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Assessment of Teachers' Awareness Level of Tribal Indigenous Practices and its Integration in School Education System for Attainment of Sustainable Development

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Abstract

The Sustainable Development Goals (SDGs) are largely facilitated by ESD, which focuses on creating the behaviours that individuals and communities need to live sustainably, to meet present needs without endangering the ability of future generations to do the same. Education address interconnected global concerns including inequality, unsustainable resource use and climate change and biodiversity loss. Tribal indigenous practices are the observations, innovations, customs, beliefs, and written and oral wisdom that indigenous tribes and people have produced through their interactions and experiences with the environment. The present research study explored the teachers' awareness level of tribal indigenous practices and its integration in school education system for attaining sustainable development goals in the state of Jharkhand in India. To conduct this research study 80 teachers were selected through multistage cluster samplings from five province of Jharkhand. The result of this research study revealed that the secondary school teachers' exhibited average level of awareness regarding tribal indigenous practices and further their integration of the tribal indigenous practices in school education system in also at average level. There was not any significant difference of awareness level of tribal indigenous practices among secondary school teachers with respect to gender and experience. Teachers displayed significant differences in awareness level of tribal indigenous practices only in respect of stream; Science teachers showed significantly better awareness level of tribal indigenous practices than social science teacher.

Keyword: TIP - Tribal Indigenous Practices, ESD - Education for Sustainable Development, SDG - Sustainable Development Goals, SES – School Education System.

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1. Introduction

Indigenous practices or indigenous ways of being, living, knowing and doing are about relationship and connections throughout our physical, mental, and spiritual selves (Bastien, 2004; Battiste, 2013). People who get education for sustainable development are equipped with the beliefs, attitudes, behaviours, and practices necessary to live in a way that benefits society, the economy, and the environment. It inspires individuals to make wise, responsible decisions that contribute to a brighter future for everybody. From the standpoint of critical pedagogy, practices are not only situated in social and cultural contexts, but it is also imbued with power. It is produced by interacting with people within the background of each given circumstance (Kincheloe, 2008; Kovach, 2009; Freire, 2000/1970). Indigenous practices have been marginalized and excluded from both formal and informal learning environments in Canada due to the colonial culture (Battiste, 2013).

Long-standing practices, wisdom and customs are typically referred as indigenous practices or other coterminous names like traditional practices and local practices and customs of local populations or indigenous peoples. Traditional wisdom has frequently been transmitted orally from one generation to the next. Stories, folklore, rituals, songs, artwork, laws, and even folklore are some of the ways that traditional practices are expressed. The necessity of greater levels of coexistence between humans and their natural environment is highlighted by indigenous practices.

The tribes of Jharkhand, India consist of 32 tribes inhabiting the Jharkhand state in India. The tribes in Jharkhand were originally classified based on their cultural types by the Indian Anthropologist, Lalita Prasad Vidyarthi Hunter gatherer type – Birhor, Korwa, hill Kharia, Shifting agriculture - Sauria Paharia, Simple artisans - Mahli, Lohra, Karmali, Chik Baraik. Settled agriculturist– Santhal, Munda, Oraon, ho, Bhumij. The Scheduled Tribe (ST) population of Jharkhand State is as per 2001 census 7,087,068 constituting 26.3 percent of the total population (26,945,829) of the state. The Scheduled Tribes are primarily rural as 91.7 percent of them reside in villages. Jharkhand has 32 tribal groups. The majority of tribal people, who make up over 28% of the total population, reside in Jharkhand, one of the eastern states. Thirty-two tribes call it home, including eight archaic tribes. The tribes were mostly rural, and their economy was centred mostly on agriculture, which was exploited using rudimentary methods and dependent on the natural seasons.

NEP 2020 suggested that inculcation of our tribal insight's practices into the curriculum for sustainable development. In addition, NEP 2020 suggests that the "Practices of India" will encompass information about ancient India and its contributions to current India, as well as its achievements and difficulties, as well as a thorough understanding of India's future goals regarding health, education, the environment, and other areas. In particular, Indian Practices Systems, including tribal practices and indigenous and traditional ways of learning, will be covered and included in mathematics, astronomy, philosophy, yoga, architecture, medicine, agriculture, engineering, linguistics, literature, sports, games, governance, polity, and conservation. These elements will be accurately and scientifically incorporated throughout the school curriculum wherever appropriate.

NCFSE 2023 also advocated for the rootedness and pride in Ancient Indian tradition and culture. The rich history of Indian contributions to various fields not only develops pride and self-confidence, but also enriches learning in those areas. For example, the approach to Environmental Education is deeply enriched by the range of nature-conservation traditions across India, the approach to Values and Ethics is rooted in Indian concepts and practices of respect and compassion for fellow humans and all creatures.

This study focuses on Awareness level of Teachers about the tribal indigenous practices of education for sustainable development (ESD). The two main concepts tribal indigenous practices and education for sustainable development were identified.

