

**EMOTIONAL MATURITY, PSYCHOLOGICAL RESILIENCE, AND
LOCUS OF CONTROL AS CORRELATES OF ACADEMIC STRESS
AMONG HIGHER SECONDARY SCHOOL STUDENTS**

Thesis
Submitted for the Degree of
DOCTOR OF PHILOSOPHY IN EDUCATION

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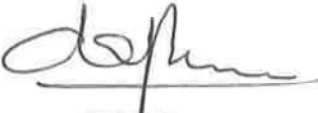
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LIST OF ABBREVIATIONS

ACH	- American College Health Association
ANOVA	- Analysis of Variance
APA	- American Psychological Association
ARIES	- Adapted Version of Rotter's Internal-External Locus of Control Scale
ASHS	- Academic Stress Scale for Higher Secondary School Students
BSES	- Brief Socio-Economic Status Scale
CBSE	- Central Board of Secondary Education
CISCE	- Council for the Indian School Certificate Examination
CLOCS	- Children's Locus of Control Scale
ELC	- External Locus of Control
EMSS	- Emotional Maturity Scale for Higher Secondary School Students
HSS	- Higher Secondary School
ILC	- Internal Locus of Control
KBHSE	- Kerala Board of Higher Secondary Education
Ku	- Kurtosis
LOC	- Locus of Control
M	- Mean
Mdn	- Median
M _{POP}	- Mean Population Value
NCERT	- National Council of Educational Research and Training
NIOS	- National Institute of Open Schooling
OECD	- Organization for Economic Co-operation and Development
RRL	- Review of Related Literature
PRSA	- Psychological Resilience Scale for Adolescents
SE _M	- Standard Error of Mean
Sk	- Skewness
VHSS	- Vocational Higher Secondary Schools
WHO	- World Health Organization
σ	- Standard Deviation

ABSTRACT

Academic stress and related problems have become a growing concern all over the world. Despite the availability of many experimentally proven psychotherapeutic measures to alleviate academic stress, the graph of academic stress always shows an upward trend. It points to the need for controlling academic stress at a more fundamental level by manipulating and controlling psychological factors at the bottom level of academic stress. In this context, the present study aims to understand how psychological factors like emotional maturity, psychological resilience, and locus of control are related to academic stress of one of the most vulnerable group of students, viz., the higher secondary school students. The descriptive study employed survey method to collect data from a stratified random sample of 1232 higher secondary school students (Male = 583; Female = 649) in the age range 16-19, from 23 schools under Directorate of Higher Secondary Education, Govt. of Kerala. The data collected psychometric instruments were analysed with SPSS to test 13 null hypotheses.

The results of the analyses showed that demographic factors like type of family, and ordinal position exert significant differential influence on the distribution of academic stress and all the independent variables. While gender exert significant differential influence on all the variables except psychological resilience, the differential effect of socio-economic status is limited to locus of control. Emotional maturity, psychological resilience, and internal locus of control are significantly and negatively correlated to academic stress showing that any improvement in these factors will be accompanied by a corresponding decrease in academic stress experienced by the students. While socio-economic status is a decisive factor in the relationship of academic stress to emotional maturity, psychological resilience, and locus of control, gender limit its influence to the relationship of academic stress to emotional maturity and psychological resilience. Though some of the ordinal positions are critical in the association of academic stress to emotional maturity and psychological resilience, type of family do not exert any significant differential effect on the relationship of academic stress to any of the independent variables.

Emotional Maturity (EM), Psychological Resilience (PR), and Internal Locus of Control (ILC) exert significant main effect on Academic Stress (AST). Emotional maturity and psychological resilience have significant interaction effects on academic stress. Likewise, locus of control also has significant interaction effect on academic stress with psychological resilience. The effect of emotional maturity on academic stress in interaction with locus of control, however, is not significant. The independent variables have significant interaction effects on academic stress of HSS-students. While emotional maturity can significantly explain 38.5% variability, psychological resilience can explain 14.4% and internal locus of control can explain 10.4% variabilities in academic stress of HSS-students. A total of 43.4% variability in the academic stress can be predicted jointly by the independent variables. All the independent variables significantly contribute to the prediction of the dependent variable. The multiple regression equation for academic stress (AST) worked out to be $AST = 258.904 - (0.536 \times EM) - (0.095 \times PR) - (0.202 \times ILC)$.

The findings of the study implies that immunity against academic stress must be developed in students right from the beginning of education by taking measures to strengthen their emotional maturity, psychological resilience and internal locus of control. Any measure taken by the school to alleviate academic stress by fostering emotional maturity, psychological resilience, and internal locus of control should address female students, students from nuclear families and the ‘only children’, on a priority base. While providing counselling service to abate academic stress, teachers and school counsellors/psychologists should consider the influential demographic factors to group them so as to make the intervention more effective. The significant interaction effects of the independent variables on academic stress implies the need for ability grouping of students based on these factors for school-based group therapy. The regression equation has its implications for teachers, school counsellors/psychologists, administrators, curriculum planners, teacher educators and researchers to find out the value of one factor provided the value of other factors are known. The study has made suggestion for further research in the light of the new avenues opened from current research.

Keywords: Academic stress, Emotional maturity, Psychological resilience, Locus of control, Higher secondary school students.

പ്രബന്ധത്തിന്റെ സംഗ്രഹം

അക്കാദമിക് സമ്മർദ്ദവും അനുബന്ധ പ്രശ്നങ്ങളും ലോകമെമ്പാടും വർദ്ധിച്ചുവരുന്ന ആശങ്കയായി മാറിയിരിക്കുന്നു. അക്കാദമിക് സമ്മർദ്ദം ലഘൂകരിക്കുന്നതിന് പരീക്ഷണാത്മകമായി തെളിയിക്കപ്പെട്ട നിരവധി സൈക്കോതെറാപ്യൂട്ടിക് മാർഗ്ഗങ്ങൾ ലഭ്യമായിരുന്നിട്ടുകൂടിയും, അക്കാദമിക് സമ്മർദ്ദത്തിന്റെ ഗ്രാഫ് എല്ലായ്പ്പോഴും ഉയർന്നുകൊണ്ടിരിക്കുന്നു. അക്കാദമിക് സമ്മർദ്ദത്തിന് കാരണമായ മാനസിക ഘടകങ്ങളെ സൂക്ഷ്മമായി നിരീക്ഷിക്കുകയും നിയന്ത്രിക്കുകയും ചെയ്തുകൊണ്ട് കൂടുതൽ അടിസ്ഥാന തലത്തിൽ അക്കാദമിക് സമ്മർദ്ദത്തെ നിയന്ത്രിക്കേണ്ടതിന്റെ ആവശ്യകത ഇത് ചൂണ്ടിക്കാണിക്കുന്നു. ഈ സാഹചര്യത്തിൽ, വൈകാരിക പക്ഷത, മാനസിക പ്രതിരോധം, മനോനിയന്ത്രണാധികാരം തുടങ്ങിയ മനുഷാസ്ത്രപരമായ ഘടകങ്ങൾ ഹയർ സെക്കൻഡറി സ്കൂൾ വിദ്യാർത്ഥികളുടെ അക്കാദമിക് സമ്മർദ്ദവുമായി എങ്ങനെ ബന്ധപ്പെട്ടിരിക്കുന്നുവെന്ന് മനസ്സിലാക്കുക എന്ന ലക്ഷ്യത്തോടുകൂടിയാണ് ഈ പഠനം ഏറ്റെടുത്തിട്ടുള്ളത്. സർവ്വേരീതി പിന്തുടരുന്ന വിവരണാത്മക പഠനമാർഗ്ഗമാണ് ഈ ഗവേഷണത്തിന് അവലംബിച്ചിട്ടുള്ളത്. കേരള ഹയർ സെക്കൻഡറി സ്കൂൾ ഡയറക്ടറേറ്റുമായി അഫിലിയേറ്റ് ചെയ്തിട്ടുള്ള മുഴുവൻ ഹയർസെക്കണ്ടറി സ്കൂളുകളിലേയും പ്ലസ് വൺ, പ്ലസ് ടു ക്ളാസ്സുകളിൽ പഠിച്ചുകൊണ്ടിരിക്കുന്ന കുട്ടികളെ പ്രതിനിധാനം ചെയ്തുകൊണ്ട്, 23 സ്കൂളുകളിൽ നിന്ന് 16-19 വയസ്സിനിടയിലുള്ള 1232 ഹയർ സെക്കൻഡറി സ്കൂൾ വിദ്യാർത്ഥികളുടെ (പുരുഷൻ = 583; സ്ത്രീ = 649) സ്റ്റാറ്റിസ്റ്റിക് റാൻഡം സാമ്പിൾ ആണ് ഈ പഠനത്തിനായി തെരഞ്ഞെടുത്തിട്ടുള്ളത്. അവരിൽനിന്നും, ഗവേഷക സ്വന്തംനിലയിൽ വികസിപ്പിച്ചെടുത്ത മൂന്ന് ടെസ്റ്റുകൾ ഉൾപ്പെടെ, അഞ്ച് സ്റ്റാൻഡേർഡ് സൈക്കോമെട്രിക് ടെസ്റ്റുകൾ ഉപയോഗിച്ച് പഠനത്തിനുവേണ്ട ഡാറ്റകൾ ശേഖരിക്കുകയും, പ്രസ്തുത ഡാറ്റ സൂക്ഷ്മപരിശോധനകൾക്ക് ശേഷം സ്റ്റാറ്റിസ്റ്റിക്കൽ സോഫ്റ്റ്‌വെയറിന്റെ സഹായത്തോടെ അപഗ്രഥനത്തിന് വിധേയമാക്കുകയും ചെയ്തു.

പഠിതാവിന്റെ ലിംഗഭേദം, കുടുംബത്തിന്റെ തരം, ജനനക്രമം, കുടുംബത്തിന്റെ സാമ്പത്തിക-സാമൂഹിക നില മുതലായ ഘടകങ്ങൾ അക്കാദമിക് സമ്മർദ്ദത്തെയും വൈകാരിക പക്ഷത, മാനസിക പ്രതിരോധം, മനോനിയന്ത്രണാധികാരം മുതലായ ഘടകങ്ങളെയും വിഭിന്ന രീതികളിൽ സ്വാധീനിക്കുന്നുണ്ടെന്ന് വിശകലനഫലം കാണിക്കുന്നു. മനുഷാസ്ത്രപരമായ പ്രതിരോധശേഷി ഒഴികെയുള്ള എല്ലാ വേരിയബിളുകളിലും ലിംഗഭേദം പ്രസക്തമായ വിന്യാസ വ്യതിയാനം ചെലുത്തുന്നുണ്ടെങ്കിലും, സാമൂഹിക-സാമ്പത്തിക നിലയുടെ ഭിന്നപ്രഭാവം നിയന്ത്രണാധികാരത്തിന്റെ കാര്യത്തിൽ മാത്രമായി പരിമിതപ്പെട്ടിരിക്കുന്നു. വൈകാരിക പക്ഷത, മനുഷാസ്ത്രപരമായ പ്രതിരോധം, നിയന്ത്രണത്തിന്റെ ആന്തരിക സ്ഥാനം എന്നിവ അക്കാദമിക് സമ്മർദ്ദവുമായി ഗണ്യമായും പ്രതികൂലമായും ബന്ധപ്പെട്ടിരിക്കുന്നു. ഈ ഘടകങ്ങളിലെ ഏത് പുരോഗതിയും വിദ്യാർത്ഥികൾ അനുഭവിക്കുന്ന അക്കാദമിക് സമ്മർദ്ദത്തിൽ സമാനമായ കുറവുണ്ടാകുമെന്ന് പഠനഫലം കാണിക്കുന്നു.

വൈകാരിക പക്ഷത (EM), മാനസിക പ്രതിരോധം (PR), മനോനിയന്ത്രണത്തിന്റെ സ്ഥാനം (LC) എന്നിവയുമായുള്ള അക്കാദമിക് സമ്മർദ്ദത്തിന്റെ ബന്ധത്തിൽ സാമൂഹിക-സാമ്പത്തിക നില നിർണ്ണായക ഘടകമാണെങ്കിലും, ലിംഗഭേദം അതിന്റെ സ്വാധീനത്തെ അക്കാദമിക് സമ്മർദ്ദത്തിന് വൈകാരിക പക്ഷതയും മാനസിക പ്രതിരോധവും തമ്മിലുള്ള ബന്ധത്തിലേക്ക് പരിമിതപ്പെടുത്തുന്നു. വൈകാരിക പക്ഷതയുമായും മാനസിക പ്രതിരോധവുമായും അക്കാദമിക് സമ്മർദ്ദത്തിനുള്ള ബന്ധത്തിൽ ചില ജനനക്രമങ്ങൾക്കുള്ള സ്വാധീനം നിർണ്ണായകമാണെങ്കിലും, പഠനത്തിൽ പരിഗണിക്കപ്പെട്ട സ്വതന്ത്ര വേരിയബിളുകളുമായുള്ള അക്കാദമിക് സമ്മർദ്ദത്തിന്റെ ബന്ധത്തിൽ പഠിതാവ് ഏത് തരം

കുടുംബത്തിൽ പെടുന്നു എന്നത് പ്രസക്തമായ സ്വാധീനമൊന്നും ചെലുത്തുന്നില്ല. വൈകാരിക പക്ഷത, മാനസിക പ്രതിരോധം, ആന്തരമനോനിയന്ത്രണാധികാരം (ILC) എന്നീ ഘടകങ്ങൾ സ്വതന്ത്രനിലയിൽ അക്കാദമിക് സമ്മർദ്ദത്തിൽ കാര്യമായ സ്വാധീനം ചെലുത്തുന്നതിനോടൊപ്പം, വൈകാരിക പക്ഷതയും മനഃശാസ്ത്രപരമായ പ്രതിരോധശേഷിയും സംയുക്തമായും അക്കാദമിക് സമ്മർദ്ദത്തിൽ കാര്യമായ ഇടപെടൽ പ്രഭാവം ചെലുത്തുന്നുണ്ട്.

അതുപോലെ, മാനസിക പ്രതിരോധം, ആന്തരമനോനിയന്ത്രണാധികാരവുമായി പ്രതിപ്രവർത്തിച്ച് അക്കാദമിക് സമ്മർദ്ദത്തിന്മേൽ പ്രകടമായ സ്വാധീനം ചെലുത്തുന്നു. എന്നിരുന്നാലും, മനോനിയന്ത്രണ സ്ഥാനവുമായുള്ള ഇടപെടലിലെ അക്കാദമിക് സമ്മർദ്ദത്തിൽ വൈകാരിക പക്ഷതയുടെ സ്വാധീനം പ്രാധാന്യമർഹിക്കുന്നില്ല. ഹയർ സെക്കണ്ടറി വിദ്യാർത്ഥികളുടെ അക്കാദമിക് സമ്മർദ്ദത്തിൽ സ്വതന്ത്ര വേരിയബിളുകൾക്ക് കാര്യമായ ഇടപെടൽ സ്വാധീനമുണ്ട്. വൈകാരിക പക്ഷതയ്ക്ക് 38.5%, മാനസിക പ്രതിരോധത്തിന് 14.4%, ആന്തരമനോനിയന്ത്രണാധികാരത്തിന് 10.4% എന്നീ തോതിൽ അക്കാദമിക് സമ്മർദ്ദത്തിലുള്ള വ്യതിയാനങ്ങളെ ഗണ്യമായി വിശദീകരിക്കാൻ കഴിയും. ഹയർ സെക്കണ്ടറി വിദ്യാർത്ഥികളുടെ അക്കാദമിക് സമ്മർദ്ദത്തിൽ (AST) മൊത്തം 43.4% വ്യതിയാനം സ്വതന്ത്ര വേരിയബിളുകൾ സംയുക്തമായി പ്രവചിക്കാൻ കഴിയും. എല്ലാ സ്വതന്ത്ര വേരിയബിളുകളും ഡിപെൻഡന്റ് വേരിയബിളിന്റെ പ്രവചനത്തിന് ഗണ്യമായ സംഭാവന നൽകുന്നു. ഈ വിവരങ്ങളുടെ അടിസ്ഥാനത്തിൽ ഹയർ സെക്കണ്ടറി വിദ്യാർത്ഥികളുടെ അക്കാദമിക് സമ്മർദ്ദത്തിന്റെ തോത് കണക്കാക്കാൻ ഉതകുന്ന ഒരു റിഗ്രഷൻ സമവാക്യം വികസിപ്പിച്ചെടുത്താൽ അത് $AST = 258.904 - (0.536 \times EM) - (0.095 \times PR) - (0.202 \times ILC)$ എന്നതായിരിക്കും.

പഠനത്തിന്റെ കണ്ടെത്തലുകൾ സൂചിപ്പിക്കുന്നത് വിദ്യാർത്ഥികളിൽ അവരുടെ വൈകാരിക പക്ഷത, മാനസിക പ്രതിരോധം, ആന്തരമനോനിയന്ത്രണാധികാരം എന്നിവ ശക്തിപ്പെടുത്തുന്നതിനുള്ള നടപടികൾ സ്വീകരിച്ച് വിദ്യാഭ്യാസത്തിന്റെ തുടക്കം മുതൽ തന്നെ അക്കാദമിക് സമ്മർദ്ദത്തിനെതിരായ പ്രതിരോധശേഷി വികസിപ്പിക്കണം എന്നാണ്. വൈകാരിക പക്ഷത, മാനസിക പ്രതിരോധം, ആന്തരമനോനിയന്ത്രണാധികാരം എന്നിവ വളർത്തുന്നതിലൂടെ അക്കാദമിക് സമ്മർദ്ദം ലഘൂകരിക്കുന്നതിന് സ്കൂൾ സ്വീകരിക്കുന്ന ഏതൊരു നടപടിയും വനിതാ വിദ്യാർത്ഥികളെയും ഏകകുടുംബങ്ങളിൽ നിന്നുള്ള വിദ്യാർത്ഥികളെയും 'ഏക സന്താനങ്ങളെയും' മുൻഗണനാ അടിസ്ഥാനത്തിൽ അഭിസംബോധന ചെയ്യണം. അക്കാദമിക് സമ്മർദ്ദം കുറയ്ക്കുന്നതിന് കൗൺസലിംഗ് സേവനം നൽകുമ്പോൾ, അധ്യാപകരും സ്കൂൾ സൈക്കോളജിസ്റ്റുകളും ഇടപെടൽ കൂടുതൽ ഫലപ്രദമാക്കുന്നതിന് അവരെ ഗ്രൂപ്പുചെയ്യുന്നതിന് ജനസംഖ്യാപരമായ ഘടകങ്ങൾ പരിഗണിക്കണം. അക്കാദമിക് സമ്മർദ്ദത്തിൽ ഇൻഡിപെൻഡന്റ് വേരിയബിളുകളുടെ കാര്യമായ ഇടപെടൽ പ്രഭാവം സ്കൂൾ അധിഷ്ഠിത ഗ്രൂപ്പ് തെറാപ്പിക്ക് ഈ ഘടകങ്ങളെ അടിസ്ഥാനമാക്കിയുള്ള എബിലിറ്റി ഗ്രൂപ്പിംഗിന്റെ ആവശ്യകതയെ സൂചിപ്പിക്കുന്നു. അധ്യാപകർ, സ്കൂൾ സൈക്കോളജിസ്റ്റുകൾ, അഡ്മിനിസ്ട്രേറ്റർമാർ, പാഠ്യപദ്ധതി ആസൂത്രകർ, അധ്യാപക പരിശീലകർ, ഗവേഷകർ എന്നിവർക്ക് മറ്റ് ഘടകങ്ങളുടെ മൂല്യം അറിയാമെങ്കിൽ ഒരു ഘടകത്തിന്റെ മൂല്യം കണ്ടെത്താൻ ഈ പഠനത്തിൽനിന്നും വികസിപ്പിച്ചെടുത്ത റിഗ്രഷൻ സമവാക്യം സഹായകരമായിരിക്കും. ഈ ഗവേഷണത്തിന്റെ കണ്ടെത്തലുകൾ തുറന്നുനൽകുന്ന പുതിയ അന്വേഷണമേഖലകൾ പ്രബന്ധത്തിന്റെ ഒടുവിൽ നിർദ്ദേശിച്ചിട്ടുണ്ട്.

പ്രധാന പദങ്ങൾ: അക്കാദമിക് സമ്മർദ്ദം, വൈകാരിക പക്ഷത, മനോനിയന്ത്രണാധികാരം, മാനസിക പ്രതിരോധം, ഹയർ സെക്കൻഡറി സ്കൂൾ വിദ്യാർത്ഥികൾ.

INTRODUCTION

- Introduction
- Rationale
- Need and Significance
- Research Problem
- Operationalization
- Objectives
- Hypotheses
- Scope and Limitations

CHAPTER I

INTRODUCTION

1.1. INTRODUCTION

Education is the powerful instrument for the social, political and economic development of a country. In an increasingly interconnected world, where borders are blurred by technology and trade, education equips individuals with the skills and knowledge needed to navigate a globalized economy. Education shapes self-perception of adolescents and gives them the foundation for their future participation in society that is not limited to participation in the workplace. Experiences acquired by children in school help them to develop well balanced personalities, to become physically strong, mentally alert, emotionally stable, culturally sound, and socially efficient along with the most desired aspects of knowledge and learning. It is a place where the students grow and learn as they travel the road from childhood to maturity. Therefore, school education is a necessary component for the children of all the citizens of a nation for the development, betterment and utilization of best side of human resources. Even though education is universally given a high priority, academic institutions today do not show a motivating atmosphere. Students are being pressurized and forced to learn things without really understanding them just to get more distinctions and good grades in examinations. The constant need to perform well academically, coupled with high expectations from parents, teachers, or society, can lead to

feelings of inadequacy, fear of failure, and overwhelming pressure to succeed. This pressure, tension, or anxiety experienced by students due to the demands, challenges, and expectations associated with their academic pursuits is known in research literature as academic stress. The pervasive nature of academic stress among student community necessitates a comprehensive understanding of its distribution, causes, effects, factors influencing and potential interventions.

Higher secondary education is an extremely significant turning point in the academic life of a student. At this point, the learner's academic achievement is critical in determining their next step in their education and most likely their profession. Thus, too much stress at this point may lead to a rise in mental health issues including nervousness, depression, and anxiety, which may eventually harm the consequences of the accomplishments (Pascoe, Hetrick & Parker, 2019). Academic stress is a psychological state of distress related to some frustration that is expected to result from academic failure, or merely from knowing that such failure may occur. At higher secondary level, pupils must deal with a variety of academic challenges, including tests, in-class questions, and demonstrating improvement in subjects of their choice. It also includes understanding the lessons being taught by the teacher, competing with peers, and meeting the academic standards set by parents and teachers. These expectations may tax or go beyond available resources of the learners, which would leave them under excessive stress. There are always individual differences in the effect of these stressors. Plentiful research evidence exists to demonstrate the adverse effect on

academic stress on academic performance of students at different levels of education. It also increases the risk of serious mental health issues and behaviour problems, including depression, suicidal ideation, substance abuse and truancy.

1.1.1. Prevalence of Academic Stress among School Students

Students all throughout the world, regardless of their educational level, struggle with academic stress. American Psychological Association (APA) in a nationwide survey conducted among high school students in 2021 found that 27% of them experience ‘extreme academic stress’, and 83% reported having academic stress at different degrees (American Psychological Association, 2021). A survey conducted by the Organisation for Economic Co-operation and Development (OECD) among 15–16-year-old students by taking sample from 72 nations showed that 66% of the students experience academic stress, and 59% is anxious about performance in exams, a major source of stress among school students (OECD, 2017). The National College Health Assessment conducted by American College Health Association [ACH] in 2023 reported that 86% of college students have experienced academic stress at some point of time in the year 2022 (American College Health Association, 2024). The survey conducted by the National Union of Students (UK) in 2020 revealed that academic stress is a regular occurrence for 73% of pupils (Bhardwa, 2020). A survey on college students by the Federal Centre for Health Education, Germany, reported 69% of the students are stressed due to pressure of academic works (Federal Centre for

Health Education, 2021). Reports from China shows that more than 50% of the Chinese adolescents are under academic stress (Wang, Rost, Qiao & Monk, 2020). A study conducted in Indian context reported that 28% of plus one students and 26% of plus two students experience high to extreme academic stress (Mayya, Mayya, Martis & Lakshmi, 2022). Deb, Strodl and Sun (2015) found that 63.5% of Indian high school students experience academic stress, and 66% reported of getting parental pressure for better performance. According to National Crime Records Bureau (2020), in India, 1.8% of students commit suicide as a result of academic failure brought on by academic stress. A study conducted in Saudi Arabia, Al-Rasheed, Naqvi, Ahmad, and Ahmad (2017) found that 39.58% of health science students experienced academic stress. In a Spanish study among college students, Ramon-Arbues, Gea-Caballero, Granada-Lopez, Juarez-Vela, Pellicer-Garcia, and Anton-Solanas (2020) found 34.5% students under academic stress. Zamroni, Hidayah, Ramli, and Hambali (2018) reported that 61% of medical students in Indonesia are under significant academic stress. A report from Bangladesh shows that 54% of Medical College students were experiencing high levels of academic stress (Eva et al., 2015). Study conducted in Nepal showed that 26.5% of high school students experience severe academic stress (Gurung, Chansatitporn, Chamroonsawasdi & Lapvongwatana, 2020).

1.1.2. Sources of Academic Stress among School Students

The sources of academic stress are varied and diverse. They vary from academic load, overloaded curriculum, overloads of homework/assignments,

recurrent examinations, lack of study material and resources, private coaching, rigid teacher attitude, threat of failure, peer pressure, overcrowded classrooms, explosion of information to unempathetic parents. In the Indian setting, family pressure to achieve higher grades is arguably the most frequent cause of academic stress among school students. Lack of time to study for exams is another issue that students at all levels frequently bring up. Secondary school students' academic stress is also caused by an overly packed curriculum, peer comparison, novel teaching strategies, exam anxiety, duration of exams, an excessive number of competitive exams for admission to professional programmes, fear of failure, relentless effort to meet parental and teacher expectations, lack of supportive family, uncertainty about which courses to choose for further education, participation in extracurricular activities in which they have no genuine interest, etc. Mishra (2017) reported that heavy workload and anxiety related to poor performance in tests are the primary causes of academic stress among Indian students. Pressure from academic activities has been identified as the major source of academic stress by many researchers (Islam & Rabbi, 2024; Mehfooz & Haider, 2017). The most common sources of academic stress among Indian school students, as reported by Venkatachalam and Chellamuthu (2019) are fear of failure in exams (96%), parental expectations (96%), peer comparison (89.9%), classroom competition (89.4%), and plethora of tests (74.7%). The main causes of academic stress, as identified by Alsulami et al. (2018), inadequate time to do homework, oral presentations, academic overload, and frequent exams. According to Bataineh (2013), the primary cause of academic stress in high

schoolers is their fear of failure. Chandan and Shivappa (2020) found failure to cope with studies, dysfunctional family relationships, and peer pressure are major sources of academic stress. Hostel life is another important source of academic stress for first-time hostelers (Khan, Shekili, Badi & Khanbashi, 2020). Other factors that contribute to academic stress include the highly competitive school environment and the fear of being labelled as inferior (Córdova Olivera et al., 2023).

1.1.3. Consequences of Academic Stress

Addressing academic stress in school students is important given its potentially serious impact on educational attainment and wellbeing. High levels of academic stress are associated with poorer examination performance, mental wellbeing, depression, affect sleep, confidence, motivation, and even physical health (Pascoe, Hetrick & Parker, 2020; Rahul & Vikas, 2018; Shankar & Park, 2016). Prolonged academic stress can lead to a variety of negative outcomes in students, including anxiety, sadness, moodiness, irritability, low self-confidence, decline in self-esteem, and others (Córdova Olivera et al., 2023; Rana, Gulati & Wadhwa, 2019; Austria-cruz, 2019). Symptoms like depression, fear of failure, difficulty in concentrating, pessimistic judgement of the future, etc. have been reported in higher rates in students who are academically stressed (Deng et al., 2022; Schimelpfening, 2020; Alvarez-Huerta, Muela & Larrea, 2021). Research by Blows and Isaacs (2022), Pascoe, Hetrick and Parker (2019), Woolman,

Becker and Klanecky (2015) etc. showed that college students experiencing high levels of academic stress were more likely to engage in risky behaviours like irregular eating and sleeping patterns, substance abuse, alcoholism, unprotected sexual activity, physical inactivity, and an increased risk of suicide. Students in higher education who experience high levels of perceived academic stress report poor quality of life and wellbeing (Cordova Olivera et al., 2023). Higher levels of academic stress led to poor achievement motivation (Yoo & Marshall, 2021; Liu, 2015), subsequently to poor academic performance. Numerous researchers have reported the detrimental effect of academic stress on academic achievement of learners at different levels (e.g., Polisetty & Pothu, 2023; Thimmaraju, 2021; Pascoe, Hetrick & Parker, 2020; Sahoo & Gogoi, 2019). Bhatt (2023) has reported increased tendency for procrastination among academically stressed learners at different educational levels. The mediating role procrastination was noticed in the association between academic stress and academic performance by Qian and Zhao (2018). Higher levels of academic stress have been reported to cause higher academic burnout in adolescent learners (Gao, 2023). Many researchers have noticed positive correlation between academic stress and suicidal ideation (Waseem, 2023; Okechukwu et al., 2022; Yadav & Srivastava, 2020).

There is ample evidence of the negative impact of academic stress on students' physical health. Impairing the quality of sleep is an outcome of any kind of stress, which affects concentration and cognitive functioning including

memory, thereby adversely affecting academic performance (Suardiaz-Muro et al., 2023). Prolonged academic stress is likely to cause decreased physical activity, increased appetite, obesity and reduced insulin sensitivity, metabolic syndrome etc. (Pascoe, Hetrick & Parker, 2019). It was shown that getting too little sleep as a result of academic stress led to problems with attention span, anxiety during performances, poor performance, increased levels of overall stress, irritability, and issues with interpersonal adjustment. Students that fit this description are more likely to use problematic coping mechanisms such as smoking, drinking alcohol, or using sleeping drugs. The physical response to prolonged academic stress is a function of gender, age and physical health status of the individual.

1.1.4. Emotional Maturity and Academic Stress

Emotional maturity is the capacity to recognise, control, and express one's feelings in a constructive and healthy manner. American Psychological Association [APA] defines emotional maturity as, “a high and appropriate level of emotional control and expression” (American Psychological Association, n.d.). According to Jobson (2020), emotional maturity is “the capability of a person to stabilize emotions which include emotional progression, independence, social adjustment, emotional stability, personality integration, etc.”. Emotional maturity requires a blend of empathy, self-awareness, and the capacity to face obstacles head-on with dignity and resilience. It is vital during the formative years as it

affects their relationships, academic performance, personal growth, and general well-being (Sutradhar, 2022; Joy & Mathew, 2018; Rai & Khanal, 2017). Emotional maturity is a critical factor at a time when adolescents are trying to figure out who they are and are investigating their identities. It enables them to recognise and comprehend their own feelings, which improves their self-awareness. The capacity to control and regulate one's emotions is an important feature of emotional maturity. This helps adolescents to manage various stresses and cope with challenges in life (Vijaykumar, 2022). Emotional maturity promotes communication abilities so that individuals can express their feelings clearly and effectively, which in turn lead to healthy relationships with peers, teachers, family members, etc. (Shah & Mistry, 2020; Mae, Aquino, Enriquez, Gonzales & Landicho, 2015). Emotional maturity also fosters empathy and understanding. Adolescents who are more mature are more adept at empathising with others, which promotes closer and more sustaining bonds between people. Adolescents with higher emotional maturity possess better ability to resolve conflicts without becoming hostile or withdrawing. They are more capable of solving issues and overcoming challenges through teamwork (Jobson, 2020).

Emotional maturity is contributory to academic and career success of students. Being emotionally mature helps one focussed and be motivated, both of which are essential for academic achievement (Priya, 2022; Kumar & Mishra, 2016). Emotionally matured adolescents are more likely to stick with their goals and are less prone to get sidetracked by personal problems. Students with high

emotional maturity are likely to be more resilient and can persevere through academic and career challenges (Joseph & Bobin, 2023). They are less likely to give up their plans when faced with difficulties. Emotional maturity also helps individuals to maintain their mental health. Studies have shown that emotionally matured adolescents are less likely to experience anxiety and depression and are more adept at handling stress (Yildirim, Vives & Ballespi, 2023). They have healthier coping mechanisms for unpleasant feelings. When necessary, they are also more likely to ask friends, relatives, or mental health specialists for assistance. Emotional maturity helps individuals with decision-making and risk management. It enables them to make deliberate, well-informed judgements as opposed to rash ones (Prietzl, 2020). Students with higher levels of emotional maturity are more inclined to think through the long-term effects of what they do. Because of their superior ability to weigh rewards and risks, they are more likely to adopt safer practices and involve in less risky activities (Lerner, Li, Valdesolo & Kassam, 2014). Emotionally matured teenagers tend to create more positive and encouraging social networks and participate in more events that foster social cohesiveness and the well-being of the group.

Emotional maturity is a psychological resource which helps people to manage stressful situations. The capacity to manage emotions and readiness to face academic challenges mobilize psychological resources needed to deal with stressors in educational context. Students who are emotionally matured are better able to manage stress and anxiety associated with exams, deadlines, and academic

achievement (Maccann, Jiang, Brown, Double, Bucich & Minbashian, 2020). They can identify moments when they feel overwhelmed and use strategies like mindfulness or relaxation to deal with these emotions. Emotionally mature students often recover from setbacks more skillfully. They might see obstacles as chances for improvement rather than letting a bad mark or a challenging project get to them (Cherian, Kumari & Sinha, 2021). Moreover, students who are emotionally mature are more likely to employ healthy coping strategies, such as asking for help from classmates or teachers, engaging in solving problems, or breaking learning tasks to more manageable steps. They are less likely to resort to unhealthy coping mechanisms like avoidance, alcohol misuse, or procrastination, which can eventually make stress worse. Emotionally mature learners are good at setting realistic objectives and prioritizing work, which lessens the chance that they would feel overburdened by their academic demands. Improved time management abilities are frequently correlated with emotional maturity. Studies conducted by Rani and Rashmi (2023), Dhakal (2019), Sunilima (2018) etc. have shown that emotional maturity is psychological resource that mitigates the adverse effect of academic stress.

1.1.5. Psychological Resilience and Academic Stress

Psychological resilience is the ability of a person to successfully adjust in the face of hardship, stress, trauma, or substantial causes of stress. American Psychological Association (APA) considers psychological resilience as a process

and defines it as “the process of adapting well in the face of adversity, trauma, tragedy, threats, or significant sources of stress” (American Psychological Association, 2014). Terte and Stephens (2014) defines psychological resilience as, “the ability to cope mentally and emotionally with a crisis, or to return to pre-crisis status quickly”. According to Southwick and his colleagues, “resilience is the degree to which a person can respond adaptively to stressful experiences” (Southwick, Bonanno, Masten, Panter-Brick & Yehuda, 2014). Resilience is the capacity to overcome adversity in any form and go on to achieve favourable results in spite of an adverse circumstance. In psychological literature the concept of resilience is taken as the process and result of effectively adjusting to challenging or stressful life circumstances. It entails emotional, behavioural, and cognitive adaptability, enabling people to stay mentally well throughout emergencies without suffering detrimental long-term effects. As a personality factor, resilience is shaped and influenced by both internal and external factors. The internal factors include one’s outlook on life, self-esteem, optimism, adaptability, and emotional regulation. The external factors include availability of social support as well as access to resources and opportunities (Southwick, Bonanno, Masten, Panter-Brick & Yehuda, 2014). According to Zautra and John (2012), psychological resilience is an adaptation in a person's psychological features and experiences that enables them to restore or remain in a healthy mental state amid crises or turmoil without suffering long-term negative repercussions.

Psychological resilience is essential for preserving general wellbeing and helping people deal with the ups and downs of life. People who possess resilience are better able to handle stress arising from unexpected life happenings such as sickness, trauma, loss etc. Psychological resilience also helps to handle pressure at workplace or in academics, cope with challenges, face setbacks and failure and maintain job satisfaction and productivity (Palamarchuk & Vaillancourt, 2021; Hartmann, Weiss, Newman & Hoegl, 2020). Psychological resilience is important from a mental health point of view also. People who have higher resilience are able to maintain an optimistic attitude, and are less prone to long-term stress, anxiety, or depression. Resilience can help persons who are already experiencing mental health problems recover more quickly and successfully (Afek, Ben-Avraham, Davidov, Cohen, Yehuda, Gilboa & Nahum, 2021; Wallick, Feinman, Brown & Brown, 2020). Psychological resilience has its influence on even our physical health. People who are resilient are more likely to practise long-term health-promoting habits like balanced diet and frequent exercise. Resilience contributes to improved heart health, immunological response, and general physical well-being by reducing stress (Krause, 2020). Psychological resilience is critical in interpersonal relationships. Strong, enduring relationships need the development of empathy, communication, and conflict resolution skills, all of which are fostered by resilience. Social support networks are essential for providing both practical and emotional help during difficult times, and resilient people are frequently better at creating and sustaining them (Yıldırım & Celik, 2020).

Psychological resilience as an ability to manage stress and recover from setbacks in academic life, is an important source of motivation and perseverance. It allows people to retain or restore mental health in spite of traumatic events by combining their inherent strengths with external resources. Students who are resilient naturally possess greater cognitive flexibility, which enables them to modify their strategies of thinking and solving problems. This reduces the academic stress that the students experience to complete the academic tasks by enabling them to tackle academic challenges positively and identify workable solutions (Nakhostin-Khayyat, Borjali, Zeinali, Fardi & Montazeri, 2024). Students with stronger psychological resilience are more likely to utilize positive coping strategies like making appropriate plans, seeking support of peers or teachers, and managing their time well, instead of turning to avoidance or harmful behaviours (Wu, Yu, Wu, Wan, Wang & Lu, 2020). Resilient students are more optimistic and possess higher self-efficacy, which reduces stress in academic work by enhancing their perseverance and motivation (Popa-Velea, Pirvan & Diaconescu, 2021). Inverse relationship between academic stress and psychological resilience has been established by many researchers (e.g., Mulati & Purwandari, 2022; Zaheer & Khan, 2022). Academic success and psychological resilience are closely related, because resilience has a big influence on a student's capacity to thrive in their academic endeavours. Students with higher resilience are better able to withstand academic stressors like tests, assignments, projects etc. without becoming overwhelmed. Academic resilience cultivates persistence,

enabling pupils to keep pursuing their goals in the face of obstacles or disappointments (Radhamani & Kalaivani, 2021).

