**CHAPTER 4**

**DATA PRESENTATION, ANALYSIS AND INTERPRETATION**

1. **0 Introduction**

This chapter shows the analyses of the data and the test of hypotheses of the original research conducted as part of this study. The sample views of respondents in the engineering, nursing and business management were used for the analysis. The Statistical Package for Social Sciences (SPSS) was the Software Program (specially T-test, descriptive, and inferential statistics) were used to analyse the various responses of the respondents.

**4.1 Percentage Analyses on Demographics**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Age** | | | | | |
|  |  | Frequency | Percent | Valid Percent | Cumulative Percent |
| Valid | 17-20 | 352 | 85.9 | 85.9 | 85.9 |
| 21-24  25-30 | 42  16 | 10.2  3.9 | 10.2  3.9 | 96.1  100.0 |
| Total | 410 | 100.0 | 100.0 |  |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Gender** | | | | | |
|  |  | Frequency | Percent | Valid Percent | Cumulative Percent |
| Valid | Male | 240 | 58.5 | 58.5 | 58.5 |
| Female | 170 | 41.5 | 41.5 | 100.0 |
| Total | 410 | 100.0 | 100.0 |  |

**4.2 Reliability analysis**

The results shows the Cronbach alpha scores on Emotional Intelligence (EI) which is 0.808 on 24 variables and for Team Cohesion (TC) the score is 0.738 on 13 variables. The results shows that the questionnaire was consistent in measuring what it intended to measure.

**Table 2 Reliability Test**

|  |  |  |
| --- | --- | --- |
| *Variables* | *Cronbach Alpha* | *Number of items* |
| Total Emotional Intelligence | 0.808 | 24 |
| Team Cohesion | 0.738 | 13 |

*5.2 Demographic factors*

Descriptive statistics is performed on the population under study on gender, age and family income. The results shows that the male populace is more than that of the females. This suggest that there are more male students offering engineering programs as oppose to females. Concerning the age distribution, it is obvious that the mean age range from 17-20. This depicts that the students are young and in their prime age. Again, it can be realised that most of the students comes from a well to do family with above 3 lakhs as their income. It can imply that since the fees for such programs like engineering is expensive their family have to be well capable.

**Table 3 Demographic Factors**

|  |  |
| --- | --- |
| *Demographic factors* | *Frequency* |
| Gender Male | 98 |
| Female | 12 |
| Age 17-20 | 80 |
| 21-24 | 30 |
| Family income less than 1 lakh | 20 |
| 1 lakh – 3 lakhs | 15 |
| Above 3 lakhs | 75 |

*5.3 Descriptive Statistics*

In Table 4, the descriptive statistics for the various variables are presented. The minimum score for EI is 3.38 whereas 6.13 is the maximum score. For TC the maximum score is 6.54 while the minimum score is 2.38. The maximum score is 7 and the minimum score is 1 for the sub competencies of EI which are: SA-SC (self-awareness; self-confidence), SM-AO (self-management; achievement orientation), SA-E (social-awareness; empathy) and SS-I (social skills; influence). The mean score for all the variables is a 5. This means that on the average the participants somewhat agreed to the various questions asked. The standard deviation shows 1.15 as the highest value of deviation from the mean where 0.59 indicates the lowest deviation from its mean. The total population was 110 students.

**Table 4 Descriptive Statistics**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| *Items* | *Minimum score* | *Maximum score* | *Mean* | *Standard deviation* | *N* |
| Total Emotional Intelligence | 3.38 | 6.13 | 5.16 | .59 | 110 |
| Team Cohesion | 2.38 | 6.54 | 5.37 | .64 | 110 |
| SA-SC | 2.00 | 7.00 | 5.26 | 1.09 | 110 |
| SM-AO | 2.50 | 7.00 | 5.25 | 1.06 | 110 |
| SA-E | 1.50 | 7.00 | 5.63 | .96 | 110 |
| SS-I | 1.00 | 7.00 | 5.36 | 1.15 | 110 |

*5.4 Regression Analysis*

To check the effect of EI on TC, a simple linear regression was estimated. As per the results obtained, EI significantly affect TC at 1% significance level. Commenting on the coefficient, it is obvious that EI increase TC by 45%. The overall model with respect to the independent variables accounted for 20% variation on the dependent variable (TC). This means that EI affects TC by 45%. This illustrates that at 45%, the participants EI levels affected the cohesion within the team, implying that high EI levels lead to effective cohesion in teams.