2. Tribal Indigenous Practices

Each and every tribe has different kind of indigenous practices. Indigenous practices are distinct body of practices that has grown over time and is still evolving because of generations of people living in close proximity to the natural world and its creatures. The local community can better grasp the social, cultural, political, economic, and environmental aspects of their local environments by applying their ideas and beliefs in a different way. It encompasses biological, physical, social, cultural, and spiritual systems and is founded on a wealth of observations, abilities inherited down the generations, and evidence gained from long-term experiences and direct interaction with the environment.

In this instance, indigenous practices is primarily focused on combining intelligence to create cultural outputs that are intended to preserving society's strength (Sillitoe, 2000). Nakashima (2002) defines it as cumulative body of practices, know-how, practices, and representations maintained and

developed by peoples with extended histories of interaction with the natural environment serves as the foundation needed to support local level decision-making processes on the essential elements of daily problems, claims Sillitoe (1998). The indigenous practices are social capital of the tribal people or local people. Their primary resource for investing in the fight for survival, food production, and provision for safety and to gain authority over their own life. However, the consequences for other people can also be harmful when abilities, technology, artifacts, and problem-solving techniques. Indigenous groups' expressions, customs, beliefs, comprehensions, insights, and experiences are all included in Indigenous practices, which are produced by throughout many centuries of close engagement with a specific region. Even though it shares some characteristics with other groups due to being ingrained in a broader, shared culture, its variations and mechanisms are specific to each community. IP is the cornerstone of Indigenous governance, ecological stewardship, social, ethical, linguistic, spiritual, medical, food and economic systems everywhere. As a result, the ongoing creation and dissemination of local, land-based practices forms the basis of Indigenous groups' survival as distinct peoples as well as their identity and sense of place in the world.

3. Education for Attainment of Sustainable Development

Sustainable development is the overarching paradigm of the United Nations. The concept of sustainable development was described by the 1987 Brundtland Commission Report as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs.

The goal of education for sustainable development (ESD) is to enable people and communities to make wise choices and behave responsibly for the sustainability of the environment, society, and economy. It is a comprehensive strategy that considers how economic, social, and environmental concerns are interconnected and practices that all three must be integrated for sustainable development. ESD seeks to provide people the values, abilities, and information necessary to tackle the problems associated with sustainable development. This entails realizing how the natural world is interconnected, appreciating how human activity affects the environment, and creating plans to lessen adverse effects and encourage constructive transformation.

By encouraging a sustainable culture, ESD can contribute to the development of a more sustainable future. ESD may inspire people and communities to embrace sustainable behaviours and make contributions to sustainable development by advancing sustainable practices and values.

ESD can be approached in a variety of ways, from community-based learning programs to formal teaching in schools and colleges. Among the recurring themes are social justice and equity, renewable energy, sustainable agricultural and food systems, waste reduction and recycling, and environmental awareness and conservation. All things considered, ESD is a crucial instrument for advancing sustainable development and building a more sustainable future. ESD can contribute to the creation of a more sustainable and equitable world for all by equipping people and communities with the values, practices, and abilities necessary to address environmental, social, and economic issues.

4. Objective

1. To assess the awareness level of teachers about the tribal indigenous practices and its integration in school education for sustainable development.

5. Research Question

1. What is the awareness level of teachers about the tribal indigenous practices?
2. What is the level of integration of tribal indigenous practices in school education system for sustainable development?

6. Tools and Techniques of the study

Teachers' awareness level about tribal indigenous practices of education for sustainable development (ESD) are divided into three dimensions such as awareness related to society, awareness related to economy and awareness related to environment and each dimension contains 10 items with maximum score 5 marks for each item. Therefore, each dimension has maximum score 50 and over all dimensions maximum score is (50×3=) 150. Here the five point likert scale was used to collect data from secondary school teachers. After data collection from 80 teachers, their responses were assessed and scored. Teaches obtained scores are converted into percentage dimension wise as well as overall dimensions and find out the measures of central tendencies (Mean, Median and Mode), Standard

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Deviation, Kurtosis and Skewness to know the tendency of the sample and normality of the sample.

The details measures and graph are given below:

Table1.1. Descriptive statistics for awareness level of teachers about the tribal indigenous practices.

