Scientific Creativity of SC-ST Students According To Socio-Demographic Variables

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Abstract: ***Scientific creativity means creative work in sphere of science. All inventions, innovations, discoveries in science consider scientific creativity. They think differently from common man and open new ways of living and survive. Only few people come in this category i.e. Newton, A P J Abdul kalam, Darwin etc gave their matchless creation to the world. This is the era of science and technology so it is vary necessary to see the creative potential of students in this area so that we can encourage students to show their ability in this area To observe the creative potential of Scheduled caste students in science scientific creativity test (1971) by Karuna Sanker Mishara was used. Ideational fluency, Originality and flexibility were assessed through this test. Results of Scientific creativity are given as under.***

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4.2.1 Demographic Impact on Fluency dimension of Scientific Creativity: Significance Level

Fluency is the ability of person to produce number of relevant and unrepeated ideas. Relevance is judged on the basis of the appropriateness of the response when considered in relation to the test problem and an unrepeated idea is one which has been expressed only once under given problem.

There are certain myths in the social setup that demographic variables affect the level of fluency dimension of creativity. To ascertain this myth whether the demographic variables have any impact on the fluency dimension of creativity of the scheduled caste students, the significance level has been calculated by applying t-test and F-test the results have been presented in the **Table 4.2.1**

Table-4.2.1

Significance Level of **Fluency** Dimension of Demographic Impact on Scientific Creativity of Scheduled Caste Students

Statically Result Respondent	Category	N	%	Mean	Value
Gender	Male	122	40.66	47.76	t-Value
	Female	178	59	14.67	28.28*
Residential Area	Rural	170	50	46.42	t-Value
	Urban	130	43.33	13.33	37.6*
Marital Statues	Married	70	23.33	16.2	t-Value
	Unmarried	230	73.33	14.06	1.57
Type of Family	Nuclear	172	57.33	15.99	t-Value
	Joints	128	42.66	13.76	1.9
Caste Category	SC 1	125	41.66	11.6	t-Value
	SC 2	175	58.33	16.57	4.25*
Mother Occupation	H. Wife	238	79.33	14.21	t-Value
	In Service	62	20.66	16.53	1.63
Father Occupation	Laborer	138	46.00	12.87	
	Govt Job	121	40.33	14.25	F-Value
	Pvt Job	27	9.00	14.3	4.33*
	Business	14	4.66	23.02	
Father Education	Illiterate	32	10.66	13.47	
	Upto 10+2	174	58.00	13.61	F-Value
	Graduation	43	14.33	16.45	6.58*
	P. Graduation	40	13.33	17	
Mother Education	Illiterate	49	16.33	6.6	
	Upto 10+2	204	68.00	15.06	F-Value
	Graduation	26	8.66	17.94	8.95*
	P. Graduation	21	7.00	18.73	
Family Income(per Month)	Upto 10000	150	50.00	12.65	F-Value
	10000-20000	60	20.00	21.2	8*
	Above 20000	90	30.00	18.6	
Academic Stream	Science	78	26.00	23.92	F-Value
	Arts	201	67.00	8.09	81.28*
	Commerce	21	7.00	7.24	

** Significant at 0.05 levels of significance*

Interpretation

The table 4.2.1 brings out that the obtained t- value (28.28) does highly signify the difference among **Male and Female** scheduled caste students on fluency dimension of creativity at 0.05 levels of significance. Therefore the null/hypothesis i.e. "There exists no significant difference among male and female scheduled caste students on Fluency Dimension of creativity" stands rejected and hence it can be concluded that there is significant difference in the fluency dimension of male and female scheduled caste students.

With regard to the **Residential Area Categories** of the respondents the obtained t-value (37.6) is also highly significant at 0.05 levels. Therefore the null hypothesis, "There exists no significant difference among scheduled caste students of Rural and Urban areas on Fluency dimension of creativity" is rejected and hence concluded that there is significant difference in the Fluency dimension of creativity of scheduled caste students on the basis of residential area.

With regard to the **Marital Status Categories** of the respondents the obtained t-value (1.57) is not significant at 0.05 level of significance. Therefore the null hypothesis, "There exists no significant difference among married and unmarried scheduled caste students on Fluency Dimension of Creativity" is accepted and it can be concluded that there is no significant difference in the Fluency dimension of creativity of scheduled caste students on the basis of Marital status.