**Table 5 Regression Analysis**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *Independent Variable* | *Statistic* | *Sum of*  *Square* | *Degree of freedom* | *R* | *R2* | *βconstant* | *β* | *T tabulated* | *Sig* |
| Emotional Intelligence | Regression | 8.873 | 1 | 0.448 | 0.200 | 0.448 | 2.890  0.479 | 6.031  5.203 | .000  .000 |
|  | Residual | 35.395 | 108 |  |  |  |  |  |  |
|  | Total | 44.268 | 109 |  |  |  |  |  |  |

Note: Dependent Variable: Team Cohesion

*5.5 Moderation Analysis*

Based on the results from the interaction terms (EI\* Gender) the value creation (coefficient) is positive but statistically not significant. The R2 value of 24% means that the interaction term explains the variations in team cohesion by 24% the results corroborates with the findings of (Kumar and Muniandy, 2012; Ishak et al., 2011; Pooja and kumar,2017). The results depict that when gender moderates with EI, its ability to affect TC is statistically not accepted. Therefore the hypothesis gender moderates the effect of EI on TC is rejected. This means that a person’s gender does not affect his or her EI.

Similarly, the results obtained from the interaction term (EI\* Age) is positive but statistically insignificant. This means that, the moderating effect of age on EI has no significant impact on TC. Commenting on the model strength, is conspicuous that the independent variable caused 21% change in TC. The results implies that, when age moderates with EI its ability to affect TC is statistically not accepted. This rejects the hypothesis, age moderates the effect of EI on TC. That means a person’s age either young or old does not affect his or her EI ability. The results is similar with the study by (Salguero et al., 2012; Shabani et al., 2011).

More so, the results on the interaction between (EI \* family income) is positive but not significant. This implies that one’s family income does not affect their EI ability. The findings is in line with the study of Coban et al (2010). The results depicts that when family income moderates EI, its ability to affect TC is statistically insignificant. As a result, we reject the hypothesis, family income moderates the effect of EI on TC.

*5.6 Correlation Analysis*

Based on the results of the study, EI and TC are significantly correlated (r =.448, p < 0.01). That is there is a significant relationship between EI and TC. Thus the participants overall EI levels correlated positively with TC. Also, the sub competencies of EI and TC also reveal a significant correlation between the two. Except for SM-AO and TC which reveals that there is no relationship between the two. That is per the results of the study, SM-AO and TC have no significant relationship. Thus the participants SM-AO did not correlate with TC. However, SA-I and TC are significant (r =.513, p < 0.01), SA-E and TC are significant (r =.191, p < 0.05) and lastly, SA-SC are significant (r = .305, p < 0.01). This implies that the participants SA-I, SA-E and SA-SC competencies have a significant relationship with TC.

**Table 6 Correlational Analysis**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | *Total E.I* | *Team Cohesion* | *SA-SC* | *SM-AO* | *SA-E* | *SS-I* |
| Total Emotional Intelligence |  | 0.448\*\*  0.000 | 0.420\*\*  0.000 | 0.485\*\*  0.000 | 0.494\*\*  0.000 | 0.595\*\*  0.000 |
| Team Cohesion |  |  | 0.305\*\*  0.001 | 0.114  0.237 | 0.191\*  0.046 | 0.513\*\*  0.000 |

Note: \*\* and \* represent correlation is significant at the 0.01 level (2-tailed) and 0.05 level (2-tailed) respectively. SA-SC (Self – Awareness; Self- Confidence), SM-AO (Self- Management; Achievement Orientation), SA-E (Social – Awareness; Empathy), SS-I (Social Skills; Influence).

**ANALYSES AND INTERPRETATION**

**Reliability analysis**

Reliability analysis was performed to assess the internal consistency of the dataset. Six items thus; self-awareness, self-management, motivation, empathy, social skills and emotional intelligence were assessed.