N	Mean	Median	Mode	S.D.	Skewness	Kurtosis
80	76.56	76.67	76.6	8.31	-1.50	5.54

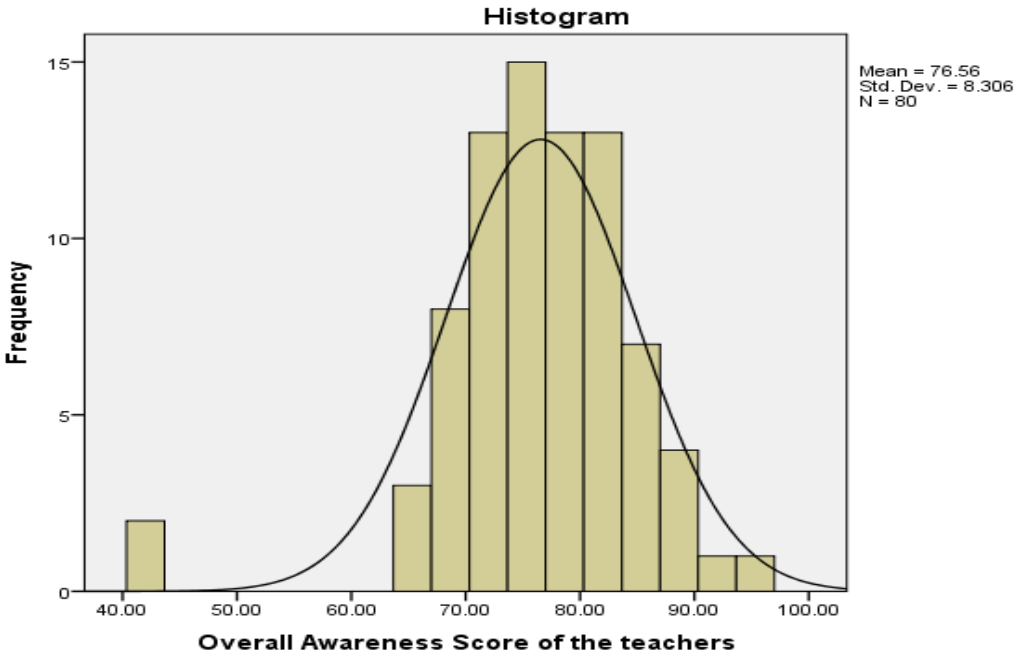

Fig-1.1 Overall Awareness Score of the teacher about the tribal indigenous practices of Education for Sustainable Development (ESD)

The above table-1 and Fig-1 show that total number of samples is 80 and mean, median and mode values are 76.56, 76.67 and 76.666 respectively which are approximately same that is nature of the distribution is normal distribution.

The conventional procedure of SD (Standard. Deviation) distance from the mean (M) was used for finding the awareness level of the teachers about the tribal indigenous practices of Education for Sustainable Development (Peedikayil, Vijayan & Kaliappan,2023; Srivastava, 2024) for this, the

teachers who got the score around (M+1SD) i.e. that is (76.56+8.31=) 84.87 and above are treated as high level group or Above Average level awareness group and teachers who got the score around (M-1SD) i.e. that is (76.56-8.31=) 68.25 and below are treated as low/level group or Below Average level Awareness. The obtained score lies between these two scores (84.87 and 68.25) are considered as an average group or Average level Awareness.

7. Analysis on Overall awareness level

On the base of above range that is i) Below Average level Awareness (Below 68.25% score), ii) Average level Awareness (68.25% to 84.87% score), iii) Above Average level Awareness

(More than 84.87% Score) it is found the awareness level of the teachers as per overall dimensions, as well as the three component dimensions (awareness related to society, awareness related to economy and awareness related to environment). These are given below

Table-1.2: The awareness level of teachers about the tribal indigenous practices as per overall dimensions as well as the three component dimensions (awareness related to society, awareness related to economy and awareness related to environment)

Dimension (T)	**N**	**Below Average level Awareness (Below 68.25% score)**		**Average level Awareness (68.25% to 84.87% Score)**		**Above Average level Awareness (More than 84.87% Score)**	
		No.	**%age**	**No.**	**%age**	**No.**	**%age**
Overall	80	8	10%	65	81.25%	7	8.75%
Society		22	27.5%	52	65%	6	7.5%
Economy		9	11.25%	58	72.5%	13	16.25%
Environment		4	5%	51	63.75%	25	31.25%

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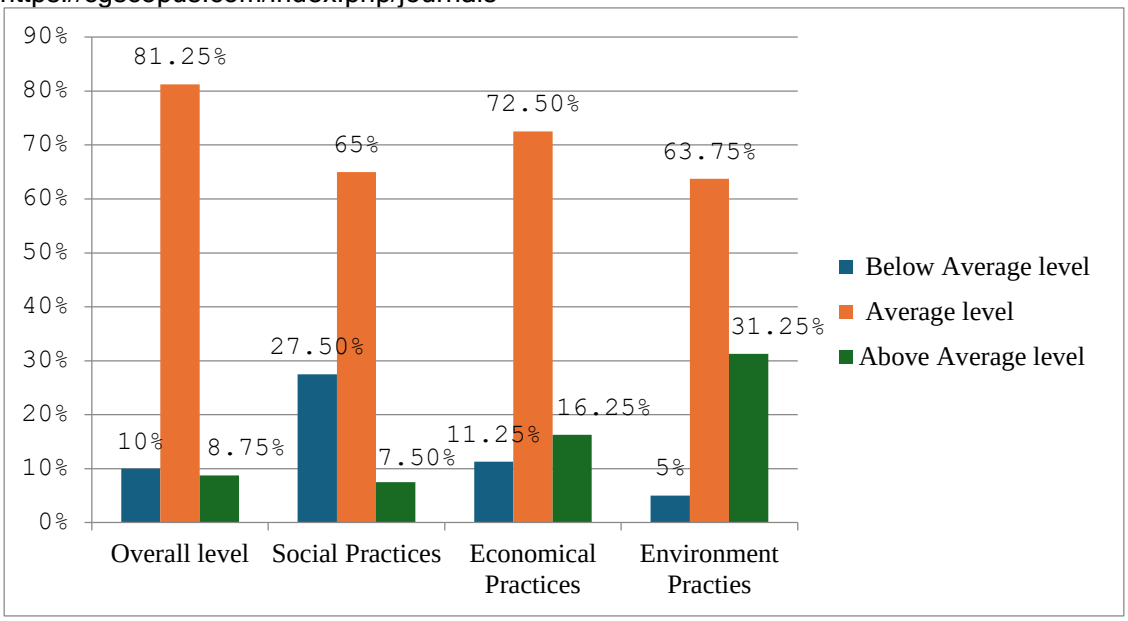