1.1.6. Locus of Control and Academic Stress

Locus of control (LOC) is a personality factor that describes the extent to which individuals believe they have influence over the course of events in their life. It is a continuum, with two primary orientations: internal and external. People who are primarily internal in orientation believe that life events are due to own actions, and people who are primarily external in their orientation believe that life events are due to outside forces beyond their control. Putting differently, persons with a high Internal Locus of Control (ILC) believe that they have control over their lives. On the other hand, persons with a high External Locus of Control (ELC) believe that external factors, like the God, luck, fate, or others, control their lives (Rotter, 1966). LOC plays a significant role in shaping one's personality and influencing behaviour, motivation, and emotional well-being. Internally oriented people are often more motivated to take on challenges because they think their efforts will pay off (Fishbach & Woolley, 2022). They might use problem-solving strategies, while externals may resort to avoidance or reliance on others (Nowicki & Duke, 2016). Studies have shown that ILC is often associated with improved mental health and well-being, as it gives people a greater sense of empowerment to take charge of their lives (e.g., Botha & Dahmann, 2023; Kesavayuth, Binh & Zikos, 2022; Dogonchi, Mohammadzadeh & Moshki, 2022).

Individuals with ELC, on the other hand, feel more helpless or apathetic about changing their situation. Since they believe they have less personal control over their lives, they may be more prone to anxiety and helplessness. They may lack the drive to act, frequently attributing their success or failure to factors outside of their control (Carnes & Knotts, 2018).

The LOC plays an essential role in managing academic stress by affecting how students perceive and respond to academic challenges. Pupils who possess an ILC feel that they can influence their own academic performance (Madu, 2018). Their sense of control lessens their stress and anxiety levels by boosting their self-assurance and ability to handle the challenges related to studies (Suraj, Lohi, Singh & Patil, 2023). Pupils who have an ELC think that the outcome of their academic effort is in the control of outside forces like God, luck, fate, or other powerful people (Davis, 2013). Since they believe they have less influence over their academic progress, this can cause them to feel helpless and more stressed (Drago, Rheinheimer & Detweiler, 2018). Moreover, pupils with ILC are inclined to utilise proactive coping mechanisms like setting goals, planning, managing time, and asking for assistance when required (Buddelmeyer & Powdthavee, 2016). These techniques assist people in stress reduction and efficient workload management. Conversely, procrastination and denial are examples of avoidance coping techniques that may be more common in students who have an ELC (Sagone & Indiana, 2021). Since these tactics don't deal with the underlying reasons of academic challenges, they may make stress worse.

Studies have shown that ILC correlated positively with resilience (e.g., Arsini, Ahman & Rusmana, 2023; Kronborg, Plunkett, Gamble & Kaman, 2017). Students with ILC are more likely to see challenges as opportunities to learn and grow, rather than undefeatable obstacles. They are more adept at adjusting to evolving academic requirements. They can continuously modify their strategies and efforts based on new information and feedback which helps them to keep on top of their academic duties and lower their stress (Auliya, Zaharuddin & Darmayanti, 2023).

An internal orientation of mind usually goes with higher levels of intrinsic motivation. Pupils are more likely to put in the required effort and persevere through difficulties when they are driven by their own objectives and aspirations to succeed (Haidari, Kocoglu & Kanadlı, 2023). This internal drive for achievement can reduce stress by promoting a feeling of fulfilment and purpose. Learners possessing ILC are inclined to be more actively involved in studies. This involvement helps them absorb the learning material and retain information better, reducing the stress associated with feeling unprepared or exhausted (Quing & Baudin, 2021; Karaman & Watson, 2017). ILC is related with positive emotions like optimism, confidence, self-efficacy, and satisfaction (Rathore, 2022; Wilson, Giles, Nettelbeck & Hutchinson, 2017). These positive emotions can buffer against stress and promote well-being. Students who feel more in charge of their academic performance are also better able to control their emotions, which can help keep stress from building up to harmful levels

(Beaumont, Putwain, Gallard, Malone, Marsh & Pekrun, 2023). To sum up, learners' ability to cope with academic stress is greatly influenced by their LOC. Positive emotional regulation, resilience, proactive coping mechanisms, intrinsic drive, and a sense of empowerment are all enhanced by having an ILC. When taken as a whole, these elements support students in managing academic demands and reducing stress. On the other hand, an ELC might result in stress levels that are higher, avoidance coping, and helplessness.

1.2. RATIONALE OF THE STUDY

Academic stress is increasingly recognized as a significant issue for adolescents, especially during the higher secondary period of schooling, a crucial phase for both academic and personal growth (Pavithra & Lokesh, 2025; Steare et al., 2023). In Kerala, students at this stage encounter intense expectations from family, educators, and society, as their academic performance often dictates their access to advanced education and career paths (Rapheal & Paul, 2018; Akshay & Sumesh, 2016). While academic demands are expected, chronic stress can lead to emotional strain, diminished learning capacity, and, in severe cases, adverse outcomes like burnout or self-destructive behaviours (Iqra, 2024; Córdova et al., 2023). Consequently, identifying psychological factors that mitigate stress during this critical phase is essential.

Three key psychological attributes viz., emotional maturity, psychological resilience, and locus of control, play a vital role in how students manage and respond

to stress. Emotional maturity equips students to regulate their emotions, maintain composure under pressure, and address challenges effectively (Ram, 2024; Sharma & Kumar, 2021). Resilience enables students to bounce back from difficulties, fostering sustained motivation and a positive outlook in challenging academic environments (Turyamureeba, 2024; Gupta & Dhaka, 2022). Locus of control influences whether students view their achievements or setbacks as a result of their own actions (internal locus) or external circumstances (external locus) (Kamran et al., 2024; Vishakha, 2023). Together, these attributes create a psychological framework that shapes students' experiences and responses to academic stress.

Although student well-being is gaining attention, research in Kerala has primarily focused on academic performance, socio-economic factors, or family dynamics, with limited exploration of psychological factors linked to academic stress (Renu et al., 2024; Arjun et al., 2022). Furthermore, demographic variables such as gender, family structure, birth order, and economic background may uniquely influence these dynamics, yet comprehensive studies examining their interplay with stress and psychological factors remain scarce. This underscores the need to investigate not only the levels of emotional maturity, psychological resilience, and locus of control but also their collective and comparative impact on academic stress.

This study aims to fill this gap by examining the interplay between these psychological factors and academic stress among higher secondary students in Kerala. By analyzing main effects, interactions, and predictive roles, the research seeks to offer deeper insights into how these psychological resources operate within the academic context. These findings are vital for advancing educational psychology

theory and developing targeted interventions to help students manage stress and foster well-rounded development.

1.3. NEED AND SIGNIFICANCE OF THE STUDY

Academic stress and related problems have become a growing concern all over the world. The global education system has become increasingly competitive, with higher expectations for academic performance. Students face intense pressure to excel in exams, secure top grades, and gain admission to prestigious institutions. The pressure to perform well on these tests can be overwhelming. Parents often have high expectations for their children's academic success, driven by a desire for them to secure better career opportunities. This pressure can contribute significantly to students' stress levels. The job market is evolving rapidly, with traditional career paths becoming less certain. This uncertainty about future employment prospects adds to the stress students feel about their academic performance. With increased globalization, students are not only competing with their local peers but also with students from around the world. This global competition can heighten stress levels.

Prolonged academic stress can have several negative outcomes on both physical and mental health, as well as on academic performance. Saving students from academic stress is important for several reasons. Firstly, high levels of academic stress can lead to mental health issues such as anxiety, depression, and burnout. Reducing academic stress helps maintain students' mental well-being.

Secondly, academic stress can negatively impact physical health, causing symptoms like headaches, sleep disturbances, and weakened immune systems. Lowering stress levels can improve students' overall physical health. Thirdly, excessive academic stress can impair cognitive function, memory, and concentration, leading to poorer academic performance. Reducing stress can help students perform better academically. By addressing and mitigating academic stress, teachers and school counsellors can help students lead healthier, more balanced lives, and achieve their full potential both academically and personally.

Academic stress is an area of active research in the field of Educational Psychology. Studies have explored various aspects of academic stress, including its causes, effects on students' mental and physical health, coping mechanisms, and interventions to reduce stress levels. Several therapeutic techniques such as Cognitive Behavioural Therapy (e.g., Jagiello, Belcher, Neelakandan, Boyd & Wuthrich, 2024; Eneogu, Ugwuanyi & Ugwuanyi, 2024), Mindfulness Based Stress Reduction (e.g., Montalto, 2023; Berek, Damayanti & Kiling, 2020), Solution-Focused Brief Therapy (Melarisisha & Saranya, 2022; Franklin, Zhang, Froerer & Johnson, 2016), Acceptance and Commitment Therapy (e.g., Caimano, Malkin, Monroy, Horoky & Kum, 2024; Nemati, Pourtaleb, BadriGargari, Abad, Deetjen-Ruiz & Shojaeian, 2022), Art Therapy (e.g., Soejanto, Bariyyah, Pambudi & Yaman, 2020; Fitria, Putri, Fadli & Ifdil, 2022), Yoga (e.g., Munif, Oktaviana & Adri, 2020; Tripathi, Kumari & Ganpat, 2018) etc. have been found as effective in mitigating academic stress. Despite the availability of all these

experimentally proven techniques, the graph of academic stress always shows an upward trend. The major reason is that the phenomenon of academic stress is so widespread, and the students, teachers, and parents become aware of it only after it has become unmanageable. Since most of the schools in Indian situation do not have the post of School Psychologist or Counsellor, early detection and timely remediation of academic stress rarely happen. The success of many of the aforementioned therapeutic interventions to mitigate academic stress is often limited to small groups. Considering the prevalence of the phenomenon, saving student community from the clutches of academic stress requires more practical measures. Studies have shown that academic stress is a function of the psychosocial makeup of the student. Variation in personality makeup and socio-cultural factors of the student exert significant differential influence not only on the distribution of academic stress, but also on the success of psychotherapeutic interventions to mitigate it. It shows that a therapeutic intervention may not be equally effective to all students to get rid of academic stress. Moreover, there is no one-time remedy for academic stress. Psychotherapeutic intervention once received does not guarantee immunity against further infection of academic stress. Studies have shown that some students are more susceptible to academic stress, retaining chances for the recurrence of the condition. It points to the need for controlling academic stress at a more fundamental level by manipulating and controlling psychological factors at the bottom extent of academic stress. An extensive review of the literature pertaining to academic stress enabled the investigator to identify three psychological factors, viz., emotional maturity,

psychological resilience, and locus of control, which are likely to be decisive in triggering academic stress in adolescent learners.

Many studies conducted in the recent past have been reported the association between emotional maturity and stress among people in different walks of life (e.g., Rani & Rashmi, 2023; Swarnalatha & Janardhanam, 2021; Dhakal, 2019; John, 2017; Ansari, 2015). All these studies have brought out that higher levels of emotional maturity is a shield against stress by fostering better emotional regulation, enhancing coping mechanisms, and improving interpersonal relationships. Studies such as those conducted by Kayun, Limbu and Wijaya (2023), Flores-Buils and Andres-Roqueta (2023), Mulati and Purwandari (2022), Goyal (2021), Sodhi (2020) etc. have presented evidence to demonstrate that psychological resilience plays a significant role in reducing stress by enabling individuals to cope effectively with challenges and bounce back from adverse situations. Studies have also reported the negative correlation between internal locus of control and stress of various kinds in different populations (e.g., Alkhazaleh & Alomery, 2023; Quing & Baudin, 2021; Padmanabhan, 2021; Willhana & Hastuti, 2021; Hasan & Mehmet, 2021). Proactive coping mechanisms are more common among people who have an internal locus of control. They take the initiative to plan, solve issues, and look for answers, which can prevent stress from escalating.

Research literature presents ample evidence to demonstrate that emotional maturity, psychological resilience, and locus of control are factors affecting stress in general and academic stress in particular. The principle “prevention is better

than cure” is most suited in managing academic stress. The question “which psychotherapeutic intervention is best for mitigating academic stress?” arises only when teachers and counsellors fail to save students from building up academic stress. Nurturing emotional maturity, psychological resilience, and internal locus of control in children is likely to enable them to cope with academic stress effectively. Though research literature has presented adequate evidence to show that emotional maturity, psychological resilience, and locus of control have independent influence on academic stress, no research attempt has been done so far to examine the joint effect of these variables on academic stress, leaving a clear research gap. Instilling immunity against academic stress in children and adolescents by influencing emotional maturity, psychological resilience, and locus of control necessitate systematic investigation on the interrelationship, interactive influence and interaction effects of these psychological factors on academic stress of students. In this context, the present study is a modest attempt to bridge the research gap by providing statistical evidence to show how emotional maturity, psychological resilience, and locus of control jointly affect the academic stress of one of the most vulnerable student groups, i.e., higher secondary school students.

1.4. STATEMENT OF THE PROBLEM

Adolescence represents a pivotal phase of development marked by swift physical, emotional, and social transformations. Students in higher secondary education often face intense academic pressure stemming from rigorous coursework, competitive exams, and expectations from family. Persistent stress

can contribute to mental health challenges, diminished academic outcomes, and unhealthy coping behaviours. Consequently, understanding the psychological elements that either mitigate or exacerbate stress is crucial. Studies indicate that emotional maturity equips adolescents with the ability to manage emotions and navigate difficulties effectively, while psychological resilience fosters recovery from adversity. Additionally, locus of control influences how students view their role in academic achievements. Despite these insights, the collective impact of these factors on academic stress among higher secondary students, particularly in India, remains largely unexamined.

This study aims to address this gap by exploring the interplay of emotional maturity, psychological resilience, and locus of control in relation to academic stress. Confirming the significance of this research, it holds the potential to inform educators, parents, and policymakers in crafting strategies to bolster adolescents' coping skills, enhance well-being, and support academic achievement. The study puts four major questions to be answered at the end of the study: (i) What relationship do variables like emotional maturity, psychological resilience, and locus of control have on academic stress experienced by higher secondary school students? (ii) What influence do emotional maturity, psychological resilience, and locus of control exert on academic stress experienced by higher secondary school students? (iii) Is it possible to predict academic stress of higher secondary school students from their emotional maturity, psychological resilience, and locus of control? (iv) What independent

and interactional effects do emotional maturity, psychological resilience, and locus of control have on academic stress experienced by higher secondary school students? To find out valid answers to these questions, a descriptive correlational study has been framed by taking Academic Stress as dependent variable and the Emotional Maturity, Psychological Resilience and Locus of Control as independent variables. Since the major emphasis of the study is to explore how the independent variables are related to the dependent variable, the research problem has been stated as:

“Emotional Maturity, Psychological Resilience, and Locus of Control as Correlates of Academic Stress among Higher Secondary School Students”

1.5. OPERATIONAL DEFINITIONS OF KEY TERMS

The important terms used in the study are explained below for the sake of clarity.

1.5.1. Academic Stress

Academic stress refers to a demand related to academics that tax or exceed the available resources (internal or external) as cognitively appeared by the student involved. In the present study the term ‘academic stress’ has been defined operationally as the mental pressure and unpleasant psychological situations experienced by higher secondary school students due to overload of academic work and high parental expectation.

1.5.2. Emotional Maturity

Emotional maturity is the ability to manage our emotions and take full responsibility for our actions. In the present study the term has been defined operationally as one's ability to respond to situations, control his/her emotions and behave in an adult manner when dealing with others.

1.5.3. Psychological Resilience

Psychological resilience is the ability to adapt to adverse situations in a positive manner. In the present study the term 'psychological resilience' has operationally defined as the ability to adapt well in the face of adversity, trauma, tragedy, threats or even significant sources of stress.

1.5.4. Locus of Control

Locus of control refers to the extent to which an individual views him/herself as causative or responsible for his/her experiences. In the present study 'locus of control' is taken as how far individuals see themselves as in control of and responsible for the course of occurrences which they experience.

1.5.5. Higher Secondary School Students

Higher secondary school students are adolescents in the age range 16-19, studying in eleventh and twelfth years of their schooling in schools affiliated to Directorate of Higher Secondary Education, Govt. of Kerala, under the prevailing 10+2 system of education in India.

1.6. OBJECTIVES OF THE STUDY

The aim of the study is to investigate the way in which emotional maturity, psychological resilience and locus of control is related to academic stress of higher secondary school students. The specific objectives of the study are:

1. To find out the extent of academic stress, emotional maturity, psychological resilience and locus of control higher secondary school students.
2. To compare academic stress, emotional maturity, psychological resilience and locus of control higher secondary school students with respect to gender, type of family, ordinal position, and socio-economic status of the family.
3. To find out the relationship of emotional maturity, psychological resilience and locus of control to academic stress of higher secondary

school students (for total sample and sub-samples based on gender, type of family, ordinal position, and socio-economic status of the family).

4. To compare the relationship between academic stress and each of the independent variables for sub-samples based on gender, type of family, ordinal position, and socio-economic status of the family.
5. To find out the main effect and interaction effects of emotional maturity, psychological resilience and locus of control on academic stress of higher secondary school students.
6. To find out the influence of emotional maturity, psychological resilience, and locus of control on academic stress of higher secondary school students.
7. To predict the academic stress of higher secondary school students from their emotional maturity, psychological resilience and locus of control.

1.7. HYPOTHESES OF THE STUDY

The hypotheses for the present study were formulated based on popular observations as well as review of the related studies. The following null hypotheses were tested for the study:

1. There is no significant difference in the academic stress of higher secondary school students with respect to gender, type of family, ordinal position and socio-economic status.
2. There is no significant difference in the emotional maturity of higher secondary school students with respect to gender, type of family, ordinal position and socio-economic status.
3. There is no significant difference in the psychological resilience of higher secondary school students with respect to gender, type of family, ordinal position and socio-economic status.
4. There is no significant difference in the locus of control of higher secondary school students with respect to gender, type of family, ordinal position and socio-economic status.
5. There is no significant relationship between academic stress and emotional maturity of higher secondary school students.
6. There is no significant difference in the degree of relationship between academic stress and emotional maturity of higher secondary school students with respect to gender, type of family, ordinal position and socio-economic status.
7. There is no significant relationship between academic stress and psychological resilience of higher secondary school students.

8. There is no significant difference in the degree of relationship between academic stress and psychological resilience of higher secondary school students with respect to gender, type of family, ordinal position and socio-economic status.
9. There is no significant relationship between academic stress and locus of control of higher secondary school students.
10. There is no significant difference in the degree of relationship between academic stress and locus of control of higher secondary school students with respect to gender, type of family, ordinal position and socio-economic status.
11. There is no significant main effect and interaction effects of emotional maturity, psychological resilience and locus of control on academic stress of higher secondary school students.
12. Emotional maturity, psychological resilience, and locus of control have no significant influence on the academic stress of higher secondary school students.
13. Emotional maturity, psychological resilience and locus of control of higher secondary school students do not significantly predict their academic stress.

1.8. METHODOLOGY IN BRIEF

- 1) **Method:** Descriptive cross-sectional study that followed survey method was adopted for the study.
- 2) **Population:** Adolescent boys and girls in the age range 16-19, studying in higher secondary schools affiliated to the Directorate of Higher Secondary Education, Govt. of Kerala were the population for the study.
- 3) **Sample:** The study made use of a stratified random sample of 1232 higher secondary school students selected from Government, Aided and Unaided schools located in Thiruvananthapuram, Ernakulam, Thrissur, and Kozhikode districts of Kerala.
- 4) **Variables:** The study was designed with academic stress as dependent variable and emotional maturity, psychological resilience and locus of control as independent variables. Individual factors like gender, type of family, ordinal position, and socio-economic status of the family were taken as basal variables.
- 5) **Tools Used:** The study utilized the following standardized instruments for data collection:
 - a) Academic Stress Scale for Higher Secondary School Students (Bindu & Happy, 2023)

- b) Emotional Maturity Scale for Higher Secondary School Students (Bindu & Happy, 2023)
 - c) Psychological Resilience Scale for Adolescents (Bindu & Happy, 2023)
 - d) Malayalam version of Rotter's Internal-External Locus of Control Scale: (Arjunan & Abraham, 2003).
 - e) Brief Socio-Economic Status Scale (Arjunan, 2022)
- 6) ***Statistical Techniques Used:*** The following statistical techniques were used for data analysis:
- a) Computation of descriptive statistics like Mean, Median, Mode, Skewness, Kurtosis, Standard Error of Mean etc.
 - b) Independent sample t-test
 - c) One-way ANOVA
 - d) Scheffe's post-hoc test of multiple comparison
 - e) Pearson's Product Moment coefficient of correlation (r).
 - f) Fisher's z-transformation test
 - g) Factorial Analysis
 - h) Multiple Regression Equation

1.9. SCOPE AND LIMITATIONS OF THE STUDY

This investigation has been designed with academic stress of higher secondary school students as dependent variable and their emotional maturity, psychological resilience and locus of control as independent variables. An understanding of the academic stress of the target population in relation to the independent variables may help the teachers, school counsellors, psychologists and parents to get a picture of how these psychological factors influence academic stress, and possibly think about manipulating the independent variables in such a manner to control academic stress. The investigator set the following boundaries beyond which generalizability of the findings of the study are doubtful:

1. The population of the study is eleventh grade and twelfth grade students studying in higher secondary schools affiliated to Directorate of Higher Secondary Education, Govt. of Kerala, India. The findings of the study should not be equally applicable to higher secondary school students who are studying in schools affiliated to other Boards of Examinations such as CBSE, CISCE, NIOS, or other International Boards, even if they are located within the revenue boundary of the Indian state of Kerala.
2. The study's population is spread throughout the entire state, but only four districts in Kerala, viz., Thiruvananthapuram, Ernakulam, Thrissur,

and Kozhikode, were included in the sample. Due to specific logistical challenges with the data collection process, like cost and accessibility to schools, students from other districts could not be included in the sample. Nonetheless, representation to all the three socio-cultural zones of Kerala (Travancore, Kochi and Malabar) had been given in the sample. Therefore, the findings' generalizability is restricted to how well these districts represent the State of Kerala.

3. The higher secondary school students of Kerala are a highly heterogeneous group in terms of their socio-cultural and economic composition. The geographic dispersion of the schools is also quite broad. Some are situated in metro city, some in urban areas, some in semi-urbanized areas, some in rural areas, some in coastal areas, and some in tribal territories. For obvious reasons, it was not possible to ensure a proportionate number of students from each of these geographic locations in the sample. The representativeness of the sample selected for the study was limited by the geographic distribution of school locale. Nonetheless, great effort was taken to ensure that all sociodemographic and cultural segments of the population were represented, in addition to selecting samples from various groups according to factors like gender, school location, academic stream of study, type of school administration, etc. Any generalization of the

findings of the study to the population is delimited to degree of representativeness of the population by the sample.

4. The population has not included Vocational Higher Secondary Schools (VHSS) of Kerala, though quite often they are also counted as part of higher secondary education. The generalizability of the study is, therefore, not extended to students of vocational higher secondary schools.
5. The effective sample size used for the study was 1232, which constitute only 0.14% of the population. Comparatively small sample size may set some limitations due to higher statistical errors, which must be considered while generalizing the results.
6. Even though stratified random sampling was adopted to secure representation from government, aided, and unaided schools, the number of participants obtained from unaided schools ($n = 149$) was considerably lower than that from government ($n = 501$) and aided schools ($n = 582$). This disparity arose primarily because unaided schools constitute a smaller proportion of the total schools in Kerala, and, in addition, several school authorities in this sector were reluctant to extend permission for data collection. As a result, conclusions pertaining to unaided schools should be treated with caution, since the limited sample size may reduce the extent to which these findings can be generalized to the broader unaided school population.

7. There are some limitations of the study related to the kind of measures employed. The study utilized self-report survey data which is not free from percept-percept bias (method error variance). The strength of the study is also limited by the absence of indicators of actual behaviours.
8. The study is limited to three independent variables, viz., emotional maturity, psychological resilience, and locus of control. There are many other psychological, academic, school-related and family-related factors influencing the academic stress experienced by higher secondary school students, that are not considered in this study.
9. The differential influence of only four individual variables, viz., gender, type of family, ordinal position, and socio-economic status of the family, were considered in the study. There may be many other factors like Academic Stream of Study (Commerce/Humanities/Science), Medium of School Education (English/Malayalam) or Type of School Management (Government/Aided/Unaided) etc. exerting differential influence on the distribution of academic stress and the independent variables, that the present study does not consider. The reason for not examining the differential influence of academic stream on the distribution of the variables is obvious. The choice of academic stream may have a bearing on the academic stress experienced by higher secondary students. However, it is unlikely to significantly impact traits like emotional maturity, psychological resilience, or locus of control, as

these characteristics are shaped by factors beyond the selected educational stream.

Despite the aforementioned limitations, it is hoped that the study's findings are broadly applicable and could provide guidance to teachers, school counsellors, administrators, educationists, to develop programmes and policies for mitigating academic stress by suitably manipulating the independent and individual variables that influence academic stress.

1.10. CHAPTERIZATION

The research report is given in six chapters, viz., Introduction, Review of related literature, Methodology, Analysis and interpretation, Summary, findings and conclusions and Recommendations. The details of organization of the report are given below:

Chapter I : The first chapter covers a quick overview of the topic being studied, its need and significance, the problem statement, the definition of important words, the objectives of the study, the hypotheses, a brief overview of the methodology, and the scope and limitations of the study.

Chapter II : This chapter presents a brief theoretical overview of the variables, academic stress, emotional maturity,

psychological resilience, and locus of control, followed by review of recent research undertaken in these areas. The discourse of the literature reviewed, and the research gap identified are also given.

Chapter III : This chapter provides a detailed account of the methodology used for the study, including the method, the population, sample drawn, description of the variables, the tools used to collect data, details of the tools developed by the investigator, the process for collecting data, and the statistical method used to analyze the data.

Chapter IV : This chapter includes the details of the statistical analysis of data and the interpretation of the findings. The results have been given in suitable tables and in figures. The differential influence of selected demographic factors on the variables, correlation between the dependent variable and each of the independent variables, comparison of the correlation between the variables in sub-samples, factor analysis for the interaction effects of the independent variables on the dependent variable, followed by regression analysis were given in detail.

Chapter V : This chapter provides a brief account of the study in retrospection, major findings and conclusions drawn.

Chapter VI : This chapter contains the educational implications and suggestions for further research.

The report is followed by an exhaustive Bibliography, and a series of Appendixes pertaining to the study. The American Psychological Association's (APA, 2019) format is followed as closely as feasible in creating the report, with reasonable adjustments allowed where needed.



Chapter Two

REVIEW OF RELATED LITERATURE

- Theoretical Overview
- Review of Related Studies
- Discourse of Literature Reviewed
- Research Gap

CHAPTER II

REVIEW OF RELATED LITERATURE

2.1. INTRODUCTION

Review of related literature (RRL) is a fundamental component of any research study. It accomplishes several goals that are essential to the growth and accomplishment of the research goals. At the outset, the RRL aids in situating the current study in relation to a larger corpus of knowledge. It illustrates the connections between new research and accepted ideas, methods, and conclusions. It outlines pertinent ideas, models, and frameworks that guide the research, therefore offering the theoretical basis for the investigation. The RRL also helps the researchers to identify gaps or inconsistencies in the current knowledge base, which explains the necessity for the current study and points out areas that require more research. It helps avoid duplicating previous research by ensuring that the proposed study explores new or understudied aspects of the topic. Insights gained from literature help in formulating precise research questions and hypotheses. It ensures that the study addresses relevant and significant issues. Details on the approaches and methods previously employed in comparable investigations are given in the literature review. This could direct the selection of appropriate methods and guarantee a strong and suitable research design. Above all, a thorough understanding of literature aids the researcher in learning what is

already known, what has been tried and failed, what approaches have proven successful or unsuccessful, and what issues still need to be resolved.

The present study aims to explore the effect of emotional maturity, psychological resilience, and locus of control on academic stress experienced by secondary school students of Kerala. The study involves three important psychological constructs as independent variables which possibly exert influence, independently as well as interactively, upon the dependent variable. The investigator made an extensive study of current research literature pertaining to these variables, a brief overview of the same is presented in the chapter. A clear understanding of the theoretical formation of these constructs will be of much use for anyone who takes a voyage through this research report. It is, therefore, decided to give a theoretical overview of the variables involved in the present investigation, prior to presenting the research studies conducted in the field in recent years. This chapter of the dissertation is structured as illustrated below:

2.2. Theoretical Overview of the Study

2.2.1. Theories of Academic Stress

2.2.2. Theories of Emotional Maturity

2.2.3. Theories of Psychological Resilience

2.2.4. Theories of Locus of Control

2.3. Review of Studies Related to Research Variables

2.3.1. Studies Related to Academic Stress

2.3.2. Studies Related to Emotional Maturity

2.3.3. Studies Related to Psychological Resilience

2.3.4. Studies Related to Locus of Control

2.4. Discourse of Literature Reviewed

2.5. The Research Gap

2.2. THEORETICAL OVERVIEW OF THE STUDY

The theoretical framework establishes a foundation for exploring the intricate relationships among emotional maturity, psychological resilience, locus of control, and academic stress in higher secondary students. Examining relevant theories provides conceptual clarity, elucidates the dynamics of these factors, and supports their inclusion in this research. This section highlights contemporary theoretical perspectives that guide and substantiate the study.

2.2.1. Theories of Academic Stress

Academic stress is the term used to describe the physical, mental, and emotional strain that students endure as a result of the rigors and expectations of their academic lives. Exams, assignments, deadlines, competitiveness, and the high standards that society, parents, and instructors impose on children are just a few of the things that can cause this kind of stress. Although stress can be a motivator, too much or ongoing academic stress can have detrimental effects like depression, fatigue, anxiety, and cognitive impairment. The two primary

categories of theories that investigate the precise relationship between stressors (external pressures) and physiological responses (stress) are psychological stress approaches that have arisen from psychological theory (Lazarus 1966, 1991, Lazarus & Folkman, 1984; McGrath, 1982) and systemic stress approaches based on physiology and psychobiology (including Selye, 1976).

2.2.1.1. Selye's Theory of Systemic Stress

The endocrinologist Hans Selye's work is largely responsible for the stress concept's extensive usage in both study and the general public. In several animal tests, he discovered a variety of stimulus events (including heat, cold, and dangerous compounds). They can share effects that aren't specific to either sensory event if they are given enough time and force. (In addition to these broad physiological changes, each stimulus has its own natural effect; for example, heat induces vasodilatation, and cold causes vasoconstriction.). These non-specifically caused changes, according to Selye, comprise the archetypal, as well specific, response structure of systemic stress. According to Selye (1976), the stress is "a state manifested by a syndrome which consists of all the non-specifically induced changes in a biologic system." This typical reaction pattern, called the General Adaptation Syndrome (GAS), occurs in three stages. (a) The alarm reaction consists of an initial impact phase and an additional countershock phase. Signs of the shock phase include gastrointestinal ulcers, elevated adrenaline production, and autonomic excitability. The countershock phase, which marks the beginning of defense measures, is characterized by increased adrenocortical activity. If

detrimental stimulation continues, the organism enters the stage of resistance. At this stage, the response of alarm symptoms disappears, which seems to be a sign that the body has adjusted to the stressor. However, as tolerance to the unpleasant stimulus increases, resistance to other stressors decreases as well.

If uncomfortable stimulation persists, resistance gives way to the state of fatigue. The organism's ability to adjust to stressful circumstances is diminished, resistance is not more feasible, and symptoms preceding stage (a) reappear. The animal dies and suffers irreparable tissue damage if the stimulation is maintained. Even though Selye's work influenced a whole generation of stress specialists, serious problems with his concept soon surfaced. Above all, the notion that pressure is a reaction to a variety of situations has the unfortunate consequence of being an intersection for many approaches. As a result, the notion of pressure was at risk of losing its scientific value since it was being used interchangeably with other ideas, such as emotional stress, anxiety, threat, and conflict (Engel, 1985).

2.2.1.2. Psychological Stress: The Lazarus Theory

Lazarus's Transactional Model of Stress was enhanced in 1984 by psychologist Richard S. Lazarus and Susan Folkman. This perspective holds that stress is not an immediate stimulus or a natural reaction, but rather a dynamic process which results from a continual connection between an individual and their environment. The term "transactional" highlights the fact that stress results from a person's evaluation of a circumstance and their capacity to handle it.

According to Lazarus, stress occurs when a person feels that expectations from their surroundings are too much for them to handle. The two basic stages of cognitive evaluation that are covered by the paradigm are fundamental and secondary appraisal. In first appraisal, the individual determines the event's relevance; it may be stressful, beneficial-positive, or unimportant.

Stressful circumstances can also be categorized as difficulties (possibility of harm in the future), threats (possibility of hurt already done), and harm/loss (opportunity for gain or improvement). After finishing the initial assessment, the individual assesses the available options and coping mechanisms. Here, the individual considers their ability to have the skills, time, resources, and strategies required to effectively manage the situation. Based on the results investigation, the person selects appropriate coping strategies. According to Lazarus, there are two primary types of coping strategies: problem-focused coping, which attempts to manage or alter the issue that is causing the stress (e.g., making a study schedule to prepare for an exam), and emotion-focused coping, which concentrates on controlling your feelings related to the problem (e.g., relaxing, communicating another friend, or modifying the problem in a positive way). Additionally, the model acknowledges that coping is a continuous process and that reassessment may occur as a person's resources or circumstances change. A significant component of Lazarus' theory is its emphasis on the subjective nature of stress—two persons may experience the same situation differently depending on their appraisal and coping strategies.

2.2.1.3. Resource Theories of Stress

Unlike the approaches discussed, resource theories of stress concentrate on resources that preserve wellbeing in the context of stressful circumstances rather than the sources of stress. Many individual and cultural characteristics have been proposed, such as social support (Schwarzer & Leppin, 1991), hardiness (Kobasa, 1979), optimism (Scheier & Carver, 1992), sense of coherence (Antonovsky, 1979), and self-efficacy (Bandura, 1977). While self-confidence and optimism are particular protective factors, hardiness and a feeling of coherence as three-part tactics. Hardiness is a combination of three qualities: self-control, commitment, and a sense of challenge instead of threat. Similarly, the belief that the world has a consistent and fundamentally good purpose is known as a sense of coherence. Many types of social support have been researched, such as instrumental, emotional, informational, and appraisal support. Three distinct circumstances can lead to stress, according to the recently put forth conservation of resources (COR) theory (Hobfoll, 1989; Hobbell et al., 1996): when people lack resources, when resources are at risk, or when they spend their resources without anticipating future benefit. Condition resources (like employment, family, or friends), individual resources (like skills or self-assurance), object resources (i.e., material possessions like a house, clothes, or a mode of transportation), as well energy resources (i.e., things that facilitate the acquisition of other resources, such as money, credit, or knowledge) are the four categories of resources that are recommended. A collection of testable hypotheses (called principles) was offered

by Hobfoll and colleagues based on the basic assumptions of COR (cf. Hobfoll et al., 1996).

1. The loss of resources is the primary source of stress. According to Holmes and Rahe (1967), stress occurs whenever people have to reevaluate their actions in response to specific circumstances, whether they are favourable (like marriage) or unfavourable (like the death of a beloved one). This idea goes against the fundamental tenets of attitudes to significant moments in life. Hobfoll and Lilly (1993) empirically investigated this basic concept and found that the loss of resources was the only element linked to distress.
2. Resources protect and preserve other resources. Self-esteem is one important resource that could support other resources. For example, Hobfoll and Leichtman (1987) found that women with excellent self-esteem used social assistance efficiently while under stress, whereas women with low self-esteem exploited social support because they perceived it as an indication of personal shortcomings.
3. After going through stressful events, a person's ability to handle more stress gradually declines. This depletion creates a losing spiral because it impairs people's capacity to cope with more stress. This method's perspective on resource investment must focus on how the relationship between resources and contextual needs changes over time as difficult

sequences unfold. This idea also shows how important it is to look at how resources affect results as well as how outcomes affect resources.

2.2.1.4. Coping Theories of Stress

Coping theories explain how people deal with stress and adversity. The transactional model of stress management, proposed by Richard Lazarus and Susan Folkman, is one of the most prominent concepts. It suggests that coping is not a one-time event but rather an ongoing procedure that entails an individual's continuous evaluation of the situation.

2.2.1.4.1. Approach categorization

The Lazarus model mentioned above is an example of a specific type of coping theory. These theories may be divided into two groups according to two different criteria: (a) trait-oriented against state-oriented, as well as (b) microanalytic and macro-analytic approaches (cf. Krohne, 1996). Research approaches that are trait-oriented and state-oriented have different objectives: A trait-oriented approach aims to identify individuals early on whose coping strategies and tendencies are inadequate for the demands of a certain stressful scenario. Early identification of these people will offer the opportunity to put in place a selection (or deployment) procedure or an efficient primary prevention program. Research that is state-oriented, or that concentrates on actual coping, has a more expansive objective. Microanalytic approaches focus on a variety of distinct coping strategies, whereas macroanalytic analysis operates at a greater

degree of abstraction and emphasizes more fundamental components. The "classic" defence mechanisms hypothesis proposed by S. Freud in 1926 is an example of a macroanalytic, state-oriented approach. Although Freud identified many distinct mechanisms, he eventually linked them to two basic categories: repression and intellectualization (A. Freud 1936). The trait-oriented personality component that correlates to these basic defences is called repression-sensitization (Byrne 1964, Eriksen 1966). Lazarus and Folkman's (1984) distinction between the two basic functions of emotion-centered and problem-focused coping is another macroanalytic state method. The Lazarus group's real research plan, however, substituted a microanalytic technique for this macroanalytic approach. Lazarus and associates' "Ways of Coping Questionnaire" (WOCQ; Folkman and Lazarus 1988, Lazarus 1991) distinguishes eight types of coping mechanisms: self-control, distancing, confrontational coping, escape-avoidance, self-control, self-control, seeking social support, accepting responsibility, intentional problem-solving, and positive reappraisal. These classifications have only a weak relationship to the two basic coping processes, which is the problem with this concept and, consequently, the way that coping is measured. Unlike the macroanalytic, trait-oriented methodology that generated many theoretical concepts, the microanalytic, trait-oriented methodology is mainly concerned with developing multidimensional inventories (Schwarzer & Schwarzer 1996). But almost none of these methods of measurement have a solid theoretical foundation (Krohne 1996).

