# Psychological Capital Index and Satisfaction Level of IIT Kharagpur Students

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(Research Study) Abstract— The paper analyses the Positivity and Psychological Capital Index of students at Indian Institute of Technology (IIT), Kharagpur. Psychological Capital is the regenerative state of an individual. It is characterised by four parameters: self-efficacy, hope, resilience and optimism. The PsyCap Model was developed by F. Luthans. The four PsyCap components have an extremely significant relation with the behaviour and performance of students along with their level of satisfaction with their life. The paper discusses how the psychological capital can be linked to satisfaction level of students and their performance on academic as well as extra-academic

Index Terms—Psychological Capital

#### I. INTRODUCTION

**T**N wake of recent unfortunate events that happened in the institute, it was necessary to understand the Psychological Capital of the students of the Institute, how satisfied they are with their life and comparison of their satisfaction level with their performance. We have always understood the necessity of positivity and happiness in the world, but it has only been a few years since it has been understood that Psychological Capital can be used to understand behavioral aspects of the students. The paper, based on responses from the students of the institute, analyses some trends that have been observed from the responses.

# II. ABBREVIATIONS

PsyCap: Psychological Capital EAA: Extra Academic Achievements

#### III. FRED LUTHANS, THE AUTHOR OF PSYCAP MODEL

The idea of PsyCap model was proposed by Fred Luthans, distinguished professor at University of Nebraska. Currently F. Luthans is an editor of the Journal of World Business, Organizational Dynamics, and Journal of Leadership and Organization Studies. He is the author of several well-known books and numerous research articles on positive organisational behaviour and psychological capital.

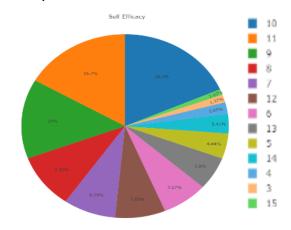
# IV. ANALYSIS OF PSYCAP INDEX AT IIT KHARAGPUR

A survey was undertaken under the Science of Happiness course to analyse the psychological capital of students in the year 2017. To validate the survey, we asked the surveyed to provide their email- ids and Roll nos. The survey contained questions on each of the components of PsyCap and about the current success, Satisfaction levels and the aspirations of students towards happiness. The answers to the questions were measured on a 5-point scale. The Survey recorded 294 responses. The questionnaire focused on these four components along with a few more questions to judge their satisfaction levels. In the survey students were asked to submit their CGPAs and their extra-academic involvements.

# A. PsyCap and Self-Efficacy

Self-efficacy is the confidence a person has in his/her skills and abilities to complete a set task in a pre-defined interval of time. Self-efficacy is a psychological state whose functionality can be extended to diverse psychological conditions and behaviors. This is a factor that has foremost significance in the psychological condition and the performance of university students and young adults in the corporate industry. This is a factor that has broad level of consequences in the lives of students, so questions of diverse fields were asked in this portion of the survey, ranging from interaction with peers to confidence level under varying circumstances. The selfefficacy was measured on a 15 – point scale. It was found that:

- a) Only a miniscule 6% of those who took the survey felt confident in discussing their problems with people outside their friend circle, and almost 60% responded that it is much easier to open to a close
- b) On the positive side, over 35% students felt that they could work under pressure, most of the time but only 14% were certain about it. However, the percentage of those who felt otherwise is at a low of
- c) About 60% felt that when they set a goal they were able to accomplish it in most cases.

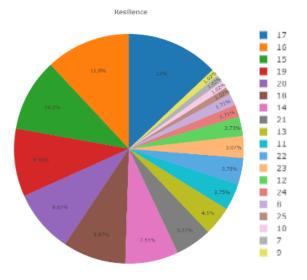


# B. PsyCap and Resilience

Psychological Resilience is the ability of an individual to successfully adapt to daily life tasks and cope with adversity or social disadvantages. Adversity and stress may occur due to family or relationship problems, health problems or academic worries. We have observed that students with poor resilience skills tend to give up easily on life whenever they feel that they are not satisfied with their daily lives.

The students were supposed to answer questions about their ability to manage difficulties and not get discouraged during adverse situations. We observed the following pattern on a 25-point scale:

- a) A little over 40% of the students felt that they could handle stressful situation and not break their heads over it, contrary to the 10% who felt that stress was something that couldn't be handled.
- b) About 60% of the students feel that they can accept low points in life and work on them in a future to produce better outputs. However, there are about 15% of the students who don't easily get over these low points and may tend to take a low point seriously.
- c) 40% responders felt that work apart, taking responsibility makes situations awkward for them.
- d) And finally, 40% of the students were somewhat inspired to face challenges opposed to a minor 4% who were conservative about facing difficulties at work.