Fig. 1.2 Awareness level of teachers overall as well as per the 3 component dimensions (Social, Economical and Environmental)

From the above Table-1.2 and Fig – 1.2, It is depicted toward tribal indigenous practices for ESD that highest percentage (81.25%) of teachers have average awareness level in overall dimension. But only few percent (8.75%) of teachers are belongs to the above average awareness level in overall dimension. 27.5% teachers have below average awareness level in society dimension, which is more than other dimensions. But only 5%teachers belong to below average awareness level and highest percentage (31.25%) of teachers belong to above average awareness level in environmental dimension.

Overall dimension awareness score of the teacher about the tribal indigenous practices of Education for Sustainable Development (ESD) are in interval scale, and mean, median and mode values are 76.56, 76.67 and 76.666 respectively which are approximately same that is nature of the distribution is normal distribution. So, the researcher is used parametric test (Independent t-test) to test the null hypothesis required for the comparison of Male & Female teacher; More than equal to 5 years & less than 5 years experienced teacher; Science & Social Science teacher and Post Graduate & Graduate educational qualification of the teacher.

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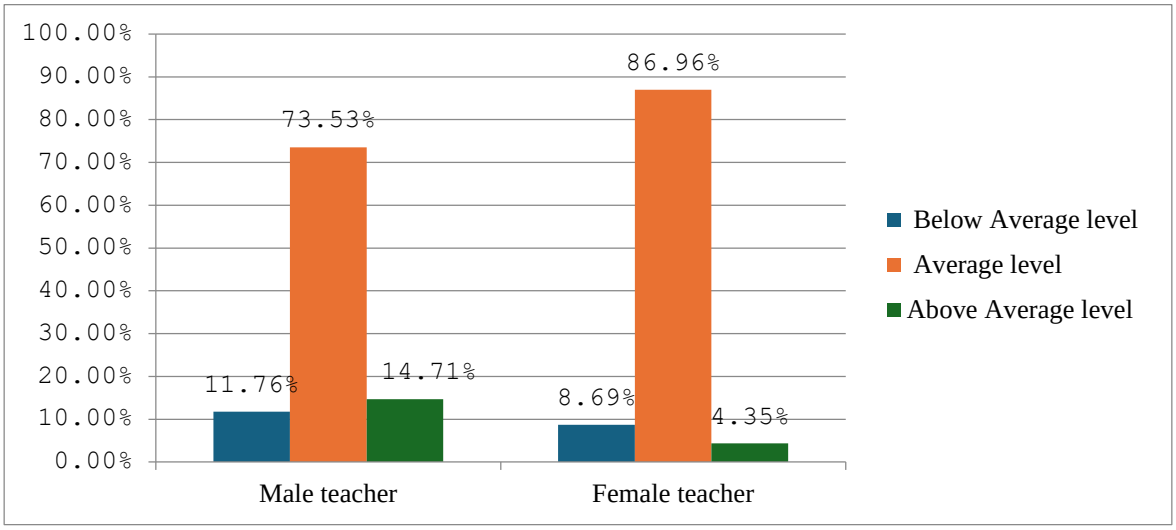
7.1 Awareness' level as per Gender

Table-1.3: The awareness level of Male and Female Teachers about the tribal indigenous practices of Education for Sustainable Development (ESD) as per as per overall dimensions

	No.	Below Average level Awareness (Below 68.25% score)		Average level Awareness (68.25% to 84.87% Score)		Above Average level Awareness (More than 84.87% Score)	
		No.	%age	No.	%age	No.	%age
Male	34	4	11.76%	25	73.53%	5	14.71%
Female	46	4	8.69%	40	86.96%	2	4.35%

Fig-1.3: The awareness level of Male and Female Teachers about the tribal indigenous practices of Education for Sustainable Development (ESD) as per as per overall dimensions



From the above table-1.3 and Fig-1.3, it is seen that more female teachers belongs to average awareness level (86.96%) than male teacher (73.53%). But more percentage of male (14.71%) teacher belong to above average awareness level than female (4.35%) teacher

To compare the awareness level of Male and Female teachers, the required null hypothesis is

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H0: There is no significant difference exist in the mean overall dimension awareness scores of Male and Female teachers.

