



**National Conference on Advanced Research in Science,  
Engineering, Management and Humanities**

**(NCARSEMh – 2025)**

**27<sup>th</sup> July, 2025, Jharkhand, India.**

**CERTIFICATE NO : NCARSEMh /2025/ C0725734**

**A Study to Examine the Relationship Between Parenting Style and  
Teenagers Mental Health Through LSTM Modeling**

**Abhay Kumar Sharma**

Research Scholar, Department of Computer Applications, IFTM University,  
Moradabad, Uttar Pradesh.

**Prof. Dr. Rahul Kumar Mishra**

Director, School of Computer Science and Applications, IFTM University,  
Moradabad., Uttar Pradesh.

**ABSTRACT**

World Health Organization estimates that 10-20 percent of youths around the world have mental health issues in adolescence, a key period in the lives of many children. Adolescent mental health cases have increased by 31% as a result of the COVID-19 epidemic, which has made the issue much worse. This paper investigates the connection between parenting styles and adolescent mental health with the help of deep learning. teenagers along with their parents were surveyed to collect data on parenting behaviors and psychological well-being. The data obtained were processed through a Long Short-Term Memory (LSTM) model to forecast parenting styles and investigate their correlation with mental health outcomes. The model was also effective with an accuracy of 86 percent, which proves the usefulness of deep learning in the analysis of behavior. The correlation analysis found out that parenting styles and mental health conditions had significant relationships. Conversely, parenting styles of authoritarian and neglect were positively associated with greater amounts of mental health problems, indicating greater risk. The results show that the family environment plays a critical role in influencing the mental health of adolescents and that balanced and supportive parenting is a crucial practice.

**Keywords:** *Parenting Style, Behavioral Analysis, Family, Risk, Psychological.*