2.2.1.4.2. Theories of macroanalysis and trait-oriented coping

Research on how people respond to stressful events has grown significantly during the last three decades (cf. Lazarus 1991, Zeidner and Endler 1996). According to various trait-oriented approaches in this field, understanding cognitive responses to stress requires an understanding of two key concepts: cognitive avoidance, or avoiding information related to stress, and alertness, or concentrating on stressful aspects of an encounter (cf. Janis, 1983; Krohne, 1978; Roth & Cohen, 1986). Repression-sensitization (Byrne, 1964), monitoring-blunting (Miller, 1980), and focus-rejection (Mullen & Suls, 1982) are techniques that support these concepts. Although Miller, Mullen, and Suls fail to address this problem, Byrne's approach provides a one-dimensional, bipolar framework for the interplay between these two entities. Krohne (1978), however, makes it clear that the aspects of cognitive avoidance and vigilance function separately.

2.2.1.4.3. Repression–sensitization

The idea of repression–sensitization, as proposed by Byrne (1964) and Eriksen (1966), relates a number of dispositional coping mechanisms to a single bipolar dimension. When confronted with a stressful meeting, those at one pole of this category (repressors) are more inclined to reject or lessen the existence of stress, fail to communicate sensations of discomfort, and avoid analysing the possible harmful implications of the interaction. Sensitizers, on the opposite end of the spectrum, react to stressors by becoming more fixated on information, ruminating, and worried excessively. The theory of repression-sensitization was

theoretically grounded in research on perceptual security (Bruner & Postman, 1947), which combined psychodynamic ideas with Brunswik's functionalistic behaviour analysis.

2.2.1.4.4. Observing and blunting

The repression–sensitization construct's basic assumptions were established by Eriksen (1966), and these assumptions formed the basis for the ideas of blunting and monitoring (Miller 1980, 1987). Miller postulated that the degree to which people focus on their stressor determines how they respond to stressful events. These concepts were conceived by Miller as cognitive informative styles. On the other side, the degree of stimulation can be reduced if a person is effective in reducing the impact of unpleasant stimuli by the application of avoidant cognitive strategies like ignoring, distraction, or reinterpretation. However, these coping strategies, referred to as blunting, might only be deemed adaptive in situations where the unpleasant event is uncontrollable. Uncontrollable events include, for example, an uncomfortable medical examination and impending surgery (Miller and Mangan, 1983). When control is available, the most effective coping mechanisms include monitoring strategies or learning more about the stressor. Although initially associated with increased stress reactivity, these strategies ultimately assist the individual in taking charge of the stressor, thereby reducing the impact of the stressful situation. One example of a stressor that is simpler to handle is studying for academic exams. The overall relationship between a stressor's level of controllability and the

application of evaluation or blunting measures can be influenced by situational and personal characteristics. The unpleasant stimulus may be so intense, depending on the situation, that blunting strategies such as attentional distraction are ineffective in reducing stress-related arousal.

2.2.1.4.5. The model of coping modes

Miller's monitoring-blunting concept is similar to the model of coping modalities (MCM), which examines individual differences in attention alignments and emotional-behavioural regulation in stressful situations (Krohne 1993). The MCM extends the concept of monitoring blunting by linking the components of cognitive avoidance and alertness to a demonstrated cognitive-motivational foundation. It is predicated on the idea that most stressful situations, especially those that induce anxiety, share two key traits: a great deal of ambiguity and the presence of an unpleasant stimuli. There are similarities between these environmental traits and emotional arousal, which is mostly linked to unpleasant stimuli, and uncertainty, which is linked to ambiguity. Arousal should increase the tendency to cognitively limit (or inhibit) future processing of cues connected with the unpleasant encounter, even though uncertainty sets off alert inclinations. Conceptually, these two coping mechanisms are linked to personality by the notion that a habitual preference towards vigilant or avoiding coping strategies reflects variations in personality in reaction to emotional arousal with uncertainty. It is believed that those who are more susceptible to emotional arousal from stress develop a practice of cognitive avoidance. Preventing an

increase in arousal (arousal-related regulating behaviour) is the primary objective of employing avoidant strategies. People who are most affected by the uncertainty inherent in most challenging circumstances are thought to develop the habit of vigilant coping. Thus, taking precautions is a part of a strategy to lessen the chance that unpleasant things will happen without warning (uncertainty-motivated coping action).

The MCM views the regular coping strategies of perception and cognitive avoidance as distinct personality traits. This suggests that when applied to a wide number of stressful situations, employing alert and avoidant strategies does not preclude one another. Four coping mechanisms can be distinguished. (a) Individuals with high vigilance ratings and poor cognitive avoidance are considered sensitizers. By concentrating on facts relevant to stress, these people primarily aim to reduce uncertainty. (b) Individuals who have the opposite tendency are categorized as repressive. To reduce the feeling of excitement, these people avoid unfavourable information. (c) No defensive team has a low score on either dimension. These people are supposed to be flexible enough to adapt to the demands of a challenging circumstance. In most situations, they would rather react instrumentally than consistently employ avoidant or alert coping strategies. (d) High anxiety is the term used to describe people who perform highly on both measures. These individuals use both attentive and avoidant coping strategies in an effort to reduce the subjective uncertainty and emotional arousal caused by stressful situations. Because the two goals are usually irreconcilable, people who

are highly nervous are believed to display unpredictable and, therefore, less efficient coping techniques. Krohne et al. (2000) outline techniques for assessing individual differences in cognitive avoidance and awareness. Krohne et al. (1992) and Krohne (1993, 1996) present empirical results related to predictions made using the MCM.

2.2.2. Theories of Emotional Maturity

Emotional maturity is the ability to understand, manage, and express one's emotions in a balanced and constructive manner (Liberty Psychological Association, 2024). It refers to an individual's capacity to navigate and regulate emotions, reactions, and behaviour effectively across situations, incorporating self-awareness, self-control, empathy, and resilience. Bhagat et al. (2016) defined emotional maturity as "the ability to respond to situations with emotional control and behave in an adult manner when interacting with others". Emotional maturity refers to "the ability to manage one's emotions calmly even under pressure: taking responsibility, showing empathy, owning mistakes, embracing vulnerability, and setting healthy boundaries" (Healthline, 2020).

2.2.2.1. Erikson's Psychosocial Development Theory

According to Erik Erikson's theory of psychosocial development, human growth occurs in eight phases throughout the length of an individual's life, each of which is marked by a unique psychological crisis that the individual must overcome. These stages, which span from young age to late adulthood, are

marked by a basic conflict (autonomy versus doubt and guilt, identity versus confusion about roles, trust versus mistrust, etc.). Successfully resolved disagreements promote the development of qualities, a helping emotional and social maturity, but unresolved disputes may impair psychological equilibrium and personal progress (Erikson, 1963).

According to Erikson's theory, the advanced stages of psychosocial development closeness against isolation, generativity vs stagnation, and integrity vs despair are closely related to emotional maturity. Young adults, for example, strive to establish meaningful and deep connections; achievement at this stage promotes trust, empathy, and emotional stability. The focus shifts to mentoring the coming generations and serving the community in middle life, which creates a sense of fulfillment and purpose. Thinking about life with integrity in later life encourages peace and acceptance rather than regret and despair. The method places a strong emphasis on how life events and skillful crisis management mould maturity in emotions, which is a continuous process instead of a fixed state. Mature individuals are self-aware, sensitive, resilient, and able to maintain healthy relationships. Erikson's concept frames development as a lifetime journey, emphasizing the dynamic nature of emotional evolution. It suggests that by thinking back on the events and making constructive adjustments, people might achieve greater mental maturity even in their later years (McLeod, 2018).

2.2.2.2. The Emotional Intelligence (EI) Theory of Daniel Goleman

Daniel Goleman's concept of emotional intelligence (EI) is among the most comprehensive concepts for understanding emotional maturity. Goleman (1995) identified five key components of emotional intelligence (EI): self-awareness, self- and social skills. Understanding one's own emotions and how they affect one's thoughts and behaviour is a necessary component of self-awareness. People who possess self-regulation are able to restrain their impulsive feelings and behaviours, think things through before doing something, and express their emotions in a healthy manner. In this context, motivation refers to the internal drive to achieve goals with fervor and commitment. Empathy, or the ability to understand other people's feelings, is a crucial aspect of interpersonal growth. Lastly, relationship management, effective dispute resolution, and inspiring others are all examples of social skills.

When a person can balance their emotional sensibility and logical thinking to handle stress, judgment, and interpersonal challenges with poise and understanding, they have reached emotional maturity. For instance, someone who is emotionally mature can debate with someone without becoming hostile or accept faults without losing confidence. Goleman also emphasizes that emotional intelligence (EI), not just cognitive intelligence (IQ), is impacted by emotional behaviours that are learned and practiced. Therefore, emotional maturity may be cultivated over time through experience, feedback, and self-reflection, and it is accessible for individuals at any stage of life.

2.2.2.3. The Person-centered Theory of Carl Rogers

Carl Rogers, a well-known humanistic psychologist, created the Person-centered Theory, which emphasizes the individual experiences and developmental possibilities of every person. In 1961, Rogers introduced the idea of the “fully developed person,” who is mentally and emotionally developed, aware of oneself, and open to new experiences. According to him, a person’s maturity in emotions is largely influenced by their environment, particularly in their formative years, and whether or not they receive empathy, genuine acceptance, and unconditional positive respect from others. Consistency, or the synthesis of a person’s ideal self who they want to be with their genuine self who they are is encouraged by these conditions.

Emotionally mature people are open to new experiences, accept change, and are conscious of their own feelings. Additionally, they are free to express their emotions honestly without fear of criticism. Emotionally matured people are able to recover from setbacks and maintain a consistent sense of their own worth, unlike emotionally immature people who could turn to defensive tactics like denial or projection. According to Rogers, self-acceptance and emotional openness are crucial components of maturity. By creating emotionally supportive environments, people can be guided toward mature emotions and personal growth.

2.2.2.4. Albert Ellis's Rational Emotive Behaviour Therapy (REBT)

Rational Emotive Behaviour Therapy (REBT), developed by Albert Ellis, is a cognitive-behavioural approach to emotional development. As stated by Ellis (1962), “people’s irrational notions about life experiences are what contribute to emotional disorders rather than the actual events themselves”. The basis of REBT is the ABC model:

- A. The event that activates
- B. Perceptions of the incident
- C. Repercussions (behavioural and emotional)

According to Ellis, emotionally immature people often hold rigid, unachievable beliefs like “I have to always succeed” or “Everyone else must deal with me generously at all times.” These thoughts cause unhealthy emotions of stress, anger, and guilt. Emotional development, on the other hand, means questioning these irrational presumptions and replacing them with fluid, logical concepts such as “I would rather do well, but defeat does not lower my value.” This mental shift leads to healthier emotional responses and better decision-making.

Emotional responsibility or controlling one’s emotions instead of blaming others or external circumstances, was emphasized by Ellis. This view holds that emotionally mature people are able to put off gratification, tolerate suffering, and accept themselves completely despite their imperfections. Because it provides

practical skills for enhancing emotional control, REBT is a helpful method for promoting emotional maturity through rational analysis and cognitive restructuring.

2.2.2.5. Abraham Maslow's Hierarchy of Needs

The work of Abraham Maslow's (1943) Hierarchy of Needs is a motivating theory that provides significant insight into the requirements for development of emotions and maturity. The hierarchy is typically shown as a structure that was with five levels: safety needs, worth, love and belonging, self-actualization, and physiological needs. According to Maslow, individuals must attend to the more basic requirements at the base of the pyramid before seeking higher-order psychological growth. Emotional maturity is most probably to appear at the top of the hierarchy, particularly during the phases of self-actualization and esteem.

When people reach the esteem stage, they begin to develop independence, self-assurance, and respect for others as well as themselves. These qualities promote stability and emotional growth. When people reach the stage of self-actualization, they try to live authentically and realize their full potential. Self-awareness, compassion, and approval of one's own strengths and shortcomings are traits of this emotional maturity level. They don't rely too heavily on outside approval and make decisions on their own. According to Maslow, emotionally mature persons can also have peak experiences, which include times of deep empathy, creativity, and connection. Increased knowledge, compassion, and tolerance qualities that are suggestive of emotional maturity are often the outcome of these realizations.

2.2.3. Theories of Psychological Resilience

Psychological resilience is the process of adapting well in the face of adversity, trauma, tragedy, threats, or significant sources of stress such as family and relationship problems, serious health problems, or workplace and financial stressors (American Psychological Association, 2014). “Psychological resilience is the capacity of individuals to navigate their way to resources that sustain well-being, and the capacity of individuals and communities to negotiate for these resources to be provided in culturally meaningful ways” (Masten, 2001). According to Bonanno (2004), “resilience is the ability of adults in otherwise normal circumstances who are exposed to an isolated and potentially highly disruptive event, such as the death of a loved one or a violent or life-threatening situation, to maintain relatively stable, healthy levels of psychological and physical functioning”.

2.2.3.1. Rutter’s Protective Mechanisms Theory

Reframing resilience as an action that evolves progressively by connections to the environment instead of seeing it as a human trait, Michael Rutter is frequently regarded as the founder of resilience research. Rutter (1987) defined protective mechanisms as factors that mitigate or buffer the effects of risk exposure, enabling people to thrive despite adversity. Unlike other models that focused on static personality traits, Rutter proposed that resilience involves changing relationships among an individual and the surroundings. These tactics

include things like positive school environments, good parenting, and encouraging communities.

One of Rutter's most significant contributions is his emphasis on multiple pathways to resilience. He realized that a combination of risk and protective factors shapes personal evolution and that resilience cannot be ensured by a single component. For example, a child from a low-income home may succeed academically with the assistance of a helpful mentor or teacher. These compensating factors help the person cope with adversity more effectively, but they do not totally eliminate it. These mechanisms operate in the cognitive, emotional, and social domains and create a network of defensive systems. Rutter also introduced the idea of gene-environment interaction, which holds that there are biological differences in how people react to encouragement and hardship. This hypothesis holds that not everybody is resistant; certain individuals may have dispositions that make themselves more receptive to help or more likely to seek it out. A child who is naturally more gregarious may benefit more from an educational setting that is nurturing than a timid or introverted learner. Developmental time is another important element of Rutter's theory. Early-life protective mechanisms, like a strong bond with caregivers, may grow into teenaged peer support, problem-solving skills, and a sense of independence. This shift emphasizes that resilience is not a "one and done" strategy but rather requires constant reinforcement and adaptability across life stages.

In conclusion, Rutter's theory of safeguarding mechanisms provides a basic understanding of how resilience develops gradually. By highlighting the dynamic nature of resilience and recognizing the interplay between biology and environment, Rutter cleared the path for a more all-encompassing approach to promote mental health and positive development in the face of adversity.

2.2.3.2. Broaden-and-Build Theory

Barbara Fredrickson's Broaden-and-Build Theory (1998) provides a unique perspective on resilience by emphasizing the value of positive emotions. In contrast against adverse feelings (such fear or anger), which direct attention to assist immediate survival, positive emotions broaden consciousness and inspire novel, varied, and adventurous ideas and behaviours. More knowledge enables people to develop enduring intellectual, social, mental, and physical abilities that can assist them deal with challenges down the road. The process begins with small emotional experiences, such as joy, love, and gratitude, that increase one's temporary openness to experience. After having a good talk with a buddy, someone may open up more socially, which can lead to stronger social networks. These networks thus provide both emotional and practical support when faced with adversity. Therefore, the accumulated benefits of positive emotions which are not transient form the basis of long-term resilience.

Research has shown that people who experience happiness on a daily basis bounce back from setbacks faster. For example, in a study that followed

participants throughout stressful life events, those with higher everyday positive affect had a higher chance of recovering both emotionally and physically. Because good affect shapes behaviour and thinking processes, resilience is more than just overcoming adversity; it's about growing stronger as a result of this “upward spiraling” effect. Furthermore, Fredrickson's concept has been applied in practical contexts like therapy, education, and organizational resilience training. Interventions such as gratitude diaries, mindfulness meditation, and loving-kindness exercises aim to intentionally cultivate positive feelings. It has been shown that these behaviours enhance subjective well-being, emotional regulation, and immune functioning—all of which are essential for preserving resilience. Ultimately, resilience is shifted by the Broaden-and-Build Theory from simply managing hardship to thriving despite it. It suggests that happiness is an essential tool for building emotional and cognitive skills needed to thrive in a complex and often uncertain environment, rather than a luxury.

2.2.3.3. Compensatory, Protective, and Challenge Models

These three ideas, which come from developmental psychopathology, explain different ways that people can show resilience in difficult circumstances. The compensating model states that some protective variables directly and completely eliminate risk. For example, strong parental support may counteract the negative effects of poverty. According to the protective factor model, some strengths such as a strong sense of self-worth or useful coping strategies interact with hazards to mitigate their negative impacts. This is commonly referred to as a

“moderating effect.” For instance, a child who witnesses neighbourhood violence may still succeed academically if they have encouraging adult mentors.

The Challenge model suggests that by learning effective coping strategies, persons who face mild difficult circumstances can actually grow more resilient. However, this method emphasizes the necessity of keeping stress within acceptable ranges. Instead, persistent or severe trauma, especially without support, may cause long-term psychological harm.

2.2.3.4. Differential Susceptibility and Environmental Sensitivity

This theory, established by Belsky and Pluess, (1997) holds that persons differ in their sensitivity to environmental effects due to biological and genetic factors. Because they become more “plastic,” or flexible, certain people are more affected by both positive and negative events. These individuals are said to be more susceptible to risk and reward. This contrasts with traditional models that only focus on vulnerability to negative outcomes. The differential susceptibility notion states that if a person has traits that make them sensitive in a harsh environment, like high emotional reactivity, they may be able to thrive in a supportive one. As a result, both environmental factors and individual susceptibility have an impact on resilience. There are important implications for intervention from the hypothesis. It may be more effective to tailor assistance programmes to each individual’s particular environmental responsiveness rather

than employing a “one-size-fits-all” strategy. It highlights how crucial customized mental health care and educational programmes are.

2.2.3.5. Shattered Assumptions Theory

A person’s fundamental beliefs about the universe, other people, and himself are upended by traumatic experiences, in accordance with psychologist Ronnie Janoff-Bulman’s (1992) Shattered Assumptions Theory. Such basic assumptions, such as “the world is kind,” “life has a purpose,” and “I am deserving” often operate in an unconscious manner. Trauma, such as assault, loss, or disaster, can “shatter” these assumptions, causing profound existential and emotional suffering. People may experience fear, helplessness, or confusion as a result of the trauma since it undermines the basic framework that they rely on to interpret life events. This theory explains why some people do not have the long-lasting psychological disturbance known as Post-Traumatic Stress Disorder (PTSD), while others do. When assumptions are proven incorrect, the individual must change their viewpoint to account for the distressing experience. The ability to do so effectively is a crucial aspect of psychological resilience. Resilience in this context refers to reconstructing, incorporating unpleasant experiences, and determining how to move forward with a new outlook rather than reverting to a pre-trauma state.

Crucially, post-traumatic development can occasionally arise from this repair process. Some see their demise as a defining moment that has helped them

grow spiritually, build stronger relationships, become more resilient, and appreciate life. For example, someone who endured a serious accident may report feeling more grateful for life or closer to those they love. According to this method, resilience is about adapting to a new mental reality that is impacted by both development and pain, not merely about getting back on track following a setback. The Shattered Assumptions Theory has impacted trauma treatment approaches that emphasize meaning-making, such as existential counseling, narrative therapy, and logotherapy. These therapies help patients explore their core beliefs, reinterpret their trauma, and integrate the incident into a coherent life story. In this sense, building resilience entails helping individuals develop a meaningful framework that allows them to survive despite and sometimes even because of their pain.

2.2.3.6. Conservation of Resources (COR) Theory

The Conservation of Resources (COR) Theory was created by Stevan E. Hobfoll in 1989 and approaches psychological resilience from a resource management standpoint. At its core, the theory holds that people strive to get, preserve, and protect valuable resources such as cash, time, social support, physical energy, and self-worth. Stress arises whenever these resources are lost, endangered, or insufficient to meet life's obligations. According to this view, resilience encompasses more than simply emotional regulation; it also includes the ability to efficiently maintain and replenish resources between and following stressful events.

One of the fundamental principles of COR is that those who are already more wealthy are better able to cope with adversity. This concept is commonly referred to as a “resource caravan”—a collection of belongings that a person carries with them throughout their lifetime. For example, those with a stable income, a strong social network, and good health are more likely to bounce back from a crisis because they may leverage their current strengths. Conversely, persons with less resources are more vulnerable to loss spirals, when the loss of a single asset (such as a job) leads to further losses (such as housing, social connections, and self-worth).

Additionally, COR Theory highlights the importance of resource gain. Even while resource loss has a bigger psychological impact, resilience can be significantly increased by gaining more resources, especially after a loss. This is often seen in post-crisis recovery efforts, as individuals not only restore what was lost but also learn new skills or perspectives. For example, someone suffering from burnout might find an entirely novel use in their work or learn new coping strategies to improve their overall resilience.

This concept has a big impact, especially in fields like organizational psychology, trauma intervention, and disaster response. It provides a concrete framework for improving resilience by placing a strong emphasis on resource recovery, security, and preservation. COR-based treatments, such as financial assistance, social assistance programs, training, and community-building

initiatives, provide people with the tools to prevent resource depletion and promote long-term mental health.

2.2.3.7. Biopsychosocial and Dynamic Equilibrium Models

The Biopsychosocial Model of Resilience is a comprehensive paradigm that emphasizes the ways in which psychological, social, and biological variables interact to influence how adaptable humans are to stress and adversity. This paradigm, which was first created in health psychology, has since been used to resilience research to demonstrate that no one component works in isolation. Instead, the brain and the genes (bio), connections, culture, and surroundings (social), and mental and emotional functions (psycho) all contribute to resilience. Together, these interconnected systems influence how people perceive, react to, as well as recover from stressors. Genetic predispositions, brain areas involved in emotion control (such the adrenal cortex and frontal cortex), and endocrine regulation (like the levels of cortisol response) are some of the biological components of resilience. Optimism, self-worth, emotional regulation, and cognitive flexibility are important aspects of psychology. Family motion, standards of culture, relationship quality, and community service accessibility are examples of social influences. For example, an individual with an incurable condition may require psychological care, adequate biological medication, and support both family and medical specialists to sustain resilience.

The Dynamic Equilibrium Model developed by Richardson and associates defines resilience as the process of recovering or achieving a stable, functional state after a disruption. When people are under a lot of stress, they may have temporary emotional, behavioural, or cognitive instability. This paradigm defines resilience as systems that restore equilibrium, whether through self-correction or external support. Some people attain a condition called “resilient reintegration,” where they not only recover but also get stronger, acquiring new coping skills or a more complex outlook on the world. Often, these models operate together. While the biopsychosocial approach identifies the factors that contribute to resilience, the dynamic balance model explains how resilience evolves over time. Together, they lend credence to the idea of the ability is a process that is dynamic and context-sensitive instead of a fixed attribute. Because they promote interventions that integrate medical services, mental health strategies, and social support networks, these models are particularly beneficial in trauma recovery, medical care, and emergency planning.

2.2.4. Theories of Locus of Control

In the social sciences, locus of control (LOC) is one of the most widely utilized as well as one of the most exploited traits of personality. Julian Rotter brought it to psychology in 1966 and used his Social Learning Theory to describe it as a generalized anticipation (Nowicki et al., 2021). The psychological term locus of control refers to how people see the reasons behind the things that

happen in their life (Rotter, 1966). It indicates how much people think that their own acts (internal control) or outside forces like fate, luck, or other people's influence (external control) are to blame for certain results (Levenson, 1973). Numerous disciplines have used locus of control theories, such as organizational behaviour (Spector, 1988), health psychology (Wallston et al., 1978), and education (Trice, 1985). Rotter defines locus of control as “the degree to which individuals believe that they have control over the outcomes of events in their lives, as opposed to external forces beyond their control” (Rotter, 1966). According to Lefcourt (1982) “locus of control is a personality construct reflecting a person’s generalized expectations regarding the forces that determine rewards and punishments in life”.

2.2.4.1. Rotter's Theory of Locus of Control

As part of his larger Social Learning Theory, Julian B. Rotter established the Locus of Control Theory, one of the most important concepts in personality psychology. Rotter first used the term locus of control in 1966 to describe people's general expectations of their capacity to affect the reinforcing (punishments or rewards) they experience in life. Rotter claims that these expectations influence behaviour in a range of situations and can be grouped along an avenue from internal locus of control to external locus of control. Individuals with an internal locus of control believe that their own decisions, abilities, and deeds ultimately determine the outcomes.

Rotter attributed success or failure to personal factors like aptitude, diligence, and readiness. Those with an external locus of control, on the other hand, believe that external forces such as fate, luck, or powerful individuals are the primary determinants of life events. Saying, "I failed the exam because the questions were unfair," encourages students to place the responsibility on circumstances outside their control. Rotter emphasized that most people fall somewhere in the middle section of the locus of control spectrum, which is a continuum rather than a rigid either-or category. By developing the Internal–External (I–E) Scale to determine a person's position on this continuum, he made the concept measurable and research-applicable. According to the theory, locus of control has a major impact on coping strategies, motivation, and decision-making. People with a powerful internal orientation often have higher levels of obligation, tenacity, and accomplishment motivation because they believe that their actions can impact their environment and outcomes. They are more likely to be proactive in finding solutions to issues and improving their circumstances. On the other hand (Rotter, 1966).

2.2.4.2. Multidimensional Locus of Control Theory by Levenson (1973)

Rotter's original locus of control framework from 1966 was significantly improved upon in 1973 by Hanna Levenson's Multidimensional Locus of Control Theory. Rotter saw locus of control as an individual bipolar continuum, with the internal locus on the one end and external locus on the other, However Levenson argued that the "external" category was unduly broad and ignored important

distinctions in how people allocate control. Her research showed that external beliefs are not all the same and that they might differ greatly in their psychological effects and places of origin. She recommended a three-dimensional paradigm that measures the Internal, Probability, and Powerful External Locus of Control as opposed extremes of a single scale. The Internal Locus of Control dimension in Levenson's method is nonetheless analogous to Rotter's concept. It refers to the belief that one's own decisions, deeds, skills, and efforts directly impact outcomes. People with a strong internal attitude are more inclined to assume personal responsibility for their life's events, view themselves as active change agents, and work persistently towards their goals.

The second dimension, chance, is a form of faith in outside authority. It conveys the conviction that events in life are dictated by fate, luck, fate or other capricious factors outside of human control. People who score highly on this dimension frequently think that no matter how hard they try, their experiences are largely unexpected and out of their control. The third dimension, Powerful Others, stands for another kind of external control. People in this position believe that their outcomes are determined by powerful individuals, such as managers, political leaders, teachers, or family elders. Being under the impression that others, not oneself, are in charge does not always imply that one is completely powerless. One advantage of Levenson's methodology is that it allows for more sophisticated examination. Unlike Rotter's unidimensional approach, Levenson's multidimensional perspective recognizes that a person with a high internal control score may also believe that authority figures or luck play a significant role in some areas of life. This flexibility is especially important in practical contexts. It

can help teachers assess whether children attribute their academic success to their own efforts, good fortune, or the influence of their teachers. Motivational tactics are then guided by this information (Levenson, 1973).

2.2.4.3. The Children's Locus of Control Scale by Nowicki and Strickland (1973)

Rotter's initial Internal–External Locus of Control Scale was designed for adults and used vocabulary that was too complex for younger individuals, claim Nowicki and Strickland (1973). To help children grasp the concept, they developed the Children's Locus of Control Scale (CLOCS). This scale was created to evaluate how children perceive whether external forces, such as fate, luck, or influential people, have a greater influence over their lives (external locus) or whether they have a greater degree of control over events in their lives (internal locus).

The CLOCS's straightforward yes/no question structure, which included statements written in simple, age-appropriate English, was one of its advantages. Instead of using abstract, theoretical language, the pieces were based on everyday occurrences that children could identify with. For example, a child might be asked if they attribute their academic success primarily to hard work or pure luck. The significance of this scale stems from its impact on educational research. It enabled psychologists and educators to look into the relationship between control beliefs and children's academic achievement. According to the findings, children who had a stronger inner orientation were more likely to be motivated, persistent,

and capable of solving problems, all of which improved their academic performance (Nowicki & Strickland, 1973).

2.2.4.4. Academic Locus of Control (Trice, 1985)

Anthony D. Trice (1985) suggested that Rotter's general locus of control theory may be more useful in education if it were adjusted to assess attitudes about success and failure in the classroom. This led to the development of the Academic Locus of Control Scale (ALCS), which assesses whether students credit internal or external causes for their academic performance. This idea holds that students with an excellent internal academic locus of control believe that their academic performance is influenced by their study habits, efforts, time management, and perseverance. They are more likely to take responsibility for their grades, adjust their strategy as needed, and put in persistent effort to improve. Students with a high extrinsic academic locus of control, on the other hand, attribute their academic success to outside forces such as chance, teacher grading, or exam difficulty. These students could feel helpless and be less inclined to change their study methods when they encounter academic challenges. This hypothesis is important because it predicts academic success, attendance, and perseverance; it helps teachers identify which students can benefit from motivational interventions; and it informs counseling strategies to promote self-control and responsibility (Trice, 1985).

2.2.4.5. Education's Domain-Specific Locus of Control (Curtis & Trice, 2013)

By stressing that control attitudes differ according on the subject of study, Curtis and Trice (2013) built on earlier research on academic locus of control.

Typical academic locus of control assessments perceives a student's direction as a single general tendency, while Curtis and Trice pointed out that a student may feel externally controlled in one topic and internally in charge of another. This gave rise to the concept of Domain-Specific Academic Locus of Control. For instance, a student may have an internal locus in mathematics, believing that success depends on their work and problem-solving strategies, but an external locus in literature, attributing results to the teacher's subjective grading or the difficulty of text interpretation. These discrepancies could be the consequence of teaching strategies, perceived ability, prior experiences, or possibly cultural viewpoints on specific subjects. To measure these disparities, Curtis and Trice adapted the Academic Locus of Control Scale to create versions appropriate for a number of academic fields. This allowed researchers and educators to identify subject-specific motivational tendencies and develop targeted interventions (Curtis & Trice, 2013).

2.2.4.6. Role of Teacher (Rose & Medway, 1981)

Although most locus of control studies concentrate on students, Rose and Medway (1981) also state that teachers have opinions about how much their behaviour affects classroom outcomes. They developed the Teacher Locus of Control Scale (TLC) to assess these beliefs in teachers. Teachers with a high internal locus of control believe that their own efforts, classroom management techniques, and teaching methods have a direct impact on their students' conduct and learning. When students fail, these teachers are more motivated to adjust their teaching tactics because they tend to take ownership of their students' achievement. An instructor who is internally oriented would think, for example,

that "if my students are not understanding the topic, I need to find a better way to explain it." Instructors that have a high external locus of control blame uncontrollable elements such as family history, socioeconomic status, natural aptitude, or administrative regulations for the performance of their students. Because internal-oriented teachers are more likely to attempt new tactics, feel more powerful, and support their students' growth mentality, this has an impact on student motivation, job satisfaction, teacher burnout, and instructional perseverance (Rose & Medway, 1981).

2.2.4.7. Locus of Control and Attribution Theory (Weiner, 1986)

Bernard Weiner developed a three-dimensional model for understanding academic motivation by extending Rotter's locus of control. According to Weiner, students go through a cognitive process known as attribution when they achieve or fail, in which they identify the cause of the outcome. This attribution can be divided into three main categories. The locus of causation determines whether the cause is internal (such skill or effort) or external (like task difficulty, teacher bias, or chance). Stability refers to whether the reason is stable, such as aptitude, or unstable, such as effort or mood. Controllability indicates whether the cause is within the student's control, such as study habits, or uncontrollable, such as illness or natural disasters. By adding locus of control to this model, Weiner demonstrated how students' beliefs about the source, stability, and controllability of causes had a direct influence on their perseverance, sense of self, and academic choices. For example, a student who relates a low grade to lack of effort (internal, unstable, controllable) may give up, whereas a student who attributes a low grade to low

natural talent (internal, stable, uncontrolled) is more likely to try harder the next time. It facilitates the development of treatments that encourage internal, controlled, and unstable attributions in order to boost effort, and it aids educators in understanding the motivational inclinations of their pupils (Weiner, B. 1986).

2.3. REVIEW OF STUDIES RELATED TO RESEARCH VARIABLES

Reviewing pertinent literature is an essential part of the research process. First of all, it guarantees that the research is firmly based on the corpus of current knowledge and establishes the foundation for a well-informed study. The present study involves four variables, viz., academic stress, emotional maturity, psychological resilience, and locus of control. A review of recent and pertinent studies related to these variables were done by the researcher. The major database explored for the literature includes Pro-Quest, Education Research Complete, ERIC, Google Scholar, Sprinkler Link, Scopus, PsycINFO, JSTOR etc. The review of the research literature done in this context is given under separate sub-titles:

2.3.1. Studies Related to Academic Stress

Del Rosario (2023) investigated stress management methods and coping mechanisms used by teacher trainees from College of Teacher Education, Cagayan State University, to improve their academic performance. The descriptive study collected questionnaire data from 194 students (Male = 48; Female = 146) from

four batches doing academic teacher education programme in different years of study. Two null hypotheses were tested by computing the critical ratios. The study identified major sources of perceived stress among prospective teachers, which included work-related stress such as workload, confrontation with colleagues, tight deadlines, etc. Relationships with family, friends, love partners etc. are another powerful source of stress among teacher trainees. Napping and cognitive reappraisal are the major coping tools to manage stress among teacher trainees. The study found that profile variables such as gender, age, grade point and academic major selected have no significant differential influence either on perceived stress, the strategies adopted to manage stress or on coping mechanism adopted by the prospective teachers.

Advincula, Morales and Morales (2023) ascertained the levels of academic stress and academic motivation among Senior High School students at San Ildefonso National High School (Bulacan). The study sought to explore the potential link between these factors and the students' academic performance. The research employed a quantitative methodology, utilizing standardized survey questionnaires as the major instruments for data collection. The participants in the survey consisted of a sample of 100 twelfth grade students, picked at random. Academic stress was measured by using the scale developed by Cohen (1994) while academic motivation by employing one developed by Vallerand et al. (1992). SPSS analysis indicated that students suffer a moderate level of academic stress. Furthermore, it is worth noting that kids exhibit a highly commendable

level of academic achievement. Moreover, there is no substantial correlation between academic stress and pupils' academic achievement. Nevertheless, the findings of the study indicate a noteworthy correlation between academic motivation and students' academic achievement.

Saha (2023) surveyed the academic stress among junior college students during the Covid-19 (2018-19 school year) based on gender (boys and girls), habitat (urban and rural), and academic stream (science, commerce, and humanities). The sample was drawn from among the junior college students from the South 24 Pargana district of the Indian state of West Bengal. The stratified random sample approach was used to acquire 600 junior college students. The data was collected using the Hindi version of the Bisht Battery of Stress Scales (Bisht, 1987). The instrument was meant for appraising 13 different types of stress viz., Achievement Stress, Academic Stress, Family Stress, Institutional Stress, Financial Stress, Social Stress, Physical Stress, Existential Stress, Self-actualization Stress, Self-concept Stress, Role Stress, Superstition Stress, and Vocational Stress. For data analysis, the mean, standard deviation, t-test, and F test were utilized. The current study found that the male students experience more academic stress than that experienced by female students. Academic stress is higher among urban junior college students than among rural junior college students. Academic stress among junior college students in science is higher than in humanities and commerce.

Kumari and Singh (2022) examined the association between interpersonal relationships and academic stress among senior secondary school students in Patna. The study specifically sought to find out the correlation of three dimensions of the construct of interpersonal relationship viz., acceptance, acknowledgement and affection to academic stress. The study utilized a descriptive research approach and employed purposive random sampling to choose a sample of 230 senior secondary school pupils to test three null hypotheses. The instruments used were: (i) Interpersonal Relationship Inventory by the investigators, (ii) the Academic Stress Scale (Sinha, 2014). Pearson product-moment correlation was the inferential statistical techniques used for analysis. The findings of the study indicate a notable correlation between the characteristics of interpersonal relationships, including acceptance, recognition, affection, and academic stress among senior secondary school students.

Mohan (2022) compared the academic stress of secondary school pupils from two districts from the Indian state of Assam. The researcher chose a sample of 200 pupils, consisting of 100 boys and 100 females, from ten schools located in Kamrup district and Morigaon District. Three null hypotheses were tested by collecting data by administering the Students Stress Scale (Akhtar, 2011). Data analysis by employing t-test exposed significant gender difference in academic stress; the female students experiencing higher academic stress than the male students. Significant difference was also noticed between secondary school pupils

of Kamrup district and Morigaon district, students from the former district having higher academic stress.

In a descriptive study conducted in Indian context, Joel (2022) examined the academic stress of high school students. For the study, the investigator employed the normative survey approach. The sample is made up of 350 ninth grade learners from the Coimbatore District in Indian state of Tamil Nadu. The stratified random sampling approach was used to choose the sample to test three null hypotheses. Differential influence of three demographic factors, viz., gender, age and habitat, on academic stress of the students were examined by collecting data with the help of the Academic Stress Scale (Rajendran & Kaliappan, 1990). The t-test was used to determine the significance of the difference in academic stress among students based on gender, age, and location. A significant gender difference was noticed in the academic stress of the respondents, which was contributed by dimensions like Fear of Failure, Interpersonal Difficulties, and Teacher-Pupil Relationship. No true differences were noticed in areas like Personal Inadequacy and Inadequate Study Facilities. Significant difference in academic stress was also noticed regarding the age of the participants, which was the contributions of factors like Personal Inadequacy, Teacher-Pupil Relationship, and Inadequate Study Facilities. Residential habitat of the learners is also significant factor in academic stress which was contributed by all the five dimensions of the variable. Senior boys coming from urban areas were found to experience greater stress than junior girls from rural areas.