Table-1.4: Descriptive Statistics for Male and Female teacher on Overall Awareness Score of the teacher

Descriptive Statistics					
	Gender (Male-1, Female-2)	N	Mean	Std. Deviation	Std. Error Mean
Overall Awareness Score of the teacher	Male	34	76.16	10.85	1.86
	Female	46	76.86	5.88	.87

Fig-1.4: Comparison of the mean overall dimension awareness scores of Male and Female teachers

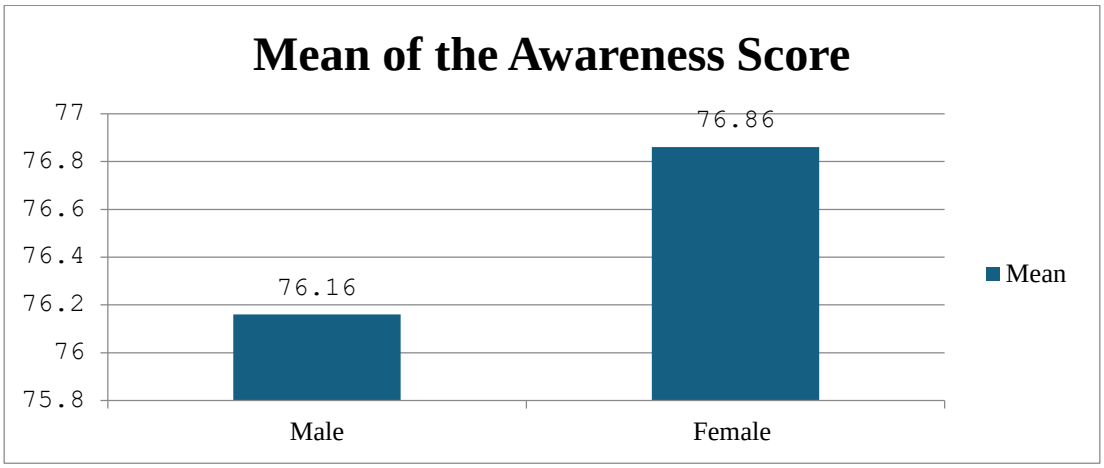

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Table-1.5: Independent Samples t-Test for Male and Female

		Levene's Test for Equality of Variances		Decision			
		F	Sig.	t	df	Sig. (2-tailed)	
Overall Awareness Score of the teacher	Equal variances assumed	3.14	.080	-.37	78	.713	Not significant
	Equal variances not assumed			-.34	47.22	.735	Not significant

From the Descriptive statistics table-1.4 and Fig-1.4 it is seen that mean of male (76.16) and female (76.86) are approximately same and from the inferential statistics (independent t – test, table -1.5) it is found that p-value is **.713** for Equal variances assumed and .735 for Equal variances not assumed which are more than .05 that is null hypothesis is not significant at .05 significant level. So we are unable to reject the null hypothesis. So it is concluded that there is no significant difference exist in the mean overall dimension awareness scores of Male and Female teachers.

7.2 Awareness' level as per Experience

The awareness level of more than equal to 5 years experienced teacher and less than 5 years experienced teachers about the tribal indigenous practices of Education for Sustainable Development are given below as per overall dimension.

Table-1.6: The awareness level of more than equal to 5 years experienced teacher and less than 5 years experienced teachers about the tribal indigenous practices of Education for Sustainable Development (ESD) as per as per overall dimensions.