Further with regard to the **Type of Family Categories** of the respondents the obtained t-value (1.9) is also not significant at 0.05 levels. Therefore the null hypothesis, "There exists no significant difference among Scheduled caste students belongs to Nuclear and Joint family," is accepted and it can be concluded that there is no significant difference on fluency Dimension of Creativity of scheduled caste students on the basis of type of family.

With regard to the **Caste Categories** of the respondents the obtained t-value (4.25) does significant at 0.05 levels. Therefore, the null hypothesis, "There exists no significant difference among scheduled caste students belongs to caste categories on fluency Dimension of Creativity" is rejected and it can be concluded that there is significant difference on fluency Dimension of Creativity of scheduled caste students on the basis of caste categories.

With regard to the **Mother Occupation Categories** of the respondents the obtained t-value (1.63) is no significant at 0.05 levels. Therefore, the null hypothesis, "There exists no significant difference among scheduled caste students belongs to mother occupation on fluency Dimension of Creativity" is accepted and it can be concluded that there is no significant difference on fluency Dimension of Creativity of scheduled caste students on the basis of mother occupation.

In relation to **Father Occupation** of the respondents the obtained f-value (4.33) is significant at 0.05 levels. Therefore the null hypothesis, "There exists no significant difference among scheduled caste students on father occupation on fluency Dimension of Creativity" is rejected hence it can be concluded that there is a significant difference among scheduled caste students on father occupation on fluency Dimension of Creativity.

Further with regard to **Father Education** of the respondents the obtained f-value (6.58) is also significant at 0.05level. Therefore the null hypothesis, "There exists no significant difference among scheduled caste students on Father Education on fluency Dimension of Creativity" is rejected hence it can be concluded that there is significant difference among scheduled caste students on Father Education on fluency Dimension of Creativity.

With regard to **Mother Education** of the respondents the obtained f-value (8.95) is also significant at 0.05 levels. Therefore the null hypothesis, "There exists no significant difference among scheduled caste students on Mother Education on fluency Dimension of Creativity" is rejected hence it can be concluded that there is significant difference among scheduled caste students on the basis of mothers education, on fluency Dimension of Creativity.

With regard to **Family Income** of the respondents the obtained f-value (8.00) is significant at 0.05 levels. Therefore the null hypothesis, "There exists no significant difference among scheduled caste students on Family income on fluency Dimension of Creativity" is rejected hence it can be concluded that there is significant difference among scheduled caste students on Family income, on fluency Dimension of Creativity.

With regard to **Academic Stream** of the respondents the obtained f-value (81.28) is significant at 0.05level. Therefore the null hypothesis, "There exists no significant difference among scheduled caste students on Family income on creative potential" is rejected hence it can be concluded that there is significant difference among scheduled caste students on Academic stream, on fluency Dimension of Creativity.

In simulation the results are:-

- There is no significant difference in the fluency dimension scientific creativity of marital status, type of families (Nuclear and Joint), and mother occupation (H.W and In-service).

- There is highly significant difference in the fluency dimension scientific creativity of male and female. Mean score shows that male has more creative ability in science area. It means creativity is influenced by gender.

- There is also highly significant difference in the fluency dimension scientific creativity of residential area (Rural and Urban). Rural students scored more than urban students.

- There is significant difference in the fluency dimension scientific creativity of caste category (SC1 and SC2). Mean score presents picture those belongs to SC2 castes category's, students performed better than SC1 students.

- There is significant difference among scheduled caste students on father occupation on fluency Dimension of scientific Creativity. Results shows that whose father's are businessmen are more creative than whose father's are in government service, pvt. Job men and laborers.

- There is significant differences among scheduled caste students on mothers are education on fluency Dimension of scientific Creativity. The results shows that they scored higher whose fathers are post graduate than graduate, opto10+2 and illiterate.

- There is significant difference among scheduled caste students on Family income, on fluency Dimension of scientific Creativity. The results show that those students are more creative whose families' per month income is 10000-20000 than whose families' per month income is up to 10000 and above 20000.

- There is highly significant difference among scheduled caste students on Academic stream, on fluency Dimension of scientific Creativity. Science students are more creative than arts and commerce students

In simulation creative potential is not influenced by these socio-demographic variables marital status, type of families, and mother occupation. Others variables affect the creative potential of students greatly.

