

## Job Satisfaction of Engineering College Teachers in Puducherry Related To the Psychological Factor Stress Using Fuzzy Logic Method

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**Abstract:** This research paper discusses the stress of Engineering College Teachers to their Job Satisfaction. Today it is generally felt that teachers in Engineering Colleges have those stress because of mushrooming of Engineering Colleges recruiting more staff with less standard in India. Many substandard institutions have sprung up due with inadequate faculty with less salary without concern for quality increases the stress of faculty. In spite of various plans and programmes to improve the conditions of teachers, serious attempts have not been made to identify the stressors which affect their Job Satisfaction of teachers in Engineering Colleges. It becomes necessary to assess the stress of teachers which affects the Job Satisfaction of Teachers in Engineering Colleges. To achieve the objectives of the present study, the informative survey method is used. Based on the statistical research, the conclusion of study says that stress is more among the Teachers which influence the Job Satisfaction of the Engineering College Teachers.

**Keywords:** Engineering College, Fuzzy Logic Method, Job Satisfaction, Statistical Research, Stress,

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### I. Introduction

Job Satisfaction (JS) is a pleasant and positive attitude possessed by an employee towards his job [1-3]. It is characterized by the feeling of affective response of a person towards his job. The teacher as an employee has a powerful and abiding influence in the formation of the character of every future citizen. The responsibility of the teacher is very important and great. To enable him to exercise his responsibilities effectively, he should be free from stress and should enjoy optimum JS, for stress and JS are vital organizational issues affecting performance and growth of an organization in emerging competitive environment [4-6].

#### Need For the Study

In this context, nothing is more important than securing a sufficient supply of high quality recruits to the teaching profession and supply conducive atmosphere to continue their profession with satisfaction. At present, in spite of various plans and programmes to improve the service conditions of Teachers, serious attempts have not been made to identify the stress factors which affect their JS [7-8]. It is therefore considered necessary to conduct an investigation concerning the factor stress associated with the JS of Teachers in Engineering Colleges. Hence there is a need for this study.

### II. Statement of Hypothesis

The following hypotheses are formed for the study:

- Stress level of Teachers in Engineering Colleges is not high.
- There is no significant difference between the subsamples of sex, age, marital status, type of institution, educational qualification, salary, teaching hours per week, promotion and teaching experience of stress in Engineering College Teachers.

### III. Research Method Adopted

Normative survey method was used. The population consists of nearly 200 Teachers from the Government & Private Engineering Colleges at Puducherry. Stratified random sampling is used.

### IV. Tools and Techniques of the Study

The tool stress scale for teaches was constructed and standardized by the researcher. Fuzzy Logic method is used to find significance between the subsamples of the study [9-13].