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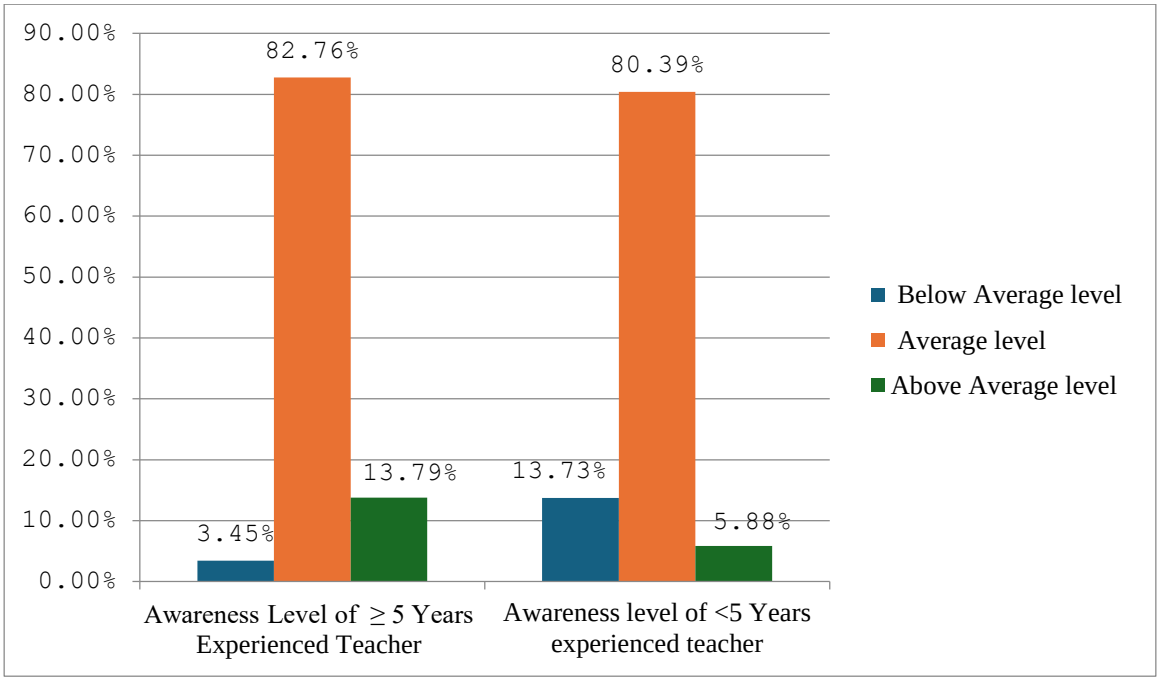
Experience (≥ 5 Years-1/ <5 Years-2)	**No.**	**Below Average level Awareness (Below 68.25% score)**		**Average level Awareness (68.25% to 84.87% Score)**		**Above Average level Awareness (More than 84.87% Score)**	
		No.	**%age**	**No.**	**%age**	**No.**	**%age**
≥5 Years	29	1	3.45%	24	82.76%	4	13.79%
<5 Years	51	7	13.73%	41	80.39%	3	5.88%

Fig-1.5: The awareness level of ≥5 years experienced teacher and <5 years experienced teachers about the tribal indigenous practices of Education for Sustainable Development (ESD) as per as per overall dimensions



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From the above table-1.6 and Fig-1.5, it is seen that 82.76% more than equal to 5 years experienced teacher belongs to average awareness level where as 80.39% less than 5 years experienced teachers belongs to average awareness level.

To compare the awareness level of more than equal to 5 years experienced teacher and less than 5 years experienced teachers, the required null hypothesis is

H0: There is no significant difference exist in the mean overall dimension awareness scores of more than equal to 5 years experienced teacher and less than 5 years experienced teachers.

Table-1.7: Descriptive Statistics for more than equal to 5 years experienced teacher and less than 5 years experienced teachers on Overall Awareness Score of the teacher

Descriptive Statistics					
	Experience (≥ 5 Years-1/ <5 Years-2)	N	Mean	Std. Deviation	Std. Error Mean
Overall Awareness Score of the teacher	More than equal to 5 Years	29	78.18	6.58	1.22
	Less than 5 Year	51	75.63	9.08	1.27

Fig-1.6: Comparison of the mean overall dimension awareness scores of more than equal to 5 years experienced teacher and less than 5 years experienced teachers