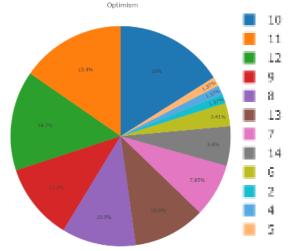
# C. PsyCap and Optimism

Optimism is an exquisite quality that affects the physical and mental health in a positive manner. Optimism is deeply related with PsyCap as it can help to develop better coping skills and it reinforces efficacy and hope. An optimistic student tends to hope for the best in his/her participation. Students with low optimism factor may not look on the bright side of things and lose expectations from life.

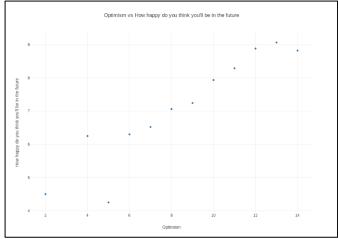
Regarding Optimism, the students were asked to tell their perception of work in future, their treatment of downfalls and their way of dealing with problems.

Reflecting upon the typical mentality of university students, the responses on a 15-point scale were much in the positive direction where: -

- a) Over 50% students were quite optimistic about their work future and only a minor 4% responding in the negative b) Over 60% students felt that they feel that the future would be better than the present, though about 10% students felt helpless when the going became tough.
- c) And keeping the percentage constant, more than 52% students even felt that when faced it adversity, they somehow, can find a solution most of the time.



Optimism vs Happiness Expectancy:

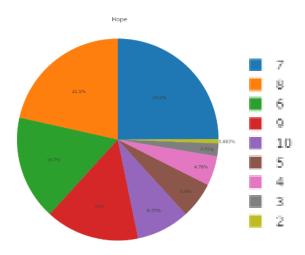


# D. PsyCap and Hope

Hope is a key component of happiness and of the psychological study of happiness. It is also the most extensively studied concept in psychology for reasons as simple as that life is not simple and that it allows people to achieve their goals with the right mindset and strategy for success whereby increasing their chances for achieving the same.

For surveying hope statistics, we inquired about their present working conditions and their expectation of success despite current setbacks. The observations of this portion of the survey on 10- point scale were much in accordance with the trend that had started with the pattern that had been observed above.

- a) When asked about their levels of motivations, though less than 20% people reported that they were actively pursuing their work, almost 50% were feeling alright or somewhat moderately motivated.
- b) However almost 75% were hopeful about future success despite ongoing hardships, among whom, 40% were certain that all present hardships lead to future success. Yet, almost 10% believed that current hardships can't indicate probable happiness.

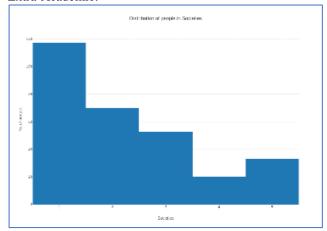


V. SUCCESS AND SATISFACTION LEVEL

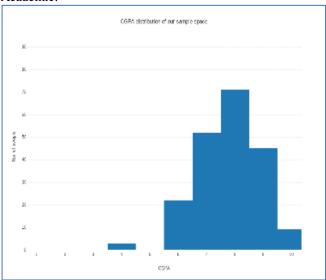
We know that success is a relative term and it may even vary from one person to another depending upon his perception. In such cases, we also discuss the satisfaction level of a person. The satisfaction level determines how much successful a person perceives himself/herself to be. It can be generalised without any doubt that every person wants to be satisfied and successful in life. However, since there is no specific parameter for success, we define satisfaction as the best possible parameter. Here, we are talking about the Psychological Capital Index and Satisfaction level of the students of IIT Kharagpur. To define success for a student, we have kept two possible parameters: academic and extraacademic achievements. A person may be good in either of these two parameters. Since both the parameters are different from one another and can't be related, we analysed our responses on both the parameters separately. Academic performance was judged by their CGPA and extra-academic performance was judged by their interaction and work in their societies, cells, halls etc.

We observed from the survey that the average CGPA of students is 7.35. For the extra-academic part, we observed that a large chunk of the students is not involved in any extra-academic activities.