4.2.2 Demographic Impact on Flexibility Dimension of Creativity: Significance level

Flexibility is the ability of an individual to produce ideas, which differ in approach or though trend. It is a general belief that Demographic variables affect flexibility dimension of the creativity. To ascertain this belief whether the demographic variables have any impact o flexibility of the scheduled caste students, the significance level has been calculated by applying t-test, F-test the results have been given in **Table-4.2.2.**

Table-4.2.2

Significance Level of **Flexibility** Dimension of Demographic Impact on Scientific Creativity of Scheduled Caste Students

Statically Result Respondent	Category	N	%	Mean	Value
Gender	Male	122	40.66	3.45	t-Value
	Female	178	59	41.64	32.09*
Residential Area	Rural	170	50	4.69	t-Value
	Urban	130	43.33	4.73	0.64*
Marital Statues	Married	70	23.33	1.84	t-Value
	Unmarried	230	73.33	28.24	2.12*
Type of Family	Nuclear	172	57.33	3.13	t-Value
	Joints	128	42.66	2.23	0.9
Caste Category	SC 1	125	41.66	6.37	t-Value
	SC 2	175	58.33	1.31	16.94*
Mother Occupation	H. Wife	238	79.33	12.31	t-Value
	In Service	62	20.66	1.31	7.74*
Father Occupation	Laborer	138	46.00	2.31	
	Govt Job	121	40.33	4.9	F-Value
	Pvt Job	27	9.00	16.7	42.55*
	Business	14	4.66	10.98	
Father Education	Illiterate	32	10.66	4.3	
	Upto 10+2	174	58.00	0.01	F-Value
	Graduation	43	14.33	11.07	19.61*
	P. Graduation	40	13.33	4.28	
Mother Education	Illiterate	49	16.33	3.24	
	Upto 10+2	204	68.00	5.58	F-Value
	Graduation	26	8.66	6.87	19.90*
	P. Graduation	21	7.00	7.95	
Family Income(per Month)	Upto 10000	150	50.00	4.2	F-Value
	10000-20000	60	20.00	7.48	594.79*
	Above 20000	90	30.00	8.79	
Academic Stream	Science	78	26.00	13.14	F-Value
	Arts	201	67.00	7.42	115.64*
	Commerce	21	7.00	10.54	

** Significant at 0.05 levels of significance*

Interpretation

Table-4.2.2 brings out that the obtained t-value (32.09) does signify the difference among **Male and Female** scheduled caste students on Flexibility Dimension of creativity at 0.05 levels of significance. Therefore the null hypothesis i.e. "There exists no significant difference between male and female scheduled caste students on flexibility dimension of creativity" is rejected on the flexibility dimension of creativity of scheduled caste students on the basis of Gender. It is concluded that there is significant difference between male and female scheduled caste students. Female students are more creative than male students. Hence creative potential is influenced by gender category.

With regard to the **Residential Area Categories** of the respondents the obtained t-value (0.64) is no significant at 0.05 levels. Therefore, the null hypothesis, "There exists

no significant difference among scheduled caste students of Rural and Urban areas on Flexibility Dimension of Creativity" is accepted and hence concluded that there is no significant difference in Flexibility dimension of creativity of scheduled caste students on the basis of Residential area. Hence creative potential is not influenced by Residential Area Category.

With regard to the **Marital Status Categories** of the respondents the obtained t-value (2.12) is significant at 0.05 levels of significance. Therefore, the null hypothesis, "There exists no significant difference between married and unmarried scheduled caste students on flexibility Dimension of creativity," is rejected and concluded that there is significant difference in the flexibility dimension of creativity of scheduled caste students on the basis of marital status. Unmarried performed batter than married. Hence creative potential is influenced by marital Status Category.

With regard to the **Type of Family Categories** of the respondents the obtained t-value (0.9) is no significant at 0.05 levels. Therefore, the null hypothesis, "There exists no significant difference among scheduled caste students belongs to Nuclear and joint family on Flexibility Dimension of Creativity" is accepted and it can be concluded that there is no significant difference on flexibility dimension of creativity of scheduled caste students on the basis of type of family. Hence creative potential is not influenced by type of Family Category.

With regard to the **Caste Categories** of the respondents the obtained t-value (16.94) is significant difference at 0.05 levels. Therefore, the null hypothesis, "There exists no significant difference among scheduled caste students belongs to caste categories on flexibility Dimension of Creativity" is rejected and it can be concluded that there is significant difference on flexibility Dimension of Creativity of scheduled caste students on the basis of type of family. SC1 Students are more creative than SC 2 Students. Hence creative potential is influenced by type of Caste Category.