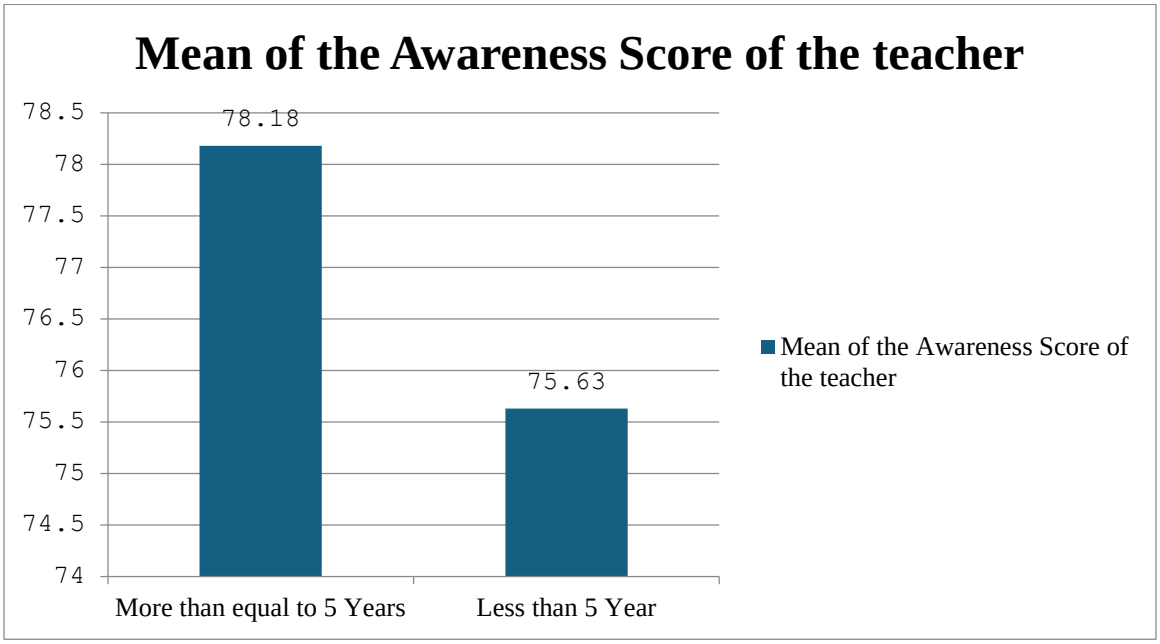

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Table-1.8: Independent Samples t-Test for More than equal to 5 Years and Less than 5 Year Experienced Teachers

		Levene's Test for Equality of Variances		**Decision**			
		F	**Sig.**	**t**	**df**	**Sig. (2-tailed)**	
Overall Awarenes s Scores	Equal variances assumed	.241	.625	1.326	78	.189	**Not significant**
	Equal variances not assumed			1.447	73.336	.152	**Not significant**

From the Descriptive statistics table-1.8 and Fig-.1.6 it is seen that mean of more than equal to 5 years experienced teacher (78.18) and less than 5 years experienced teachers (75.63) are approximately same and also from the inferential statistics (independent t – test, table -4.1.8) it is found that p-value is **.**189 for Equal variances assumed and .152 for Equal variances not assumed which are more than .05 that is null hypothesis is not significant at .05 significant level. So, the researcher unable to reject the null hypothesis. So it is concluded that there is no significant difference exist in the mean overall dimension awareness scores of more than equal to 5 years experienced teacher and less than 5 years experienced teachers.

7.3 Awareness level as per Stream

The awareness level of Science and Social Science teachers about the tribal indigenous practices of Education for Sustainable Development are given below as per overall dimension.

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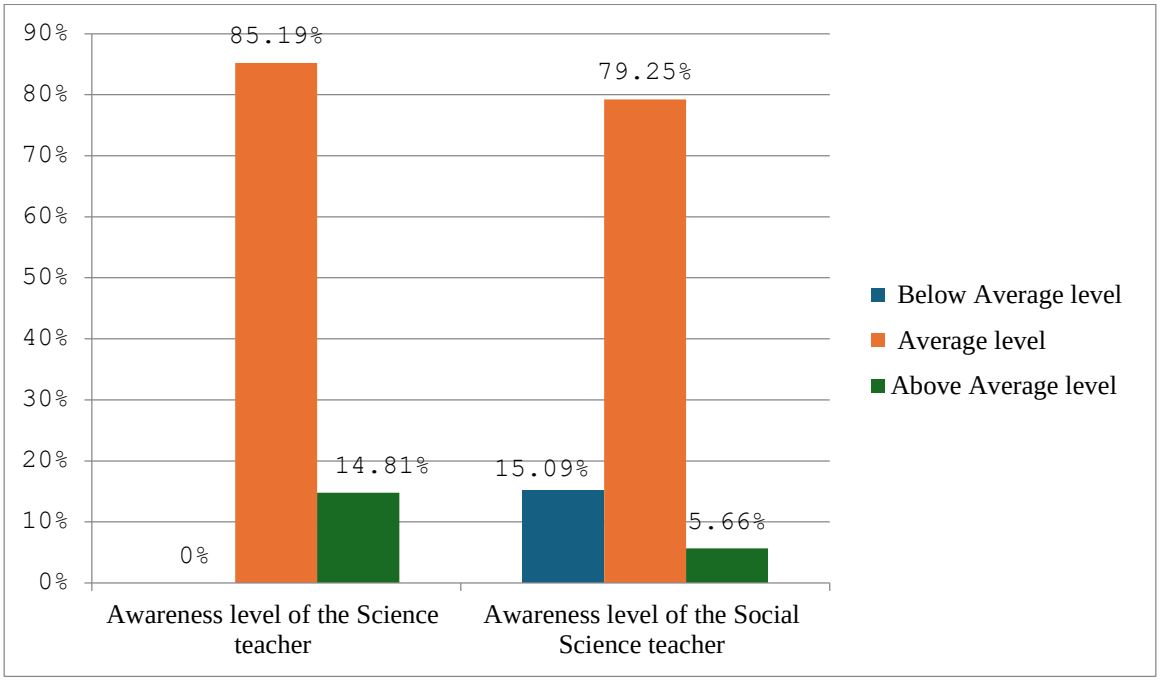
Table-1.9: The awareness level of Male and Female Teachers about the tribal indigenous practices of Education for Sustainable Development (ESD) as per as per overall dimensions

Stream (Science-1/Social Science-2)	No.	Below Average level Awareness (Below 68.25% score)		Average level Awareness (68.25% to 84.87% Score)		Above Average level Awareness (More than 84.87% Score)	
		No.	%age	No.	%age	No.	%age
Science	27	0	0%	23	85.19%	4	14.81%
Social Science	53	8	15.09%	42	79.25%	3	5.66%

Fig-1.7: The awareness level of Science and Social Science Teachers about the tribal indigenous practices of Education for Sustainable Development (ESD) as per as per overall dimensions



From the above table-1.9 and Fig-1.7, it is seen that more science teachers belong to average awareness level (85.19%) than social science (79.25%) and also it is seen that more science (14.81%) teachers belong to above average awareness level than social science (5.66%) teachers.