#### Extra-Academic:



#### Academic:



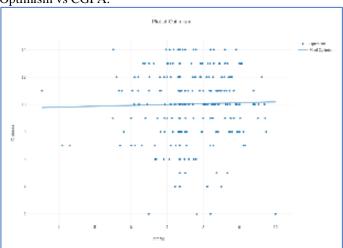
A. Considering their academic activities: -

- a) It is claimed by almost everybody that they were quite happy in their past, irrespective of their present levels of satisfaction, in accordance with global standards.
- b) In case of all those with a CGPA of above 7, it is the greater belief that there is a bright future ahead and for those in the range of 5-7, there are some who believe that the future may just be good enough, and there are others who believe that they are going to have a flawless future.
- c) However, quite predictably, the people with very low CGPA showed considerably lower level of present satisfaction and happiness, and those with relatively high CGPA have higher levels of satisfaction and happiness.

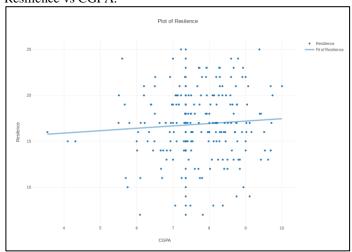
Self-efficacy vs CGPA



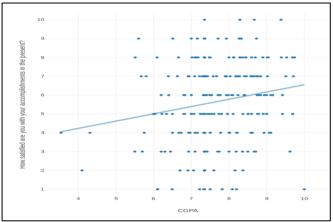
Optimism vs CGPA:



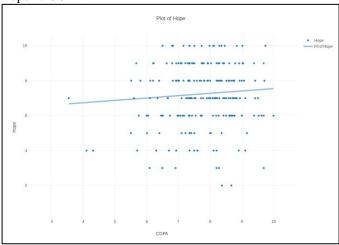
Resilience vs CGPA:



Satisfaction Level vs CGPA:



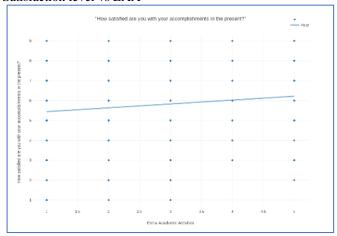
Hope vs CGPA:



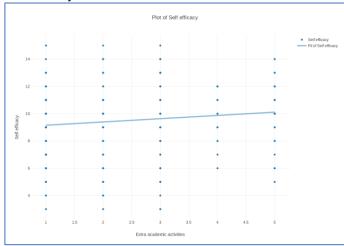
# B. Considering the Extra-Academic Activities: -

a) We observed that those with low involvement have lower levels of happiness than their more involved peers, but we also observed that those who tend to be eminently involved in Extra-Academics tend to have lower levels of happiness than those who are moderately or a little more than moderately involved.
b) The happiness expectation sees a quite similar response except that those who are in moderately involving societies have less expectations than their peers.

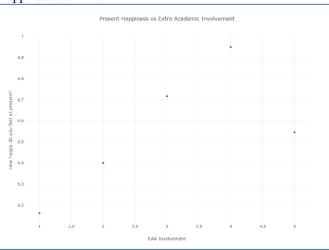
Satisfaction level vs EAA



# Self-Efficacy vs EAA:

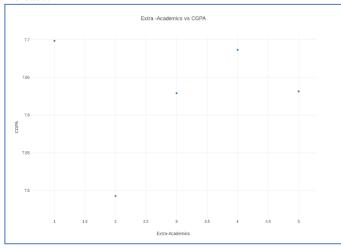


# Happiness vs EAA:



C. Relation between Academic and Extra-Academic Performance:

We observed that there is a bizarre relation between CGPA and Extra-Academic performance. We observed that those who are least involved in extra-academics have the highest average CGPA. However, as the extra-academic value increases, the average CGPA tends to decrease first and then increase.

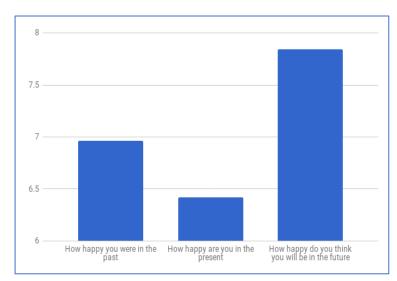


#### VI. CONNECTING PSYCAP WITH RELATIONSHIPS

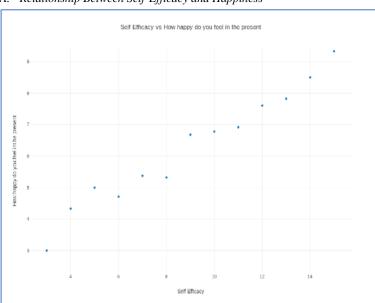
PsyCap is deeply influenced by relationships and interaction with others. We have understood the importance of good relationships. Students who tend to be expressive have better relations with others. Good interaction is directly related to PsyCap of an individual. It helps an individual to discuss his problems with his/her peers and hence, stay strong even in case of distress. However, it may not always mean that students with not-so-good friends don't have a positive PsyCap Index. We can easily review that some students are inherently self-motivated and have a positive PsyCap Index.