V. Differential Analysis Using Fuzzy Logic Method for the Subsamples

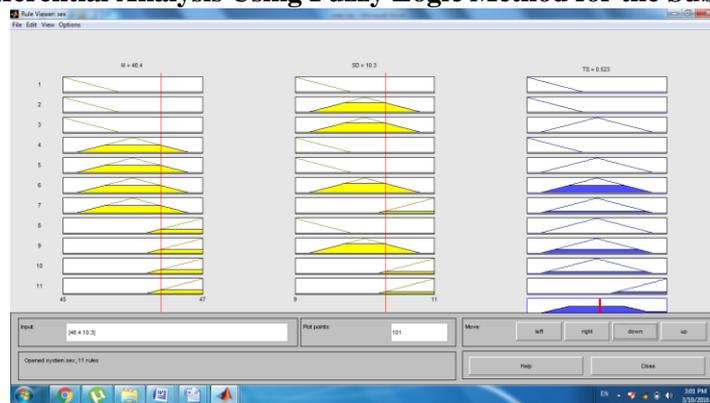


Fig. 1 Fuzzy Rule Base for Sex

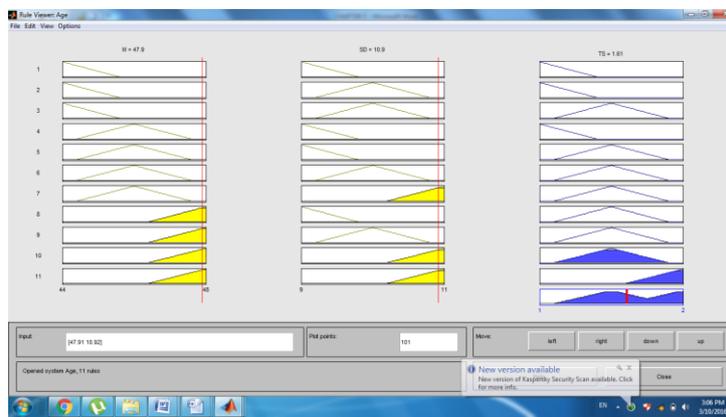


Fig. 2 Fuzzy Rule Base for Age

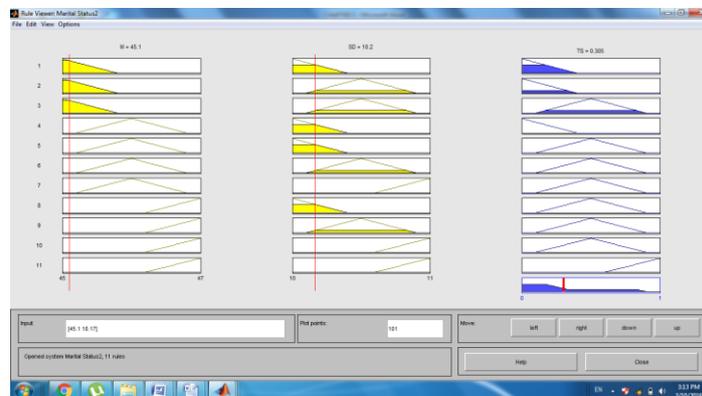


Fig. 3 Fuzzy Rule Base for Marital Status

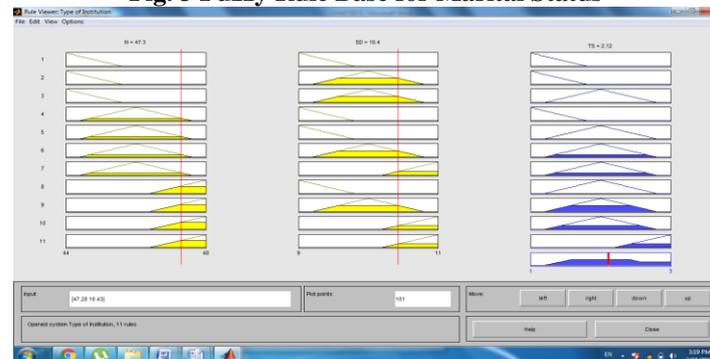


Fig. 4 Fuzzy Rule Base for Type of Institution