The Cronbach’s Alpha value of 0.841 or 84.1% suggested that the items had a relatively high internal consistency and hence were reliable and satisfactory for analysis. This was because the items met the minimum acceptable level of 0.6, therefore was accepted for analysis.

**Descriptive Analysis**

A descriptive analysis was also performed to better describe the sample understudy. The Mean and Standard Deviation were observed for each variable. The total sample was two hundred (200).

The Table 1 presents the background information of the respondents of the study. It provides an overview of the values of the mean, skewness, kurtosis and standard deviation values for each variable used in this study.

**Table 1: Descriptive statistics for the demographic variables**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Demographics** | **N** | **Min.** | **Max.** | **Mean** | **SD** | **Skewness** | **kurtosis** |
| Respondent gender | 200 | 1 | 2 | 1.290 | 0.455 | 0.933 | -1.142 |
| Age | 200 | 1 | 2 | 1.060 | 0.238 | 3.734 | 12.060 |
| Family income (per annum) | 200 | 1 | 3 | 2.120 | 0.854 | -0.233 | -1.593 |
| Work experience | 200 | 1 | 2 | 1.965 | 0.184 | -5.099 | 24.239 |
| Department | 200 | 1 | 5 | 2.700 | 1.256 | 0.415 | -0.934 |

**Source: (Author’s compilation)**

**Table 2: Frequency Table**

|  |  |  |  |
| --- | --- | --- | --- |
| **Variable** | **Demographics** | **Frequency** | **Percent** |
| Gender | Male | 142 | 71.0 |
|  | Female | 58 | 29.0 |
|  |  |  |  |
| Age | 18-22 years | 188 | 94.0 |
|  | 23-27 years | 12 | 6.0 |
|  |  |  |  |
| Family income | Less than 1lakh | 62 | 31.0 |
|  | 1lakh-3 lakhs | 52 | 26.0 |
|  | Above 3 lakhs | 86 | 43.0 |
|  |  |  |  |
| Work experience | Yes | 7 | 3.5 |
|  | No | 193 | 96.5 |
|  |  |  |  |
| Department | Chemical | 33 | 16.5 |
|  | Petroleum | 75 | 37.5 |
|  | Civil | 33 | 16.5 |
|  | Computer sci. & Engg. | 37 | 18.5 |
|  | ECE | 22 | 11.0 |

**Source: (Author’s compilation)**

From Table 2, it is conspicuous that males were twice as the number of female respondents engaged in the study. The reason could be that more males get enrolled for engineering programs as opposed their female counters.

Again, more than half 94% of the respondents were between the ages of 18 and 22 years whilst least of the ages were between the years 23 and 27 years, comprising 6%. It can be seen that the mean age of the respondents who availed for this study was 1.06 with a Standard Deviation of .23808 considering the minimum and maximum values for analysis. This, by extrapolation, from the descriptive statistics table 1 indicates that the mean age was between 18-22 and precisely 20 years by midpoint measurement. It can be concluded that at age 20, respondents are believed to be capable of exercising high emotional intelligence. The S.D of .23808 indicates that the ages are closely dispersed around the mean age indicating arguably similar good judgment of emotional intelligence by all respondents of the study.

In terms of the participants work experience, majority of the respondents representing more than 96.5 percent indicated that they do not have any work experience. Albeit, 3.5% of the respondents agreed that they have work experience. This may imply that majority of the respondents do not have any experience in the job market. Due to this, whilst their EI levels are measured, the outcome of the students absorbed at the workplace can be improved.

Similar conclusion is established for income of the respondents with a mean of 2.1200 and a S.D of .85396. It can be seen that with a mean income of 2.1200 which lies between 1 lakh-3 lakhs, respondents are believed to be emotionally composed to exercise good and sound judgement. This is because a person who is financially stable has higher tendencies of satisfaction and fulfilment, hence, would be able to manage his/her emotional life issues very well and in the case of IIT student, exhibit somewhat high emotional intelligence.