Kumari and Singh (2022) investigated variations in academic stress levels among senior secondary school students based on their gender, school type, and course stream of study. The investigation employed a descriptive research methodology and utilised purposive random selection to choose a sample of 120 senior secondary school students from Patna district, in the Indian state of Bihar. Three null hypotheses were tested with the help of data collected by administering Academic Stress Scale (Sinha, 2020). The findings of the study indicate a significant disparity in the levels of academic stress experienced by male and female pupils. The study revealed that female students exhibited higher levels of stress compared to their male counterparts, as well as among students attending private, government, and missionary schools. Nevertheless, no significant difference was seen in the academic stress levels among students pursuing science, arts, and commerce streams.

Ahmed (2022) studied the possible academic stress experienced by students during Covid-19. The researcher employed a case study methodology using a sample of five people in order to shed light on the complex issues surrounding academic stress. A primary issue that arose was the lack of access to mobile devices, cell phones, tablets, personal computers, and laptops during scheduled online class sessions. The primary reason for non-participation in online lectures is the rampant concern around internet access. The teachers demonstrate a lack of flexibility in accommodating nighttime online sessions. Visually impaired students encounter obstacles in the online teaching and learning process due to a

lack of sensitivity from teachers towards their educational requirements. Teachers who previously implemented the concept of 'inclusion' in their instructional practises are not effectively implementing it within the context of online classrooms during Covid-19. The students lack awareness of the potential academic dishonesty associated with their engagement in online assignment submission and other academic activities, specifically in terms of plagiarism and collusion practises.

Tharaldsen, Tvedt, Caravita and Bru (2022) researched the levels of academic stress, perceived motivational climate, and emotional difficulties among students attending upper secondary schools in Norway, as well as the potential relationships between these variables. A study was conducted using a structural equation model to examine the relationships between perceived mastery and performance climates, emotional difficulties, and academic stress. The sample consisted of 1379 students with an average age of 16.5 years. The tools employed included the Hopkins Symptom Checklist (Strand et al., 2003), Academic Stress Scale (Murberg & Bru, 2004) and a researcher made questionnaire for appraising motivational climate. Structural Equation Modelling was used to test the hypothesis. The study revealed that female participants exhibited higher levels of academic stress and emotional issues compared to their male counterparts. The presence of a performance-oriented environment was shown to be positively associated with increased levels of academic stress. Furthermore, this performance atmosphere was also found to be positively associated with a greater

likelihood of experiencing emotional issues, which can be attributed to its influence on academic stress levels. The presence of a mastery environment was shown to be correlated with reduced levels of academic stress, and it was seen that this relationship was evident both through direct means and indirectly through the mediating factor of academic stress.

Sharma (2022) studied the differential influence of gender, type of management of the school on academic stress of secondary school students. Data were gathered from 200 students (Boys = 100; Girls = 100), selected randomly from Samba district of the Indian state of Jammu and Kashmir. Five null hypotheses were tested by manipulating the data collected by administering the Academic Stress Inventory (Rao, 2010). Two-tailed test of significance for the differences between two independent means were employed to test the tenability of the hypotheses. Significant difference was observed in the academic stress of secondary school students regarding their gender, the girls experiencing greater stress than the boys; and regarding the type of management of the school, students of government schools experiencing higher stress than their colleagues from private schools. Significant difference was also found to exist among boys as regards to the school type, boys from government schools having greater stress than that of their counterparts from private schools. Likewise, girls from government schools have greater academic stress than girls from private schools.

Sathish and Subramanian (2021) assessed the extent of academic stress experienced by students in senior secondary schools and its impact on their

academic achievement. The study also sought to ascertain the correlation between academic stress and academic performance among students in upper secondary institutions. Additionally, this study aims to investigate the impact of academic stress on the academic achievement of students in senior secondary schools. The survey approach was utilised to gather data, and a sample of 217 students from higher secondary education was picked using random sampling techniques. A 24-item Academic Stress Scale, developed by the investigators, was administered to measure academic stress; while scores of board exams were used as secondary data on academic achievement. The data were subjected to descriptive, correlational, and regression analysis. The findings of the correlation study indicate a statistically significant inverse association between academic stress and academic achievement among students in senior secondary schools. The findings from the regression analysis indicate a statistically significant relationship between academic stress and academic achievement among the population.

Ravindar (2021) studied academic stress of learners in the secondary level of schooling and the difference in the variable according to their gender and type of management of the school. Two null hypotheses were tested by drawing a proportionate stratified random sample of 600 students from 20 secondary schools in Medchal and Hyderabad districts of the Indian state of Telangana. The sample had a 1:1 proportion of gender groups and students from private and government schools. The variable was measured by employing the Stress Scale (Lakshmi & Narain, 2016), a 40-item five-point scale with four dimensions viz., Anxiety,

Frustration, Physical stress and Pressure. Independent sample t-test exposed significant difference with regard to both gender and type of management of the school. Female students outshined male students in managing stress. Students from government schools trail behind their colleagues from private schools in their ability to manage academic stress.

Depaynos, Butala and Atompag (2021) investigated whether senior secondary students differ in their academic stress in accordance with the academic stream of study. The descriptive comparative study consumed data from 364 senior secondary students from four different academic stream of study: (i) Accountancy and business management, (ii) General academic stream, (iii) Humanities and social sciences, and (iv) Science, Mathematics and Technology in the Philippines. A fifteen-item questionnaire was used to collect the data. The weighted mean was used to estimate the amount of academic stress in each academic stream, one-way ANOVA was used to discover significant differences between the academic streams, and the chi-squared test of independence was used to examine the association between stress level and academic stream. It was discovered that uncooperative group members, time constraints, and unreciprocated review, as evidenced by poor activity ratings, are the most important aspects to consider in reducing academic stress. Furthermore, students of General academic stream and Humanities and social sciences are much more stressed than students in the Science, Mathematics and Technology stream, with Accountancy and business management students acting as a buffer. Finally, a

student's academic stress level is mostly determined by his or her personality, independent of the academic stream to which he or she belongs.

Kumari and Chaudhary (2021) looked at academic stress and its causes among Haryana's senior secondary school pupils. In this regard, 444 senior secondary school students were tested on the Students Academic Stress Scale (Busari, 2011), and all academic selected subjects were divided into two groups based on their combined scores on three dimensions of academic stress, namely cognitive reaction, affective reaction, and behavioural reaction. participants scoring less than 27% (N=120) were assigned to the Low Academic Stress Group, whereas participants scoring more than 27% (N=120) were assigned to the High Academic Stress Group. The researcher made Academic Stress Determinant Scale was used to assess the selected topics. The resulting data was analysed inferentially by computing t-ratios. The results clearly distinguished between two groups, namely the Low Academic Stress Group and the High Academic Stress Group. Subjects in the High Academic Stress Group scored considerably higher on all five predictors of academic stress, namely self-related, parent-related, peer-related, teacher-related, and school-related stresses.

Neeta and Singh (2020) investigated the extent of academic stress experienced by students in higher secondary schools. The descriptive research design utilised a stratified random sample of 110 pupils, recruited from 10 higher secondary schools located in the Gorakhpur district of the Indian state of Uttar Pradesh. The data collected with the help of a standardized Academic Stress Scale

was subjected to descriptive and inferential statistical analysis. The results brought out that there are statistically significant disparities in academic stress levels between male and female participants in higher secondary school. Additionally, the study revealed that there was no statistically significant distinction observed in terms of academic stress levels between pupils attending government-aided and self-financed schools, as well as those studying in rural and metropolitan areas.

Koshy (2019) undertook a descriptive-exploratory investigation with the objective of evaluating the extent of academic stress and investigating potential variables contributing to stress. The research was carried out within the context of tuition sessions attended by tenth standard learners. The study utilized a sample size of 100, which being picked by the convenient sampling approach. A self-made Stress Assessment Scale was employed to collect data which was analyzed by employing Chi-square test. The study demonstrated that 45% of participants had mild stress, while 51% reported moderate stress, and 4% indicated severe stress. Furthermore, the study identified parental expectations as the predominant factors contributing to academic stress levels among the participants. There is a tendency for gender to be linked to levels of stress.

Umar (2019) studied the effects of academic stress on senior secondary school pupils and their utilization of coping techniques. The descriptive study used a stratified random sample of 300 pupils from the Kaduna Central Senatorial District of Kaduna State, Nigeria. Data collection was done by the Academic

Stress and Coping Scale for Students, developed by the investigator. Two null hypotheses were tested by using the t-test statistic. The findings of the study indicated a statistically significant disparity in academic stress levels between male and female students. However, no statistically significant distinction was seen in the academic stress levels of students attending schools located in rural and urban areas.

The study of Akeela and Ashok (2018) sought to assess the quantum of academic stress among high school students from public and private schools, as well as to compare the level of stress among males and girls. Purposive sampling was employed to acquire data from the sample of 144 pupils from both public and private schools to test two null hypotheses. The Academic Stress Scale (Rajendran & Kaliappan, 1990) was administered to collect data. The hypotheses were tested by using descriptive statistics and the t-test. According to the data, the type of school appeared as a key determinant in the feeling of stress. Students attending government schools were under higher stress. Furthermore, the study discovered that there is no gender difference in stress experience.

In an exploratory research, Anupama and Sarada (2018) evaluated the levels of academic stress experienced by teenage boys and girls, aged 14 to 15 years, who are enrolled in the 10th grade within the Tirupati Municipality in the Indian state of Andhra Pradesh. The study population comprised 240 individuals, specifically 120 males and 120 girls. The Academic Stress Scale (Sinha et al., 2001) was used to collect data. Analysis revealed that the teenage females and

males reported high (57.9%) to extremely high (40%) levels of academic stress. A significant gender difference was noticed in the academic stress of students in the cognitive domain, the females exhibited greater levels of cognitive stress. Significant difference was also noticed in the physical stress experienced by boys and girls, the boys exhibited greater levels of physical stress. A statistically significant correlation was observed between gender and the behavioural domain of academic stress among the five stressor domains, with a significant level. No significant correlation was seen between gender and the categories of cognition, affect, physicality, and social interaction.

Sagar and Singh (2017) investigated the extent of academic stress experienced by students in higher secondary schools. The study employed a descriptive research design and utilized stratified random sampling as the preferred sample method. A comprehensive sample of 180 students was recruited for the purposes of this study from 10 upper secondary schools located in the Bareilly area in the Indian state of Uttar Pradesh. The data were gathered using a self-constructed Academic Stress Scale. The data underwent analysis utilizing the t-test and analysis of variance techniques. The findings indicate a statistically significant disparity in academic stress levels between male and female participants in higher secondary school. However, no statistically significant distinction was seen in the academic stress experienced by students in the arts, science, and commerce streams. Additionally, the study revealed that there was no statistically significant disparity in academic stress levels between students

attending government-aided and self-financed schools, as well as between students from rural and urban areas.

The major objective of the study undertaken by Ghosh (2016) in Indian context was to examine the differential influence of gender and type of school management on academic stress experienced by high school students. Two hypotheses were tested with the help of data collected from 200 tenth grade students in 1:1 gender ratio, drawn from two schools in Ranchi town in the Indian state of Jharkhand. The sample had an equal representation of private schools and government schools. The variable was measured by administering the Bisht Battery of Stress Scales (Bisht, 1987), and the data analysis by using t-test. Both the demographic factors were found to have significant differential effect on academic stress, wherein students from private schools were found to be under higher academic stress than their peers in public schools, and the girls were reported to experience higher levels of academic stress than the boys.

Nikitha, Jose and Valsaraj (2015) examined the success of a stress management programme on academic performance of higher secondary school students. A researchers' made scale was administered on a convenient sample of 538 high school students from Udupi district of the Indian state of Karnataka for collecting data. The students, comprising both gender groups, were in high, average and low levels of academic stress. Secondary data on academic performance, collected from school records, were also used. Data was analyzed using t test and Wilcoxon signed rank test. The descriptive part of the

investigation brought out that 80.2% of the pupils fall in the moderate stress group, 6.2% in the severe stress group and 13.5% experience low stress. Majority of the students (46.9%) are poor in their academic performance, 40.6% are average, and the rest are above average level. The stress reduction programme was given in a non-professional manner for two weeks at the rate of three 15-minutes intervention per week, prior to examination. The results showed that the stress reduction programme was successful in reducing academic stress of students but did not contribute to enhanced academic performance.

The objective of the study done by Menaga and Chandrasekaran (2014) was to alleviate the academic stress experienced by students in higher secondary education. Additionally, the study aimed to identify any potential disparities in academic stress levels based on variables such as gender, type of school management, type of family, economic status of the family, and academic stream of study. The sample consisted of a random group of 250 students enrolled in upper secondary schools in Thiruvannamalai District of the Indian state of Tamil Nadu. The research utilized the survey approach and employed a basic random sample strategy. The Academic Stress Scale (Busari, 2011) was administered to collect data, which was manipulated by employing t-test and one-way ANOVA. A significant disparity was observed in the level of Academic Stress experienced by higher secondary students, with respect to their Gender, Type of School Management and Type of Family. However, no notable variation was found in the Academic Stress experienced by higher secondary students in relation to their

economic status of the family and stream of academic track. The results of this study may prove valuable for students seeking to assess their stress levels and implement appropriate strategies to mitigate academic stress.

In Nigeria, Akande, Olowonirejuaro and Okwara-Kalu (2014) examined the extent and origins of stress experienced by secondary school pupils. The descriptive survey, with the target group consisting of all senior secondary school pupils in the federal territory in the central Nigeria. The study included a representative sample of 18 secondary schools, selected from the total population of 59 public senior secondary schools in the central territory. The sample consisted of 540 respondents, comprising both male and female pupils. The researchers developed a questionnaire and ensured its validity through expert evaluation in order to gather pertinent data. The data obtained was subjected to analysis using percentage, statistical weighted mean, and standard deviations for the research questions. Additionally, the hypotheses were tested using t-test. The findings of the study revealed that students at the secondary school level had a moderate degree of stress, with several notable stressors identified, including academic, intra-personal, and environmental factors. A notable disparity in stress levels and causes of stress was observed among secondary school pupils, with a considerable gender variation. It has been suggested that the guidance and counselling department in secondary schools should proactively identify pupils experiencing stress and offer appropriate help and ways for managing it.

In Indian context, Porwal and Kumar (2014) analyzed the level of academic stress faced by students in their last years of secondary education. The small sample study consumed data from a total of 30 participants, with an equal distribution of boys and girls. All pupils are enrolled in the twelfth grade of a secondary schools located in Noida of the Indian state of Uttar Pradesh. The data was obtained using a standardized Academic Stress Questionnaire developed by Akram et al. (2013). The data analysis involved the calculation of the mean, standard deviation, and t-test. The findings suggest that there exists a statistically significant disparity between male and female individuals with regards to the experience of academic stress. The findings indicate that male students in senior secondary education have higher levels of academic stress compared to their female counterparts.

2.3.2. Studies Related to Emotional Maturity

Rahim (2023) studied how type of school management and religion affect the distribution of emotional maturity of secondary school teachers. The study utilized data collected from a sample of 640 teachers selected from 120 secondary schools in the Kurnool district of the Indian state of Andhra Pradesh. Two null hypotheses were tested by using data on emotional maturity collected with the help of Emotional Maturity Scale (Singh & Bhargava, 2012). One way ANOVA and t-test were used to find out the significant difference among schools managed by the government, local bodies and private agencies, and among Hindu,

Christian, and Muslim teachers. Type of school management was found to be a significant factor influencing the emotional maturity of teachers. The observed difference was confined to one group pair, i.e., between teachers of private school and those governed by local bodies. Teachers of private schools are emotionally more mature than their colleagues in schools managed by local bodies. Religious affiliation was found to have no significant differential effect on the emotional maturity of secondary school teachers.

Khan (2023) examined how emotional maturity and school environment is related to academic performance of senior secondary students and to predict academic achievement from the independent variables. A stratified random sampling of 508 senior secondary students from Rajouri and Poonch districts of the Indian state of Jammu and Kashmir comprised the sample for the study. Primary data were collected by using the School Environment Inventory (Mishra, 2012) and the Emotional Maturity Scale (Sharma & Shakir, 2019). Aggregate percentage of the school grade point in the previous class was taken as secondary measure of academic performance. Multiple regression analysis and product-moment correlation were the inferential statistical techniques used to test the hypotheses. Analysis established significant positive correlation of academic achievement to both emotional maturity and school environment. Both emotional maturity and school environment were found to be significant predictors of academic achievement of the students.

Chaudhari and Shukla (2022) studied the effect of gender and residential locale on the distribution of emotional maturity among secondary school students. Three null hypotheses were tested for the study by collecting a sample of 120 students in equal proportion of boys and girls as well as rural and urban students from the schools of Mehsana district, Gujarat (India). Emotional Maturity Scale (Singh & Bharagava, 2012) was used for data collection. F-test was used to analyse the data inferentially. Analysis revealed that gender is not a significant factor that discriminates secondary school students on the basis of their emotional maturity. Rural and urban differences favouring the urbanites were noticed in the distribution of the emotional maturity of the secondary school students. Gender and residential locale were found to have no significant interaction effect on the emotional maturity of adolescent learners in secondary schools.

Ismail et al. (2021) studied the emotional maturity of secondary school students. The descriptive study utilized data from 361 secondary school students (boys = 182; Girl = 179). The variable was appraised by administering the Emotional Maturity Scale (Yashvir & Mahesh, 1989). Descriptive analysis showed that the students possess moderate level of emotional maturity with respect to the total score as well as with respect to each of the factors. Independent sample t-test revealed significant gender difference in emotional maturity, the girls excelling the boys.

Anumeha and Topno (2021) studied personality development and emotional maturity of senior secondary students. The differential influence of gender and

residential locale on personality development and emotional maturity were explored by taking a purposive sample of 200 senior secondary students. Four null hypotheses were tested by analyzing data collected by two researchers who made pre-validated instruments for measuring emotional maturity and personality development. The hypotheses were tested by using t-test. The analysis revealed significant gender difference in emotional maturity of senior secondary students, the difference favoured female students. No significant gender difference was noticed in the personality development of the students. Though rural-urban difference was not evident in the emotional maturity of the students, residential locale was found to exert significant decisive role in the personality development of senior secondary students, the difference favoured the urbanites.

Kamala and Lakshmi (2021) studied emotional maturity of secondary school students with an intention to examine the differential effect of gender, residential locale, type of school management, and medium of instruction on its distribution. Four null hypotheses were tested by collecting data from a random sample of 200 secondary school students from Krishna district of the Indian state of Andhra Pradesh. Emotional Maturity Scale (Sabapathy, 2017) was administered along with a Personal Data Sheet to gather information needed for the study. Independent sample t-test was used to analyze the data inferentially. The results showed that gender has no significant differential effect on the emotional maturity of secondary school students. Though no rural and urban difference was noticed in the emotional maturity of the sample, type of school

management was found to exert significant differential influence, where students from private schools were found to be more mature emotionally than their counterparts in government schools. Significant difference also exists between English medium and Telugu medium students, wherein Telugu medium students excel the English medium students in their emotional maturity.

Babita and Naaz (2021) studied the emotional maturity of senior secondary students in relation to the type of school and gender. The descriptive survey study collected data from a random sample of 50 students from senior secondary schools in government and private sector, located in the Indian city of Lucknow. The Emotional Maturity Scale (Singh & Bhargava, 1990) was used for data collection. The findings showed that students at private schools are more emotionally mature than students of government schools. Likewise, female students surpass the male students in their emotional maturity.

Tripathy (2020) studied the emotional maturity of secondary school students in relation to gender, residential locale, and type of school. The descriptive study used data collected from 1000 secondary school students in 1:1 gender ratio, selected randomly from 32 government and private school located within the revenue jurisdiction of Bolangir and Kalahandi districts of the Indian state of Odisha. Emotional Maturity Scale (Bhargava & Singh, 1990) was administered to collect data, which was analyzed by using t-test. The results revealed the presence of a significant difference between government and private schools regarding the emotional maturity of the students, the government schools surpassed the private

schools. Rural and urban difference favouring the rural students and gender difference favouring the male students in the sub-sample based on type of school were noticed. Gender difference among students from government schools and among the rural students favoured the male students. No gender difference, however, was noticed among urban students and among private school students. Significant gender difference was noticed in the emotional maturity of the rural students of private schools, which favoured the male students. No gender difference was noticed between students from urban private schools in their emotional maturity.

Jobson (2020) studied the emotional maturity of adolescents and examined the differential influence of gender, age type of family, and siblings on the distribution of emotional maturity. The study was conducted in Indian context using a sample of 100 adolescents in the age range 16-18 years selected from higher secondary schools of Tamil Nadu. The Emotional Maturity Scale (Singh & Bhargava, 1990) which ascertained the construct in five domains, viz., Emotional stability, Social adjustment, Personality integration, Emotional progression, and Independence, was used for data collection. A personal data sheet was also administered to collect general information needed for the study. Analysis exposed that 74% of adolescents are emotionally immature. Demographic factors like gender, age, type of family and sibling were found to exert no differential effect on the distribution of emotional maturity of adolescents.

Majumdar and Das (2019) studied the differential influence of gender and school type on the emotional maturity of ninth grade students. The descriptive design utilized data collected from a purposive sample of 200 students selected from various schools of Asansol, West Bengal (India). Eight null hypotheses were tested for the study. The sample had an equal representation of private and government school students. Data collection was completed by administering researchers' made Emotional Maturity Scale. Apart from descriptive statistical techniques, t-test was used to test the hypotheses. Significant difference was noticed in the emotional maturity of government school students and private school students, the former excelling the latter. Gender difference was also noticed in emotional maturity of the Practice Teaching, which favoured the girls. Though no gender difference was noticed among students from government schools, private school girls outshined their gender counterparts in their emotional maturity. No significant difference was observed between boys of government schools and boys of private schools. However, government schoolgirls excelled girls from private schools in their emotional maturity. Significant difference was noticed between boys of government schools and boys of private schools, government schoolboys outshined their private school peers. The government schoolgirls and private school girls were found alike in their emotional maturity, as there is no significant difference between the groups.

Rafaqi and Musheer (2019) studied the effect of emotional maturity on study habits and academic achievement of secondary school students. The

descriptive research used data collected from a random sample of 336 high school students from Aligarh district of the state of Uttar Pradesh in India. The study utilized both primary and secondary data. Primary data pertaining to emotional maturity was collected with the help of Emotional Maturity Scale (Sabapathy, 2017) and study habits by employing Study Habit Scale (Rani & Jaidka, 2015). Pearson product-moment correlation was used to find out the interrelationship among the variables and found that emotional maturity is correlated significantly and positively with both study habit and academic achievement. Two-way MANOVA revealed significant main effect of emotional maturity on both study habits and academic achievement. A non-significant multivariate interaction effect of emotional maturity, type of school, and gender was noted on the combined variables, academic achievement and study habit.

Biswas (2018) studied the differential effect of gender and residential locale on the emotional maturity of senior secondary students. A purposive sample of 100 senior secondary students were selected from four senior secondary schools of Bongaon Town, (West Bengal, India). The sample consisted of 50 male and 50 female students with equal rural and urban representation. Data was collected by employing Emotional Maturity Scale developed by the researcher for the purpose of study. The instrument covered five dimensions of the construct of emotional maturity, viz., Social Adjustment, Needs Satisfaction, Decision Making, Emotional Openness, and Personal Integration. Groups were compared by using

t-test, which revealed no significant difference between male and female students as well as between rural and urban students in their emotional maturity.

Mahendra and Thakur (2018) studied the emotional maturity of high school students with respect to selected demographic factors. The descriptive quantitative study used a sample of 150 high school students, 75 from government schools and 75 from private schools from Sirsa district of the Indian state of Haryana. Emotional Maturity Scale developed by Singh and Bhargava (1995) was used for collecting data. Data were analyzed inferentially by employing independent sample t-test. Significant difference was detected in the emotional maturity of students from govt. and private schools, the latter excelling the former. Type of school management was not a significant factor in discriminating high school girls based on their emotional maturity, as no significant difference was noted between government and private schools regarding the emotional maturity of girls. However, type of school management played a decisive role in the emotional maturity of boys as there is significant difference between government and private schools. Boys from government schools surpassed their peers from private schools in their emotional maturity.

Kaur (2018) studied the relationship between social competence and emotional maturity of adolescents. Differential influence of gender and type of school management on the variables were also examined. Adolescent learners of plus one and plus two classes were selected from different schools of Mohali (Punjab, India) as sample ($n = 100$). The sample consisted of equal number of

students from government and private schools, and equal in gender proportion. Social competence and emotional maturity were measured with the help of the Social Competence Scale (Sharma & Shukla, 1992) and the Emotional Maturity Scale (Singh & Bhargava, 1990). Product moment correlation and independent sample t-test were used to analyze the data inferentially. The analysis revealed a significant positive correlation between social competence and emotional maturity, adolescents who are emotionally matured are having more social competence. No significant differential effect of gender and type of school management was found on either emotional maturity or social competence.

Rajeshwari and Manoraj (2017) studied emotional maturity in relation to general stress and self-confidence of postgraduate students of management programme. The investigators collected data from a random sample of 349 management students from different universities in the Indian state of Karnataka. A questionnaire developed by the investigators was used to collect data to test three null hypotheses. Analysis exposed that emotional maturity is significantly and positively correlated to self-confidence, but the relationship with stress is negative and significant. Significant positive relationship between self-confidence and emotional maturity was also noticed. Students with higher emotional maturity have higher levels of stress management skills. No significant correlation was reported between self-confidence and stress.

Sunila (2017) compared the emotional maturity, academic stress and self-awareness of working and non-working mothers of undergraduate students. The

relationship between the variables was also explored. A sample of 400 undergraduate students in equal gender proportion was drawn randomly from the colleges located in Lucknow district (Uttar Pradesh, India), representing the population of all undergraduate students studying in Lucknow district. The instruments used were the Academic Stress Scale (Kamble, 2015), the Emotional Maturity Scale (Singh & Bhargav, 1999), and a Self-awareness Scale constructed by the researcher. Significant difference was noticed between students of working and non-working mothers regarding their emotional maturity as well as academic stress. Students of working mothers have higher emotional maturity as well as academic stress compared to students of non-working mothers. Though no significant difference was observed between students of working and non-working mothers regarding their self-awareness, the former was found to have numerically higher self-awareness. While academic stress was found negatively and significantly correlated with self-awareness, significant positive correlation was worked out between emotional maturity and self-awareness in students of both working and non-working mothers.

Rai and Khanal (2017) explored how emotional maturity and emotional intelligence are associated with academic performance of college students. The descriptive study tested two hypotheses by collecting data from a sample of 122 college students from two college located in Sikkim, India. Primary data on emotional maturity and emotional intelligence were collected with the help of the Emotional Maturity Scale (Roma Pal, 1988) and the Emotional Intelligence

Inventory (Mangal & Mangal, 2009). Secondary data on academic performance were collected from the college records. The results showed that 76.23% of the college students are extremely unstable, and only 1.64% of them are extremely stable in their emotions. There is significant positive correlation of high degree between emotional intelligence and academic achievement, while the correlation between emotional maturity and academic achievement was found to be not significant.

Kumar and Kiran (2017) assessed the differential effect of gender, qualification, and locale on emotional maturity of secondary school teachers in Jammu division of J & K State (India). The survey study employed a multistage sampling to get 200 teachers as participants. The Emotional Maturity Scale with acceptable validity and reliability, developed by the researchers, were used to measure the variable. Three null hypotheses were tested by using t-test, in addition to estimation of descriptive measures. No significant differences were observed between male and female teachers as well as between rural and urban teachers. Educational qualification was also found to exert no significant differential influence on the emotional maturity of secondary school teachers.

Devi and Sugumar (2017) studied the differential influence of medium of studies on the emotional maturity of secondary school boys. A sample of 700 secondary school boys in the age range 12 to 18 years were selected from senior secondary schools of Sitapur district in the Indian state of Uttar Pradesh. Half of the participants were English medium students and the remaining half Hindi

medium. Data on emotional maturity was collected by administering the Emotional Maturity Scale (Pal, 1997) and a socio-demographic questionnaire. Independent sample t-test was used to compare English medium and Hindi medium students in terms of their emotional maturity. The result exposed a significant difference favouring boys of English medium schools. The study concluded that culture exerts significant effect on emotional maturity of boys.

Nath (2016) studied the emotional maturity of secondary school students by taking sample from the Dhemaji district of the Indian state of Assam. Sub-samples based on gender, residential locale and type of management of the school were compared for the significant differences, if any. Three null hypotheses were tested by taking a stratified random sample of 300 tenth grade students from 12 schools. The gender ratio in the sample was 1:1. The variable was measured by administering the Emotional Maturity Scale (Bhargava & Singh, 1990). Independent sample t-test was the major inferential statistical techniques used for testing the hypotheses. The analysis brought to light that government and private school students differ significantly in their emotional maturity, students of government schools excelled their peers from private schools. Rural and urban differences in emotional maturity are also significant; the rural students excelled the urbanites. Gender difference in emotional maturity, however, is not significant among secondary school students from Assam.

Shafeeq and Thaqib (2015) studied the relationship between emotional maturity and academic performance of secondary school students. Three null

hypotheses were formulated and tested for the study. The participants were 400 ninth grade students drawn from government and private schools of Aligarh (India) in equal proportion of gender and type of school management. Emotional maturity was measured by administering the Emotional Maturity Scale (Singh & Bhargava, 1990), while secondary data of eighth grade marks were used as a measure of academic performance. Product moment correlation and t-test were the statistical techniques used. Results brought out that 24.75% of the participants are unstable in their emotions. There is a significant positive correlation of very high degree between emotional maturity and academic achievement of the ninth-grade students. Significant differences favouring students from government schools were also noticed in the emotional maturity of the participants.

Gunasekar and Pugalenthi (2015) studied gender effect in emotional maturity and academic achievement of high school students. A proportionate random sample of 100 high school students were collected, which consisted of boys and girls in equal proportion. The researchers' made emotional maturity scale was used to collect the data. Two null hypotheses were tested by analyzing the data by using t-test. Scores of tenth grade Board Examination were taken as secondary data pertaining to academic achievement. Mean scores were compared by using t-test. The analysis demonstrated that boys and girls are alike in their emotional maturity, as the t-value estimated is not significant. Likewise, no true difference was noticed in the academic achievement of the participants.

Ansari (2015) studied the influence of emotional maturity on academic stress among undergraduate students. The study utilized a purposive sample of 150 undergraduate students in the age range 18-20 years, drawn from Aligarh Muslim University, India. Data was collected by administering the Emotional Maturity Scale (Singh & Bhargava, 2005) and the Academic Stress Questionnaire (Latha & Satish, 1997). Linear regression analysis showed that emotional maturity exerts a significant influence on the academic stress of undergraduate students. The relationship between the variables was found to be negative and significant.

Singhpuar (2013) studied the relationship of emotional maturity to academic achievement along with other variables like anxiety and social maturity in a sample of high school students. A sample of 400 tenth grade students in equal rural-urban proportion was selected from four districts (Bathinda, Patiala, Amritsar, and Kapurthala) of the Indian state of Punjab. Collection of primary data were realized by administering the Emotional Maturity Scale (Singh & Bhargava, 1990), Social Maturity Scale (Rao, 1986), and the General Anxiety Scale for Children (Sharma, 2003). Results of matriculation examination were taken as secondary data pertaining to academic achievement, procured from the school register. Pearson product-moment correlation and t-test were used to analyze the data inferentially. The results demonstrated no significant difference between rural and urban students in their emotional maturity and social maturity. The rural students were found to have significantly higher levels of anxiety

compared to their urban counterparts. Though a significant relationship between academic achievement and social maturity was noticed, emotional maturity was found to have no significant association with academic performance of tenth grade students.

Nuzhat (2013) studied the gender difference in emotional maturity of university students of distance learning. The study was conducted by taking 120 distance learning students enrolled to University of Kashmir, India. The sample had an equal representation of gender groups. Two null hypotheses were tested by collecting data with the help of the Emotional maturity Scale (Singh & Bhargava, 1984). Gender group comparison was done by using t-test. Though no significant difference was noticed between male and female students in the total score of emotional maturity, significant gender difference was noticed in two factors of the construct of emotional maturity, viz., emotional instability and emotional regression. While the female students scored significantly higher in emotional instability than the male students, the direction of difference reversed in emotional regression. The gender groups were found to be alike in other factors like social maladjustment, lack of independence and personality disintegration.

Jain, Pasrija and Divya (2012) studied the differential influence of type of school (government and private) on emotional maturity and self-concept of higher secondary school students. The descriptive cross-sectional study employed normative survey to collect data from a random sample of 100 senior secondary school students. The tools used for data collection were the Emotional Maturity

Scale (Singh & Bhargava, 1990), and the Self Concept Scale (Saraswat & Gaur, 1981). In addition to descriptive statistical techniques, independent sample t-test was used to find out the significant difference between the means. Significant differences between students of government schools and private schools were observed in both emotional maturity and self-concept. Students from government schools excelled their counterparts from private schools in both emotional maturity and self-concept.

Lakshmi and Krishnamurthy (2011) studied the emotional maturity of higher secondary school students from Coimbatore district of the Indian state of Tamil Nadu. Significant differences in the distribution of emotional maturity in terms of gender, age, type of family, and residential locale were examined by taking a purposive random sample of 220 students from different schools within the revenue boundary of Coimbatore district. The study variable was assessed by administering the Emotional Maturity Scale developed by Roma Pal (1984). The findings of the study included: (a) male and female students differed significantly, the males excelling the females, (b) age has no significant differential effect on emotional maturity, (c) significant rural-urban differences exists in the emotional maturity of higher secondary school students, the urbanites surpassing rural students, and (d) students from nuclear family and joint families differed significantly, nuclear family has the advantage.

Bhattacharjee (2011) investigated the differential influence of gender (male and female), nature of boarding (hosteller and day scholar) on emotional maturity

of postgraduate students. Six alternative hypotheses were tested for the study. Purposive sampling was done to draw 200 postgraduate students in the age range 21-23 years from different teaching departments of Tripura University (India). The sample had an equal gender representation with hostellers and day scholars in 1:1 ratio. The Emotional Maturity Scale (Singh & Bhargava, 1990) was used as tool for data collection. Independent sample t-test was for testing the hypotheses. Analysis brought out significant gender difference favouring the male students in emotional maturity. Significant difference was also noticed between hostellers and day scholars, where the former excelled the latter in their emotional maturity. No significant difference was observed between male and female day scholars regarding their emotional maturity. Likewise, gender difference was not noticed among hostellers in their emotional maturity.

2.3.3. Studies Related to Psychological Resilience

Zablotny (2024) studied the moderating effect of psychological resilience and detachment on the association between academic stress and psychological wellbeing of undergraduate students. The quantitative cross-sectional study consumed data collected from 60 students (Mean age = 21.5 years with a SD of 1.69) from University of Twente, majority being female scholars. The psychometric part of the study involved the Academic Stress Scale (Bedewy & Gabriel, 2015), the short version of Psychological Wellbeing Scale (Ryff, 1989), the Questionnaire on the Experience and Evaluation of Work (van Veldhoven et

al., 2015), and the Connor-Davidson Resilience Scale (Campbell-Sills & Stein, 2007). Four alternative hypotheses were tested for the study. The results revealed that 57% of the variance in psychological wellbeing is explained jointly by the predictor variables, which is significant beyond 99.9% confidence interval. The association between psychological wellbeing and academic stress was also found not significant. Psychological resilience exerts no significant moderating effect on the association between academic stress and psychological wellbeing.

Park, Hong, Park and Chung (2023) studied the differential effect of psychological resilience on the association between academic stress and psychological wellbeing of medical students during Covid-19 pandemic. An online survey was conducted to collect information pertaining to academic stress, anxiety, psychological resilience and psychological wellbeing with the help of tools which included the Medical Stress Scale, the Academic Motivation Scale, Connor Davidson Resilience Scale, and the WHO Well-Being Index. Pearson product-moment correlation, Linear regression analysis, and Mediation analysis were the major statistical techniques employed. The results demonstrated that the psychological resilience of the participants partially influenced their motivation, affecting their psychological well-being and academic stress. The study presented evidence for the significance of resilience in mediating the relationship between intrinsic motivation and academic stress.

Bindu and Happy (2023) explored the association between psychological resilience and academic stress among higher secondary school students. A

convenient sample of 162 students (Female = 89; Male = 73) were drawn from different higher secondary schools in Thrissur district of the Indian state of Kerala. Two standardized psychometric instruments, viz., the Psychological Resilience Scale for Adolescents (Bindu & Happy, 2022) and the Academic Stress Scale for Higher Secondary School Students (Bindu & Happy, 2022), were used for collecting data. Pearson product-moment correlation and Fisher's z-transformation test were used to test three null hypotheses. The outcome of analysis showed negative but significant correlation between psychological resilience and academic stress. The relationship between the variables contributed by goal setting, emotional regulation and self-efficacy dimensions of the construct of psychological resilience; while social attractiveness and empathy have not significantly contributed to the correlation. Gender was found to be a significant factor in the relationship between psychological resilience and academic stress, the correlation being stronger in male students than in female.

Guo, Gong, Guo and Wang (2023) studied the predictive ability of psychological resilience on examination anxiety of university students. The study also examined the relationship between psychological resilience and examination and further explored the differential effect of demographic factors in the distribution of the variables in the population. The survey study consumed data from 529 (Male = 175; Female = 239) students from different universities in Jiangxi Province (South China). Representation had given for students from rural and urban areas, year of studies, and subject chosen. Data were collected by

administering the Resilience Scale for Chinese Adolescents (Xiang, 2013) and the Test Anxiety Inventory (Sarason et al., 1960). Analysis brought out moderate to high levels of psychological resilience and low to moderate levels of examination anxiety among university students. Gender and family support exert significant differential effects on psychological resilience. Significant grade difference was observed in the distribution of examination anxiety. Significant negative correlation was observed between psychological resilience and examination anxiety, and psychological resilience negatively predicts examination anxiety.