To compare the awareness level of Science and Social Science teachers, the required null hypothesis is H0: There is no significant difference exist in the mean overall dimension awareness scores of Sciences and Social Science teachers.

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Table-1.10: Descriptive Statistics for Science and Social Science teacher on Overall Awareness Scores

Descriptive Statistics					
	Stream (Science-1/Social Science-2)	N	Mean	Std. Deviation	Std. Error Mean
Overall Awareness Score	**Science**	27	79.09	5.92	1.14
	Social Science	53	75.27	9.07	1.25

Fig-1.8: Comparison of the mean overall dimension awareness scores of Sciences and Social Science teachers

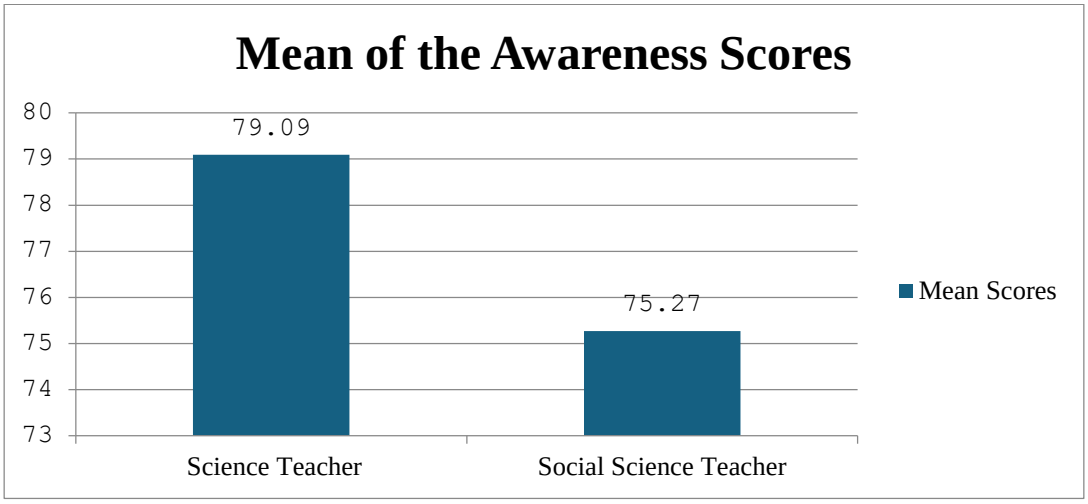

Table-1.11: Independent samples t-Test for science and social science teacher

		Levene's Test for Equality of Variances		**Decision**			
		F	Sig.	t	df	Sig. (2-tailed)	
Overall Awareness Scores	Equal variances assumed	1.61	.20	1.97	78	.05	Not significant
	Equal variances not assumed			2.26	73.07	.02	Significant

From the Descriptive statistics table-4.1.11 and Fig-4.1.8 it is seen that mean value of Science teachers (79.09) is more than Social Science teachers (75.27) and also from the inferential statistics(independent t – test, table -4.1.10) it is found that p-value is **.051** for Equal variances assumed which are more than .05 that is null hypothesis is not significant at .05 significant level but p-value is .027 for Equal variances not assumed which is less than .05 that is null hypothesis is significant at .05 significant level. So, the researcher rejects the null hypothesis. So, it is concluded that there is a significant difference exist in the mean overall dimension awareness scores of Sciences and Social Science Teacher.

8. Findings and Discussions

81.25% of teachers have average awareness level in overall dimension (awareness related to society, awareness related to economy and awareness related to environment). Only few percent (8.75%) of teachers are belongs to the above average awareness level in overall dimension. 27.5% teachers have below average awareness level in society dimension, which is more than other dimensions. Only 5%teachers are belonging to below average awareness level and highest percentage (31.25%) of teachers are belongs to above average awareness level in environmental dimension. There is no significant difference exist in the mean overall dimension awareness scores of Male and Female teachers. There is no significant difference exist in the mean overall dimension awareness scores of more than equal to 5 years experienced teacher and less than 5 years experienced teachers. There is a significant difference exist in the mean overall dimension awareness scores of Sciences and Social Science Teacher. There is no significant difference exist in the mean overall dimension awareness scores of Post Graduate and Graduate teachers. Hence from the above results, it can be revealed that most of the teachers belong to moderate or average awareness level and also exhibit average level of indigenous practices in school education system.

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