With regard to the **Mother Occupation Categories** of the respondents the obtained t-value (7.74) is highly significant at 0.05 levels. Therefore, the null hypothesis, "There exists no significant difference among scheduled caste students belongs to mother occupation on flexibility Dimension of Creativity" is rejected and it can be concluded that there is significant difference on flexibility Dimension of Creativity of scheduled caste students on the basis of mother occupation. Those students are more creative whose mothers are House Wife than whose mothers are in service. Hence creative potential is influenced by Mother Occupation Categories.

In relation to **Father Occupation** of the respondents the obtained f-value (42.55) is significant at 0.05 levels. Therefore the null hypothesis, "There exists no significant difference among scheduled caste students on father occupation on flexibility Dimension of Creativity" is rejected hence it can be concluded that there is a significant difference among scheduled caste students on father occupation on flexibility Dimension of Creativity. Results shows that whose father's are working in private sector, students are best scorer, than whose father's are business second best performer and whose father's are government in service scored more than whose father's are laborers. Hence creative potential is influenced by Father Occupation Categories.

Further with regard to **Father Education** of the respondents the obtained f-value (19.61) is significant at 0.05 levels of significance. Therefore the null hypothesis, "There exists no significant difference among scheduled caste students on Father Education on flexibility Dimension of Creativity" " is rejected hence it can be concluded that there is significant difference among scheduled caste students on Father Education on flexibility Dimension of Creativity.

With regard to **Mother Education** of the respondents the obtained f-value (19.90) is also significant at 0.05 levels. Therefore the null hypothesis, "There exists no significant difference among scheduled caste students on Mother Education on flexibility Dimension of Creativity" " is rejected hence it can be concluded that there is significant difference among scheduled caste students whether their mothers are educated or not, on flexibility Dimension of Creativity.

With regard to **Family Income** of the respondents the obtained f-value (594.79) is significant at 0.05 levels. Therefore the null hypothesis, "There exists no significant difference among scheduled caste students on family income on flexibility dimension of creativity" is rejected hence it can be concluded that there is significant difference among scheduled caste students on family income, on fluency dimension of creativity.

With regard to **Academic Stream** of the respondents the obtained f-value (115.64) is significant at 0.05level. Therefore the null hypothesis, "There exists no significant difference among scheduled caste students on Family income on flexibility Dimension of creativity" is rejected hence it can be concluded that there is significant difference among scheduled caste students on academic stream, on flexibility dimension of creativity.

In simulation the results are:-

- There is significant difference in the flexibility

dimension scientific creativity of male and female. Male performed batter than female.

- There is no significant difference in the flexibility dimension scientific creativity of Rural and Urban. They have equal potential in scientific flexibility.
- There is significant difference in the flexibility dimension scientific creativity of marital status. Unmarried performed batter than married.
- There is no significant difference in the flexibility dimension of scientific creativity of type of families (Nuclear and Joint).
- There is significant difference in the flexibility dimension language creativity of caste category (SC1 and SC2). SC1 Students are more creative than SC 2 Students.
- There is significant difference in the flexibility dimension of scientific creativity mother occupation (H.W and In-service). Those students are more creative whose mothers are House Wife than whose mothers are in service.
- There is significant difference among scheduled caste students on father occupation on Flexibility Dimension of scientific Creativity. Results shows that whose father's are working in private sector, students are best scorer, than whose father's are business second best performer and whose father's are government in service scored more than whose father's are laborers.
- There is a significant difference among scheduled caste students on Father Education on Flexibility Dimension of scientific Creativity. The results shows that they scored higher whose fathers are graduate than whose fathers are post graduate, opto10+2 and illiterate.
- There is significant difference among scheduled caste students whether their mothers are educated or not, on Flexibility Dimension of scientific Creativity. The results shows that they scored higher whose mothers are post graduate than whose mothers are graduate, opto10+2 and illiterate.
- There is significant difference among scheduled caste students on Family income, on Flexibility Dimension of scientific Creativity. The results show that high family income's students are superior to lower income's students.
- There is significant difference among scheduled caste students on Academic stream, on fluency Dimension of scientific Creativity. Science students are more creative than arts and commerce students.

Hence in conclusion significant impact of socio-demographic variables is found on scientific creativity on flexibility dimension of scheduled caste students studying in post graduation in different universities of Haryana state. These variables are found namely- residential (Rural and Urban) and type of families (Nuclear and Joint by which the creative potential of scheduled caste students is not affected and others variables make great impact on creative potential of scheduled caste students studying in post graduation level.