Lastly, the 200 students were sampled from various engineering department. 75 students from petroleum engineering department, 37 from computer science and engineering, 33 from both chemical and civil engineering department and finally 22 from electronic and communication engineering.

**Table 3: Descriptive analysis for the sub scales of EI**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Sub scales** | **N** | **Min.** | **Max.** | **Mean** | **Sd** | **skewness** | **Kurtosis** | **Rank** | **Level** |
| Self-awareness | 200 | 1.71 | 4.86 | 3.871 | 0.494 | -1.542 | 5.061 | 4 | Somewhat high |
| Self- management | 200 | 2.14 | 4.86 | 3.769 | 0.459 | -1.072 | 1.830 | 5 | Somewhat high |
| Motivation | 200 | 2.57 | 4.86 | 3.979 | 0.481 | -0.653 | -0.035 | 1 | Somewhat high |
| Empathy | 200 | 2.29 | 5.00 | 3.965 | 0.583 | -0.960 | 0.705 | 2 | Somewhat high |
| Social skills | 200 | 2.00 | 4.86 | 3.891 | 0.590 | -0.964 | 0.988 | 3 | Somewhat high |
| Emotional intelligence | 200 | 2.20 | 4.69 | 3.891 | 0.375 | -1.582 | 4.739 | 3 | Somewhat high |

**Source: (Author’s compilation)**

In Table 3, the mean score of emotional intelligence and its sub scales are analysed. The sub scales means are closely the same to each other. According to the various mean levels they are ranked in order of highest with motivation ranked as the highest with a mean value of 3.97 and a standard deviation of 0.481 with the values ranging from 2.57 to 4.86. This figure indicates that the participants understand their internal state and what drives them to succeed. Mostly, to be admitted into an IIT, one needs to be very good academically as a result “motivation” this implies that the participants understand their internal state so as to strive for the best.

Empathy (with a mean value of 3.965 and standard deviation of 0.583) and social skills (with a mean value of 3.891 and standard deviation of 0.590) is ranked second (2nd) and third (3rd) respectively. This means that for “empathy” individuals can understand the viewpoints of others, become attentive listeners, perceive the unmentioned emotions and understand others by putting yourself in others shoes. Whilst social skills implies that individuals are able to manage emotions of others. Is being able to smoothly interact with others.

More so, self-awareness has values ranging from with a mean score of 3.8871 with a standard deviation of 0.494 is ranked fourth and its better than Self-management which had a mean value of 3.769 and a standard deviation of 0.459 ranked last. This indicates that, among the EI sub scales, Self-management is the least among all the sub scale.

Overall, with regards to the Likert scale scores, all the sub scales mean scores were found within 3 which represent somewhat emotionally intelligent. Therefore, it can be suggested that IIT ISM Dhanbad students are somewhat emotionally intelligent according to this current study.

Examining the asymmetric nature of variables, it is evident that all the variables are negatively skewed based on the results of the skewness. Moreover, the values obtained from the results of the skewness show that Motivation, Empathy and Social Skills are close to Zero (0) unlike Self-awareness and Self-management which had values far from Zero (0).

**Independent t-Test**

Gender and EI

An independent sample t-test was conducted to compare EI levels amongst males and females as well as the sub scales of EI (self- awareness, self-management, motivation, empathy and social skills). The results indicated that there is no statistical difference in the scores for EI, male (M=3.87, SD=0.43) and female (M=3.96, SD=0.13) conditions t (-1.50) =198, p=0.14. For the sub scales, self-awareness, self-management, and empathy the results revealed that there was no significance difference. SA male (M=3.90, SD=0.58) and female (M=3.81, SD=0.11) condition t (1.12) =198 p=0.27, SM male (M=3.76, SD=0.52) and female (M=3.80, SD=0.27) condition t (-0.66) =198 p=0.51, E male (M=3.96, SD=0.65) and female (M=3.72, SD=0.39) condition t (-0.12) =198 p=0.90. However, motivation and social skills results revealed that there is a statistical difference; M male (M=3.90, SD=0.48) and female (M=4.17, SD=0.42) condition t (-3.76) =198 p=0.00, and SS male (M=3.83, SD=0.64) and female (M=4.03, SD=0.41) condition t (-2.11) =198 p=0.04.