Gong, Wang, Zhong and Shao (2023) studied the learning stress of college students in relation to their psychological resilience and academic burnout. A stratified cluster sample of 1680 college students from different disciplines and years of study were selected for the investigation. The instrumentation for the study included the College Students' Learning Stress Scale (Lan & Deng, 2008), Psychological Resilience Scale for College Students (Rong et al., 2005), and the Learning Burnout Scale (Hu & Gan, 2008). Chi-square test, product moment correlation and Bootstrap method for potential mediating effect were used to analyze the data inferentially. Learning burnout and academic stress were found to be correlated significantly and positively whereas learning burnout was found correlated negatively with psychological resilience. The correlation between academic stress and psychological resilience was found to be significant and negative ($r = -0.61$). Psychological resilience was found to play an intermediary role in the prediction of learning burnout by academic stress, accounting for

75.94% of the combined effect. The study concluded that psychological resilience is a mediating variable of the effect of academic stress on learning burnout.

Elbarbary, Shalaby, Abo-Elyazed and Mohamed (2023) studied psychological resilience, academic burnout, and its relationship with psychological wellbeing of nursing students. Third year and fourth year nursing students ($n = 1487$) of Tanta University (Egypt) were selected as sample for the descriptive correlational study. The tools used included Connor-Davidson Resilience Scale (Connor & Davidson, 2003), Ryff's Psychological Wellbeing Scale (Carol & Keyes, 1995), and Maslach Burnout Inventory (Maslach & Jackson, 1996). Analysis exposed that majority of nursing students experience high academic burnout, and majority have low level psychological resilience, and low-level psychological wellbeing. The relationship between academic burnout and psychological wellbeing was found to be significant and negative. Psychological resilience of the nursing students was found correlated significantly and positively with their psychological wellbeing. Further, academic burnout was found correlated significantly and negatively with psychological resilience of nursing students. The study concluded that psychological resilience serves as a protective factor against academic burnout experienced by nursing students, subsequently leads to their psychological wellbeing.

Choi, Yoo, Kim, An, Sung & Kim (2023) examined the moderating effect of resilience on the relationship between academic stress and school adjustment among adolescent learners. A convenient sample of 674 adolescents (Male = 338;

Female = 336) were selected from the high schools in the Pusan province of Korea for the study. The average age of the students was 16.78 years with a standard deviation of 1.61. The tools used include the Scale of Academic Stress (Park & Park, 2012), the Resilience Scale (Connor & Davidson, 2003), and the School Adjustment Scale Choi (1997). Multiple regression analysis and hierarchical regression analysis were employed to test the hypotheses. The results showed that academic stress is a significant predictor of adjustment to school environment among Korean students. Greater academic stress leads to poor school adjustment. Further, psychological resilience was found to have significant mediating effect on the correlation between school adjustment and academic stress.

Ragusa et al. (2023) studied the influence of academic self-regulation on academic stress, academic anxiety and academic resilience. The descriptive study tested four hypotheses by collecting data from a sample high school students ($n = 991$) which consisted of 563 male students and 428 female students in the age range 16-19 years, selected from different public schools of Almeria region of Spain. The instrumentation consisted of the Spanish version of the Academic Resilience Scale (Trigueros et al., 2020), the Test Anxiety Inventory (Spielberger, 1980), the Irrational Procrastination Scale (Steel, 2010) and the Student Stress Inventory (Fimian et al., 1989). The relationship between the variables were explored by using the structural equation model. The results revealed that psychological resilience is negatively related to academic stress and anxiety.

While psychological resilience positively predicted academic performance, anxiety and stress negatively predicted academic performance.

Kayun, Limbu and Wijaya (2023) explored the relationship between stress and academic resilience among online students from Kupang City, capital of the Indonesian province of East Nusa Tenggara. The quantitative research design consumed data from a sample of 334 online learning students in the age range of 18-25 years. Data collection was completed by administering the adapted versions of the Academic Stress Scale (Sun et al., 2011) and the Academic Resilience Scale (Simon, 2016). Spearman's rho was the statistical technique used to examine the relationship between the variables, and found no significant relationship between academic stress and academic resilience.

Amzil (2023) investigated the correlation between academic resilience and academic performance during Covid-19 pandemic in a sample of university students from Morocco. The study further explored the mediating effect of gender and level of studies with academic resilience. The participants of the study were 138 students (Male = 60; Female = 78) in the age range 18-25 years, from the Faculty of Education (Graduates = 30; Undergraduates = 108). The Academic Resilience Scale (Cassidy, 2016) was used to ascertain academic resilience of the participants while cumulative GPA for the year was taken as a measure of academic performance. The analysis exposed moderate level of academic resilience among university students. Significant difference was noticed between high and low achievers in their academic resilience, the high achievers excelling

the low achievers. Gender and level of studies were found to have no significant relationship with academic resilience of the university students during Covid-19 pandemic.

Flores-Buils and Andres-Roqueta (2023) investigated the effect of individually and contextually resilient factors on the academic stress experienced by primary schoolchildren. Four hypotheses were tested for the study by collecting information from a sample of 427 primary schoolers in the age range 6-12 years, drawn from various public schools in Valencian County, Spain. The two measures employed were the School Stress Scale of the Everyday Childhood Stress Inventory (Trianes, et al., 2011) and Resilience Scale for Primary School Students (Flores-Buil et al., 2013). Data were analysed inferentially by correlation and regression calculations. The children experienced moderate levels of academic stress, and the most stressful situation was the task of participating in too many activities, difficulties in classroom concentration, and performance anxiety in the class. Regression analysis exposed that part of the academic stress could be explained by individual factors like self-esteem, future purpose, social skills, and introspection and part by resilient contextual factors like parental support, peer support and teacher support. The study recommended for the development of individual resilient skills in primary schoolers.

Mulati and Purwandari (2022), in a meta-analytic study, studied the role of psychological resilience in coping with academic stress. A total number of 25 online research articles were initially identified from databases such as Google

Scholar, Proquest, ERIC, National Library, Sage Pub online by using academic stress and resilience as search words. The search was limited to correlational studies. Eight articles were later excluded due to unavailability of reliability coefficient and Cronbach's alpha of the instruments employed for data collection. The final selection of 17 articles covered a total number of 4194 students. The meta-analysis showed a significant negative correlation of -0.503 between academic stress and psychological resilience. The sampling error correlation analysis attributed differences in the variance of correlation to sampling error (6.12%) and error in measurement of the variables (1.45%). The study underlined the negative influence of psychological resilience on academic stress.

Singh, Sharma, Sharma and Siddiqui (2022) studied academic stress and psychological resilience of secondary school students during post-Covid-19 pandemic period. Participants ($n = 200$) were selected purposively from different private high schools located in Lucknow and Agra, two Indian cities. Equal representation of gender and the cities were made in the sample. The tools used were Scale for Assessing Academic Stress (Sharma & Mahendra, 2001) and the Brief Resilience Scale (Smith et al., 2008). Data was analyzed by using independent sample t-test and product-moment correlation. The results demonstrated significant gender difference in academic stress, the female students experiencing higher academic stress compared to the male students. Students from Lucknow and Agra differed significantly regarding the physical factor and motivational factor of academic stress, but not in the total score. Gender

difference was not noticed in the psychological resilience of the high school students, nor was any difference noticed between the cities. Significant negative correlation was reported between psychological resilience and each of the dimensions of academic stress.

Sarnon, Li, Saim, & Nen (2022) studied the psychological resilience and academic stress of adolescent students during Covid-19 pandemic. The differential influence of gender on the distribution of psychological resilience and academic stress was also explored. The descriptive study utilized data from 180 adolescents (Male = 68; Female = 112) in the age range 13-18 years. Data was collected with the help of the Resiliency Scale (Wagnild & Young, 1993) and the Perceived Stress Scale (Cohen, et al.,1983). Correlation and t-test were used to find out answers to the research questions. The stress level during Covid-19 pandemic was found to correlate significantly and negatively with psychological resilience of the adolescent students. Significant gender difference in academic stress was also reported through the pandemic period, the female students experiencing greater stress than that experienced by their male counterparts.

Latif, Ali, Shahzad, Hussain, Manj and Akram (2021) studied the relationship between job stress and psychological resilience in public and private school teachers. A cross-sectional correlational research design was employed wherein data were collected from a stratified random sample of 291 teachers from both public schools and private schools. Data collection was completed by administering the Brief Job Stress Questionnaire (Kawada & Otsuka, 2011) and the Brief

Resilience Scale (Smith et al., 2008). Apart from descriptive statistical techniques, independent sample t-test and Pearson product-moment correlation were used to analyze the data inferentially. The results revealed that teachers working in private schools have more job stress than their counterparts in public schools. Job demands and job control are two areas where significant differences were noticed. No significant difference was noticed between private school teachers and public-school teachers in their psychological resilience. Correlational analysis has revealed a significant positive correlation between job stress and resilience skills of both private and public-school teachers.

Kirtana (2021) examined the differential influence of age in job stress, psychological resilience and psychological wellbeing among employed women, and the interrelationship among the variables. Four null hypotheses were tested by collecting data from a sample of 90 working women who were later categorized into three age groups. The measurements consisted of the Resilience Scale (Abiola & Udofia, 2011), Ryff's Psychological Well-being Scales (Carol Ryff, 1989), and the Perceived Stress Scale (Cohen, 1994). Statistical techniques used for data analysis included Spearman rho, one way ANOVA, and Kruskal-Wallis's test. The results indicated that age is not a significant factor that differentiate working women on the basis of their job satisfaction, psychological wellbeing and psychological resilience.

Goyal (2021) studied the association of academic stress with psychological resilience and self-concept by taking a mixed sample of school and college

students. Five hypotheses were tested for the study by collecting data from a non-probability sample of 174 students, 87 each from higher secondary level school and undergraduate level college by employing snowball method. The instrumentation part of the study included adapted version of the Academic Stress Scale (Kim, 1970), the Resilience Scale (Wagnild & Young, 1993), and the Self-concept Inventory (Saraswat, 1984). Two-tailed test exposed no significant difference between the school students and undergraduate students regarding their academic stress, resilience and self-concept. The correlation between resilience and academic stress was found insignificant in both the groups. Likewise, the correlation between self-concept and academic stress was also found insignificant in both school students and college students.

Sodhi (2020) explored the relationship between psychological resilience and various coping strategies adopted by college students in stressful situations. Three hypotheses were tested by collecting data from 61 college students (Male = 31; Female = 30) in the age range 18-25 years from the Indian city of Chandigarh. Three standardized instruments, viz., the Perceived Stress Scale (Cohen, 1983), and the Coping Orientation to Problems Experienced Inventory (Carver, 1989), were used to collect the data. The results showed significant gender difference in coping strategies. Negative, but significant correlation was noticed between perceived stress and psychological resilience. Whereas the perceived stress was found correlated positively with the coping strategy of behavioural

disengagement, the association was found to be negative with coping strategies of positive reinterpretation and growth, and planning.

Jones (2020) examined the relationship between stress and resilience in pharmacy students. The association of resilience to academic performance and risk-taking behaviour among pharmacy students were also explored. The participants of the study were 101 second year pharmacy students from the Middle States Pharmacy University. Online data were collected by administering the Visual Analogue Scale for Stress (Hayes & Patterson, 1921), The Resilience Scale (Wagnild, 1993), and the Health Behaviours Questionnaire (Ingersoll & Orr, 1989). The Pearson product moment correlation and independent sample t-test were used to analyze the data statistically. The analysis showed a mid-high level of general stress among the participant students. A significant negative correlation was noticed between stress and resilience, where students who are higher in resilience report lower stress. Students with higher scores in resilience also were less likely to show emotional risk behaviours that are considered damaging to overall health, such as feeling lonely, upset, tense, sad and nervous. The researcher has suggested resilience education and psychological support for mitigating stress.

Demir and Barut (2020) examined the relationship between psychological resilience and anxiety of undergraduate students, and the differential influence of gender, academic achievement and level of physical activity on the association between the variables. The descriptive correlational study utilized data from a

voluntary sample of 360 undergraduate students having a mean age of 20.73 ($\sigma = 1.21$). The data were collected by administering Turkish versions of the Short Psychological Resilience Scale (Smith et al., 2008) and the Beck Anxiety Inventory (Beck et al., 1988). Correlational analysis exposed the presence of significant, negative correlation of low degree between psychological resilience and anxiety of the university students. Though no significant gender difference was observed in psychological resilience of the students, female students were found to have significantly greater anxiety level than the male students. Students who engage in regular physical activities were found to have significantly lower levels of anxiety and higher levels of psychological resilience when compared to students are less involved in regular physical activities. Psychological resilience is a significant decisive factor in academic achievement of the students, where students who are academically good are more resilient than those who are not smart academically.

Wu, Yu, Wu, Wan, Wang and Lu (2020) investigated the relationship between psychological resilience, learner characteristics and coping style among undergraduate students. The cross-sectional study utilized a stratified random sample of 1743 undergraduate students from six universities situated in the Shandong Province, China. The sample consisted of 1168 females and 575 males in the age range 17-26 years. The measurements included the Coping Style Questionnaire (Folkman & Lazarus, 1985), and the Asian Resilience Scale (Liu & Lu, 2010) administered along with a demographic questionnaire. The statistical

techniques employed were multivariable regression analysis. The outcome of analysis identified mood control, coping flexibility and self-plasticity as dimensions of psychological resilience as significant factors for coping style. Female students compared to male students, and medical students compared to non-medical students were found to surpass in positive coping styles. The study brought out that higher psychological resilience is related with better positive coping style.

Hernandez, Escobar, Fuentes and Eguiarte (2019) explored the relationship of psychological resilience to academic stress, academic self-efficacy, and academic achievement emerging adults. The descriptive study collected data from a stratified random sample of 288 university students (male = 112; Female = 176) in the age range 18-25 years. The measures employed included the Inventory of Academic Stress (Barraza, 2007), Academic Behaviours Self-Efficacy Scale (Blanco et al., 2016), and the Resilience Questionnaire (López-Fuentes, 2016), apart from a socio-economic status scale. Independent sample t-test and correlation analysis were performed to examine the data statistically. The results showed moderate levels of academic stress and psychological resilience among the students. While significant positive correlation was observed between psychological resilience and academic self-efficacy, the relationship between psychological resilience and academic stress was found to be significant and negative. Further, higher levels of academic performance were found to correlate with higher levels of resilience and lower levels of academic stress.

Kapikiran and Acun-Kapikiran (2016) studied the relationship between psychological resilience and optimism, and the mediator role of self-esteem in the association between the two variables. The sample for the descriptive study was 494 undergraduate students (Male = 241; Female = 253) in the age range 18-30 years. The tools used were the Brief Symptom Inventory (Derogatis, 1992), the Life Orientation Test (Scheier & Carver, 1985), the Ego Resiliency Scale (Block & Kremen, 1996), and the Rosenberg Self-Esteem Scale (Rosenberg, 1965). Structured equation modelling was used for statistical analysis of the data. The results brought out a significant positive relationship between psychological resilience and self-esteem and negative relationship between psychological resilience and depression. The study disclosed significant positive relationship between optimism and self-esteem also.

Mathur and Sharma (2015) examined the relationship between academic stress with optimism and resilience. The study was conducted on a sample of 300 senior secondary school students in the age range 16-18 years, drawn from different CBSE schools from Jaipur city, Indian state of Rajasthan. The tools used were the revised Life Orientation Test (Scheier et al., 1994), the Resilience Scale (Wagnild & Heather, 2009), and the Academic Expectation Stress Inventory (Ang & Huan, 2006). Correlation analysis showed that academic stress is significantly and negatively correlated to resilience and optimism. Regression analysis brought out that 61.3% of the total variation in academic stress was brought out by

resilience and optimism jointly, and the influence was found to be significant at .001 level.

Shilpa and Srimathi (2015) studied the relationship between perceived stress and resilience by taking a sample of pre-university and undergraduate students. The differential effect of educational level on perceived stress of the sample was also explored. Three null hypotheses were tested by taking a random sample of 100 students (Pre-university students = 50; Undergraduate students = 50) from Bangalore city of India. Data was collected by administering the Perceived Stress Scale (Cohen et al., 1983) and the Resilience Scale (Wagnild & Young, 1993). Product moment correlation and independent sample t-test were used to analyse the data inferentially. The results showed that the pre-university students excelled undergraduate students in perceived stress, but the latter surpassed the former in the level of psychological resilience. Significant negative correlation ($r = -0.70$, $p < .05$) was noticed between psychological resilience and perceived stress. The researchers have suggested resilience training in educational institutions for reducing their perceived stress.

2.3.4. Studies Related to Locus of Control

Alkhazaleh and Alomery (2023) examined the association between locus of control and psychological stress among students of Al-Ain University, UAE. Data was collected from a random sample of 353 students by administering the Psychological Stress Scale (Derany, 2003) and the Arabic version of Rotter's

Locus of Control Scale (Barhoom, 1999). The analysis disclosed that university students experience moderate levels of academic stress. Majority of the students were found to be internally oriented. A significant positive correlation of a low degree was observed between external locus of control and psychological stress among university students.

Sakthivel (2022) studied the influence of locus of control on depression-happiness among college students. The descriptive research design utilized data from simple random sample of 200 undergraduate students (Male = 111; Female = 89) in the age range 18-25 years, enrolled to an autonomous college in Tirupattur (Tamil Nadu, India). The measures used were the Rotter's I-E Scale (Riotter, 1966) and the Depression-Happiness Scale (Joseph & Lewis, 1998). Pearson product-moment correlation, independent sample t-test, and regression analysis were the inferential statistical techniques used for data analysis. The analyses showed that locus of control is a significant predictor of depression-happiness among college students, and that 21% of variance in criterion variable is accounted by locus of control. A significant negative correlation was found to exist between internal locus of control and depression-happiness. Gender was found to have no significant differential influence on either locus of control or depression-happiness of college students.

Chandra and Yagnik (2022) explored the relationship of anxiety and stress with health locus of control (HLOC) among employees and entrepreneurs, and the coping strategies they adopt to manage it. The quantitative cross-sectional

design collected online data during Covid-19 lockdown from a random sample of 91 employees and entrepreneurs. Data was collected by using the Perceived stress scale (Cohen et al., 1988) and the Multidimensional Health Locus of Control (Wallston et al., 1978). The data analysis was accomplished by using Fisher's exact test and independent sample t-test. Analysis showed the presence of moderate to high stress in employees as well as entrepreneurs. Majority of the employees and entrepreneurs were found to be internally oriented in health-related matters. Health locus of control was found to exert significant influence on stress of both employees and the entrepreneurs. Significant difference was found between individuals with internal HLOC and external HLOC with respect to their stress, the former having less stress than the latter. Whereas internal health locus of control discriminates employees and entrepreneurs on the basis of the stress scores, such differential effect is not observed in the case of individuals with external health locus of control.

Willhana and Hastuti (2021) studied the relationship between psychological distress and locus of control among students during Covid-19 pandemic. Data was collected from 273 students by administering questionnaire. Pearson product-moment correlation between the variables were calculated which revealed that psychological distress is correlated significantly and positively with 'powerful others' and 'chance' dimensions of external locus of control. No significant relationship, however, was found between psychological distress and dimensions of internal locus of control. Students who think that their academic success is

controlled by powerful others or forces external to the person will be more susceptible to psychological distress. On the other hand, students who are self-efficacious and believe in own ability are less prone to psychological distress.

Padmanabhan (2021) studied how work stress and job satisfaction were influenced by locus of control of employees. The descriptive study used data collected from a purposive sample of 65 employees (Male = 34; Female = 31) working in private sector. The measures included the Job Satisfaction Survey (Spector, 1988), the Work Locus of Control Scale (Spector, 1988) and the Workplace Stress Survey (American Institute of Stress, 1978). Three null hypotheses were tested for the study by using t-test and product moment correlation. Two-tailed test revealed that gender has no significant differential influence on job satisfaction, work stress, and locus of control of the employees. External locus of control is inversely correlated with job satisfaction, showing that workers with internal locus of control experience greater job satisfaction. Significant negative correlation was also found to exist between workplace stress and external locus of control, and between job satisfaction and workplace stress.

Abraham and Rajalakshmi (2021) examined how self-efficacy of school students are related to their locus of control. The descriptive study was conducted in Indian context by utilizing quantitative data collected from a purposive sample of students drawn from the higher secondary schools of Kottayam district of the Indian state of Kerala. The study specifically examined the differential effect of gender in the distribution of self-efficacy and locus of control, and the correlation

between the variables. While self-efficacy was measured by administering the Generalized Self-Efficacy Scale (Schwarzer & Jerusalem, 1995), locus of control was appraised with the help of the Locus of Control Scale (Levenson, 1981). Spearman correlation and Mann-Whitney U test were used to analyze the data. The results showed that no significant relationship exists between locus of control and self-efficacy. Likewise, gender was found to exert no significant differential effect either on self-efficacy or on locus of control of higher secondary school students.

Tan, Ho & T'ng (2021) studied how academic hardiness is related to student engagement, academic locus of control, automatic negative thoughts and tolerance for ambiguity. The study employed a cross-sectional design wherein data from a purposive sample of 94 students (Male = 47; Female = 58) in the age range 18-26 years from the Malaysian University. The instrumentation part of the study consisted of the Academic Hardiness Scale (Benishek & Lopez, 2001), Academic Locus of Control Scale (Curtis & Trice, 2013), Tolerance of Ambiguity Scale (Budner, 1962), University Student Engagement Inventory (Maroco et al., 2016) and the Automatic Thought Questionnaire (Hollon & Kendall, 1980). Data was collected online with the help of Google Forms. Data analysis exposed the presence of a significant positive correlation of academic locus of control with challenge, control, and commitment components of academic hardiness. The academic locus of control significantly predicted academic hardiness together with automatic negative thoughts and university students' engagement.

Quing and Baudin (2021) studied the role of grit and internal locus of control in dealing with academic stress of adolescents in Philippines. The quantitative study selected 165 senior secondary students with internal locus of control who were screened from an initial selection of 190 adolescents from the main campus of the Southern Luzon State University. Three instruments, viz., the Locus of Control Scale (Rotter, 1966), the Short Grit-S Scale (Duckworth, 2009), and the Educational Stress Scale for Adolescents (Sun et al., 2011), were used for measuring the variables. The data was analysed by using correlation and multiple linear regression analyses. While the internal locus of control showed significant negative correlation with academic stress, the association of grit with academic stress was positive. The association between internal locus of control and grit was also found to be significant and positive; but grit was not a significant predictor of internal locus of control.

Namita and Kanchana (2021) studied the perceived stress, locus of control and coronavirus anxiety among college students. The study hypothesized a significant relationship between external locus of control and perceived stress, between external locus of control and anxiety due to coronavirus, and between perceived stress and anxiety due to coronavirus. The ex-post-facto research conducted an online survey to get a final sample of 154 college students in the age range 18-25 years. The tools comprised the I-E Locus of Control Scale (Rotter, 1966), the Perceived Stress Scale (Cohen et al., 1983), and Coronavirus Anxiety Scale (Lee, 2020). Analysis revealed that the participants were

predominantly externally oriented and showed high perceived stress. External locus of control showed significant positive correlation with perceived stress and coronavirus anxiety.

Krampe, Danbolt, Haver, Stalsett and Schnell (2021) studied the moderating effect of locus of control on the relationship between Covid-19 stress and mental distress among the general population during Covid-19 pandemic. The cross-sectional study utilized data from two culturally different samples, viz., people of German nationality (n = 1527) and Norwegian nationality (n = 1225). The measuring instruments included the Internal-External Locus of Control Scale (Kovaleva et al., 2012) and the Patient Health Questionnaire (Loewe et al., 2010), and a researcher made scale to assess psychological stress due to Covid-19. Multiple regression analysis and moderation analysis were done to answer the research questions. The results showed significant and strong association between Covid-19 stress and general mental distress in both Norwegian and German sub-samples. The locus of control showed significant moderation effect in both the sub-samples. Internal locus of control served as a buffer and external locus of control intensified the relationship between Covid-19 stress and mental distress.

Kaur and Singh (2021) examined how gender and stream of study of undergraduate students influence the distribution of their internal locus of control. The quantitative cross-sectional study collected data from a random sample of 216 undergraduate students from two colleges affiliated to Punjab University, Chandigarh (India). The instrumentation part of the investigation consisted of the

Locus of Control Scale (Nongtdu & Bhutia, 2018). Three null hypotheses were tested for the study by employing two-way ANOVA and t-test. The academic stream of study was found to have significant influence on internal locus of control of the students. Gender, however, was found to exert no differential influence on internal locus of control of the undergraduate students. Further, no significant interaction effects of gender and academic stream of study was noticed on internal locus of control.

Hasan and Mehmet (2021) studied the relationship between perceived stress, locus of control and positive psychological capital in higher education students. The descriptive survey collected data from 497 students engaged in higher education, representing a population of 18293 students of Recep Tayyip Erdogan University, Rize (Turkey). The tools used were the Perceived Stress Scale (Cohen et al., 1983), the Positive Psychological Capital Scale (Luthans et al., 2007) and the Locus of Control Scale (Dag, 2002). Data analysis was accomplished by Mann-Whitney U test, Kruskal-Wallis H test and Spearman test. The results showed that there is a significant negative correlation between perceived stress and positive psychological capital, and the external locus of control have inverse association with perceived stress, but it has no direct effect on positive psychological capital.

Ganjoo, Farhadi, Baghbani, Safieh and Reza (2021) explored the relationship between health locus of control and perceived stress among medical students during Covid-19 pandemic. The cross-sectional study consumed data

from a sample of 250 students from Bushehr University of Medical Sciences, Iran. The tools consisted of the Multidimensional Health Locus of Control Scale (Wallston, 1992) and the Perceived Stress Scale (Cohen et al., 1983). Hierarchical regression analysis and Pearson product-moment correlation were used for analysing the data which revealed the participants experience moderate to high stress. A significant negative correlation between health locus of control and perceived stress was brought out in correlational analysis. Regression analysis showed that 22.7% variation in perceived stress could be predicted by the health locus of control.

Giao, Vuong and Tushar (2020) studied the moderating effect of locus of control on the association between social support and job stress among bank employees in Vietnam. The descriptive study collected data from 50 bank employees by administering instruments like the Internal Control Scale (Levenson, 1973), Job Stress Scale (Paoline et al., 2015), and Social Support Inventory (Mack & Dunn, 2019). Structural Equation Modelling was used to test the hypotheses. Analysis revealed a positive impact of social support on job-related behaviour like job satisfaction and job performance, which is mediated partially by job stress. The study also exposed that employees with higher internal locus of control experience lower job stress. Further, internal locus of control moderates the relationship between social support and job stress. The study also revealed that social support and locus of control play critical role in the overall effectiveness of bank employees.

Reknes, Visockaite, Liefhoghe, Lovakov and Einarsen (2019) examined the moderating effect of internal locus of control and external locus of control on the relationship between bullying behaviour and mental health among employees. The descriptive design utilized online data collected from 1474 employees (Male = 426; Female = 1048) whose mean age was 36.02 years with a standard deviation of 9.58. The measures included the revised version of Negative Acts Questionnaire (Einarsen et al., 2009) to measure the bullying behaviour, the General Health Questionnaire (Goldberg, 1978) to measure the psychological strain, and the Locus of Control Scale (Levenson, 1981). Though the sample demonstrated a low level of bullying behaviour, a significant positive association was noticed between bullying behaviour and psychological strain. The locus of control was found to exert a significant moderating effect on the relationship between bullying behaviour and psychological strain. When internal locus of control has no positive effect on psychological strain when exposed to bullying behaviour, external locus of control was found to be relatively beneficial when exposed to bullying behaviour.

Holden, Forester, Williford and Reilly (2019) explored the perceived stress in relation to sport locus of control in college student athletes. The quantitative study collected data from 126 student athletes (Male = 28; Female = 98) from two universities in Southeastern United States. The participants had a mean age of 19.69 with standard deviation of 1.32. The participants represented different sports areas like softball, tennis, volleyball, basketball, track and field,

cheerleading and soccer in different proportions. The Perceived Stress Scale (Cohen et al., 1983) and the Sport Locus of Control Scale (Rushall, 1978) were used for collecting data. Analysis showed a significant negative correlation of a moderate degree between perceived stress and sports locus of control of the students. The academic scholarship of the participants was also found correlated significantly and positively with their sports locus of control. Student athletes who think that they have little control over performance in an event have lesser academic scholarships.

Fujica (2019) examined how locus of control of adolescent learners are related to their coping strategies. A stratified random sample of 300 adolescents in (Male = 150; Female = 150) in the age range 11-16 years were selected from three schools in Imphal (Manipur, India). The Locus of Control Scale (Nowicki & Duke, 1974) and Coping Check List (Rao et.al., 1989) were instruments used for data collection. Data analysis by employing the one-way ANOVA brought out that no significant relationship exists between locus of control and problem focused coping strategy. However, all the dimensions of locus of control were found to be significantly related with emotion focused coping strategies and social support coping strategies. The study concluded that adolescents with external orientation of mind mostly adopt emotion focused coping strategies when compared to adolescents with internal and intermediate orientation of mind.

Kalyanasundaram, Manickam and Senthilkumar (2018) studied the effect of locus of control on occupational stress of spinning mill employees. The sample of

the study were a group of 100 employees selected by adopting systematic random sampling method from the spinning mills of Coimbatore city (Tamil Nadu, India). Apart from the Occupational Stress Scale (Srivastav & Singh, 1981), a questionnaire to assess locus of control orientation of the individual was also used for data collection. Chi-square test, independent sample t-test, and product moment correlation were used to analyze the data. The analysis disclosed higher levels of occupational stress among spinning mill employees. Significant differences between employees having internal locus of control and external locus of control were observed in their occupational stress, the former group having less occupational stress. Employees with high internal locus of control are more satisfied in organization, compared to their counterparts with external locus of control.

Atibuni, Ssenyonga, Olema and Kemeza (2017) conducted a cross-sectional survey to investigate the ability of locus of control to predict academic attitude of prospective science teachers. Two hypotheses were tested by collecting data from 203 undergraduate teacher trainee from Mbarara University of Science and Technology, Uganda. The academic attitude of the participants was appraised with the help of researchers-made questionnaire and locus of control by using Rotter's I-E Scale. Analysis showed that the prospective science teachers are predominantly external in their locus of control orientation and have moderately negative academic attitude. Locus of control significantly predicts 3.2% variance in academic attitude of undergraduate students in science education.

Karaman (2016) compared international students and domestic students with respect to academic stress, locus of control, achievement motivation and life satisfaction of college students in the US. The participants of the descriptive study were domestic and international students enrolled in undergraduate programme Hispanic Serving Institution (South Texas). A convenient sample of 307 undergraduate students (International = 66; Domestic = 241) were selected as sample for the study. The international sample consisted of students from countries like South Korea, Turkey, India, Taiwan, Mexico, China, Saudi Arabia etc. The instrumentation part of the study included the Smith Achievement Motivation Scale (Smith et al., 2016), the Internal-External Locus of Control Scale (Rotter, 1966), the Student Life Stress Inventory (Gadzella & Masten, 2005) and the Satisfaction with Life Scale (Diener et al., 1985). The statistical techniques included bivariate correlation, hierarchical multiple linear regression analysis, and one-way MANOVA. The analysis showed no significant difference between domestic and international students regarding their locus of control. The regression analysis revealed that locus of control is a significant predictor of achievement motivation, explaining 9% of the variance, and relationship between locus of control and achievement motivation was found to be moderate but negative. The analysis also brought out that life satisfaction is a significant predictor of achievement motivation, which explains 18% of the variance with locus of control and academic stress.

Abid, Kanwal, Nasir, Iqbal and Noor-ul-Huda (2016) examined the influence of locus of control on the academic performance of university students. The descriptive study tested two hypotheses by collecting data from a random sample of 100 students, representing a population around 1500 students in the Sahiwal Campus of the University of Faisalabad. The variables were assessed with the help of the I-E Locus of Control Scale (Rotter, 1966) and the Learning Scale (Gungor, 2006). Pearson correlation and regression analysis were performed to test the hypotheses. A significant, positive correlation of high degrees was found to exist between internal locus of control and academic performance of university students. The study recommends taking steps in school system that strengthens the internal locus of control of students and weakens external orientation of mind.

Roderick (2015) examined the relationship between locus of control and general stress on university students. The researcher hypothesized that students with a more external locus of control will have higher levels of general stress. Online data were collected by using Survey Gizmo from undergraduate students of Lindenwood University. A total of 65 effective responses were collected from students below the age of 18. The measures used were the Internal-External LOC Control Scale (Rotter, 1966), and the Perceived Stress Scale (Wickrama et al., 2003). The data was checked for their correlation between the variables by employing product moment method. A significant positive correlation between

external locus of control and perceived general stress had emerged from the analysis.

Paranjpe (2014) researched the relationship between locus of control and perceived stress among college teachers from Mumbai (India). The participants were randomly selected from the Joshi-Bedekar College, Thane (Mumbai). The Locus of Control Scale (Rotter, 1954) and the Perceived Stress Scale (Cohen et al., 1983) were administered to get the data. Pearson product-moment correlation was the only inferential statistical techniques used to test the single hypothesis formulated. The analysis revealed that the two variables, internal locus of control and perceived stress, are correlated significantly to a moderate extent.

Sahraian, Omdivar, Ghanizadeh and Bazrafshan (2014) examined how covariate variables affect the relationship between job stress and locus of control in working nurses. A sample of female nurses ($n = 270$; Mean age = 34.6 years; $SD = 6.8$) were selected from the state hospital in Shiraz City (Iran) by using stratified proportionate random sampling method. Tools employed included the Job Stress Questionnaire (Eliot, 1995) and Rotter's I-E LOC Scale (1966). Linear regression analysis was employed to analyze the data. The results demonstrated a significant positive association between job stress and external locus of control in nurses. The covariates like age, marital status, qualification, number of children, years of experience, self-reported psychiatric problems etc. have no significant effect on either variables or their association.

Uma and Manikandan (2013) studied the influence of gender, locus of control, and self-esteem on academic stress of adolescents. The sample of the study were 300 undergraduate students in the age range 18-21 years, drawn from different colleges of Bangalore city (India). The measures consist of the Brief Self Esteem Inventory (Williams, 2000), the Locus of Control Scale (Uma & Manikandan, 2013) and Academic Stress Inventory (Uma & Manikandan, 2013). Three-way ANOVA was used to analyse the data. The result showed that gender and self-esteem have significant main effects on academic stress of the students. Though locus of control has no significant main effect on academic stress, it exerts effect on academic stress in interaction with self-esteem.

2.4. DISCOURSE OF LITERATURE REVIEWED

The review of research studies conducted in the present decade in the areas of academic stress, emotional maturity, psychological resilience, and locus of control indicates that research is still very active in these areas. Though the investigator reviewed around 60 research papers pertaining to academic stress, which were published after 2015, only 25 of them were found relevant in the context of the present study. One of the important objectives of research undertaken in the area during the period was to examine differential effect of gender in the distribution of academic stress. The studies have put forth different conclusions regarding the influence of gender on the distribution of academic stress. While researcher like Del Rosario (2023), Akeela and Ashok (2018) and Anupama and Sarada (2018) reported no significant difference between the

gender groups in academic stress, scholars like Saha (2023), Mohan (2022), Joel (2022), Kumari and Singh (2022), Tharaldsen, Tvedt, Caravita and Bru (2022), Sharma (2022), Ravindar (2021), Neeta and Singh (2020), Sagar and Singh (2017), Ghosh (2016), Akande, Olowonirejuaro and Okwara-Kalu (2014), and Porwal and Kumar (2014) reported significant gender difference in academic stress. Whereas the studies conducted by Saha (2023), Joel (2022), Umar (2019), and Porwal and Kumar (2014) found male students having higher academic stress, Mohan (2022), Kumari and Singh (2022), Tharaldsen, Tvedt, Caravita and Bru (2022), Sharma (2022), Ravindar (2021) and Ghosh (2016) found female students having higher academic stress. The research taken up by few investigators to examine the differential influence of residential locales on academic stress also has varying conclusions. While researchers like Saha (2023), Joel (2022) found urban students having more academic stress than the rural students, Sagar and Singh (2017) found no significant difference between rural and urban students in this matter. The studies conducted by Neeta and Singh (2020) and Umar (2019) are different in the sense that they examined the influence of the locale of educational institution on academic stress and reported that school locale is not a significant factor in academic stress.

Differential influence of age on academic stress was studied by While Del Rosario (2023) and Joel (2022). While the former study found no significant differential effect of age on academic stress, the later study reported age as a significant factor in academic stress. Type of school management was another important factor in studies on academic stress, which also ended with mixed results. Sharma (2022) and Ravindar (2021) reported that students at government

schools have greater academic stress than students from private schools. Contrary to this, Ghosh (2016) reported that students from private school experience higher stress than their government school counterparts. Menaga and Chandrasekaran (2014), on the other hand, found no significant difference between government schools and private schools with respect to the academic stress experienced by the students. Researchers like Saha (2023), Depaynos, Butala and Atompag (2021), and Menaga and Chandrasekaran (2014) examined the variation in academic stress in accordance with the academic stream of study. Whereas Saha (2023) reported higher academic stress in science students compared to students in humanities and commerce, Depaynos, Butala and Atompag (2021) found that students of General academic stream and Humanities and social sciences are much more stressed than students in the Science, Mathematics and Technology stream. Contrary to the above, Menaga and Chandrasekaran (2014) reported that academic stream of study is not a significant factor in discriminating students on the basis of their academic stress.

Academic stress has been studied in relationship with academic achievement (Advincula, Morales & Morales, 2023; Sathish & Subramanian, 2021), with interpersonal relationship (Kumari & Singh, 2022), with perceived mastery and performance climate as well as with emotional difficulties (Tharaldsen, Tvedt, Caravita & Bru, 2022). Whereas, Advincula, Morales and Morales (2023) found no significant relationship between academic stress and academic achievement, Sathish and Subramanian (2021) reported a significant negative correlation between the variables. Components like acceptance,

recognition, and affection of interpersonal relationships were found significantly and negatively correlated with academic stress by Kumari and Singh (2022).

Research attempts to explore the association between emotional maturity and academic stress are not many in recent literature. One such research has been reported by Sunila (2017) who compared undergraduate students of working and non-working mothers regarding emotional maturity, academic stress and self-awareness and the relationship between the variables. The study reported negative association between emotional maturity and academic stress. Another study in this direction is one conducted by Ansari (2015) in undergraduate students, who also reported significant negative correlation between academic stress and emotional maturity. Rajeshwari and Manoraj (2017) examined emotional maturity in relation to general stress on a sample of postgraduate students and brought out that students with high emotional maturity have high stress management skill. Studies exploring the association between emotional maturity and academic stress of school students were not found in literature.