4.2.3 Demographic Impact on Originality dimension of creativity: Significance level

Creativity is the process of developing original novel and yet appropriate response to a problem. An original response is one that is not usually given. A novel response is one that is new or has no precedent. However, useless, original and novel solution is also appropriate, but cannot be termed as creative. An appropriate response is one that seemed reasonable to the situation. Building a house of toothpicks is probably original and novel ideas, but it clearly not appropriate because such a house could be structurally weak. Hence originality is represented by uncommonness of a given response. Responses given by less than 5% of the group are treated as original. There is a general belief that Demographic variables affects originality dimension of the creativity. To ascertain this belief whether the demographic variables have any impact on originality of the scheduled caste students, the significance level has been calculated by applying t-test and F-test the results have been presented in the **Table- 4.2.3.**

Table-4.2.3

Significance Level of **Originality** Dimension of Demographic Impact on Scientific Creativity of Scheduled Caste Students					
Statically Result Respondent	Category	N	%	Mean	Value
Gender	Male	122	40.66	5.18	t-Value
	Female	178	59	13.06	6.73*
Residential Area	Rural	170	50	5.11	t-Value
	Urban	130	43.33	14.94	8.47*
Marital Statues	Married	70	23.33	8.59	t-Value
	Unmarried	230	73.33	10.89	1.69
Type of Family	Nuclear	172	57.33	14.12	t-Value
	Joints	128	42.66	2.81	9.66*
Caste Category	SC 1	125	41.66	5.03	t-Value
	SC 2	175	58.33	13.27	7.04*
Mother Occupation	H. Wife	238	79.33	5.09	t-Value
	In Service	62	20.66	20.96	11.17*
Father Occupation	Laborer	138	46.00	3.39	
	Govt Job	121	40.33	13.56	F-Value
	Pvt Job	27	9.00	14.35	82.42*
	Business	14	4.66	23.68	
Father Education	Illiterate	32	10.66	5.45	
	Upto 10+2	174	58.00	4.3	F-Value
	Graduation	43	14.33	7.8	147.82*
	P. Graduation	40	13.33	23.66	
Mother Education	Illiterate	49	16.33	6.02	
	Upto 10+2	204	68.00	6.05	F-Value
	Graduation	26	8.66	21.23	32.02*
	P. Graduation	21	7.00	22.28	
Family Income(per Month)	Upto 10000	150	50.00	1.97	F-Value
	10000-20000	60	20.00	19.87	55.41*
	Above 20000	90	30.00	14.32	
Academic Stream	Science	78	26.00	34.08	F-Value
	Arts	201	67.00	25.24	425.28*
	Commerce	21	7.00	8.94	

** Significant at 0.05 levels of significance*

Interpretation

The table 4.2.3 brings out that the obtained t-value (6.73) does signify the difference among the **Male and Female** scheduled caste students on originality dimension of creativity at 0.05 levels of significance. Thus the null hypothesis i.e. "There exists no significant difference among male and female scheduled caste students on originality dimension of creativity." Is rejected and hence concluded that there is significant difference in the originality of male and female scheduled caste students. Female performed batter than male. Hence creative potential is influenced by gender category.

With regard to the **Residential Area Categories** of the respondents the obtained t-value (8.47) is also significant at 0.05 levels. Therefore the null hypothesis, "There exists no significant difference among scheduled caste students of rural and urban areas on originality Dimension o creativity" is rejected and hence concluded that there is significant difference in the originality of scheduled caste students on the basis of residential area. Urban performed batter than Rural Hence creative potential is influenced by Residential area categories.

With regard to the **Marital Status Categories** of the respondents the obtained t-value (1.69) is not significant at 0.05 levels of significance. Therefore the null hypothesis, "There exists no significant difference among married and unmarried scheduled caste students on originality dimension of creativity" is accepted and thus can be concluded that there is no significant difference in the originality of scheduled caste students on the basis of marital status. Hence creative potential is not influenced by Marital Status categories.

Further with regard to the **Type of Family Categories** of the respondents the obtained t-value (9.66) is highly significant at 0.05 levels. Therefore the null hypothesis, "There exists no significant difference among scheduled caste students (belongs to Nuclear and Joint family) on originality dimension of creativity" is rejected and thus can be concluded that there is a highly significant difference in the originality of scheduled caste students on the basis of type of family. Nuclear Families' students performed batter than Joint Families' students. Hence creative potential is influenced by type of Family categories.