**Table 4: T-Test: Gender, EI and its Sub scales**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Sub scales** | **Gender** | **M** | **SD** | **F** | **Sig** |
| Self- awareness | Male  Female | 3.90  3.81 | 0.58  0.11 | 35.887 | 0.27 |
| Self-management | Male  Female | 3.76  3.80 | 0.52  0.27 | 23.467 | 0.51 |
| Motivation | Male  Female | 3.90  4.17 | 0.48  0.42 | 1.810 | 0.00\*\*\* |
| Empathy | Male  Female | 3.96  3.72 | 0.65  0.39 | 8.016 | 0.90 |
| Social skills | Male  Female | 3.83  4.03 | 0.65  0.39 | 4.233 | 0.04\*\* |
| Emotional intelligence | Male  Female | 3.87  3.96 | 0.43  0.13 | 63.227 | 0.14 |

Note: \*, \*\*, \*\*\* Significant at 10, 5 and 1 percent levels, respectively

Source: (Author’s compilation)

**Work Experience and EI**

The EI levels of the participant understudy is compared to check whether there is any difference between participants with working experience or not. The results in Table 5 indicated that there is a statistical difference in the scores for EI and its sub scales. EI yes (M=2.85, SD=0.64) and no (M= 3.93, SD=0.30) condition t (-8.80)=198 p=0.00, SA yes(M=3.43, SD=0.87) and no (M=3.92, SD=0.39) condition t (-9.45)= 198 p=0.00, SM yes(M=2.51, SD=0.36) and no (M=3.82, SD=0.39) condition t (-8.63)=198 p=0.00, M yes (M=3.14, SD=0.53) and no (M=4.01, SD=0.45) condition t (-4.94)=198 p=0.00, E yes (M=3.24, SD=0.63) and no (M=4.00, SD=0.57) condition t(-3.41)=198 p=0.00 and SS yes (M=2.94, SD=0.93) and no (M=3.93, SD=0.55) condition t (-4.55)=198 p=0.00.

**Table 5: T-Test: Work experience and EI**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Sub scales** | **Work experience** | **M** | **SD** | **F** | **Sig** |
| Self- awareness | Yes  No | 3.43  3.92 | 0.87  0.39 | 9.510 | 0.000\*\*\* |
| Self-management | Yes  No | 2.51  3.82 | 0.36  0.39 | 0.003 | 0.000\*\*\* |
| Motivation | Yes  No | 3.14  4.01 | 0.53  0.45 | 1.390 | 0.000\*\*\* |
| Empathy | Yes  No | 3.24  4.00 | 0.63  0.57 | 0.998 | 0.000\*\*\* |
| Social skills | Yes  No | 2.94  3.93 | 0.93  0.55 | 8.648 | 0.000\*\*\* |
| Emotional intelligence | Yes  No | 2.85  3.93 | 0.64  0.30 | 20.212 | 0.000\*\*\* |

Note: \*, \*\*, \*\*\* Significant at 10, 5 and 1 percent levels, respectively

Source: (Author’s compilation)

**Age and EI**

The ages of the participants are compared to check whether there is any difference of the level of EI in regards to their ages or not. The results in Table 6 indicated that there is no statistical difference in the scores for EI, and its sub scales except for SA 18-22(M=3.85, SD=0.50) and 23-27 (M=4.29, SD=0.00) t (-3.06) =198, p=0.003 and SM 18-22 (M=3.75, SD=0.46), 23-27 (M=4.14, SD=0.00) t (-2.96) =198, p=0.003. EI 18-22 (M=3.88, SD=0.38) and 23-27 (M= 4.07, SD=0.38) condition t (-1.69) =198 p=0.93. M 18-22 (M=3.99, SD=0.49) and 23-27 (M=3.76, SD=0.22) t (1.61) =198, p=0.108, E 18-22 (M=3.96, SD=0.60) and 23-27 (M=4.00, SD=0.00) t (-0.21) = 198, p= 0.831 and SS 18-22 (M=3.87, SD=0.60) and 23-27 (M=4.17, SD=0.06) t (-1.68) =198, p=0.095.