Emotional maturity, however, have been studied in relation to many other variables such as academic achievement (Rafaqi & Musheer, 2019; Rai & Khanal, 2017; Shafeeq & Thaqib, 2015; Singhpuar, 2013), school environment (Khan, 2023), study habit (Rafaqi & Musheer, 2019), social competency (Kaur, 2018), self-confidence (Rajeshwari & Manoraj, 2017), self-awareness (Sunila, 2017). All the studies, except that done by Rai and Khanal (2017) and Singhpuar (2013), reported a significant positive association between emotional maturity and the variables studied. Studies of Rai and Khanal (2017) and Singhpuar (2013)

found no significant relationship between emotional maturity and academic achievement.

The demographic factors exerting differential effect on emotional maturity, which were explored by various studies in the current decade, include gender (Chaudhari & Shukla, 2022; Anumeha & Topno, 2021; Kamala & Lakshmi, 2021; Babita & Naaz, 2021; Tripathy, 2020; Jobson, 2020; Majumdar & Das, 2019; Rafaqi & Musheer, 2019; Biswas, 2018; Kaur, 2018; Kumar & Kiran, 2017; Nath, 2016; Shafeeq & Thaqib, 2015; Gunasekar & Pugalenth, 2015; Nuzhat, 2013; Lakshmi & Krishnamurthy, 2011; Bhattacharjee, 2011), locale (Chaudhari & Shukla, 2022; Anumeha & Topno, 2021; Kamala & Lakshmi, 2021; Tripathy, 2020; Biswas, 2018; Kumar & Kiran, 2017; Nath, 2016; Lakshmi & Krishnamurthy, 2011), type of school management (Rahim, 2023; Kamala & Lakshmi, 2021; Mahendra & Thakur, 2018; Kaur, 2018; Rajeshwari & Manoraj, 2017; Nath, 2016; Shafeeq & Thaqib, 2015), and age (Ansari, 2015; Lakshmi & Krishnamurthy, 2011). The findings of the studies are inconclusive regarding the differential influence of gender on emotional maturity. While studies such as those conducted by Tripathy (2020), Lakshmi and Krishnamurthy (2011) and Bhattacharjee (2011) reported males having higher emotional maturity, studies of Ismail et al. (2021) as well as Anumeha and Topno (2021) reported females having greater emotional maturity. However, majority of the studies found no significant gender difference in emotional maturity (Chaudhari & Shukla, 2022; Kamala & Lakshmi, 2021; Babita & Naaz, 2021; Jobson, 2020; Majumdar & Das, 2019; Biswas, 2018; Kaur, 2018; Kumar & Kiran, 2017; Nath, 2016; Gunasekar & Pugalenth, 2015). Nuzhat (2013) reported domain difference in

emotional maturity among university students, wherein females excelled males in emotional instability, but the direction of difference reversed in emotional regression. The males and females were found to be alike in other factors like social maladjustment, lack of independence and personality disintegration.

Academic stress has been studied in relation to resilience by researchers like Zablotny (2024) Park, Hong, Park and Chung (2023), Bindu and Happy (2023), Gong, Wang, Zhong and Shao (2023), Choi, Yoo, Kim, An, Sung and Kim (2023), Kayun, Limbu and Wijaya (2023), Flores-Buils and Andres-Roqueta (2023), Mulati and Purwandari (2022), Singh, Sharma, Sharma and Siddiqui (2022), Sarnon, Li, Saim and Nen (2022), Latif, Ali, Shahzad, Hussain, Manj and Akram (2021), Goyal (2021), Sodhi (2020), Jones (2020), Hernandez, Escobar, Fuentes and Eguiarte (2019), Mathur and Sharma (2015), and Shilpa and Srimathi (2015). All the studies, except that conducted by Kayun, Limbu and Wijaya (2023), reported significant negative correlation between academic stress and psychological resilience. Kayun, Limbu and Wijaya (2023) found significant association between the variables. Kirtana (2021) and Latif, Ali, Shahzad, Hussain, Manj and Akram (2021) studied job stress in relationship with psychological resilience and reported that persons having higher resilience skills experience lower job stress compared to persons with low resilience skills.

Differential effect of demographic factors on psychological resilience was studied by Guo, Gong, Guo and Wang (2023), Amzil (2023), Singh, Sharma, Sharma and Siddiqui (2022), Sarnon, Li, Saim and Nen (2022), and Demir and Barut (2020). All the researchers, except Singh, Sharma, Sharma and Siddiqui

(2022), reported significant differences in psychological resilience. Singh et al., (2022) found no significant gender difference in the distribution of psychological resilience of school students. Bindu and Happy (2023) noticed gender as a significant factor deciding the correlation between psychological resilience and academic stress, the correlation being stronger in males than in females. In their study on medical students, Park, Hong, Park and Chung (2023) brought out the mediating effect psychological resilience in the relationship between academic stress and intrinsic motivation. Choi, Yoo, Kim, An, Sung & Kim (2023) found psychological resilience as a mediator in the relationship between academic stress and school adjustment. Researcher like Flores-Buils and Andres-Roqueta (2023), Wu, Yu, Wu, Wan, Wang and Lu (2020) and Mathur and Sharma (2015) used regression analysis to spotlight the influence of psychological resilience on academic stress.

A good number of research have been done in recent years to explore the relationship between locus of control and various types of stress in life (e.g., Alkhazaleh & Alomery, 2023; Chandra & Yagnik, 2022; Willhana & Hastuti, 2021; Padmanabhan, 2021; Quing & Baudin, 2021; Namita & Kanchana, 2021; Krampe, Danbolt, Haver, Stalsett & Schnell, 2021; Hasan & Mehmet, 2021; Giao, Vuong & Tushar, 2020). While there are few studies such as those conducted by Alkhazaleh and Alomery (2023) Willhana and Hastuti (2021) Padmanabhan (2021) Namita and Kanchana (2021) Hasan and Mehmet (2021) and Sahraian, Omdivar, Ghanizadeh and Bazrafshan (2014) measured locus of control from an external angle, all other studies assessed the variable from an internal perspective. While studies which measured locus of control from an

external perspective reported positive correlation with academic stress (e.g., Alkhazaleh & Alomery, 2023; Willhana & Hastuti, 2021; Padmanabhan, 2021; Namita & Kanchana, 2021 etc.), significant negative correlation was reported between academic stress and locus of control by scholars who measured locus of control from internal perspective (e.g., Sakthivel, 2022; Chandra & Yagnik, 2022; Quing & Baudin, 2021; Krampe, Danbolt, Haver, Stalsett & Schnell, 2021; Giao, Vuong & Tushar, 2020 etc.).

Among demographic factors that exert differential influence on locus of control, the effect of gender was studied by researchers like Sakthivel (2022), Padmanabhan (2021), Abraham and Rajalakshmi (2021), Kaur and Singh (2021), Uma and Manikandan (2013). No significant gender influence was observed in the distribution of locus of control by these researchers. The study on health locus of control by Chandra and Yagnik (2022) reported no significant difference between employees with internal and external LOC regarding the stress they experience in workplace. Locus of control has been studied in relation to many other psychological factors like depression-happiness (Sakthivel, 2022), anxiety (Chandra & Yagnik, 2022; Namita & Kanchana, 2021), psychological distress (Willhana & Hastuti, 2021; Krampe, Danbolt, Haver, Stalsett & Schnell, 2021), job satisfaction (Padmanabhan, 2021), self-efficacy (Abraham & Rajalakshmi, 2021), academic attitude (Atibuni, Ssenyonga, Olema & Kemeza, 2017), achievement motivation (Karaman, 2016), self-esteem (Uma & Manikandan, 2013) etc. Few scholars have explored the moderating effect of locus of control on the association between Covid-19 stress and mental distress (Krampe, Danbolt, Haver, Stalsett & Schnell, 2021), social support and job stress (Giao,

Vuong & Tushar, 2020), and bullying behaviour and mental health (Reknes, Visockaite, Liefoghe, Lovakov & Einarsen, 2019), and demonstrated that locus of control has significant moderating effect in the relationship between the variables.

2.5. THE RESEARCH GAP

It is evident from the review that academic stress is still a burning research issue in the field of education at all levels, and an active area of academic research. Higher secondary stage is the most stressful period in the educational career of most of the Indian students as it imposes great pressure on them to score high in various entrance examinations for getting admission to professional courses which is often the choice of parents. Despite many effective psycho-pedagogic techniques such as mindfulness meditation, yogic exercises, breathing exercises, body scanning exercises, progressive muscle relaxation, assertive training etc., academic stress remains as a classroom reality contributing to great academic impairment to student community, apart from affecting their psychological wellbeing adversely. This situation demands a better understanding of various demographic and psychological factors that affect the academic stress experienced by higher secondary school students.

A study of the theoretical background of the construct of academic stress drew attention to three personality factors, viz., emotional maturity, psychological resilience, and locus of control, having speculative association with academic stress. The subsequent review of recent research done in the areas of stress and

emotional maturity convinced that higher level of emotional maturity will serve as a shield against stress by nurturing better emotional regulation, enhancing coping mechanisms, and improving interpersonal relationships. Studies have also presented evidence to demonstrate that psychological resilience plays a significant role in reducing stress by enabling individuals to cope effectively with challenges and bounce back from adverse situations. Research evidences are also available to demonstrate that proactive coping mechanisms are more common among people who have an internal locus of control, producing an inverse relationship between internal locus of control and academic stress.

Psychological literature presents sufficient evidence to demonstrate that emotional maturity, psychological resilience, and locus of control are factors affecting stress in general and academic stress in particular. Treating students who are 'infected' with academic stress by subjecting them to psychotherapeutic or psycho-pedagogic intervention should not be the approach of teachers/school authorities. Saving students from the 'infection' of academic stress by systematically developing right 'immunity' by nurturing their emotional maturity, psychological resilience, and locus of control is the right psychological approach to save student community from the 'pandemic of academic stress'. To accomplish this, a thorough understanding of the distribution of these psychological factors in the population and sub-populations, differential influence of various demographic factors on them, the relationship of each of these independent variables to academic stress, the differential effect of demographic factors on the relationship of these factors to academic stress, the independent and interactive effects of these psychological factors on academic stress, the influence

exerted by them on academic stress, predicting academic stress of students from measures on these psychological factors etc. are needed. Though adequate evidence is available in literature to show that emotional maturity, psychological resilience, and locus of control have independent influence on academic stress, no research attempt has been done so far to examine the joint effects of these variables on academic stress, leaving a clear research gap. Literature shows inconclusive research evidence on the differential effect of demographic factors on the distribution of psychological factors and their relationship with academic stress. The influence exerted by emotional maturity, psychological resilience, and locus of control on academic stress experienced by HSS-students of Kerala remains as an unexplored area, leaving a serious research gap. Instilling immunity against academic stress in children and adolescents by developing emotional maturity, psychological resilience, and internal locus of control necessitate systematic investigation on the interrelationship, interactive influence and interaction effects of these psychological factors on academic stress of students. The present study is a modest attempt to bridge the research gap by providing statistical evidence to demonstrate how emotional maturity, psychological resilience, and locus of control jointly affect the academic stress of higher secondary school students.



METHODOLOGY

- Method
- Population
- Sample
- Research Design
- Variables
- Tools
- Procedure
- Consolidation of Data
- Statistical Techniques

CHAPTER III

METHODOLOGY

3.1 INTRODUCTION

This chapter focuses on the plan and procedure employed in conducting the study. The demarcation of the objectives of the study and the formulation of the hypotheses to be tested enabled the researcher to frame the different facets of the methodology of the study. The following sections provide a detailed description of the research protocol, sampling technique followed, procedure of tool construction, process of data collection, their consolidation, statistical techniques used etc.

3.2 METHOD ADOPTED FOR THE STUDY

The aim of the study is to explore academic stress of Higher Secondary School Students (HSS-students) of Kerala in relation to psychological factors like emotional maturity, psychological resilience, and locus of control. Since the study intends to describe the chosen psychological phenomena accurately and systematically as they exist in the population, descriptive method was selected for the research. The descriptive research method focuses on the examination of existing situations or connections, held beliefs, ongoing processes, visible impacts, or growing trends. As the task before the investigator was to find out the typically

existing condition regarding the distribution of the variables, survey method was selected for collecting required data pertaining to different variables from the population.

3.3 POPULATION OF THE STUDY

The population refers to the complete set of individuals or elements from whom a statistical sample is selected. Adolescents studying in the higher secondary classes (11th and 12th grades) of schools affiliated to Kerala Board of Higher Secondary Education (KBHSE), Kerala constituted the target population of the study. The estimated size of the population, as reported by government sources, is 864720 (Govt. of Kerala, 2022).

3.4 SAMPLE FOR THE STUDY

A sample is a smaller, representative group selected from a larger population, with the purpose of drawing conclusions that may be applied to the entire population. The population for the present investigation includes HSS-students selected from four districts of Kerala, *viz.*, Thiruvananthapuram, Ernakulam, Thrissur, and Kozhikode. The sample was chosen from the population in a manner that allows for the drawing of generalizable and pertinent findings from the study. This required three fundamental choices to be taken regarding the sample. They are:

- a) Size of the sample
- b) Techniques of sampling
- c) Basal variables to be represented in the sample

3.4.1 Size of the sample

There exists difference of opinion among scholars regarding the optimum size of the sample to be drawn for descriptive studies. Guilford (1954) proposed that a minimum sample size of 200 should be utilised when employing Pearson's Product Moment Coefficient of Correlation (r). Garrett (2004) supports this perspective and asserts that when the sample size (N) increases, the standard deviation (σ) of the sample similarly increases. Consequently, the sample becomes more comprehensive and likely to represent the population more accurately. Krech & Crutchfield (1948) suggested that a sample size of around 500 is suitable for social science research when the acceptable margin of error is approximately five percent. Nevertheless, for the current investigation, the decision was made to utilise a sample size of around one thousand and two hundred participants. This choice was made in order to ensure a high level of representativeness in the survey and to enhance the reliability of the results.

3.4.2 Technique of sampling

Stratified random sampling, in the words of Garrett (2004), guarantees representativeness and is suitable for populations that consist of sub-groups or

strata of varying sizes. The present study, therefore, utilised a stratified random sampling approach to ensure that the selected population accurately represented the population for whom information was being sought. The sample selection ensured equitable representation of criteria such as gender, type of management of the school, and school location.

3.4.3 Basal variables to be represented in the sample

The three basal variables that would possibly influence the distribution of the dependent variable and the independent variables are the gender (male and female students), type of school management (government, aided and unaided schools) and location of the school (rural and urban schools). As such, it was decided to give representation to male and female students, students from government, aided and unaided schools and students from schools located in rural and urban areas. Though the scope of the study is wide across the entire State of Kerala, the study was confined to four districts of Kerala state viz, Thiruvananthapuram, Ernakulam, Thrissur, and Kozhikode, thinking that students from these districts will be a cross section of higher secondary school student population of Kerala. The state of Kerala has three distinct socio-cultural zones viz., Travancore, Kochi and Malabar. Three out of the four districts selected for the study viz., Thiruvananthapuram, Thrissur and Kozhikode, represents the Travancore, the Kochi and the Malabar zones respectively, while Ernakulam district was selected as a representative district of the State of Kerala which consists of highest number of people migrated from other districts of Kerala in search of education, employment, trade and

commerce. The details of the schools affiliated to Kerala Board of Higher Secondary Education (KBHSE), located in these districts were collected, scrutinized and a list of 25 schools was prepared. While preparing the list, proportionate representation was given to rural and urban locale of the schools and also to schools in Government, Aided and Unaided Sectors. Accordingly, 11 schools from government sector, 9 schools from aided sector and 5 schools from unaided sectors were included in the list. Likewise, in order to ensure a rough proportionate representation of rural and urban students, 16 schools from rural areas and 9 schools from urban areas were included in the list. While preparing the initial list, double the number of schools in all the categories were included so as to ensure the cooperation of at least one of the schools from each category. However, data could be collected only from 23 schools in the list due to non-cooperation of two schools shortlisted for the study. The schools from which samples were finally gathered are listed in **Appendix-A**.

3.4.4 The final sample for the study

Based on the aforesaid considerations, a preliminary division of a potential sample was determined. On the expectation of getting a sample size of 1250 will be obtainable for analysis, it was decided to collect a bigger baseline sample around 1300. The completion of all the chosen schools resulted in a sample that was slightly bigger than the predetermined size. The exact measurement of the basal sample was 1316. Unfortunately, the data from all these respondents were deemed unusable for the final study. The reasons for this were: (a) the absence of

some students during certain test sessions, (b) incomplete test items submitted by some students, and (c) instances where some students marked multiple responses for certain test items. After excluding all such cases, data concerning only 1232 students were deemed suitable for analysis. Table 3.1 presents the district wise, and locale wise distribution of the schools selected for the study.

Table 3.1: District wise and locale wise distribution of schools selected for the study

Sl. No.	District	Locale		Total
		Rural	Urban	
1	Thiruvananthapuram	4	2	6
2	Ernakulam	3	3	6
3	Thrissur	3	2	5
4	Kozhikode	3	3	6
Total		13	10	23

The distribution of the final sample according to gender and type of management of the school is presented in Table 3.2.

Table 3.2: Distribution of final sample based on gender and type of institution

Sl. No.	Type of Institution	Gender		Total
		Male	Female	
1	Government Schools	229	272	501
2	Aided Schools	305	277	582
3	Unaided Schools	49	100	149
Total		583	649	1232

3.5 RESEARCH DESIGN

A research design is the general strategy or plan that a researcher use to cohesively and logically integrate the various components of the study in his/her attempt to answer the research question. It functions as a framework for the collection, measurement, and analysis of data. A meticulously crafted research design guarantees the effective resolution of the research problem and facilitates the proper implementation of the study. An effective research design possesses numerous essential attributes that guarantee the study's credibility, dependability, and utility. Clarity and precision of the research problem, control variables in causal-experimental research, trustworthiness (the outcomes closely resemble reality), reliability (structuring the research design to get repeated results), internal validity (the result truly indicate the phenomenon investigated), external validity (findings generalizable to other populations), flexibility (adaptable to new insights that arise during the investigation), adherence to ethical standards, ensuring human rights and privacy, feasibility in terms of time, effort and resources, generalizability of the findings beyond the sample, minimization of researcher bias, logical sequencing of different phases of investigation, appropriate sampling design, measurability of the variables etc. Since the aim of this study is to examine the academic stress experienced by HSS-students, with a focus on its relationship with their emotional maturity, psychological resilience, and locus of control, quantitative research design was selected for the study. The conceptual framework used for the study is illustrated in Figure 3.1.

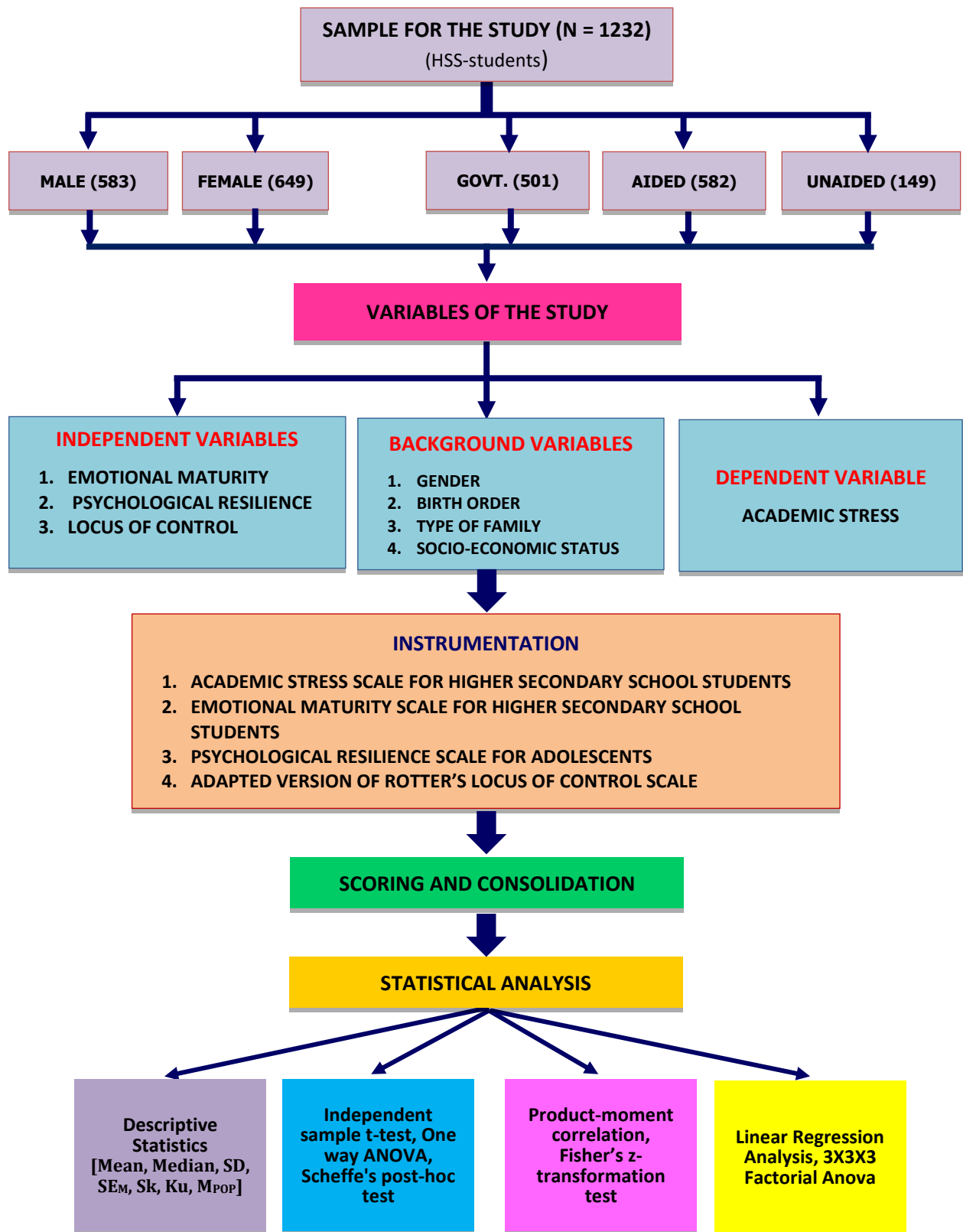


Figure 3.1: The Research Design

3.6 VARIABLES OF THE STUDY

The study was designed with Academic stress of students as dependent variable and emotional maturity, psychological resilience, and locus of control as independent variables. A brief discussion of the different variables considered in the present study is provided below.

3.6.1 Academic stress

Academic stress refers to the psychological condition experienced by students due to ongoing social and self-imposed pressure in a school setting, which exhausts their psychological resources. It is a psychological state in which students experience an imbalance between the expectations placed on them by their environment and their available resources, leading to heightened load and pressure in their academic pursuits. Academic stress is the physiological and psychological reactions that occur when pupils face scholastic expectations that are beyond their ability to cope with. It is the major catalyst for anxiety, tension and depression among learners at all levels of education. It is the net result of a combination of school related demands that surpass the adaptive resources available to the learner. Academic stress encompasses several elements such as familial influences, social pressure, teacher expectations, school administration, the educational framework, homework assignments, exam performance, and supplementary educational programmes. Academic stress amplifies an individual's feeling of academic dissatisfaction, academic conflict, academic

pressure, and academic anxiety, all of which are components of academic stress. Approximately 10-30% of students encounter varying levels of academic stress during their academic journey. The most often mentioned sources of stress in school setting include workload due to homework, assignments, frequent tests, classroom questioning, lack of time to complete schoolworks, fear of failure in exams, conflict with teachers and so on. Academic stress causes notable neurohormonal alterations in the hypothalamic–pituitary–adrenocortical axis. Students undergoing an academically challenging scenario have shown a significant increase in stress hormones, such as Adrenocorticotrophic hormone (ACTH) and cortisol, and considerable immunological dysregulation.

3.6.2 Emotional maturity

Emotional maturity is the ability to normalise one's emotions so as to maintain harmony in interpersonal context. It is the capacity to regulate intense emotions, demonstrate stability and resilience in challenging situations, and exhibit tolerance while being free from neurotic tendencies. Emotional maturity stems from one's skill to become sensitive to one's inner world, outer environment as well as to the people we interact with. It is the internal process of harmonising one's thoughts and intellect with the external world. At the core of emotional maturity, there is the capacity to comprehend objective truth and factual information, as well as the ability to respond to a situation without being swayed by one's positive or negative emotions. Persons with higher emotional maturity have a heightened capacity to effectively navigate and handle practical

challenges in real-life scenarios. Higher emotional maturity has been found to correlate positively with ability to handle and manage tension, capacity for self-control, ability to handle disruptive emotions, capacity to wholeheartedly accept the hardships of life and openly display distress. Emotional maturity is a significant factor that influences an individual's personality, conduct, and attitudes. It also plays a crucial role in improving relationships with others and boosting one's self-esteem. The individual's survival in a given situation hinges on their emotional coping mechanisms. Therefore, emotional maturity significantly influences the ability to successfully adapt to oneself, family members, peers, society, culture, and the environment. The hallmark of emotional maturity is the capacity to endure stress, which allows individuals to withstand the dissatisfaction they experience.

3.6.3 Psychological resilience

Psychological resilience is the capacity to effectively manage and adapt to a crisis, both mentally and emotionally, or to swiftly regain one's previous state of well-being after a disaster. It refers to an individual's capacity to effectively deal with and adjust to challenging circumstances and demanding life situations. Shortly, resilience pertains to an individual's capacity to effectively adjust to and cope with stress and challenges. Therefore, it focuses on individuals' abilities to adapt and thrive, rather than on their limits or difficulties in adjusting. It enables a person to sustain mental and physical well-being in the face of challenging circumstances. Several variables, both internal and external, affect an individual's

degree of resilience. Internal elements encompass individual attributes such as self-esteem, self-regulation, and an optimistic perspective on life. External variables encompass social support networks, such as familial, friendly, and communal interactions, with the availability of resources and opportunities. Theoretical models of psychological resilience emphasise that the combination of physiological, neuro-behavioural, and psychological components play a crucial role in safeguarding resilience. Psychological characteristics, such as optimism, self-efficacy, high intellect, and the use of adaptive emotional regulation mechanisms, have all had a favourable impact on resilience.

3.6.4 Locus of control

Locus of control pertains to the degree to which an individual perceives themselves as the primary cause or accountable for their own experiences. It is defined as the extent to which individuals perceive themselves as having control over and being accountable for the outcomes (both positive and negative) they encounter. Shortly, it is the degree to which an individual perceives themselves as having influence over the events that affect their life. The locus of control has two dimensional orientations - external and internal. Persons who possess a robust internal locus of control attribute the outcomes in their life mostly to their own activities. Such people firmly think that they have the power to determine their own fate. They often believe that their own competence, aptitude, and endeavours largely shape their life experiences. Conversely, those with an external locus of control hold the belief that changes occur due to chance or other factors such as

divine intervention, destiny, fortune, or influential individuals, rather than being influenced by their own actions. Such people attribute credit or assign blame to other variables, such as the teacher or the level of difficulty of the test.

3.7 TOOLS USED FOR DATA COLLECTION

The data needed for the study were collected by employing the following standardized psychometric instruments:

1. Academic Stress Scale for Higher Secondary School Students (Bindu & Happy, 2023)
2. Emotional Maturity Scale for Higher Secondary School Students (Bindu & Happy, 2023)
3. Psychological Resilience Scale for Adolescents (Bindu & Happy, 2023)
4. Adapted Version of Rotter's Internal-External Locus of Control Scale: (Arjunan & Abraham, 2003).
5. Brief Socio-Economic Status Scale (Arjunan, 2022)

Among the various instruments used for the study, three instruments, viz., the Academic Stress Scale for Higher Secondary School Students, the Emotional Maturity Scale for Higher Secondary School Students and the Psychological Resilience Scale for Adolescents were developed by the investigator with the

assistance of her guide for the purpose of the study. A brief description of the tools is provided here under.

3.7.1 The Academic Stress Scale for Higher Secondary School Students (ASHS)

The tool constructed for assessing the academic stress of HSS-students has been named as ‘Academic stress Scale for Higher Secondary School Students’ which is abbreviated throughout this study as ASHS. The instrument provides a quantitative measure of the physiological and psychological stress that the learners experience due to their lack of adequate ability to cope with the demands of academic challenges. The details of the procedure involved in the development of the ASHS are given below.

3.7.1.1 Planning and preparation of the items for draft ASHS

As a preliminary step to the development of ASHS, the investigator reviewed the literature pertained to the area of ‘Academic Stress’ and also referred the existing tools for Academic Stress like Academic Stress Scale (Amin et al., 2023), Educational Stress Scale for Adolescents (Sun, Dunne, Hou & Xu, 2011) and Student Stress Inventory (Arip, Kamaruzaman, Roslan & Ahmad, 2015). Experts in the field were also consulted, and their suggestions were taken into consideration. The study of literature and discussion with experts in the area resulted in the identification of six dimensions of academic stress, viz., (i) Cognitive, (ii) Affective, (iii) Behavioural, (iv) Physical, (v) Interpersonal, and

(vi) Motivational. This is followed by drafting of a list of 110 statements, each describing some behaviour of the identified dimensions of academic stress. These statements were then presented to specialists for evaluation and feedback. Based on the suggestion received, few items were eliminated, and a few others were modified. Thus, a revised compilation of 100 elements was chosen for the draft instrument. The draft items were printed with serial numbers and a response pane for indicating responses on a five-point scale: "No Stress", "Slight Stress", "Moderate Stress", "High Stress", and "Extreme Stress".

3.7.1.2 Pilot Study

To understand the challenges that an average student is likely to encounter while taking the test and also to evaluate the quality of the test, a pilot study was conducted. The goal of the pilot testing was to determine the clarity of the items and average response time required for each question in the test. The draft scale was administered to a sample of 86 ninth grade students selected from a government secondary school located in Thrissur district of Kerala. The investigator administered the instrument by giving oral instructions to the test takers, clarified items having doubt and recorded the time taken by the participants to complete the test. An average time of 30 seconds per item was found sufficient for the respondents to complete the test. After the pilot testing, an interactive session was conducted with the respondents to get their input on the clarity of the items, the difficulties in understanding the meaning of specific phrases, and the challenges in marking their responses. Based on the input, items

that were vague or had inappropriate wordings were either eliminated or revised. Following the pilot testing, the draft ASHS was compiled by printing the 100 selected items together with the answer pane and relevant instructions.

3.7.1.3 Administration of the Draft ASHS

The draft ASHS was administered on a group of 411 secondary school students in the age range 13-17 years (Mean age = 15.29; SD = 1.46), selected from Thiruvananthapuram, Ernakulam and Malappuram districts of Kerala. The selected schools included one private aided school and one government school from Thiruvananthapuram district, one Private Unaided School from Ernakulam district, and one government school and one private aided school from Malappuram district. The schools selected for administering the ASHS were all co-educational and affiliated to Kerala Board of Secondary Education. Directions had been given to respond to each item in the tool in terms of the severity of the stress they experience while involved in academic activities by putting a tick mark (✓) in any one of the five cells under columns marked as 'No stress', 'Slight stress', 'Moderate stress', 'High stress', and 'Extreme stress'. The marked booklets were collected in the same order in which they were distributed and scored appropriately.

3.7.1.4 Scoring of the Draft ASHS

The scoring of the draft ASHS was done on a five-point scale by adopting the arbitrary weighing method. Accordingly, a credit of 1, 2, 3, 4, and 5 points were

given for responses ‘No stress’, ‘Slight stress’, ‘Moderate stress’, ‘High stress’, and ‘Extreme stress’ respectively. The scores of all the items were summated to get the academic stress score of a student.

3.7.1.5 *Item Analysis*

In order to identify suitable items for the final academic stress scale, an item analysis was conducted. Out of the 411 draft scales that were distributed, twenty-four were eliminated due to incomplete entries, and an additional seventeen were rejected by random selection. The number of booklets available for item analysis purposes were thus reduced to 370. The 370 booklets were sorted in descending order based on their overall scores. The top 27 percent (the highest 100) and the bottom 27 percent (the lowest 100) booklets were selected as extreme groups for item analysis. Ebel (1965) suggests that a compromise of 27 percent is optimal in order to achieve two conflicting goals, i.e., to make extreme groups as large as possible and to make extreme groups as different as possible. The collected scores for each item in these groups with extreme characteristics were utilized to calculate the discriminating power of each item. The discriminating power was computed by computing the t-value using the given formula:

$$t = \frac{\bar{X}_H - \bar{X}_L}{\sqrt{\frac{\Sigma(X_H - \bar{X}_H)^2 + \Sigma(X_L - \bar{X}_L)^2}{N(N-1)}}$$

Edwards (1957)

where,

- $\bar{X}_H$ = The mean score on a given statement for the high group
 $\bar{X}_L$ = The mean score on the same statement for the low group
 X_H = The score for a given individual for a given statement in the high group.
 X_L = The score for a given individual for a given statement in the low group.
 N = Number of subjects in the criterion group

3.7.1.6 Preparation of the Final form of ASHS

The t-value quantifies the degree to which a given item distinguishes between the high and low stress groups. The statement with a t-ratio greater than or equal to 1.96 was considered an item that demonstrates both internal consistency and discriminatory power (Edwards, 1957). The items with t-values below 1.96 were excluded from the draft version. After conducting item evaluations, it was noticed that a total of 57 items had a discriminating power more than 1.96. Seven items with the lowest discriminating power were removed from the pool in order to reduce the total number of items to 50 in the final scale. The items were subjected to a thorough examination to ensure their clarity and use of simple language before being finalised. The final instrument was created by printing the items, assigning them sequential numbers, including a response panel with five response alternatives, and providing the required instructions for the test takers.

3.7.1.7 Establishing Validity of ASHS

The face validity of the scale was determined by submitting the newly developed ASHS to experts for their appraisal. The draft scale comprised only

those items on which the experts agreed unanimously that it has the potential to assess the level of stress faced by a secondary school student in an academic setting. The scale's external validity was ascertained by utilising teacher evaluation as an external criterion. Accordingly, a cohort of secondary school students from three classes of CJMA Higher Secondary School, Varandarappilly (Thrissur District) was selected as participants. The three chosen classes (one from each grade, VIII, IX, and X) consisted of a total of 114 pupils. Out of them, a total of 52 were excluded by a process of random selection. A list containing the names of the 62 chosen students was compiled and distributed to three teachers handling different subjects of each class. These teachers were instructed to closely monitor the students for a duration of one month, with the aim of assessing the level of academic stress these students experience. The teachers were asked to rate the students on a 5-point scale, ranging from "Extreme stress" to "No stress," based on observable indicators of stress exhibited in the classroom. The phrase 'academic stress' was explained to the teachers in simple terms as 'mental distress with respect to some anticipated frustration associated with academic failure or even unawareness to the possibility of such failure'. The mean instructor ratings for the 62 pupils were transformed into scores using the arbitrary scoring method outlined below:

Teacher rating of academic stress

No stress	Mild stress	Moderate stress	High stress	Extreme stress

10	20	30	40	50

The teacher ratings, transformed into scores, were correlated with the scores on the ASHS by calculating the coefficient of correlation (r) using the product moment method. The correlation coefficient calculated was 0.69, indicating a satisfactory level of agreement between the two measures. Therefore, it was concluded that the scale possesses a good level of validity for the current investigation.

3.7.1.8 *Establishing Reliability of ASHS*

The reliability of the ASHS was appraised using the test-retest method. A total of 176 secondary school pupils from different grade levels of secondary education, viz., Std. VIII, Std. IX, and Std. X, Std. XI and Std. XII, were chosen from three schools one each representing the Government, Aided private, and Unaided private schools from Thrissur district of Kerala. The final ASHS was delivered twice to the sample with a four-week gap. The correlation coefficient between the two sets of scores was calculated as an indicator of the test's dependability. The scale's reliability coefficient was determined to be 0.84, suggesting a good level of reliability for the ASHS.

The Academic Stress Scale for Higher Secondary School Students developed for the purpose of the study in the regional language (Malayalam) and

its English translated version are given in **Appendix-B** and **Appendix-C** respectively.

3.7.2 Emotional Maturity Scale for Higher Secondary School Students (EMSS)

The instrument constructed to assess the emotional maturity of the respondents in the study is called the Emotional Maturity Scale for Higher Secondary School Students (EMSS). It offers an objective assessment of an individual's ability to control and express the emotions appropriately. The details of the procedure employed in the development of the test are given in the subsequent sessions.

3.7.2.1 *Planning and preparation of the items for draft EMSS*

As a preliminary step for the preparation of the Emotional Maturity Scale, the investigator deeply analysed the concept and various models of Emotional Maturity. Experts in the field of Psychology and Education were also consulted. After studying the literature pertaining to emotional maturity and inspecting few instruments presently in use to assess emotional maturity, five dimensions of the construct were identified: (i) Lack of psychological independence, (ii) Personality disintegration, (iii) Emotional maladjustment, (iv) Emotional regression, and (v) Emotional steadiness. Lack of psychological independence is the inability to make and carry out important decisions by oneself, and lack of responsibility and

willingness to answer for the consequences of one's actions. Personality disintegration is the extent of disharmony among thoughts, emotions and actions of a person. Emotional maladjustment is the inability to control one's emotions and express them in a socially approved manner. Emotional regression is the tendency to revert to a prior stage of emotional development. Emotional steadiness is the ability to remain emotionally stable and balanced. A compilation of 112 statements was prepared in the next stage, with each statement delineating some of the identified dimensions of emotional maturity. The prepared statements were carefully examined to eliminate any things that were confusing, irrelevant, or capable of being construed in several ways. The list of items was then subjected to careful examination and was thereafter presented to experts for their appraisal. Based on the suggestions received, certain items were removed, and others were altered, and finally a revised compilation of 100 elements was chosen for the draft scale. The draft scale was prepared with a response-pane for the respondents to indicate their level of agreement or disagreement for each item on a 5-point scale, viz., "Strongly disagree", "Disagree", "Undecided", "Agree" and "Strongly agree".

