tuition class, co-curricular activities, ' learning skills develop,
5	49 to 60	12	Teacher Effectiveness	Use teaching learning materials, create lesson plans, take tuition on time, use ICT skills, professional development activities, conduct assessments, conduct administrative. duties, held accountable, local tribal language training, life skills training
6	61 to 72	12	Pupil-teacher Relationship	Strong bonds among the teachers and the students, cordial relationship between teachers and students, caring relationship between teachers and students, motivation by teachers, teachers are approachable, equal opportunities to all students

#### 3.6.2.7 VALIDATION OF THE SCHOOL EFFECTIVENESS SCALE: Validity refers to

the extent that an instrument accurately assesses what it is intended to measure (Broniatowski & Tucker, 2017). Further, valid instruments provide a measurement that will address and accurately measure the construct they were designed to measure (Frongillo, Baranowski, Subar, Tooze, & Kirkpatrick, 2019). The prepared tool was given to the seven subject experts in field of Education for validation of content for its relevance and appropriateness to the study and its language. The tool was reviewed and accordingly, inclusion, omission and modification of the items in the tool has been done. The list of experts who validated the tools is attached in the appendix. The validated tool is also attached in the appendix. The first draft of the tool was shown to the expert requesting for their suggestions/modification if any. The following suggestions were incorporated in the tools. Initially the first draft of the scale for headmasters and teachers was common for all the headmasters and teachers of government Scheduled tribe and Scheduled caste development high schools. Therefore, the tool was too lengthy and many statements and options were not applicable to all. According to the suggestions of the experts' changes were made and the common tool for collecting data from the headmasters and teachers. After the selection of items based on the review of related literature the drafted items have been to given for validation explained in below.

The items have been sent to seven subject experts from Sambalpur University, The Maharaja Sayajirao University of Baroda (Vadodara), Kalahandi University (Odisha), Navrachana University (Vadodara), Rani Durgavati university (Madhya Pradesh) Reliance Foundation Schools, Mumbai. The content validated with respect to content validity, objectivity, clarity and understandability and accuracy. The subject experts have been requested to mark (√) Appropriate /Inappropriate against each item and, put their remarks for further revision or modification. The indices have been calculated with the formula total number of selected item responses/ total number of responses. The items with the indices greater than 0.5 have been accepted and less than 0.5 have been rejected. The following Table 3.6 shows the content validity of the statements.

**Table 3.7 Content validity of the statements for School Effectiveness Scale**

Statements No	APR/INAPR	Index	Selected	Suggestions
1	APR	0.71	Yes	Students and teachers (keep in two group), Nurturing environment for Learning
2	INAPR	0.28	No	
3	APR	1	Yes	
4	APR	1	Yes	
5	INAPR	0.28	No	
6	APR	0.71	Yes	Keep into two groups, Remove “My”
7	INAPR	0.28	No	
8	APR	0.85	Yes	Mission Suvidya scheme available in Odisha can be ensured
9	APR	0.71	Yes	double barrel questions as 9,10 should be avoided, Need to be modified
10	INAPR	0.28	No	Double barrel questions as 9,10 should be avoided
11	APR	0.85	Yes	Prayer sessions rather than classes
12	APR	0.71	Yes	Be specific (which value-based behaviour you use), Lack of clarity
13	APR	1	Yes	
14	APR	0.85	Yes	Not should be avoided
15	APR	0.71	Yes	Instead of ensure you may use fell/think/observe,
16	INAPR	0.28	No	
17	APR	0.85	Yes	Need to be modified (Fair practices like)
18	APR	1	Yes	
19	APR	1	Yes	
20	INAPR	0.28	No	
21	APR	1	Yes	
22	APR	1	Yes	

Statements No	APR/INAPR	Index	Selected	Suggestions
23	INAPR	0.28	No	Need to be modified (Outdoor learning culture)
24	APR	1	Yes	
25	APR	0.85	Yes	Need to be modified(Why? school to promote)
26	APR	1	Yes	
27	APR	1	Yes	
28	APR	1	Yes	
29	INAPR	0.28	No	
30	INAPR	0.28	No	
31	APR	1	Yes	
32	APR	1	Yes	
33	APR	1	Yes	
34	INAPR	0.28	No	
35	INAPR	0.28	No	You may use “rarely” instead of don’t
36	APR	1	Yes	
37	APR	1	Yes	
38	APR	0.85	Yes	Reframe it
39	APR	0.85	Yes	you may use plan instead of organise
40	APR	1	Yes	
41	APR	1	Yes	
42	APR	0.71	Yes	Need to be modified, You may use all instead of 80%, Why not 100% ?
43	APR	1	Yes	
44	APR	1	Yes	
45	APR	1	Yes	
46	APR	0.85	Yes	Reframe it
47	APR	1	Yes	
48	APR	1	Yes	
49	APR	1	Yes	
50	INAPR	0.28	No	