**Table 6: ANOVA: Age and EI**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Sub scales** | **Age** | **M** | **SD** | **F** | **Sig** |
| Self- awareness | 18-22  23-27 | 3.85  4.29 | 0.50  0.00 | 9.354 | 0.003\*\*\* |
| Self-management | 18-22  23-27 | 3.75  4.14 | 0.46  0.00 | 8.756 | 0.003\*\*\* |
| Motivation | 18-22  23-27 | 3.99  3.76 | 0.49  0.22 | 2.605 | 0.108\* |
| Empathy | 18-22  23-27 | 3.96  4.00 | 0.60  0.00 | 0.046 | 0.831 |
| Social skills | 18-22  23-27 | 3.87  4.17 | 0.60  0.06 | 2.815 | 0.095\* |
| Emotional intelligence | 18-22  23-27 | 3.88  4.07 | 0.38  0.03 | 2.847 | 0.093\* |

Note: \*, \*\*, \*\*\*Significant at 10,5, and 1 percent levels, respectively

Source: (Author’s compilation)

**Family Income and EI**

A one-way ANOVA was conducted to find the levels of EI on family income thus less than 1 lakh, 1-3 lakhs and above 3 lakhs. There was a significant effect of the levels of EI on family income at the p<0.05 level for the three conditions. The results show SA F (2, 197) =4.372, p=0.014, SM F (2, 197) =5.887, p=0.003, M F (2,197) =21.320, p=0.000, E F (2,197) =3.082, p=0.048, SS F (2,197) =17.082, p=0.000, EI F (2,197) =12.180, p=0.000.

Post hoc comparisons using the Tukey HSD test indicated that the mean score for SA for less than 1 lakhs (M=3.79, SD=0.72) was significantly different than above 3 lakhs (M=3.99, SD=0.35). However, 1-3 lakhs (M=3.78, SD=0.31) didn’t significantly differ from the less than 1 lakh and above lakhs.SM shows less than 1 (M=3.63, SD=0.63), 1-3lakhs (M=3.92, SD=0.16) and above 3 lakhs (M=3.77, SD=0.41). M less than 1 lakh (M=3.75, SD=0.52), 1-3 lakhs (M=3.75, SD=0.52), 1-3 lakhs (M=4.29, SD=0.26) and above 3 lakhs (M=3.96, SD=0.46), E less than 1lakh (M=3.83, SD=0.77), 1-3 lakhs (M=3.95, SD=0.39) and above 3 lakhs (M=4.07, SD=0.51), SS less than 1 lakh (M=3.55, SD=0.77), 1-3 lakhs (M=4.04, SD=0.44) and above 3 lakhs (M=4.04, SD=0.40) and EI less than 1 lakh (M=3.71, SD=0.53), 1-3 lakhs (M=4.00, SD=0.17) and above 3 lakhs (M=4.00, SD=0.27)

**Table 7: ANOVA: Family Income and EI**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Sub scales** | **Income (per annum)** | **M** | **SD** | **F** | **Sig** |
| Self- awareness | Less than 1 lakh  1-3 lakhs  Above 3 lakhs | 3.79  3.78  3.99 | 0.72  0.31  0.35 | 2.993 | 0.014\*\*\* |
| Self-management | Less than 1 lakh  1-3 lakhs  Above 3 lakhs | 3.63  3.92  3.77 | 0.63  0.16  0.41 | 2.085 | 0.003\*\*\* |
| Motivation | Less than 1 lakh  1-3 lakhs  Above 3 lakhs | 3.75  4.29  3.96 | 0.52  0.26  0.46 | 7.654 | 0.000\*\*\* |
| Empathy | Less than 1 lakh  1-3 lakhs  Above 3 lakhs | 3.83  3.95  4.07 | 0.77  0.39  0.51 | 0.978 | 0.048\*\* |
| Social skills | Less than 1 lakh  1-3 lakhs  Above 3 lakhs | 3.55  4.04  4.04 | 0.77  0.44  0.40 | 3.680 | 0.000\*\*\* |
| Emotional intelligence | Less than 1 lakh  1-3 lakhs  Above 3 lakhs | 3.71  4.00  4.00 | 0.53  0.17  0.27 | 4.975 | 0.000\*\*\* |