3.7.2.2 *Initial try-out of the draft EMSS*

Following the preparation of the test items in accordance with the design, a trial test was administered to assess the test's quality, establish the time limit, and finalise the test's format. A total of 119 students from three distinct high schools in Thrissur district were selected as the sample for the pilot testing. Prior to

conducting the exam, they were provided with instructions. The criterion for the time restriction of the final test was based on the majority of students' time taken, with a maximum limit of thirty minutes. The items that were unclear or had confusing phrasing were adjusted based on the feedback obtained from test participants. After the pilot test, all the selected 100 items were printed with necessary instructions.

3.7.2.3 Administration of the draft EMSS

The draft form of the Emotional Maturity Scale was administered on a group of 394 students studying in different grade levels of secondary and higher secondary classes (Std. VIII, Std. IX, Std. X, Std. XI, & Std. XII) of seven selected secondary schools from Ernakulam, Thrissur and Palakkad districts of Kerala. The participants were instructed to indicate their level of agreement or disagreement for each item on the scale by placing a tick mark (✓) in one of the five columns labelled 'Strongly disagree', 'Disagree', 'Undecided', 'Agree', and 'Strongly agree'. The response sheets were collected separately and scored suitably.

3.7.2.4 Scoring of the draft EMSS

The scoring of the draft Emotional Maturity Scale was done on a five-point scale by following the arbitrary weighing method. The credits given are 5, 4, 3, 2 and 1 points for responses 'Strongly disagree', 'Disagree', 'Undecided', 'Agree',

and 'Strongly agree' respectively. The scores of all the items were summated to obtain the Emotional Maturity score of an individual.

3.7.2.5 *Item analysis*

An item analysis was conducted to determine the appropriateness of the items for inclusion in the final scale. Out of the 394 draft scales that were distributed, sixteen were eliminated due to incomplete entries, and an additional eight were rejected by random selection. As a result, the number of booklets available for item analysis purposes was reduced to 370. The 370 booklets were organised in a decreasing order based on their overall scores. The highest 27 percent (the top 100) and the lowest 27 percent (the bottom 100) booklets were selected as extreme groups for item analysis. The scores obtained for each item in these extreme groups were utilised to calculate the discriminating power of each item. The discriminating power was obtained by calculating the t-value using the formula:

$$t = \frac{\bar{X}_H - \bar{X}_L}{\sqrt{\frac{\Sigma(X_H - \bar{X}_H)^2 + \Sigma(X_L - \bar{X}_L)^2}{N(N-1)}}$$

Edwards (1957)

where,

- $\bar{X}_H$ = The mean score on a given statement for the high group
- $\bar{X}_L$ = The mean score on the same statement for the low group
- X_H = The score for a given individual for a given statement in the high group.

- X_L = The score for a given individual for a given statement in the low group.
- N = Number of subjects in the criterion group

The items for which t-value is greater than or equal to 1.96 were selected for the final test as they possess internal consistency and hence discriminating power.

3.7.2.6 Preparation of final form of EMSS

After doing item analysis, it was noticed that a total of 59 items had a discriminating power more than 1.96. To ensure practicality and ease, the final scale was streamlined by eliminating items with the lowest discriminatory power. As a result, the test now consists of a total of 50 items, with 10 items representing each domain of emotional maturity.

3.7.2.7 Validity and reliability of EMSS

The internal validity of EMSS was guaranteed by the use of rigorous protocols throughout the development of the instrument, specifically with regard to item selection. The face validity of the scale was determined by submitting the prepared scale to experts for their assessment. The scale's content validity was upheld by meticulous examination of the latest research and expert input. The criterion validity of EMSS was ensured by correlating the scores of EMSS with the scores of another well-established instrument, namely the Emotional Maturity Scale (Singh & Bhargava, 1990). Both tools were administered to a sample of 123 HSS-students, and the correlation between the two sets of the results was

determined. The calculated validity coefficient was 0.69. The test-retest method was used to ascertain the reliability of the final scale. The EMSS was administered twice on a representative sample of 119 students in higher secondary school, with a four-week gap between each administration. The coefficient of correlation was calculated to assess the reliability of the instrument by correlating the scores obtained in two testing. The scale's reliability coefficient was determined to be 0.79, exposing high reliability of the instrument. The Emotional Maturity Scale, designed specifically for this study, is provided in **Appendix-D** in the regional language (Malayalam) and in **Appendix-E** in its English translated form.

3.7.3 Psychological Resilience Scale for Adolescents (PRSA)

The instrument developed and standardized by the investigator for assessing psychological resilience of the HSS-students is named as Psychological Resilience Scale for Adolescents (PRSA). This test is intended to provide an objective measure of the capacity of an adolescent to cope emotionally and cognitively with a crisis and to return to pre-crisis status quickly. The details of the procedure involved in the development of the test are given under suitable sub-headings:

3.7.3.1 *Planning and preparation of items for draft PRSA*

As a preliminary step, a careful analysis of the Psychological Resilience Scale for Youth developed by Bhat and Khan (2018), and the Resilience Scale

developed by Wagnild and Young (1988) were done. A detailed examination of the psychometric properties of the Resilience Scale-10 (Jardim, Pereira & Bartolo, 2021) was also done along with a critical review of literature describing the construct and theories of psychological resilience. Experts in the field of Education and psychology were consulted, and their suggestions were considered to identify five key domains of psychological resilience - Goal setting and planning, Self-efficacy, Emotional regulation, Social attractiveness, and Empathy. Subsequently 109 statements, each of which discloses either a cognitive, or emotional or behavioural aspect of any of the five dimensions of the construct of Psychological Resilience, were prepared. The list of the statements was presented to a group of experts in the fields of Psychology and Education, who carefully examined the items for their conceptual precision, linguistic coherence, face validity, and repetitiveness. After taking into account the recommendations provided by the experts, a few things were modified, some were rewritten, and others were removed from the list, resulting in a decrease in the total number of draft items to 103. Considering the opinion of the experts, all the items were worded positively. The draft scale was printed on paper with an adjacent response-pane with five response alternatives - Strongly Agree, Agree, Not Sure, Disagree and Strongly Disagree.

3.7.3.2 Pilot study

A total of 103 draft questions, categorised into five domains of psychological resilience, were administered to a sample of 63 adolescents from a

higher secondary school. Concise and explicit instructions were provided to the participants, along with the answer form. The average time required by the students to finish an item in the examination was recorded to estimate the duration to be allocated for the final testing. After analysing the pilot test and gathering feedback from students who took it, the response options were slightly modified, and the wording and format of certain items were enhanced to improve clarity and comprehension. A total of 100 items were included in the final version of the test.

3.7.3.3 Administration of the draft PRSA

A cohort of 394 teenagers, aged 16-18, attending higher secondary schools in Thrissur district (Kerala), were administered the preliminary version of the Psychological Resilience Scale. The participants were instructed to indicate their response to each item in the test by placing a tick mark (✓) in the suitable cell against each item. The response papers were gathered individually and scored accordingly.

3.7.3.4 Scoring draft PRSA

The scoring of the draft PRSA was done manually by the investigator. Prior to scoring, each response sheet was scrutinized for its completeness and made sure that only one response alternative was marked by the respondent. The items were scored by following the mandatory scoring method. Accordingly, score of 5,

4, 3, 2 and 1 were given to responses Strongly Agree, Agree, Not Sure, Disagree and Strongly Disagree respectively.

3.7.3.5 Item analysis

An item analysis was conducted to determine the most appropriate items for the final test. The Edwards (1957) methodology was employed to determine the discriminating power of the items. From the total of 394 response sheets collected, only 370 were chosen for item analysis. Part of the exempted papers were not fully filled out, and a few of them were arbitrarily excluded in order to reduce the total number to 370 for the sake of convenience. The 370 booklets were sorted in descending order based on the overall scores. The top 100 students (27%) and bottom 100 students (27%) were selected as extreme groups for item analysis. The scores for each item in these extreme groups were utilised to calculate the discriminating power of each item. The discriminating power was determined by computing the t-values of each item using the procedure provided by Edwards (1957), as given in Section 3.7.2. Subsequently, the t-value for a set of 100 items was computed and tabulated. Items having a t-value of 1.96 or above were chosen with the idea that these items effectively differentiate between students with high and low psychological resilience.

3.7.3.6 Preparation of final form of PRSA

After doing item analysis, it was seen that a total of 61 items had a discriminating power more than 1.96. In order to ensure practicality and ease, the

final scale was streamlined by eliminating eleven questions with the lowest discriminating power. This was done by maintaining a balanced representation of psychological resilience, with ten items from each dimension being selected. The items were carefully examined once again to ensure that they were clear and expressed in a simple manner before finalising the scale.

3.7.3.7 *Validity and reliability of PRSA*

The face validity of the PRSA was determined by presenting the prepared test to experts for their evaluation. The instrument's construct validity was established by meticulously developing the items based on a thorough examination of the theoretical ideas of psychological resilience. The core dimensions of the construct were extensively studied, and the test items were groomed in a manner that ensured content validity. The criterion-related validity was determined by estimating the coefficient of correlation between the PRSA scores of 122 HSS-students and their scores on a Malayalam translated version of the Brief Resilience Scale (Smith, Dalen, Wiggins, Tooley, Christopher & Bernard, 2008). The two sets of scores had a strong positive correlation ($r = 0.76$), indicating that the PRSA is a reliable tool for assessing the psychological resilience of adolescents in the secondary schools. The test-retest method was used to determine the reliability of the PRSA. The instrument was given to a

sample of 117 HSS-students twice, with a 4-week gap between administrations. The correlation coefficient was calculated to assess the reliability of the instrument. The reliability coefficient of PRSA was found to be 0.87, showing a good level of consistency in measuring the psychological concept of psychological resilience. The PRSA, developed for the purpose of the study in the regional language (Malayalam) given in **Appendix-F**, and its English translated version in **Appendix-G**.

3.7.4 Adapted Version of Rotter's Internal-External Locus of Control Scale (ARIES)

The locus of control of the students was assessed by administering the Adapted Version of Rotter's Internal-External Locus of Control Scale (ARIES), originally established by Rotter (1966). The original I-E Scale has 29 forced-choice items, with 23 items specifically designed to assess the locus of control expectations and the remaining 6 items serving as fillers. Every item comprises a pair of assertions. The participants must select between an internal and an external option. To suit the instrument to measure the locus of control of adolescents of Indian socio-cultural context, the Rotter's I-E Scale was adapted to Indian context (Arjunan & Abraham, 2003) by incorporating some changes and adding three more filler items, thus the total number of items in the new version being 32. The adapted scale was found to have a concurrent validity of 0.93 (correlation with the original scale in a bilingual sample) and a test-retest reliability (four weeks interval) of 0.88. The Adapted I-E Scale in Malayalam, its

English translated version, and its Scoring Key are given in **Appendix-H**, **Appendix-I**, and **Appendix-J** respectively.

3.7.5 Brief Socio-Economic Status Scale (BSES)

The socio-economic status of the participants, one of the socio-demographic factors likely to influence the effect of independent variables on the dependent variables, was measured by using the Brief Socio-Economic Status Scale (BSES) developed by Arjunan (2022). It is a non-standardised instrument which covers three domains of socio-economic status of people living in Kerala. The domains covered are Education, Occupation, and Income of the Family. The total family income is divided with the number of adult members treated as 1 and two minors treated as 1. Based on the total annual income, families were categorised into six: [(i) < Rs. 50000/-, (ii) between Rs. 50,000-1,00,000, (iii) between Rs. 1,00,000 – 2,00,000, (iv) between Rs. 2,00,000 – 5,00, 000, and (v) above Rs. 5,00,000 – 10,00,000, and (vi) above Rs. 10,00,000. The score of family income was estimated by giving scores from 1 to 6 from lowest to highest income category. Education of adult members are considered for computing the social status while that of children studying are not counted. Educational status of the parents was categorized into seven groups ranging from illiterate to Ph.D/Professional PG, scored from 1 to 7. The scores of both the parents are added to estimate the total score for parental education. Occupational status of parents or employed members are rated by using the criteria of government servants as Class-I, Class-II, Class-III, and Class-IV, and uncategorised people are taken separately as

Class-V. A weighted scores of 5 to 1 for Class-I to Class-V are given to estimate the SES-score which ranges from 5 to 30. The total SES scores is estimated by adding the scores of parental education, family income (after dividing with number of family members; adult taken as 1 and children as $\frac{1}{2}$) and occupational status of parents. The Socio-Economic Status Scale used for the study, in Malayalam, is given in **Appendix-K** and its English version in **Appendix-L**.

3.8 PROCEDURE ADOPTED FOR THE STUDY

After developing the tools needed for data collection, planning was done for the administration of the tests. The researcher requested consent from the school officials to collect data from the students for the study. The objectives and scope of the study, and the type of information to be gathered from the students were clearly explained to the school officials to ensure better cooperation and transparency. Then the researcher herself administered the instruments on the sample in a controlled and uniform manner. Before distributing the instruments, the investigator thoroughly examined them and familiarised herself with the protocols of administering psycho-pedagogic instruments and possible eventualities. Stringent measures were implemented to ensure consistency in the procedure of administration of the instruments across all the schools chosen for data collecting. Prior to administering each instrument, participants were provided with explicit and accurate instructions on how to record their responses on the answer sheets, the time allotted for completing the test, and personal

details to be furnished on the response sheets. The following steps were invariably followed in administering the tests:

1. Self-introduction by the researcher, founding rapport with respondents, followed by a brief description of the purpose of her visit and nature of the tests.
2. Ensuring enough physical amenities in the classroom.
3. Distribution of the test booklets to the students along with written instructions that outline the general guidelines to be followed by the students.
4. Providing an elucidation of the general instructions inside the test booklets.
5. Familiarizing the pupils with the response sheets and the method of marking their responses.
6. Addressing any uncertainties regarding the directions to be followed, strictly adhering to time constraints, and method of dealing with eventualities etc.
7. Gathering the booklets and response papers in the same sequence of distribution.
8. Granting a 10-minute gap between each successive testing session.

Before administering the exams, the students were notified that the tools should not be seen as a measure of their knowledge or any other accomplishment; instead, they should be viewed as an effort to share their concerns. Furthermore, they were assured that the results would exclusively be utilized for research purpose and would never be used for evaluating their scholastic performance, cocurricular achievement, conduct, or recommending them for any scholarship or awards. This facilitated the reduction of their stress and test anxiety and ensured active collaboration throughout the testing duration. The instruments were administered on the sample in four sessions, with each session lasting approximately 35-40 minutes. The order of administration followed the sequence outlined in Section 3.7, commencing with the Academic Stress Scale and concluding with the Locus of Control Scale. Each tool was accompanied at the beginning by a Personal Data Sheet for collecting the essential background information of the participants required for the study.

3.9 SCORING AND CONSOLIDATION OF DATA

The answer sheets of all the respondents were thoroughly examined to ensure their completeness and accuracy prior to scoring. Among the 1316 sets of response sheets, 84 sets were identified as incomplete or faulty and were subsequently eliminated from the pool. As a result, the effective sample size was reduced to 1232. The response sheets of all the tests were evaluated according to the prescribed scoring criteria for each instrument. The tests were manually

scored by the investigator with the help of her colleagues using a pre-prepared or scoring keys provided with the tools. The data from the sample of 1232 individuals was consolidated using computer software (MS Excel), with a focus on obtaining important sub-sample categories such as gender, type of family, ordinal position, socio-economic status, and type of school management. The scores for various tests were inputted into a spread sheet on a personal computer, after the assignment of a serial number to each student. The data from the master tabulation sheet was categorised and analysed statistically based on the requirements.

3.10 STATISTICAL TECHNIQUES USED FOR DATA ANALYSIS

The specific objectives and the hypotheses of the study outlined the statistical techniques to be used for analysing the data. The major statistical employed for data analysis include the following:

- a) Computations of statistical indices like Mean (M), Median (Mdn), Standard Deviation (σ), Skewness (Sk), Kurtosis (Ku), Standard Error of Mean (SE_M), $M_{POP} .05$ level and $M_{POP} .01$ level etc.
- b) Independent sample t-test
- c) One-way ANOVA
- d) Scheffé's post-hoc test

- e) Pearson's Product-Moment Coefficient of Correlation (r -value), estimation of Standard error of coefficient of correlation (SE_r) and Population values for coefficient of correlation (r_{POP}).
- f) Fisher's z-transformation test
- g) Multiple Regression Analysis
- h) Factorial ANOVA



ANALYSIS AND INTERPRETATION

- Descriptive Analysis of Variables
- Mean Difference Analysis
- Correlational Analysis
- Comparison of Correlations
- Three-way Analysis of Variance
- Multiple Regression Analysis

CHAPTER IV

ANALYSIS AND INTERPRETATION

The current study aims to investigate how emotional maturity, psychological resilience, and locus of control is related to academic stress among Higher Secondary School students (HSS students) of Kerala. The data gathered from 1232 higher secondary school students were analyzed descriptively as well as inferentially with the help of SPSS to answer the research questions and test the hypotheses. The analyses performed are presented under different sub-titles as shown below:

- 4.1 Academic stress of higher secondary school students and comparison of subgroups.
- 4.2 Emotional maturity of higher secondary school students and comparison of subgroups.
- 4.3 Psychological resilience of higher secondary school students and comparison of subgroups
- 4.4 Locus of control of higher secondary school students and comparison of subgroups.
- 4.5 Relationship between emotional maturity and academic stress of higher secondary school students.

- 4.6 Comparison of the relationship between emotional maturity and academic stress of subsamples.
- 4.7 Relationship between psychological resilience and academic stress of higher secondary school students.
- 4.8 Comparison of the relationship between psychological resilience and academic stress of subgroups.
- 4.9 Relationship between academic stress and locus of control of higher secondary school students.
- 4.10 Comparison of the relationship between academic stress and locus of control of subgroups.
- 4.11 Effect of emotional maturity, psychological resilience and locus of control on academic stress of higher secondary school students.
- 4.12 Influence of emotional maturity, psychological resilience, and locus of control on academic stress.
- 4.13 Prediction of academic stress of higher secondary school students from emotional maturity, psychological resilience and locus of control.

The details of the analyses performed with regard to each of the subsections are presented below:

4.1 ACADEMIC STRESS OF HIGHER SECONDARY SCHOOL STUDENTS AND COMPARISON OF SUBGROUPS

This segment of the analysis displays the distribution of academic stress of higher secondary school students in terms of the scores obtained on Academic Stress Scale for Higher Secondary School Students (ASHS). The ASHS scores were analyzed descriptively for the whole sample as well as for the sub-samples based on gender, type of family, ordinal position and socio-economic status of the family. The sub-samples were further compared to find out the significant difference, if any, in their academic stress. The details of the analysis done incidentally are given below:

4.1.1 Descriptive Analysis of Academic Stress Scores

Descriptive statistics provide concise summaries about the main features of a dataset, which offer a quick overview of the data distribution, and enables to identify patterns and trends within the data. The vital statistical indices such as Mean (M), Median (Mdn), Standard Deviation (σ), Kurtosis (Ku), Skewness (Sk), Standard error of Mean (SE_M) and Parameter estimates of mean (M_{POP}), computed from the ASHS scores for the total sample and sub-samples based on Gender (Male and female students), Type of family (Extended family and Nuclear family), Ordinal position (Only child, Firstborn, Middleborn, and Lastborn) and Socio-economic status of the family (High SES, Average SES and Low SES), are given in Table 4.1.

Table 4.1: Statistical indices pertaining to academic stress of higher secondary school students

Groups	Sample	N	Range	M	Mdn	σ	Sk	Ku	SE _M	M _{POP.05}	M _{POP.01}
Whole	Total	1232	100	168.91	170.0	21.10	-0.336	-0.091	0.60	167.72 170.09	167.36 170.46
Gender	Male	583	94	164.93	168.0	22.02	-0.359	-0.318	0.91	163.14 166.72	162.57 167.28
	Female	649	91	172.49	172.0	19.56	-0.194	-0.102	0.77	170.98 173.99	170.50 174.47
Family Type	Extended	532	99	160.55	164.0	20.86	-0.293	-0.325	0.90	158.78 162.33	158.21 162.89
	Nuclear	700	94	175.26	174.0	18.97	-0.283	-0.048	0.72	173.85 176.67	173.41 177.11
Ordinal Position	Only	195	98	173.23	174.0	21.78	-0.614	0.457	1.56	170.15 176.30	169.17 177.28
	First	462	99	169.23	170.0	21.15	-0.228	-0.212	0.98	167.29 171.16	166.69 171.77
	Middle	127	94	170.96	171.0	20.0	-0.331	0.054	1.78	167.45 174.47	166.32 175.61
	Last	448	96	166.12	169.5	20.70	-0.367	-0.160	0.98	164.19 168.04	163.59 168.64
Socio-economic Status	High	254	87	170.99	172.0	19.82	-0.225	-0.410	1.24	163.54 173.44	167.77 174.22
	Average	703	100	168.29	170.0	21.01	-0.322	0.028	0.79	166.74 169.85	166.25 170.34
	Low	275	96	168.56	170.0	22.37	-0.390	-0.231	1.35	165.90 171.22	165.06 172.06

The results of the descriptive analysis presented in Table 4.1 indicate that the sample selected for the study is heterogeneous with respect to academic stress. The highest score obtained is 211 (out of a maximum of 250) and the lowest score obtained is 111 (out of a minimum of 50), with an estimated range of 100. The arithmetic mean calculated for the total sample is 168.91, with a

standard deviation of 21.10. The median estimated (Mdn. = 170.0) lies very close to the arithmetic mean (168.91) with a slight shift to the high end of the distribution. The skewness estimated for the distribution is negligible with its value positioned between $-\frac{1}{2}$ and $+\frac{1}{2}$, making it symmetrical. The parameter estimates of mean (M_{POP}) fall between 167.72 and 170.09 at 0.05 levels; and between 167.36 and 170.46 at 0.01 levels. The standard error of mean (SE_M) for the entire sample is 0.60. The distribution of the academic stress scores in the total sample of higher secondary school students is shown in Figure 4.1.

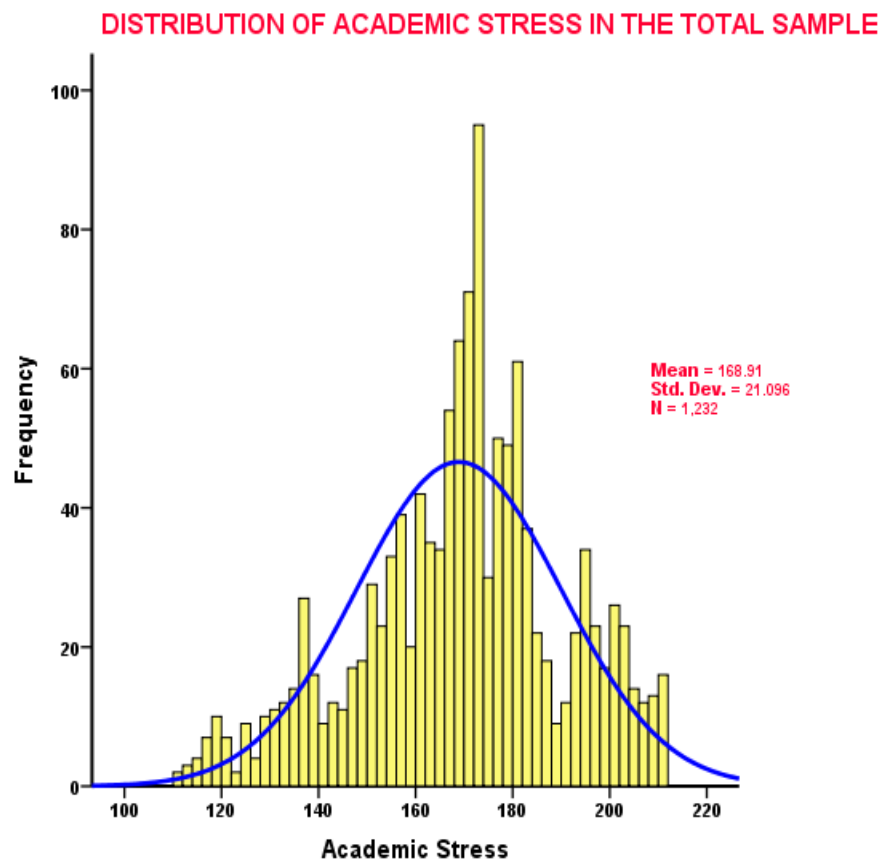


Figure 4.1: Distribution of academic stress in the total sample of higher secondary school students.

4.1.2 Extent of Academic Stress among Higher Secondary School Students

To find out the extent of academic stress among HSS students, the whole sample was divided into different levels based on the Mean (M) and Standard Deviation (σ) of the ASHS scores, by employing the standard deviation method of classification (empirical rule). Accordingly, students who scored $M+2\sigma$ and above (211 and above) were taken as “Very High Academic Stress Group”, those scored between $M+\sigma$ and $M+2\sigma$ (between 190 and 210) were taken as “High Academic Stress Group”, those who scored between $M+\sigma$ and $M-\sigma$ (between 189 and 149) were taken as “Average Academic Stress Group”, those who scored between $M-\sigma$ and $M-2\sigma$ (between 148 and 128) were taken as “Low Academic Stress Group” and those who scored $M-2\sigma$ and below (below 127) were taken as “Very Low Academic Stress Group”. The number and proportion of HSS students having different extent of academic stress in the whole group is given in Table 4. 2.

Table 4.2: Extent of academic stress in the total sample of higher secondary school students

Sl. No.	Category	Norm	Score Range	No.	%
1	Very High Stress	Above $M+2\sigma$	≥ 211	7	0.57
2	High Stress	Above $M+\sigma$ and below $M+2\sigma$	190 - 210	205	16.64
3	Average Stress	Between $M+\sigma$ and $M-\sigma$	189 - 149	822	66.72
4	Low Stress	Below $M-\sigma$ and above $M-2\sigma$	148 - 128	150	12.18
5	Very Low Stress	Below $M-2\sigma$	≤ 127	48	3.90
Total				1232	100.00

The distribution of academic stress scores reveals that approximately 67% of the HSS students fall within the average stress range (scores 149–189). A notable 17% experience high stress levels (scores 190–210), while a small fraction, about 0.6%, report very high stress (scores above 211). Conversely, around 12% of students exhibit low stress (scores 128–148), and roughly 4% fall into the very low stress category (scores below 127). The data indicates that the majority of students fall within the average stress range, but approximately 17% of the group experience elevated to extremely high stress levels, potentially impacting their health and academic success. Conversely, around 16% report low to very low stress, suggesting they may face less academic pressure. The proportion of different stress groups in the total sample of HSS students are portrayed in Figure 4.2

LEVELS OF ACADEMIC STRESS IN THE TOTAL SAMPLE

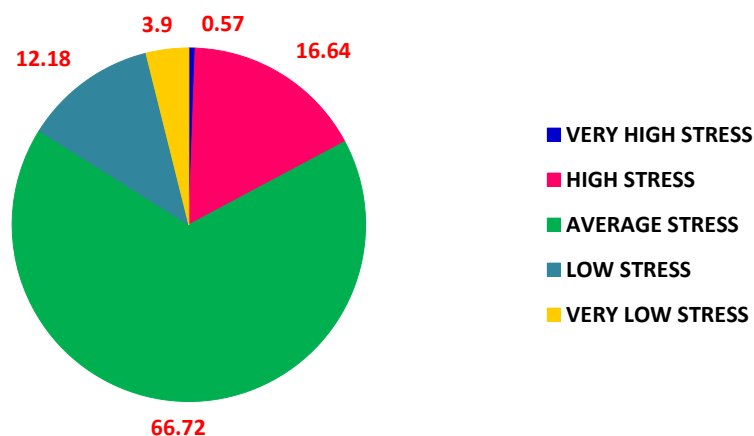


Figure 4.2: Proportion of different academic stress groups in the total sample

4.1.3 Comparison of Academic Stress of the Sub-samples

In this section, the academic stress scores of sub-samples based on gender (male and female students), type of family (extended families and nuclear families), birth order (only child, firstborn, middleborn and last-born), and socio-economic status (high, average and low SES) were compared to find out the differential influence of these demographic factors on academic stress experienced by higher secondary school students, followed by testing of Hypothesis-1.

Hypothesis-1: There is no significant difference in the academic stress of higher secondary school students with respect to gender, type of family, ordinal position, and socio-economic status.

4.1.2.1. Comparison of academic stress of sub-samples based on gender

The academic stress scores of male and female higher secondary school students were compared by employing independent sample t-test so as to find out the significant difference, if any, between the groups. Table 4.3 presents the data and result of the analysis performed in this regard.

Table 4.3: Comparison of the academic stress of male and female students

Groups	Statistical Indices				t-value	Sig.
	N	M	SD	SE _M		
Male	583	164.93	22.02	0.91	6.380	.001
Female	649	172.49	19.56	0.77		

Comparison of the academic stress of male and female students generated a t-value that is significant at 0.01 level ($t = 6.380$; $p < 0.001$). It exposes the presence of a true difference between male and female students in their academic stress. Inspection of the mean estimates shows that female students ($M = 172.49$) indicated higher levels of academic stress than the male students ($M = 164.93$). The mean difference in the academic stress of the gender based sub-samples of higher secondary school students is depicted in Figure 4.3.

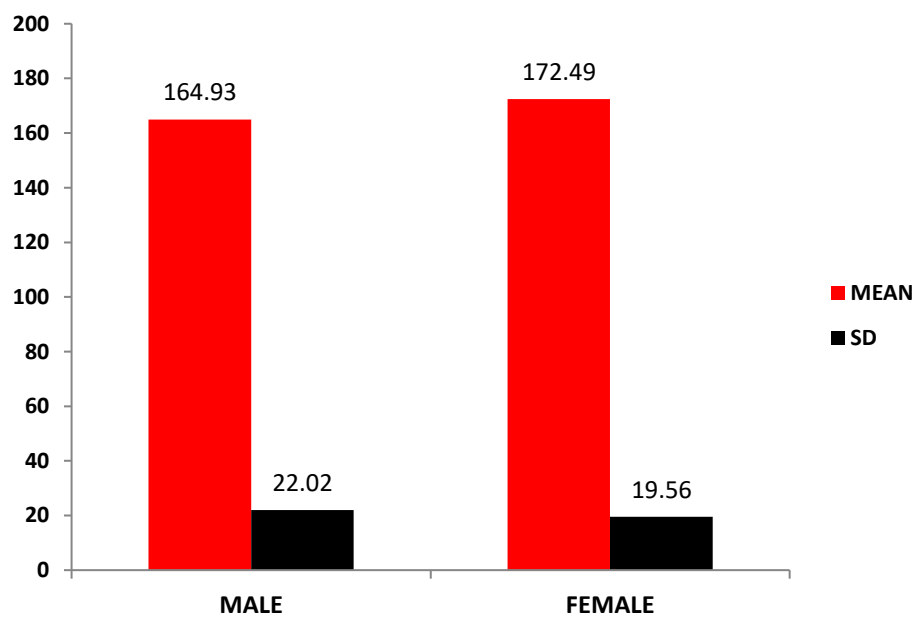


Figure 4.3: Mean difference between male and female students in academic stress

4.1.2.2. *Comparison of academic stress of students from extended families and nuclear families*

The ASHS scores of higher secondary school students coming from extended families and nuclear families were compared to find out the differential

effect of type of family on their academic stress. The result of the independent sample t-test performed in this context is given in Table 4.4.

Table 4.4: Comparison of academic stress of students from extended families and nuclear families

Groups	Statistical Indices				t-value	Sig.
	N	M	SD	SE _M		
Extended	532	160.55	20.86	.904	12.913	.001
Nuclear	700	175.26	18.97	.717		

Comparison of students from extended families and nuclear families regarding their academic stress generated a t-value that is significant beyond 99.9% confidence interval ($t = 12.913$; $p < .001$). Type of family, whether the student is living in a nuclear family or extended family, is a significant factor deciding the magnitude of academic stress they experience. Scrutiny of the mean ASHS scores obtained for the sub-samples based on type of family shows that students hailing from nuclear families ($M = 175.26$) experience higher levels of academic stress compared to their colleagues from extended families. The mean difference in the academic stress of students from extended and nuclear families is shown in Figure 4.4.

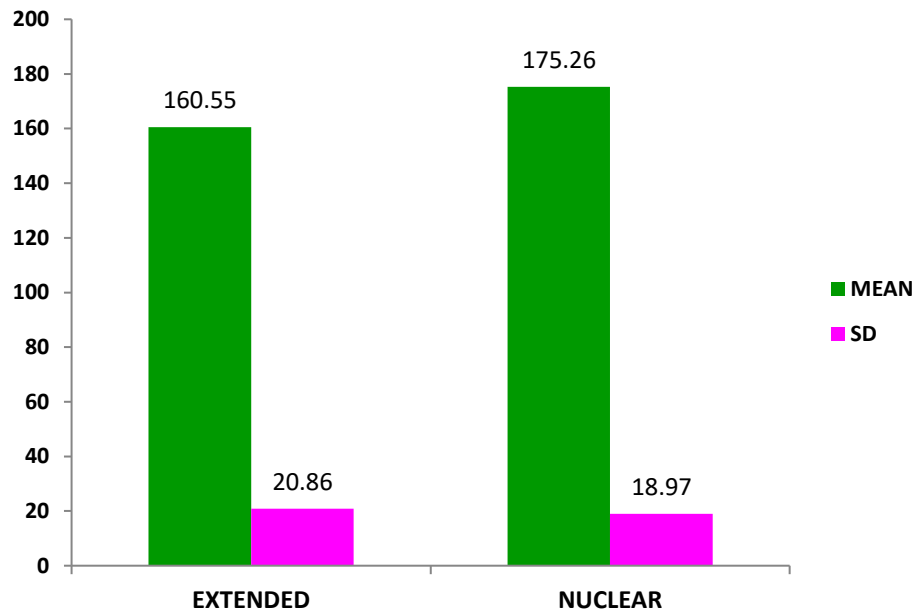


Figure 4.4: Mean difference between students from extended families and nuclear families in academic stress

4.1.2.3. *Comparison of academic stress of students in different birth orders*

In order to find out the differential influence of ordinal position on academic stress experienced by higher secondary school students, the academic stress scores of only children, ‘firstborn children’, middleborn children and lastborn children were compared by employing one-way ANOVA. Table 4.5 presents the summary of the ANOVA conducted in this regard.

Table 4.5: Comparison of the academic stress of students in different ordinal positions (Summary of ANOVA)

AST	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	7710.117	3	2570.039		
Within Groups	540132.519	1228	439.847	5.843	.001
Total	547842.636	1231			

The F-value obtained on comparing the academic stress of higher secondary school students having different birth orders is significant at 99.9% confidence interval ($F = 5.843$; $p < .001$). It demonstrates the presence of a true statistical difference among the only child, firstborn, middleborn and lastborn students, regarding the stress they experience in educational context. The mean difference in the academic stress of students with different ordinal positions is portrayed in Figure 4.5.

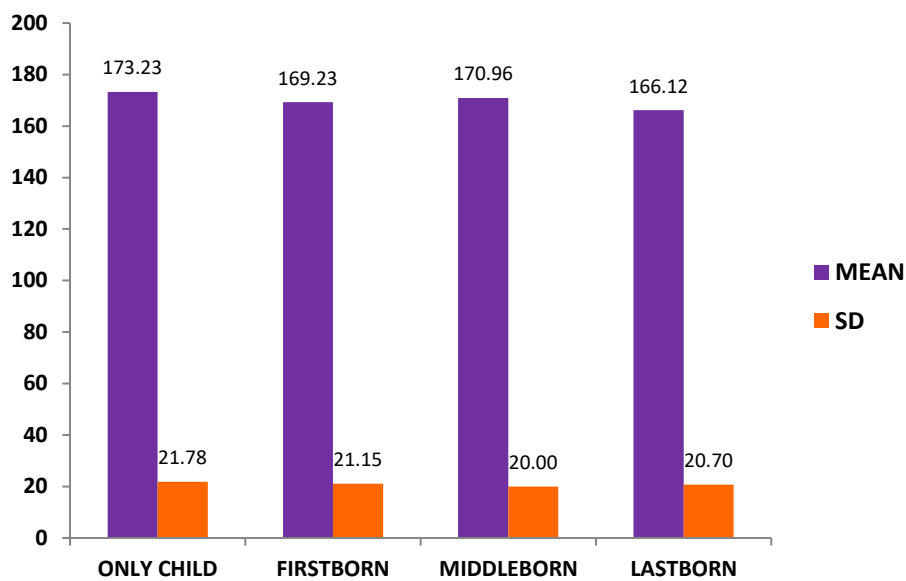


Figure 4.5: Mean Difference in academic stress of students in different ordinal positions

The one-way ANOVA was followed by Scheffe's post-hoc test to find out the group pairs which demonstrate true difference in academic stress. The result of the multiple comparisons made in this regard is presented in Table 4.6.

Table 4.6: Post hoc tests for comparison of the academic stress of students in different ordinal positions.

(I) OP	(J) OP	(I-J) Mean Difference	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
ONLY CHILD (O)	F	3.996	1.791	.174	-1.02	9.01
	M	2.265	2.391	.826	-4.43	8.96
	L	7.110*	1.799	.001	2.07	12.15
FIRSTBORN (F)	O	-3.996	1.791	.174	-9.01	1.02
	M	-1.731	2.101	.878	-7.61	4.15
	L	3.113	1.391	.171	-.78	7.01
MIDDLEBORN (M)	O	-2.265	2.391	.826	-8.96	4.43
	F	1.731	2.101	.878	-4.15	7.61
	L	4.845	2.108	.153	-1.06	10.75
LASTBORN (L)	O	-7.110*	1.799	.001	-12.15	-2.07
	F	-3.113	1.391	.171	-7.01	.78
	M	-4.845	2.108	.153	-10.75	1.06

* The mean difference is significant at the 0.05 level.

The results of the post-hoc test reveals the following:

- 1) There is no significant difference between the only children and the firstborns in their academic stress (Mean difference = 3.996; $p > .05$).
- 2) The only children and the middleborn children are almost alike in their academic stress (Mean difference = 2.265; $p > .05$).