Statements No	APR/INAPR	Index	Selected	Suggestions
51	APR	1	Yes	
52	INAPR	0.28	No	reframe it
53	APR	1	Yes	
54	INAPR	0.28	No	
55	APR	1	Yes	
56	INAPR	0.28	No	
57	APR	1	Yes	
58	INAPR	0.28	No	Need to be modified
59	APR	1	Yes	
60	APR	1	Yes	Reframe it
61	INAPR	0.28	No	
62	INAPR	0.28	No	
63	INAPR	0.28	No	
64	APR	0.85	Yes	You may use identify instead of detect
65	APR	0.85	Yes	Reframe it
66	INAPR	0.28	No	
67	INAPR	0.28	No	
68	APR	0.85	Yes	Need to be modified
69	INAPR	0.28	No	
70	INAPR	0.28	No	Reframe it
71	INAPR	0.28	No	
72	APR	0.85	Yes	Reframe it
73	APR	0.85	Yes	Reframe it
74	APR	0.71	Yes	Reframe it, You may use remedial classes/enrichment classes instead of tuition
75	INAPR	0.28	No	
76	INAPR	0.28	No	
77	APR	0.85	Yes	Need to be modified
78	INAPR	0.28	No	Reframe it, You may use Not fully able to

Statements No	APR/INAPR	Index	Selected	Suggestions
				instead of unable to
79	INAPR	0.28	No	
80	APR	1	Yes	
81	INAPR	0.28	No	
82	INAPR	0.28	No	Reframe it
83	APR	0.85	Yes	Reframe it
84	INAPR	0.28	No	
85	INAPR	0.28	No	
86	APR	1	Yes	
87	INAPR	0.28	No	Give one example
88	INAPR	0.28	No	
89	APR	1	Yes	
90	APR	0.85	Yes	Reframe it
91	APR	0.85	Yes	Reframe it
92	INAPR	0.28	No	Reframe it, Some of the teachers may not complete but mostly complete the syllabus
93	INAPR	0.28	No	Reframe it, You may use work hard instead of work too hard
94	APR	0.71	Yes	Reframe it, Need to be modified
95	INAPR	0.28	No	Reframe it
96	INAPR	0.28	No	Reframe it, Need to be modified, You may use rarely instead of do not
97	APR	1	Yes	
98	APR	1	Yes	
99	APR	1	Yes	
100	APR	1	Yes	
101	INAPR	0.28	No	
102	APR	1	Yes	
103	APR	0.71	Yes	Reframe it , not fully aware instead of not aware

Statements No	APR/INAPR	Index	Selected	Suggestions
104	APR	0.85	Yes	You may use objectively instead of prejudices
105	APR	0.71	Yes	Reframe it, You may use personal instead of Individual
106	INAPR	0.28	No	
107	APR	1	Yes	
108	APR	1	Yes	
109	APR	1	Yes	
110	APR	1	Yes	
111	INAPR	0.28	No	Need to be modified

APR= Appropriate

INAPR= Inappropriate

The grouping of the finalized items has been given below in the Table 3.7

**Table No. 3.8 Finalised Items of School Effectiveness with their dimensions**

SL No.	Item Number	No. of Item Allotted	Dimension
1	1 to 12	12	School Culture
2	13 to 24	12	Resource Management
3	25 to 36	12	Academic Achievement
4	37 to 48	12	Pupil Development
5	49 to 60	12	Teacher Effectiveness
6	61 to 72	12	Pupil-teacher Relationship

**3.6.2.8 RELIABILITY:** The reliability of School Effectiveness Scale was analyzed through internal reliability test. For this purpose, using SPSS (Statistical software for the Social Sciences) version 20.0 and Cronbach alpha has been used which gave internal reliability of the School Effectiveness Scale as 0.945, which according to Cronbach (1951) signified a ‘Good’ reliability attribute of a scale.

### **3.7 SEMI-STRUCTURED INTERVIEW SCHEDULE**

The semi-structured interview was conducted for the headmasters by the investigator to identify the problems that comes in the way of practicing their leadership behaviour. The interview was conducted based on seven different traits and skills, whereas traits were cooperation, courage, trust, and skills are decision-making, problem-solving, motivation, and communication of the Government Scheduled Tribe and Scheduled Caste Development high school headmasters.