Note: \*, \*\*, \*\*\*Significant at 10, 5, and 1 percent levels, respectively

Source: (Author’s compilation)

**Participant’s Department and EI**

The ANOVA results shows that there was a significant effect of the levels of EI on participants department at the p<0.05 level except SS F (4,195) =6.20, p=0.151. For SA F (4, 195) =5.42, p=0.000, SM F (4,195) =6.62, p=0.000, M F (4,195) =6.59, p=0.000, E F (4,195) =7.23, p=0.000 and EI F (4,195) =6.20, p=0.000.

**Table 8: ANOVA: Participant’s department and EI**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Sub scales** | **Department** | **M** | **SD** | **F** | **Sig** |
| Self- awareness | Chemical department  Petroleum department  Civil department  Computer Sci., & Eng.  Electronics & Comm. | 3.844  3.975  3.978  3.830  3.467 | 0.289  0.520  0.299  0.353  0.807 | 5.423 | 0.000\*\*\* |
| Self-management | Chemical department  Petroleum department  Civil department  Computer Sci., & Eng.  Electronics & Comm. | 3.835  3.840  3.722  3.865  3.337 | 0.284  0.437  0.444  0.416  0.608 | 6.616 | 0.000\*\*\* |
| Motivation | Chemical department  Petroleum department  Civil department  Computer Sci., & Eng.  Electronics & Comm. | 4.186  4.074  3.758  3.965  3.695 | 0.366  0.429  0.465  0.477  0.603 | 6.594 | 0.000\*\*\* |
| Empathy | Chemical department  Petroleum department  Civil department  Computer Sci., & Eng.  Electronics & Comm. | 3.913  4.222  3.835  3.768  3.688 | 0.472  0.480  0.717  0.526  0.631 | 7.225 | 0.000\*\*\* |
| Social skills | Chemical department  Petroleum department  Civil department  Computer Sci., & Eng.  Electronics & Comm. | 3.831  3.870  4.000  4.023  3.662 | 0.541  0.624  0.396  0.614  0.698 | 1.701 | 0.151 |
| Emotional intelligence | Chemical department  Petroleum department  Civil department  Computer Sci., & Eng.  Electronics & Comm. | 3.922  3.996  3.859  3.890  3.570 | 0.244  0.373  0.266  0.338  0.547 | 6.201 | 0.000\*\*\* |

Note: \*, \*\*, \*\*\*Significant at 10, 5, and 1 percent levels, respectively

Source: (Author’s compilation)

1. **Results**

*3.1 Pearson Correlation Analysis*

Based on the results of the study, EI and TC are significantly correlated (r =.559, p < 0.00). That is there is a significant relationship between EI and TC. Thus the participant's overall EI levels correlated positively with TC. By this, the hypothesis H3: There is a relationship between EI and TC is accepted.

Also, the sub competencies of EI and TC reveals a significant correlation. Therefore hypothesis 2 is accepted. “own aware” and TC are significant (r =.225, p < 0.024), “own manage” and TC are significant (r =.400, p < 0.00) and “others aware” and TC are significant (r=.425, p< 0.00) lastly, “others manage” and TC are significant (r = .546, p < 0.00). This implies that all of the competencies of EI have a significant relationship with TC. Below is the correlation table.