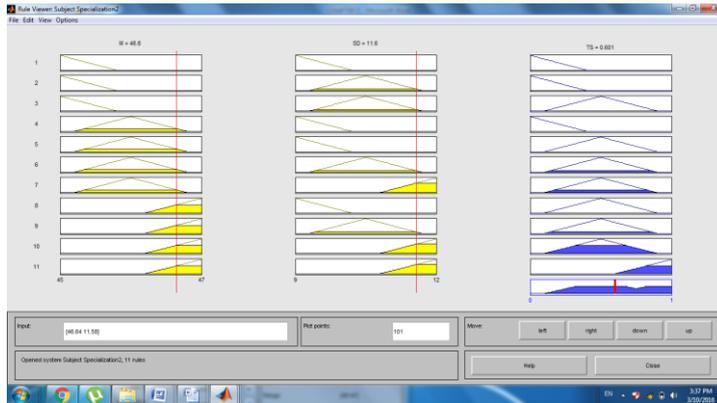


Fig. 5 Fuzzy Rule Base for Subject Specialization

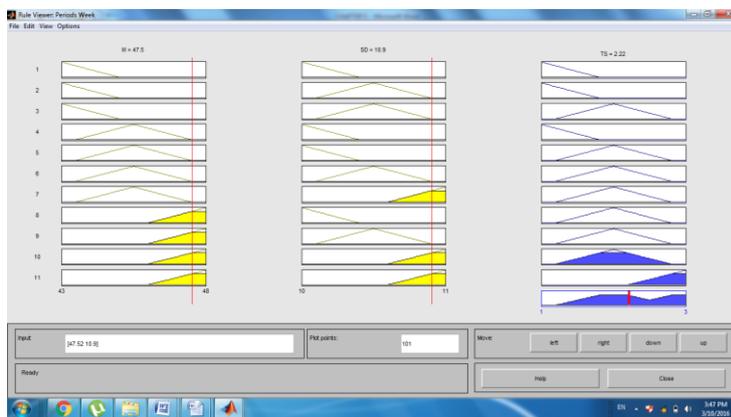


Fig. 6 Fuzzy Rule Base for Periods/week

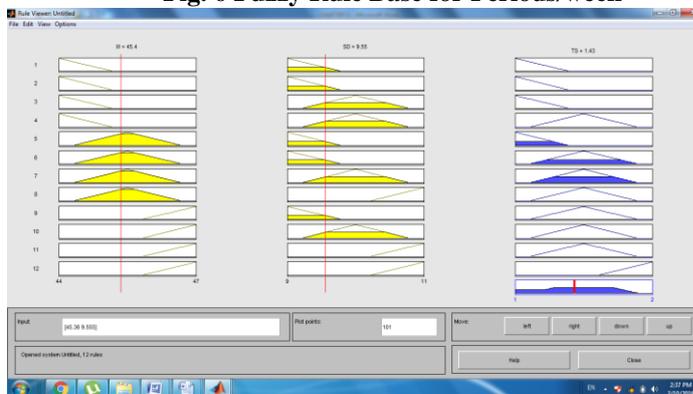


Fig. 7 Fuzzy Rule Base for Salary

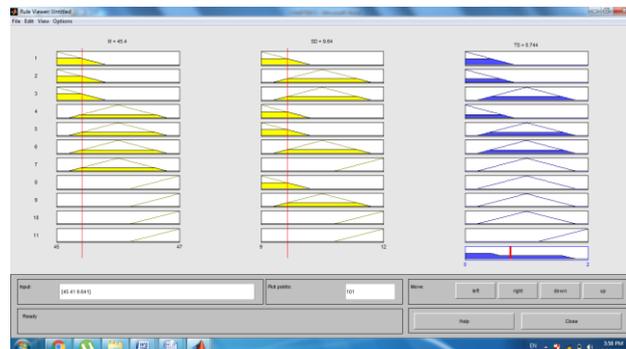
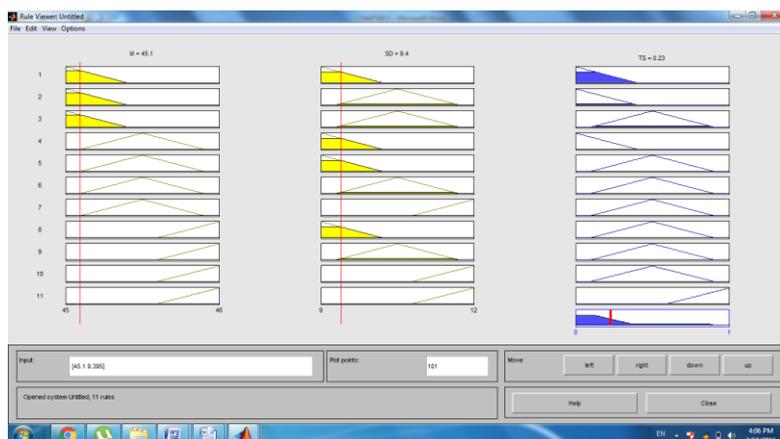
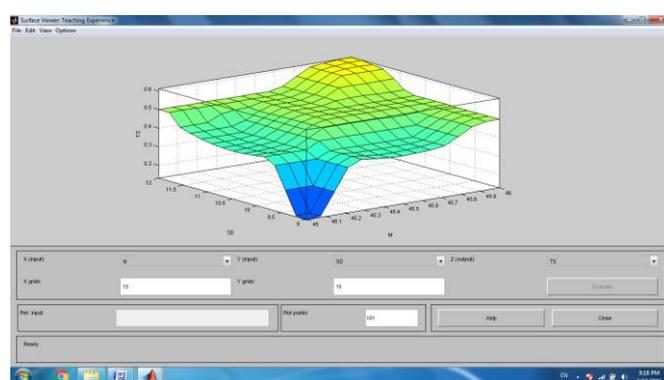