With regard to the **Caste Categories** of the respondents the obtained t-value (7.04) is also significant at 0.05 levels. Therefore, the null hypothesis, "There exists no significant difference among scheduled caste students belongs to caste categories on originality Dimension of Creativity" is rejected and it can be concluded that there is significant difference in originality dimension of creativity of scheduled caste students on the basis of type of family. SC2 students performed batter than SC1. Hence creative potential is influenced by Caste categories.

With regard to the **Mother Occupation Categories** of the respondents the obtained t-value (11.17) is also significant at 0.05 levels. Therefore, the null hypothesis, "There exists no significant difference among scheduled caste students belongs to mother occupation on originality Dimension of Creativity" is rejected and it can be concluded that there is also highly significant difference in originality dimension of creativity of scheduled caste students on the basis of mother occupation. Those students are more creative whose mothers are in service than whose mothers are House Wife. Hence creative potential is influenced by Mother Occupation categories.

In relation to **Father Occupation** of the respondents the

obtained f-value (82.42) is significant at 0.05 levels. Therefore the null hypothesis, "There exists no significant difference among scheduled caste students on father occupation on originality Dimension of Creativity" is rejected and it can be that there is a significant difference among scheduled caste students on father occupation on originality Dimension of Creativity. Results shows that whose father's are businessmen, than whose father's are govt. Job, pvt. Job and laborers. Hence creative potential is influenced by Father Occupation categories.

Further with regard to **Father Education** of the respondents the obtained f-value (147.82) is significant at 0.05level. Therefore the null hypothesis, "There exists no significant difference among scheduled caste students on Father Education on originality Dimension of Creativity" is rejected and it can be that there is a significant difference among scheduled caste students on Father Education on fluency Dimension of Creativity. The results shows that they scored higher whose mothers are post graduate than whose mothers are graduate, opto10+2 and illiterate. Hence creative potential is influenced by Father Education categories.

With regard to **Mother Education** of the respondents the obtained f-value (32.02) is also significant at 0.05 levels. Therefore the null hypothesis, "There exists no significant difference among scheduled caste students on Mother Education on originality Dimension of Creativity" is rejected and it can be that there is significant difference among scheduled caste students whether their mothers are educated or not, on originality Dimension of Creativity. The results shows that they scored higher whose mothers are post graduate than whose mothers are graduate, opto10+2 and illiterate. Hence creative potential is influenced by Mother Education categories.

With regard to **Family Income** of the respondents the obtained f-value (55.41) is significant at 0.05 levels. Therefore the null hypothesis, "There exists no significant difference among scheduled caste students on Family income on originality Dimension of Creativity" is rejected and it can be that there is significant difference among scheduled caste students on Family income, on fluency Dimension of Creativity. The results show that average family income's students are superior to high and lower family's income's students. Hence creative potential is influenced by Family income categories.

With regard to **Academic Stream** of the respondents the obtained f-value (425.28) is significant at 0.05level. Therefore the null hypothesis, "There exists no significant difference among scheduled caste students on Family income on originality Dimension of Creativity" is rejected and it can be that there is significant difference among scheduled caste students on Academic stream, on originality Dimension of Creativity. Science students are more creative than arts and commerce students. Hence creative potential is influenced by Academic stream categories.

In conclusion the results are:-

- There is significant difference in the originality dimension scientific creativity of male and female. Female performed batter than male.
- There is significant difference in the originality dimension scientific creativity of Rural and Urban. Urban performed batter than Rural.
- There is no significant difference in the originality dimension scientific creativity of marital status.
- There is significant difference in the originality dimension of scientific creativity of type of families (Nuclear and Joint). Nuclear Families' students performed batter than Joint Families' students.
- There is significant difference in the originality dimension scientific creativity of caste category (SC1 and SC2). SC2 students performed batter than SC1.
- There is significant difference in the originality dimension of scientific creativity mother occupation (H.W and In-service). Those students are more creative whose mothers are in service than whose mothers are House Wife.
- There is a significant difference among scheduled caste students on father occupation on originality Dimension of scientific Creativity. Results shows that whose father's are businessmen, than whose father's are govt. Job, pvt. Job and laborers.
- There is a significant difference among scheduled caste students on Father Education on originality Dimension of scientific Creativity. The results shows that they scored higher whose mothers are post graduate than whose mothers are graduate, opto10+2 and illiterate.
- There is highly significant difference among scheduled caste students whether their mothers are educated or not, on originality Dimension of scientific Creativity The results shows that they scored higher whose mothers are post graduate than whose mothers are graduate, opto10+2 and illiterate.
- There is significant difference among scheduled caste

students on Family income, on fluency Dimension of scientific Creativity. The results show that average family income's students are superior to high and lower family's income's students.