**Table 1 Correlation Analysis**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **Total EI** | **Own-aware** | **Own manage** | **Others aware** | **Others manage** | **TC** |
| **Total ­\_EI** | 1  100 | .651\*\*  .000  100 | .673\*\*  .000  100 | .797\*\*  .000  100 | .662\*\*  .000  100 | .559\*\*  .000  100 |
| **Own-Aware** | .651\*\*  .000  100 | 1  100 | .178  .077  100 | .312\*\*  .002  100 | .186  .064  100 | .225\*  .024  100 |
| **Own –manage** | .673\*\*  .000  100 | .178  .077  100 | 1  100 | .471\*\*  .000  100 | .294\*  .003  100 | .400\*\*  .000  100 |
| **Others-aware** | .797\*\*  .000  100 | .312\*\*  .002  100 | .471\*\*  .000  100 | 1  100 | .447\*  .000  100 | .425\*\*  .000  100 |
| **Others –manage** | .662\*\*  .000  100 | .186  .064  100 | .294\*\*  .003  100 | .447\*  .000  100 | 1  100 | .546\*\*  .000  100 |
| **T\_C** | .559\*\*  .000  100 | .225\*  .024  100 | .400\*\*  .000  100 | .425  .000  100 | .546\*\*  .000  100 | 1  100 |

\*\*Correlation is significant at the 0.01 level (2-tailed)

\*correlation is significant at the 0.05 level (2-tailed)

*3.2 Linear Regression*

A simple linear regression tested the hypothesis 1: EI has an impact on TC. The results shows that EI has a positive significant influence on TC (β constant =1.446, p < .000). The R2 accounts for 31% variation on the dependent variable team cohesion. The results is seen in table 2. Therefore the hypothesis, EI impacts TC is accepted. This finding corroborates with the studies of (Guleryuz et al., 2008; Codier et al., 2008).

**Table 2 Regression Analysis**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Independent  Variable | Statistic | R | Β | Β constant | T  Tabulated | | Sig. |
| Emotional Intelligence | Regression  Residual  Total | .559 | 1.446  .610 | .559 | 4.413  6.667 | .000  .000 | |
| Constant =1.446 |  |  |  |  |  |  | |
| R2 =.312 |  |  |  |  |  |  | |
| F-ratio =44.446 |  |  |  |  |  |  | |
| SEE =.44678 |  |  |  |  |  |  | |
| N =100 |  |  |  |  |  |  | |

*Dependent Variable: Team Cohesion*

Furthermore, the sub competencies of EI (own-aware, own-manage, others aware, and others manage) also had an impact on team cohesion. The results indicate that all except “own-aware” and “others aware” did not statistically impact team cohesion. These findings are in line with the study of Jordan and Troth (2004). The results of the multiple regression is shown in table 3.

**Table 3 Multiple Regression**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Independent  Variables | Statistic | R | Β | Βconstant | T  Tabulated | Sig. |
| Constant  Own aware  Own manage  Others aware  Others manage | Regression  Residual  Total | .559 | .330  .056  .076  .076  .077 | .074  .209  .116  .418 | 3.789  .865  2.267  1.149  4.593 | .000  .389  .026  .254  .000 |
| Constant= 1.250 |  |  |  |  |  |  |
| R2=.378 |  |  |  |  |  |  |
| F-ratio=14.443 |  |  |  |  |  |  |
| SEE=.43141 |  |  |  |  |  |  |
| N=100 |  |  |  |  |  |  |

*Dependent Variable: Team Cohesion*

*3.3 Moderation Analysis*

Since all the participants are females, there was no moderation analysis done on gender on EI on TC. Thus, the hypothesis H4: Gender moderates the effect of EI on TC is rejected. From other studies, when gender is moderated on EI the results are positive but statistically not significant. This is similar to the results of Kumar and Muniandy, 2012; Ishak et al., 2011; Pooja and kumar, 2017.

Similarly, the results obtained from the interaction term (EI and Age) is positive but statistically insignificant. This means that, the moderating effect of age on EI has no significant impact on TC. The independent variable caused 33% change in TC. The results imply that when age moderates with EI its ability to affect TC is statistically not accepted. This rejects the hypothesis; Age moderates the effect of EI on TC. That means a person’s age either young or old does not affect his or her EI ability. The results is similar to the study by Salguero et al. 2012 and Shabani et al. 2011.

More so, the results on the interaction between (EI and family income) is positive but not significant. This implies that one's family income does not affect their EI ability. The finding is in line with the study of Coban et al. (2010). The results depict that when family income moderates EI, its ability to affect TC is statistically insignificant. As a result, we reject the hypothesis, family income moderates the effect of EI on TC.