Fig. 8 Fuzzy Rule Base for Promotion



**Fig. 9 Fuzzy Rule Base for Teaching Experience**



**Fig. 10. Fuzzy Surface Viewer for Teaching Experience**

## VI. Results and Discussions

- The Engineering College Teachers working in the Government and Private institution differ in their stress which influences their JS.
- The Engineering College Teachers working for more than 17 hours per week have more stress than the teachers who work less than 17 hours.
- The Engineering College Teachers whose educational qualification is M.E. or M.Tech. have more stress compared to other qualified teachers.
- There exists no significance difference between the other subsamples such as sex, age, marital status, educational qualification, salary, promotion and teaching experience.

Based on the findings of the study, we can infer that stress exists in the Engineering College Teachers whose qualification is less compared to other higher qualified teachers. Teachers those who work more than the stipulated hours have more stress.

## VII. Conclusion

The study indicate that the necessary steps has to be taken by the Institution in order to reduce the stress of the Engineering College Teachers for it has greater impact on their JS which will affect the entire edifice of the Engineering Education.

## References

- [1]. Price, Organizational stress and Job Satisfaction in Public School Teachers, DAI, 31, 1971, (11-A).
- [2]. Anita Devi, Occupational Stress: A Comparative Study of Women in Different Occupation, Trajan, 35(1), 2006, 61-73.
- [3]. T.R.Rajeswari, Employees Stress: A study with reference to Bank Employees, Indian Journal of Industrial Relations, 27(4), 1992.
- [4]. Sun, W., Wu, H., & Wang, L., Occupational stress and its related factors among university teachers in China, Journal of Occupational Health, 53(4), 2011, 280-6.
- [5]. Shernoff, E.S., Mehta, T.G., Atkins, M.S., Torf, R. & Spencer, J., A qualitative study of the sources and impact of stress among urban teachers, School Mental Health, 3, 2011, 59-69.
- [6]. Eres, F. & Atanasoska, T., Occupational Stress of Teachers: a comparative study between Turkey and Macedonia, International Journal of Humanities and Social Science, 1(7), 2011, 59-65.
- [7]. Liu Z. and Yang J., A Study on Job Satisfaction of Hotel Employees, IEEE International Conference on Information Management, Innovation Management and Industrial Engineering (ICIMI 2009), X'ian, China, 2009, 204-209.
- [8]. Best John, Research in Education (Englewood Cliffs, NJ: Prentice-Hall, 1982).

- [9]. Rasmani K. A. and Shahari N.A., Job Satisfaction Evaluation using Fuzzy Approach. Proc. IEEE Third International Conference on Natural Computation (ICNC 2007). Hainan, China, Vol.4, 2007, 544-548.
- [10]. Limin Xu and Onggang Zhaoa, Fuzzy Evaluation on College Teacher's Job Satisfaction Based on Improved Algorithm, Proc. Second Asia Pacific Conference on Computational Intelligence and Industrial Application (PACII 2009), Wuhan, China, 2009, 189-192.
- [11]. Khan A.R., Amin H.U. and Rehman Z.U., Application of Expert System with Fuzzy Logic in Teachers Performance Evaluation, International Journal of Advanced Computer Science and Applications, Vol. 2(2), 2011, 51-57.
- [12]. Iraj Mahdavi, Hamed Fazlollahtabar, Nezam Mahdavi-Amiri, Mohsen Arabmaghsudi, Norouz Kolbadinejad, Design of a Fuzzy Job Satisfaction Matrix with Dynamic Performance Criteria, Proceedings of the 2011 International Conference on Industrial Engineering and Operations Management (IEOM 2011), Kuala Lumpur, Malaysia, 2011, 1173-1178.
- [13]. Rahib H.Abiyev, Günay Sadiko, Esmira Abiyeva, Fuzzy Evaluation of Job Satisfaction of Hotel Employees", International Conference on Artificial Intelligence (ICAI 2015), Nevada, USA, 2015, 175-180.