- There is significant difference among scheduled caste students on Academic stream, on originality Dimension of scientific Creativity. Science students are more creative than arts and commerce students.

Hence in conclusion significant impact of socio-demographic variables is found on scientific creativity on originality dimension of scheduled caste students studying in post graduation in different universities of Haryana state. Only one variable is found namely- marital status by which the creative potential of scheduled caste students is not affected otherwise others variables make great impact on creative potential of scheduled caste students studying in post graduation level.

4.2.4 Demographic Impact on creative potential in scientific creativity: significance level

Creativity is capacity that works as a back ground to all types of motivations and aspirations to achieve the goal in life. It is inherent in imaginative person. It is basic to the capability of bringing new discoveries, inventions in all fields/spheres of life. It is reflective in scientific discoveries, sports, and literatures and even in day to day working of comparatively unskilled tasks of economic and social life.

Creativity is the ability of an individual to respond to the need for creation, self-expression, and self-realization and to solve problem thereby improving the quality of life. A person may possess it as a natural endowment or nurture it as a result of various environmentally stimulating impact that might have consciously or unconsciously affected his/her growth of personality. Whatever may be the reason behind shaping of a creative personality but there is a great myth in the social setup that demographic variables affect the creative potential individual. To ascertain this myth whether the demographic variables have any impact on creative potential of the scheduled caste students, the significance level has been calculated by applying t-test and F-test the results have been presented in the **table-4.2.4.**

Table-4.2.4

Significance Level of Demographic Impact on **Creative Potential** in Science area of Scheduled Caste Students

Statically Result Respondent	Category	N	%	Mean	Value
Gender	Male	122	40.66	45.51	t-Value
	Female	178	59	44.14	1.17
Residential Area	Rural	170	50	45.25	t-Value
	Urban	130	43.33	47.67	2.09*
Marital Statues	Married	70	23.33	45.6	t-Value
	Unmarried	230	73.33	46.59	0.73
Type of Family	Nuclear	172	57.33	47.39	t-Value
	Joints	128	42.66	44.74	2.26*
Caste Category	SC 1	125	41.66	45.39	t-Value
	SC 2	175	58.33	46.9	2.01*
Mother Occupation	H. Wife	238	79.33	45.59	t-Value
	In Service	62	20.66	48.84	1.42
Father Occupation	Laborer	138	46.00	39.03	
	Govt Job	121	40.33	46.46	F-Value
	Pvt Job	27	9.00	47.91	0.89
	Business	14	4.66	48.14	
Father Education	Illiterate	32	10.66	46.9	
	Upto 10+2	174	58.00	44.95	F-Value
	Graduation	43	14.33	47.03	81.02*
	P. Graduation	40	13.33	50.52	
Mother Education	Illiterate	49	16.33	46.59	
	Upto 10+2	204	68.00	45.42	F-Value
	Graduation	26	8.66	48.36	2.06
	P. Graduation	21	7.00	50.45	
Family Income(per Month)	Upto 10000	150	50.00	45.03	F-Value
	10000-20000	60	20.00	49.2	2.07
	Above 20000	90	30.00	47.53	
Academic Stream	Science	78	26.00	52.44	F-Value
	Arts	201	67.00	48.2	29.59*
	Commerce	21	7.00	41.22	

** Significant at 0.05 levels of significance*

Interpretation

The table 4.2.4 brings out that the obtained t-value (1.17) does not signify the difference among the **Male and Female** scheduled caste students in creative potential at 0.05 levels of significance. Thus the null hypothesis "There exists no significant difference among male and female scheduled caste students on creative potential" is accepted and hence it can be concluded that there is no significant difference in creative potential of scheduled caste students on the basis o gender.

With regard to the **Residential Area Categories** of the respondents the obtained t-value (2.09) is significant at 0.05 levels of significance. Therefore the null hypothesis, "There exists no significant difference among scheduled caste students of rural and urban areas on creative potential" is rejected and hence it can be concluded that there is significant difference in creative potential of scheduled caste students on the basis of residential area.