### **3.8 DATA COLLECTION PROCEDURE**

The permission for data collection was taken from the Under Secretary to the Government of Odisha, ST & SC Development, Minorities & Backward Classes Welfare (M & BCW) Department and Districts Welfare Officer of various districts like Rayagarh, Malkangiri, Koraput, Nabarangpur, Kalahandi, Nuapada, Bolangir, and finally Subarnapur. The data was collected by the researcher personally with the help of leadership behaviour scale, school effectiveness scale from headmasters and teachers and conducted semi-structural interview of headmasters during the academic session of 2023-24 during the month of November and December from the Scheduled Tribe and Scheduled Caste high school of tribal district of Odisha.

### **3.9 DATA ANALYSIS PROCEDURE**

The data analysis for quantitative analysis was conducted using SPSS, incorporating a comprehensive statistical approach that encompassed both descriptive and inferential statistics to test the null hypotheses and generalize the research outcomes. Descriptive statistics were utilized to summarize and describe the main features of the collected data, providing a clear picture of the sample characteristics. Specifically, the mean (M) was used to represent the central tendency of the data, while the difference of means ( $\Delta M$ ) helped compare means between different groups or conditions. Standard deviation (SD) measured the amount of variation or dispersion in the data set, and the standard error of mean (SEM) quantified the precision of the mean estimate. The t-value was used in hypothesis testing to determine whether there was a significant difference between the means of two groups, and degrees of freedom

(df) were crucial in determining the critical value of the t-distribution for hypothesis testing.

To draw conclusions about the population based on the sample data, Pearson's Correlation Coefficient ( $r$ ) was employed. This coefficient measures the strength and direction of the linear relationship between two variables, with values ranging from -1 to +1, where +1 indicates a perfect positive linear relationship, -1 indicates a perfect negative linear relationship, and 0 indicates no linear relationship. Pearson's correlation is essential for understanding the degree to which variables are related, informing further analysis and interpretation of the data.

The primary goal of null hypothesis testing is to determine whether there is enough evidence to reject the null hypothesis, which typically states that there is no effect or no difference. By comparing the calculated t-value against the critical value from the t-distribution table using degrees of freedom, the researchers can determine statistical significance. If the calculated t-value exceeds the critical value, the null hypothesis is rejected, suggesting that the observed difference is statistically significant.

For this study, the researcher analyzed transcripts from semi-structured interviews with headmasters. These interviews cover the leadership behaviour of headmasters concerning dimensions such as "Cooperation," "Courage," "Trust," "Decision-Making," "Problem Solving," "Motivation," and "Communication." By applying content analysis, the researcher aims to identify the problem that comes in the way of effectiveness of leadership behaviour of the scheduled tribe and scheduled caste development high school headmasters. The goal is to uncover recurring themes and patterns in the headmasters' responses, providing insights into their perspectives and experiences. This approach will help us understand the common issues and dimensions that shape their roles and interactions with various stakeholders in the education system. Through content analysis, the researcher identified common themes, patterns, and recurring issues across different dimensions and stakeholder interactions.

In conclusion, this study employed a comprehensive approach to data analysis, utilizing both quantitative and qualitative methods to investigate the effectiveness of leadership behavior in educational settings. Quantitative analysis, conducted using SPSS, involved descriptive and inferential statistics to test null hypotheses and generalize research outcomes. Descriptive statistics, including mean, standard deviation, and standard error of the mean, provided insights into sample characteristics, while inferential statistics such as the t-value and Pearson's correlation coefficient facilitated hypothesis testing and understanding of relationships between

variables. Content analysis of semi-structured interviews with headmasters further enriched the study by uncovering recurring themes and patterns in leadership behavior, shedding light on common problems and dimensions shaping their roles and interactions within the education system. By integrating these analytical approaches, this study offers valuable insights into effective leadership practices and informs strategies for improving educational outcomes.

### **3.10 LEVEL OF SIGNIFICANCE**

The null hypothesis has been statistically tested to the level of significance as 0.05.

### **3.11 CONCLUSION**

Through this chapter the researcher has presented the methodology of research applied for the present study. The researcher described the plan and procedure followed for the study. The methodology of this research provided a comprehensive framework for investigating the leadership behavior of headmasters and the effectiveness of schools in the Government Scheduled Tribe and Scheduled Caste Development High Schools of Odisha. After defining the problem and setting the hypothesis, the study utilized a descriptive survey method to systematically collect and analyze data. All the Headmasters and Teachers in the Government Scheduled Tribe and Scheduled Caste Development High School of Odisha were forming the population of the present study. Data was gathered using the Leadership Behaviour Scale, the School Effectiveness Scale, and semi-structured interviews.