# VII. HAPPINESS LEVEL OF STUDENTS

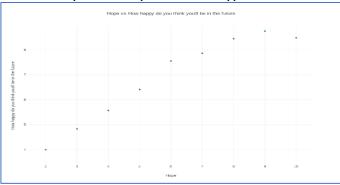
We observed that students were happier in the past than present. In general, students wish to be happier in future which is expected. The current happiness index of the institute is expectedly low.



# A. Relationship Between Self-Efficacy and Happiness



B. Relationship Between Hope and Future-Happiness



VIII. CONCLUSION

We analysed the Psychological Capital of students of Indian Institute of Technology (IIT), Kharagpur and observed the results as given above. We would like to conclude a few points from the above.

- We saw that some results of the Psychological Capital Index contain an expected output. However, we also need to put our focus on the small percentage of students who don't have a positive PsyCap Index (characterised by low levels of resilience, hope, optimism and self-efficacy). These set of students represent about 15-20% of the student community, which constitutes a significant portion.
- 2. People with negative PsyCap index are not mostly like that by choice. Many times, circumstances tend to make them that way. According to the book 'The How of Happiness' (2008, Sonja Lyubomirsky), just 10% of our happiness is affected by the circumstances but 40% of the happiness depends on ourselves. However, it has been observed that these two factors are closely interrelated to one another. Circumstances could be of two kinds: First, the circumstances in which a student has been raised and second, their current circumstances. They are the current circumstances that constitute the 10% of the happiness. The circumstances in which a student might have been raised affects his way of thinking and his attitude towards life. Circumstances only make a student think that he cannot be successful in the future or that he isn't making an efficient use of his life, because of which, the student might start getting depressed.
- 3. We saw that PsyCap Index has a very critical relation with depression and suicidal thoughts among students. Students with negative PsyCap Index tend to lose hope from life and not think efficiently about how to manage life. Such students are not optimistic and feel that nothing good can happen with them. This may lead them to unethical activities as a resort to get away from the worries of life. However, this may worsen their situation further and even cause bad health. All these circumstances are directly related to poor efficiency in their academic or extra-

- academic life which further makes them lose hope. Thus, a student might fall into this vicious cycle and end up in depression.
- 4. The reason behind the first decrease in average CGPA and then increase with increase in extraacademic involvements can be since on an average, students with less extra-academic involvements are more oriented with academics. However, as we observed in the graph for academics vs happiness in the present, satisfaction of students first increases but then reduces with increasing CGPA. Also, people with greater extra-academic involvements tend to have better interaction with other students because of which, their PsyCap index tends to be higher. Thus, they can produce better academic performance.
- 5. We observed that those with a positive PsyCap index at present tend to lead more satisfying lives and have better interaction with their peers, and the reasons are obvious like they are more confident and have a higher tendency to communicate their feelings with a larger number of their peers. And with company, hope and resilience are factors that are enhanced automatically. Another observation is that those who have a positive PsyCap index also have high expectations from their future and we have ascertained this from the values of their past happiness and their present PsyCap indices.
- We have observed that among the four factors of PsyCap, resilience and self-efficacy are the factors that are of prime importance in student life and there is a significant portion of students who feel that they can do their work confidently and can handle failure but in these two categories, the percentage of students who respond in the negative is also significantly more which is a matter of concern. It is a lack of resilience and self-efficacy that drives many students to quit and take the extreme step. Possible reasons for this may include the fact that in institutes like IIT Kharagpur, most people have come after spending majority of their formative years studying for a sixhour exam and hence the response of people when asked how happy they have been in their past is a value as low as six out of ten. Considering this, we need to include special training for all such individuals to boost their resilience and self-efficacy so that institutes won't need to experience the sad day when it loses its precious student to what can be interpreted as a lack of resilience.

#### IX. REFERENCES

- [1] Sonja Lyumbomirsky, "The How of Happiness", 2008 [2] Aiste DIRZYTE, "Research on Positivity and
- Psychological Capital at Science and Study Institutions in the USA", 2013 Vol. 7, No. 3(17), p. 389-395
- [3]https://en.wikipedia.org/wiki/Positive\_psychological\_c apital
- [4] Fred Luthans and Carolyn M. Yousef-Morgan", Psychological Capital: An Evidence Based Positive Approach", 2017

# X. ACKNOWLEDGEMENT

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