With regard to the **Marital Status Categories** of the respondents the obtained t-value (0.73) is not significant at 0 .05 level of significance. Therefore, the null hypothesis, "There exists no significant difference among married and unmarried scheduled caste students on creative potential" is accepted and thus can be concluded that there is no significant difference in creative potential of scheduled caste students on the basis of marital status.

Further with regard to the **Type of Family Categories** of the respondents the obtained t-value (2.26) is significant at 0.05 levels. Therefore, the null hypothesis, "There exists no significant difference among scheduled caste students belongs to Nuclear and Joint family on creative potential" is rejected and thus can be concluded that there is a significant difference on creative potential of scheduled caste students on the basis of type of family.

With regard to the **Caste Categories** of the respondents the obtained t-value (2.01) is also significant at 0.05 levels. Therefore, the null hypothesis, "There exists no significant difference among scheduled caste students belongs to caste categories on creative potential" is rejected and it can be concluded that there is significant difference in creative potential of scheduled caste students on the basis of type of family.

With regard to the **Mother Occupation Categories** of the respondents the obtained t-value (1.42) is not significant at 0.05 levels. Therefore, the null hypothesis, "There exists no significant difference among scheduled caste students belongs to mother occupation on creative potential" is accepted and it can be concluded that there is also significant difference on creative potential of scheduled caste students on the basis of mother occupation

In relation to **Father Occupation** of the respondents the obtained f-value (0.89) is no significant at 0.05 levels. Therefore the null hypothesis, "There exists no significant difference among scheduled caste students on father occupation on creative potential" is accepted hence it can be concluded that there is no significant difference among scheduled caste students on father occupation on creative potential.

Further with regard to **Father Education** of the respondents the obtained f-value (81.02) there is significant at 0.05level. Therefore the null hypothesis, "There exists no significant difference among scheduled caste students on Father Education on creative potential" is rejected hence it can be concluded that there is a significant difference among scheduled caste students on Father Education on creative potential.

With regard to **Mother Education** of the respondents the obtained f-value (2.06) is no significant at 0.05 levels. Therefore the null hypothesis, "There exists no significant difference among scheduled caste students on Mother Education on creative potential" is accepted hence it can be concluded that there is no significant difference among scheduled caste students whether their mothers are educated or not, on creative potential.

With regard to **Family Income** of the respondents the obtained f-value (2.07) is no significant at 0.05 levels. Therefore the null hypothesis, "There exists no significant difference among scheduled caste students on Family income on creative potential" is accepted hence it can be concluded that there is no significant difference among scheduled caste students on Family income, on creative potential.

With regard to **Academic Stream** of the respondents the obtained f-value (29.59) is significant at 0.05level. Therefore the null hypothesis, "There exists no significant difference among scheduled caste students on Family income on creative potential" is rejected hence it can be concluded that there is significant difference among scheduled caste students on Academic stream, on creative potential. Science students have highest creative potential in scientific creativity than students

It is concluded that

- There is no significant difference on the basis of total scientific creativity of male and female.
- There is significant difference on the basis of total scientific creativity of residential area (Rural and Urban). Urban students are more creative than rural students.
- There is no significant difference of creative potential of scheduled caste students in scientific creativity on the basis of marital status.
- There is significant difference in scientific creativity on the basis of type of families (Nuclear and Joint). Nuclear Family students performed batter than Joint.
- There is significant difference in scientific creativity on the basis of caste category (SC1 and SC2). SC2 students have more creative ability than SC1students.
- There is no significant difference in scientific creativity on the basis of mother occupation (H.W and In-service).
- There is no significant difference among scheduled caste students in scientific creativity on the basis of

father occupation.

- There is significant difference of creative potential among scheduled caste students on the basis of Father Education in scientific creativity. The results shows that they scored higher whose Fathers are post graduate than illiterate graduate, opto10+2 and illiterate. But that student, who's Fathers are illiterate have more creative potential than whose Fathers are up to10+2.

- There is no significant difference among scheduled caste students whether their mothers are educated or not, on scientific creativity

- There is no significant difference among scheduled caste students on Family income, in scientific creativity**.**

- There is significant difference among scheduled caste students on Academic stream, on total scientific creativity. Science students are more creative than arts and commerce students.

In summation it can be viewed that some time creative potential is fully influenced by socio-demographic variables types of changes (social, cultural, environmental, technical, political etc.), but some demographic variables do not make any effect on creative potential.

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