- 3) The only children differed significantly from the lastborn children in their academic stress (Mean difference = 7.110; $p < .001$), the former having greater academic stress than the later.
- 4) The 'firstborn children' and the middleborn children do not differ significantly in their academic stress (Mean difference = 1.731; $p > .05$);
- 5) No true difference was observed between 'firstborn children' and 'last-born children' in their academic stress (Mean difference = 3.113; $p > .05$).
- 6) There is no significant difference between the middleborn children and lastborn children regarding their academic stress (Mean difference = 4.845; $p > .05$).

As evident from the analysis, the observed difference between the children in different ordinal positions is confined to one paired combination, viz., between the 'only children' and the 'lastborn children'. No significant differences exist between other paired birth order groups compared.

4.1.2.4. Comparison of academic stress of students in different SES

In this section of the analysis, the academic stress of higher secondary school students from different socio-economic status were compared to find out the significant difference, if any, among the groups. As a first step, the sample were categorized into High, Average and Low levels of SES based on their scores

on the Brief Socio-Economic Status Scale (BSES), by employing the $M \pm \sigma$ principle. Accordingly, those who scored $M + \sigma$ and above on the BSES Scale were taken as students from High SES, those who scored $M - \sigma$ and below on the SES Scale were taken as students from Low SES, and students who scored between $M + \sigma$ and $M - \sigma$ were considered as from Average SES. Students from the high, average and low SES were then compared with respect to their academic stress scores by employing one-way ANOVA, the summary of the same is given in Table 4.7.

Table 4.7: Comparison of the academic stress scores of students from high, average and low socio-economic status (Summary of ANOVA)

AST	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1403.671	2	701.835		
Within Groups	546438.965	1229	444.621	1.579	NS
Total	547842.636	1231			

The F-value estimated on comparing the ASHS scores of higher secondary school students from high, average and low SES is not significant ($F = 1.579$; $p > .05$), disclosing that socio-economic status is not a significant factor that discriminates higher secondary school students on the basis of their academic stress.

4.1.2.5. *Tenability of Hypothesis-1*

The results of the statistical analysis done in the preceding sessions have brought out the following:

- 1) Male and female students differ significantly regarding academic stress ($t = 6.380$; $p < 0.001$: vide Table 4.3).
- 2) Students from extended families and nuclear families differ significantly in their academic stress ($t = 12.913$; $p < .001$: vide Table 4.4).
- 3) Students in different ordinal positions differ significantly in their academic stress ($F = 5.843$; $p < .001$): vide Table 4.5).
- 4) Students from high, average and low socio-economic status do not differ significantly regarding academic stress ($F = 1.579$; $p > .05$: vide Table 4.7).

The hypothesis formulated in this circumstance, viz., Hypothesis-1 (*there is no significant difference in the academic stress of higher secondary school students with respect to gender, type of family, ordinal position, and socio-economic status*) is, hence, partially accepted.

4.2 EMOTIONAL MATURITY OF HIGHER SECONDARY SCHOOL STUDENTS AND COMPARISON OF SUBGROUPS

Efforts have been made in this section to examine the emotional maturity of higher secondary school students, considering the sample as total group as well as the subgroups based on gender, type of family, birth order and socio-economic status. The details of the analysis done incidentally are presented below.

4.2.1 Descriptive Analysis of Emotional Maturity Scores

The important statistical indices such as Mean (M), Median (Mdn), Standard Deviation (σ), Skewness (Sk), Kurtosis (Ku), Standard Error of Mean (SE_M) and population values of the Mean (M_{POP}), calculated from the emotional maturity scores of the entire sample and the sub-samples based on gender, type of family, birth order and socio-economic status are presented in Table 4.8.

Table 4.8: Statistical indices pertaining to emotional maturity of higher secondary school students

Groups	Sample	N	Range	M	Mdn	σ	Sk	Ku	SE_M	$M_{POP.05}$	$M_{POP.01}$
Whole	Total	1232	159	142.69	141.0	36.72	0.019	-0.837	1.04	140.64 144.74	139.99 145.39
Gender	Male	583	159	146.02	143.0	40.46	-0.037	-1.082	1.68	142.73 149.32	141.69 150.35
	Female	649	151	139.69	140.0	32.74	-0.030	-0.632	1.29	137.17 142.21	136.37 143.01
Family Type	Extended	532	159	152.29	157.0	36.96	-0.269	-0.751	1.60	149.14 155.44	148.15 156.43
	Nuclear	700	159	135.39	132.0	34.83	0.199	-0.679	1.32	132.81 137.98	131.99 138.79
Ordinal Position	Only	195	150	137.32	136.0	37.26	0.251	-0.890	2.67	132.06 142.58	130.38 144.26
	First	462	159	141.58	140.0	36.84	-0.050	00.733	1.71	138.21 144.94	137.14 146.01
	Middle	127	153	140.51	136.0	36.29	0.310	-0.695	3.22	134.14 146.88	132.09 148.94
	Last	448	148	146.79	150.0	36.16	-0.080	-0.879	1.71	143.43 150.14	142.37 151.21
Socio-economic Status	High	254	153	143.25	145.0	36.22	-0.127	-0.929	2.27	138.77 147.72	137.35 149.15
	Average	703	154	143.04	141.0	36.02	0.117	-0.845	1.36	140.38 145.71	139.53 146.55
	Low	275	153	141.26	138.0	38.98	-0.053	-0.798	2.35	136.63 145.89	135.17 147.36

The result of the descriptive analysis shows that the sample selected is heterogeneous with regard to the distribution of their emotional maturity. The highest score obtained for the entire sample is 217 out of a possible maximum of 250, and the lowest score obtained is 58 out of a minimum of 50; the range estimated is 159. The distribution of emotional maturity in the total sample as well as all the sub-samples are normal as the estimated skewness lies between $-\frac{1}{2}$ and $+\frac{1}{2}$. The mean estimated for the total sample is 142.69 with a standard deviation of 36.72. The median score ($Mdn = 141.0$) lies very close to the arithmetic mean, and the skewness computed ($Sk = 0.019$) is very small and negligible. The population mean calculated lies between 140.64 and 144.74 at 95% confidence interval and between 139.99 and 145.39 at 99% confidence interval, with a standard error of mean (SE_M) of 1.04. The distribution of the emotional maturity in the total sample of higher secondary school students is shown in Figure 4.6.

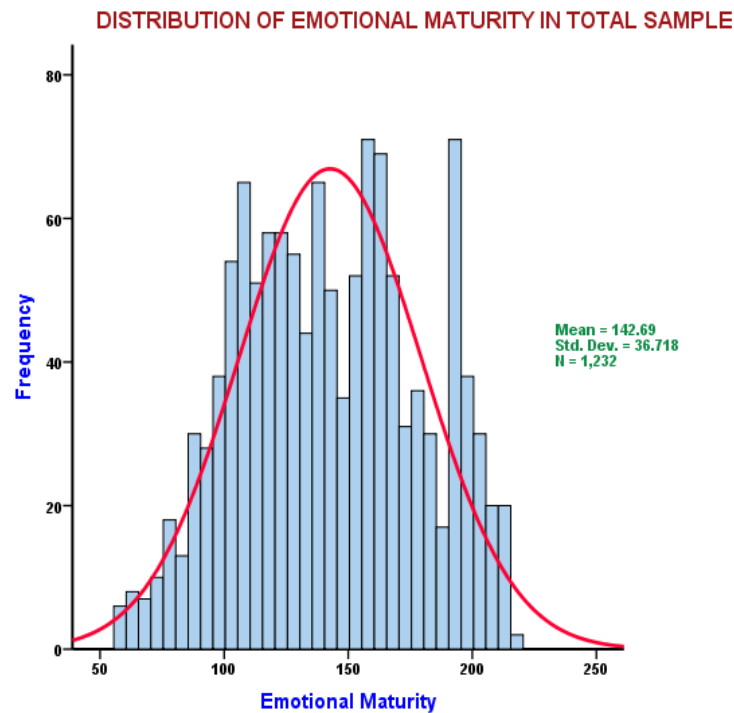


Figure 4.6: Distribution of emotional maturity in the total sample of higher secondary school students.

4.2.2 Extent of Emotional Maturity among Higher Secondary School Students

The whole sample was categorized into different groups based on the extent of emotional maturity by employing the Normal Distribution Rule ($M \pm \sigma$ Principle). The emotional maturity groups thus formed are: (i) Very High Emotional Maturity Group (EMSS score 216 and above), (ii) High Emotional Maturity Group (EMSS score between 179 and 215), (iii) Average Emotional Maturity Group (EMSS score between 178 and 107), (iv) Low Emotional Maturity Group (EMSS score between 106 and 70), and Very Low Emotional Maturity Group (EMSS score 69 and below). The number and proportion of the HSS students in different emotional maturity groups are given in Table 4.9.

Table 4.9: Extent of emotional maturity in the total sample of HSS students

Sl. No.	Category	Norm	Score Range	No.	%
1	Very High EM	Above $M+2\sigma$	≥ 216	2	0.16
2	High EM	Above $M+\sigma$ and below $M+2\sigma$	179 - 215	239	19.40
3	Average EM	Between $M+\sigma$ and $M-\sigma$	178 - 107	779	63.23
4	Low EM	Below $M-\sigma$ and above $M-2\sigma$	106 - 70	191	15.50
5	Very Low EM	Below $M-2\sigma$	≤ 69	21	1.70
Total				1232	100.00

Among 1,232 higher secondary students, the majority, approximately 63%, exhibit emotional maturity within the average range (scores 107–178). About 19% demonstrate high emotional maturity (scores 179–215), while a mere 0.16% achieve very high emotional maturity (scores above 216). On the lower spectrum, roughly 15% of students fall into the low emotional maturity category (scores 70–106), and about 2% are classified as having very low emotional maturity (scores below 69). This distribution suggests that emotional maturity is generally well-balanced, with most students falling in the average range. The fact that nearly one in five students displays high emotional maturity is promising, indicating strong emotional regulation in a significant portion of the group. However, roughly 17% of students in the low to very low categories may face challenges in managing their emotions, which could impact their social interactions and academic performance. The proportion of different emotional maturity groups in the total sample of HSS students are illustrated in Figure 4.7

LEVELS OF EMOTIONAL MATURITY IN THE TOTAL SAMPLE

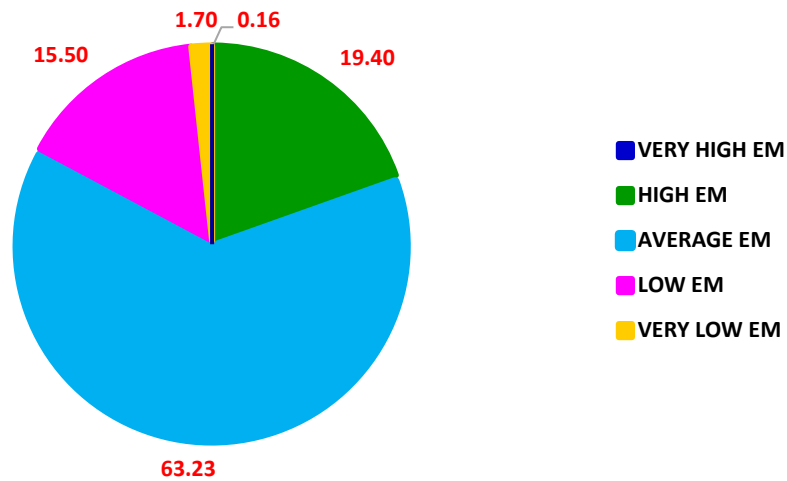


Figure 4.7: Proportion of different emotional maturity groups in the total sample

4.2.3 Comparison of Emotional Maturity of the Sub-samples

This section of the analysis is given over to compare the emotional maturity of different sub-samples of higher secondary school students so as to examine the differential influence of selected demographic factors on the distribution of the variable. The sub-samples based on gender, type of family, birth order, and socio-economic status were compared with respect to the scores obtained on the Emotional Maturity Scale for Higher Secondary School Students (EMSS), followed by testing of Hypothesis-2.

Hypothesis-2: There is no significant difference in the emotional maturity of higher secondary school students with respect to gender, type of family, ordinal position, and socio-economic status.

4.2.2.1. Comparison of emotional maturity of sub-samples based on gender

The emotional maturity scores of male and female higher secondary school students were compared to find out the differential effect of gender on the distribution of the variable. The data and result of the independent sample t-test performed in this regard is given in Table 4.10.

Table 4.10: Comparison of the emotional maturity of male and female students

Groups	Statistical Indices				t-value	Sig.
	N	M	SD	SE _M		
Male	583	146.02	40.46	1.676	3.033	.01
Female	649	139.69	32.74	1.285		

The t-value calculated on comparing the emotional maturity of male and female students is significant at 99% confidence interval ($t = 3.033$; $p < .01$), exposing the presence of significant gender difference in the emotional maturity of higher secondary school students. Since the mean score estimated for the male students ($M = 146.02$) is greater than that estimated for the female students ($M = 139.69$), the difference favours male students. Putting differently, compared to female students, the male students in the higher secondary schools of Kerala have greater capacity to understand, regulate and express emotions in a manner that promotes individual development and harmonious interpersonal relationship. The mean difference in the emotional maturity of male and female students of higher secondary schools is portrayed in Figure 4.8.

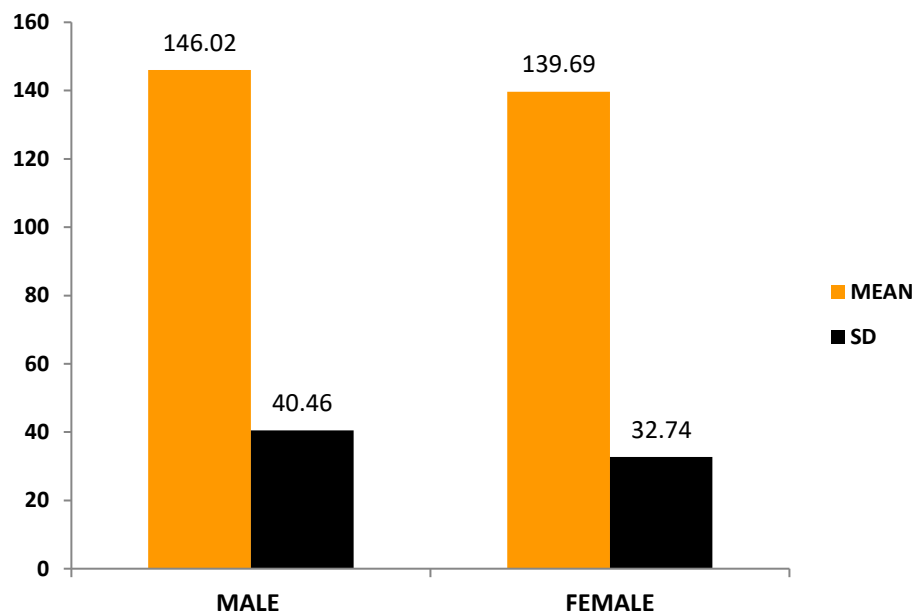


Figure 4.8: Mean difference between male and female students in emotional maturity

4.2.2.2. *Comparison of emotional maturity of students from extended families and nuclear families*

The structure of a family plays a pivotal role in shaping the emotional maturity of children. In nuclear families, where the social setting is limited to parents and siblings, children often develop autonomy, decision-making ability, and self-reliance. By contrast, extended families expose children to grandparents, uncles, aunts, and cousins, offering wider emotional support, role models, and social experiences that cultivate empathy, cooperation, and resilience. Though extended families foster collective responsibility, they may also restrict independence. Thus, nuclear families emphasize self-regulation, while extended families strengthen relational competence, with parenting and interactions determining outcomes. The higher secondary school students coming from

extended families and nuclear families were compared to find out the differential effect of type of family on their emotional maturity. Table 4.11 presents the data and result of independent sample t-test performed incidentally.

Table 4.11: Comparison of emotional maturity of students from extended families and nuclear families

Groups	Statistical Indices				t-value	Sig.
	N	M	SD	SE _M		
Extended	532	152.29	36.957	1.602	8.215	.001
Nuclear	700	135.39	34.831	1.317		

The t-value obtained on comparing the emotional maturity scores of students from extended families and nuclear families is significant at 99.9% confidence interval ($t = 8.215$; $p < .001$). It shows the presence of a true difference between the family groups with respect to the emotional maturity of the adolescents. A closer observation of the mean estimates for the extended families ($M = 152.29$) and the nuclear families ($M = 135.39$) exposes that students from extended families excel their counterparts from nuclear families in their ability to understand and manage their own emotions and that of others. The mean difference in the emotional maturity of students from extended- and nuclear families is depicted in Figure 4.9.

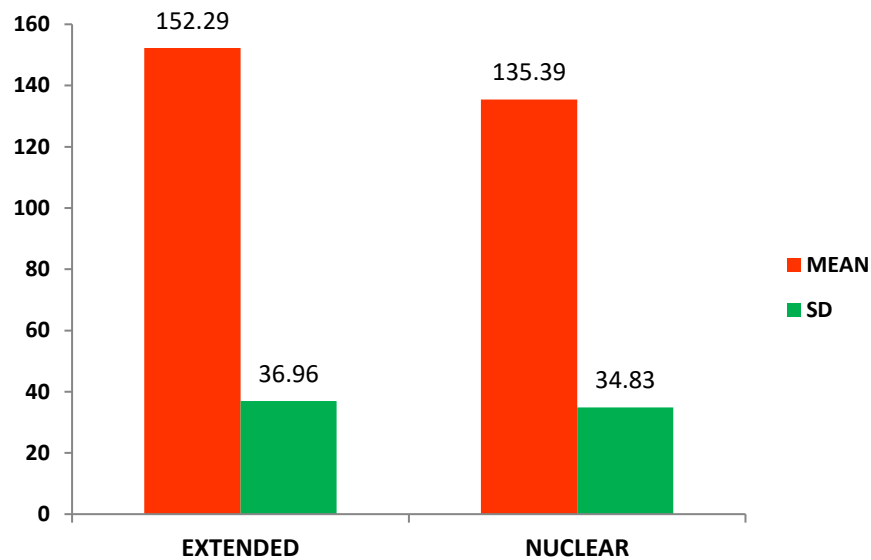


Figure 4.9: Mean difference between students from extended families and nuclear families in emotional maturity

4.2.2.3. *Comparison of emotional maturity of students in different birth orders*

The differential effect of birth order on the emotional maturity of the higher secondary school students was explored by comparing the EMSS scores of only children, firstborn children, middleborn children and lastborn children. The summary of the one-way ANOVA carried out in this regard is given in Table 4.12.

Table 4.12: Comparison of the emotional maturity of students in different ordinal positions (Summary of ANOVA)

AST	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	14308.032	3	4769.344		
Within Groups	1645312.655	1228	1339.831	3.560	.01
Total	1659620.688	1231			

Comparison of emotional maturity of higher secondary school students having different ordinal positions produced an F-ratio which is significant at .01 level ($F = 3.560$; $p < .01$). It reveals the presence of significant difference among higher secondary school students having different birth orders in their ability to recognize and regulate their emotions. The mean difference in the emotional maturity of students with different ordinal positions is illustrated in Figure 4.10.

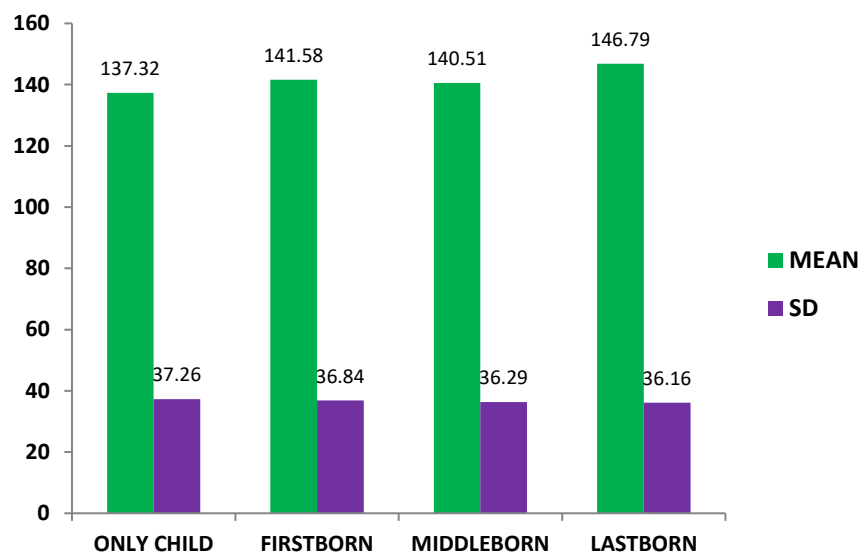


Figure 4.10: Mean Difference in emotional maturity of students in different ordinal positions

Estimation of a significant F-ratio subsequently led to post-hoc test, so as to find out the groups which show the significant differences in their emotional maturity. Table 4.13 presents the result of the Scheffe's post-hoc test performed in this context.

Table 4.13: Post hoc tests for comparison of the emotional maturity of students in different ordinal positions.

(I) OP	(J) OP	(I-J) Mean Difference	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
ONLY CHILD (O)	F	-4.253	3.126	.604	-13.00	4.50
	M	-3.189	4.174	.900	-14.87	8.50
	L	-9.463*	3.140	.029	-18.25	-.67
FIRSTBORN (F)	O	4.253	3.126	.604	-4.50	13.00
	M	1.064	3.667	.994	-9.20	11.33
	L	-5.210	2.427	.203	-12.00	1.58
MIDDLEBORN (M)	O	3.189	4.174	.900	-8.50	14.87
	F	-1.064	3.667	.994	-11.33	9.20
	L	-6.274	3.680	.407	-16.57	4.03
LASTBORN (L)	O	9.463*	3.140	.029	.67	18.25
	F	5.210	2.427	.203	-1.58	12.00
	M	6.274	3.680	.407	-4.03	16.57

* The mean difference is significant at the 0.05 level.

The results of Scheffe's post-hoc test discloses the following:

- 1) The 'only children' do not differ significantly from the firstborns in their emotional maturity (Mean difference = 4.253; $p > .05$).
- 2) There is no true difference between the middleborns and the 'only children' in their emotional maturity (Mean difference = 3.189; $p > .05$).
- 3) The lastborn children differ significantly from the 'only children' in their emotional maturity (Mean difference = 9.463; $p < .001$), the 'last-born children' excel 'firstborn children' in their emotional maturity.

- 4) The 'firstborn children' and the middleborn children are almost alike in their emotional maturity (Mean difference = 1.064; $p > .05$).
- 5) There is no significant difference between 'firstborn children' and 'last-born children' in their emotional maturity (Mean difference = 5.210; $p > .05$); and
- 6) No significant difference exists between the middleborn children and lastborn children with respect to their emotional maturity (Mean difference = 6.274; $p > .05$).

The significant difference in emotional maturity observed among higher secondary school students in different ordinal positions is restricted to one paired combination, viz., between the 'only children' and 'lastborn children'. Higher secondary school students in other ordinal positions are almost alike in their emotional maturity, as there is no significant difference between the group pairs compared.

4.2.2.4. Comparison of emotional maturity of students in different socio-economic status

Higher secondary school students from high, average and low socio-economic status were compared to find out the significant difference, if any, in their emotional maturity. The summary of the one-way ANOVA carried out in this regard is given in Table 4.14.

Table 4.14: Comparison of the emotional maturity scores of students from high, average and low socio-economic status (Summary of ANOVA)

AST	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	727.445	2	363.722		
Within Groups	1658893.243	1229	1349.791	0.269	NS
Total	1659620.687	1231			

The F-ratio obtained on comparing the emotional maturity of higher secondary school students in different SES is not significant ($F = 0.269$; $p > .05$); revealing that there is no true difference among students from high, average and low socio-economic status regarding their emotional maturity.

4.2.2.5. *Tenability of Hypothesis-2*

The results of the statistical analyses done in Section 4.2.2 have disclosed the following:

- 1) Male and female students differ significantly regarding emotional maturity ($t = 3.033$; $p < .01$; vide Table 4.10).
- 2) Students from extended families and nuclear families differ significantly in their emotional maturity ($t = 8.215$; $p < .001$; vide Table 4.11).
- 3) Students in different ordinal positions differ significantly in their emotional maturity ($F = 3.560$; $p < .01$; vide Table 4.12).

- 4) Students from high, average and low socio-economic status do not differ significantly in their emotional maturity ($F = 0.269$; $p > .05$: vide Table 4.14).

The hypothesis formulated in this context, viz., Hypothesis-2 (*there is no significant difference in the emotional maturity of higher secondary school students with respect to gender, type of family, ordinal position, and socio-economic status*) is, hence, partially accepted.

4.3 PSYCHOLOGICAL RESILIENCE OF HIGHER SECONDARY SCHOOL STUDENTS AND COMPARISON OF SUBGROUPS

In this section of analysis, the psychological resilience of higher secondary school students, appraised in terms of the scores they secured on the Psychological Resilience Scale for Adolescents (PRSA), was studied by taking the sample as total group as well as sub-groups based on gender, type of family, birth order and socio-economic status. The details of the analyses done in this regard are presented below.

4.3.1 Descriptive Analysis of Psychological Resilience Scores

The major descriptive statistical indices such as Mean (M), Median (Mdn), Standard Deviation (σ), Skewness (Sk), Kurtosis (Ku), Standard Error of Mean (SE_M) and population values of the Mean (M_{POP}), computed from the PRSA scores of the total sample and the sub-samples based on gender, type of family, birth order and socio-economic status are presented in Table 4.15.

Table 4.15: Statistical indices pertaining to psychological resilience of higher secondary school students

Groups	Sample	N	Range	M	Mdn	σ	Sk	Ku	SE _M	M _{POP.05}	M _{POP.01}
Whole	Total	1232	113	163.33	163.5	23.01	0.063	-0.526	0.66	162.05 164.62	161.64 165.03
Gender	Male	583	113	164.57	165.0	21.81	0.027	-0.284	0.90	162.79 166.34	162.24 166.90
	Female	649	108	162.22	161.0	24.01	0.112	-0.693	0.94	160.38 164.08	159.79 164.66
Family Type	Extended	532	106	166.01	168.0	22.25	-0.217	-0.602	0.97	164.11 167.90	163.51 168.50
	Nuclear	700	113	161.30	160.0	23.39	0.273	-0.341	0.88	159.57 163.04	159.02 163.59
Ordinal Position	Only	195	107	155.46	154.0	23.99	0.181	-0.521	1.72	152.07 158.84	150.99 159.93
	First	462	108	164.94	165.0	22.61	0.107	-0.638	1.05	162.88 167.01	162.22 167.66
	Middle	127	99	155.84	156.0	21.35	0.085	-0.454	1.89	152.09 159.59	150.89 160.79
	Last	448	109	167.23	167.0	22.18	0.030	-0.466	1.05	165.17 169.29	164.52 169.94
Socio-economic Status	High	254	109	162.81	160.0	21.68	0.336	-0.297	1.36	160.13 165.49	159.28 166.34
	Average	703	113	162.96	164.0	23.45	0.015	-0.568	0.88	161.23 164.69	160.68 165.25
	Low	275	109	162.81	160.0	21.68	0.336	-0.297	1.36	162.02 167.51	161.15 168.38

The total sample of higher secondary school students is heterogeneous with respect to the distribution of psychological resilience scores as the range estimated is 113, with an obtained highest score of 220 (out of the maximum possible score of 250) and lowest score of 107 (out of the minimum possible score of 50). The distribution of the variable in the population is normal as the skewness value lies between $+1/2$ and $-1/2$, which is further substantiated by the closeness of arithmetic

mean and median. The different sub-samples of the higher secondary school students also exhibit normality in the distribution of their psychological resilience scores. The arithmetic mean estimated for the total sample is 163.33 with a standard deviation of 23.01. The skewness is very small and negligible ($sk = 0.063$) and the estimated kurtosis is -0.526 . The population value of mean (M_{POP}) lies between 162.05 and 164.62 at 0.05 level and between 161.64 and 165.03 at 0.01 level. The SE_M calculated for the total sample is 1.72. The distribution of psychological resilience in the total sample of higher secondary school students is shown in Figure 4.11.

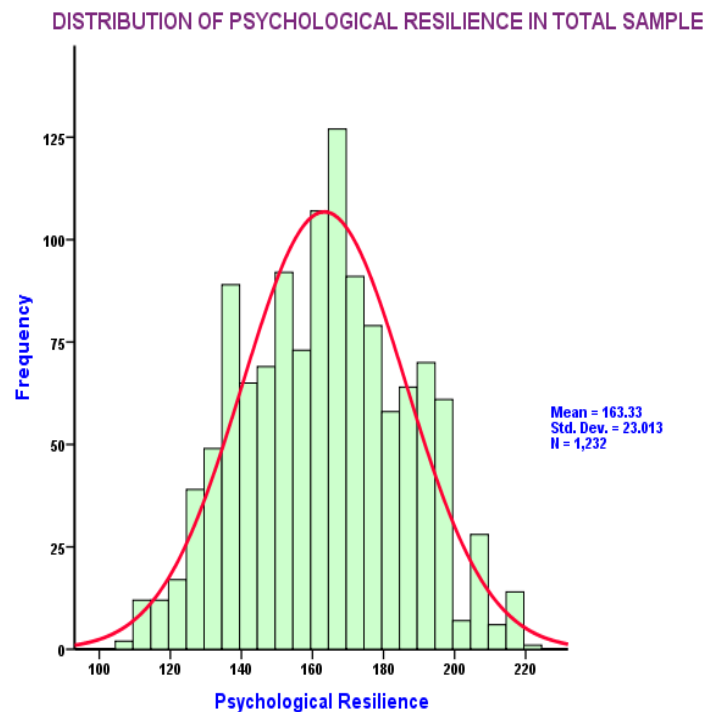


Figure 4.11: Distribution of psychological resilience in the total sample of higher secondary school students.

4.3.2 Extent of Psychological Resilience among Higher Secondary School Students

The whole sample of the HSS students was categorized into different levels of Psychological Resilience (PR) based on the scores obtained on the Psychological Resilience Scale for Adolescents (PRSA). The empirical rule ($M \pm \sigma$) was used to constitute groups based on the extent of psychological resilience. Accordingly, students scored $M+2\sigma$ and above (score ≥ 209) fell in the “Very High Psychological Resilience Group”, students scored between $M+\sigma$ and $M+2\sigma$ (between 186 and 208) fell in the “High Psychological Resilience Group”, those scored between $M+\sigma$ and $M-\sigma$ (between 141 and 185) fell in the “Average Psychological Resilience Group”, students scored between $M-\sigma$ and $M-2\sigma$ (between 140 and 118) fell in the “Low Psychological Resilience Group”, and those who scored $M-2\sigma$ and below (≤ 117) were taken as “Very Low Psychological Resilience Group”. The distribution of the HSS students in different resilience groups is given in Table 4.16.

Table 4.16: Extent of psychological resilience in the total sample of HSS students

Sl. No.	Category	Norm	Score Range	No.	%
1	Very High PR	Above $M+2\sigma$	≥ 209	32	2.60
2	High PR	Above $M+\sigma$ and below $M+2\sigma$	187 - 208	175	14.20
3	Average PR	Between $M+\sigma$ and $M-\sigma$	141 - 186	625	50.73
4	Low PR	Below $M-\sigma$ and above $M-2\sigma$	140 - 118	377	30.60
5	Very Low PR	Below $M-2\sigma$	≤ 117	23	1.87
Total				1232	100.00

Table 16 shows that approximately 51% fall within the average range of psychological resilience (scores 141–186), indicating that about half exhibit a moderate capacity to handle challenges. A substantial 31% are categorized as having low resilience (scores 118–140), and around 2% are in the very low range (scores below 117). Combined, nearly one-third of the students display limited resilience, potentially making them more susceptible to stress and difficulties. Conversely, about 14% of students demonstrate high resilience (scores 187–208), and roughly 3% exhibit very high resilience (scores above 209). This smaller yet significant group shows a strong ability to adapt and manage adversities effectively. Shortly, while most students possess moderate resilience, the considerable number in the low and very low categories underscores the need for targeted interventions to enhance coping mechanisms. Meanwhile, those in the high and very high resilience groups could serve as valuable assets and exemplars in efforts to foster resilience among peers. The proportion of different emotional maturity groups in the total sample of HSS students are illustrated in Figure 4.12

LEVELS OF PSYCHOLOGICAL RESILIENCE IN THE TOTAL SAMPLE

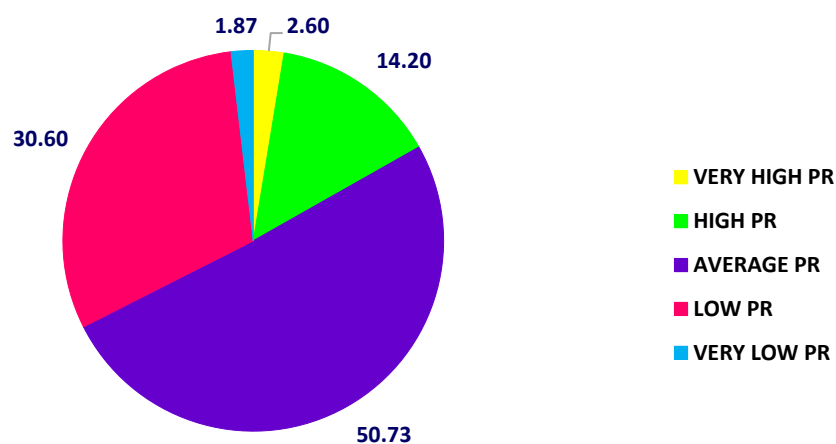


Figure 4.12: Proportion of different psychological resilience groups in the total sample

4.3.3 Comparison of Psychological Resilience of the Sub-samples

This section of the analysis is dedicated to comparing the different sub-samples of higher secondary school students with respect to their psychological resilience so as to find out the differential effect of demographic factors on the distribution of the variable on the population. The sub-samples based on gender (male and female students), type of family (extended families and nuclear families), birth order (only child, firstborn, middleborn and last-born), and socio-economic status (high, average and low SES) were compared with respect to the scores obtained on the Psychological Resilience Scale for Adolescents (PRSA), followed by testing of Hypothesis-3.

Hypothesis-3: There is no significant difference in the psychological resilience of higher secondary school students with respect to gender, type of family, ordinal position, and socio-economic status.

4.3.2.1. Comparison of psychological resilience of sub-samples based on gender

The male and female higher secondary school students were compared so as to explore the differential influence of gender on psychological resilience of adolescent learners. The data and result of the two-tailed test of significance for the differences between two independent means is given in Table 4.17.

Table 4.17: Comparison of the psychological resilience of male and female students

Groups	Statistical Indices				t-value	Sig.
	N	M	SD	SE _M		
Male	583	164.57	21.81	.903	1.787	NS
Female	649	162.22	24.01	.942		

The t-ratio calculated on comparing the psychological resilience of the gender groups is not large enough to be significant at least at 95% confidence interval ($t = 1.787$; $p > .05$). It indicates that male and female students are almost alike in their ability to cope emotionally and mentally with a distress and come back to normal. In another words, gender is not a significant demographic factor that discriminate higher secondary school students on the basis of their psychological resilience.

4.3.2.2. Comparison of psychological resilience of students from extended families and nuclear families

The differential effect of type of family on psychological resilience of higher secondary school students was studied by comparing the PRSA scores of students coming from extended and nuclear families. Table 4.18 gives the data and results of the t-test carried out in this context.

Table 4.18: Comparison of psychological resilience of students from extended families and nuclear families

Groups	Statistical Indices				t-value	Sig.
	N	M	SD	SE _M		
Extended	532	166.01	22.25	.965	3.569	.001
Nuclear	700	161.30	23.39	.884		

The result of the independent sample t-test performed on comparing the psychological resilience of higher secondary school students from extended families and nuclear families is significant beyond 99.9% confidence interval ($t = 3.569$; $p < .001$). It exposes that type of family has a significant differential influence on psychological resilience of higher secondary school students. The arithmetic mean estimated for the students from extended families ($M = 166.01$) is greater than that estimated from students from nuclear families ($M = 161.30$), revealing that extended family atmosphere fosters one's ability to adapt well in the face of adversity. The mean difference in the psychological resilience of students from nuclear families and extended families is represented in Figure 4.13.

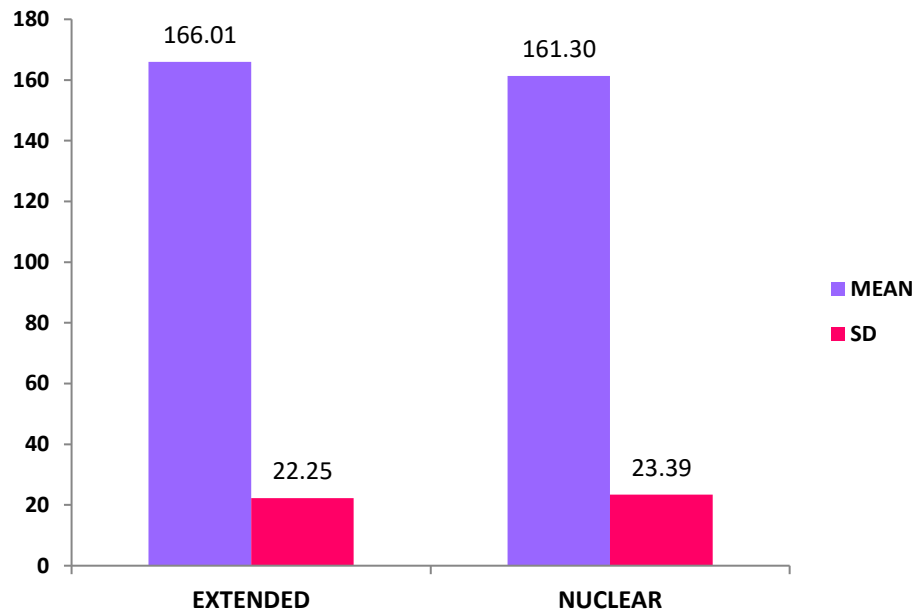


Figure 4.13: Mean difference between students from extended families and nuclear families in psychological resilience

4.3.2.3. Comparison of psychological resilience of students in different birth orders

Higher secondary school students in different ordinal positions were compared with respect to their PRSA scores so as to find out the differential influence of birth order on their psychological resilience. Table 4.19 presents the summary of the one-way ANOVA performed incidentally.

Table 4.19: Comparison of the psychological resilience of students in different ordinal positions (Summary of ANOVA)

AST	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	27217.677	3	9072.559		
Within Groups	624706.543	1228	508.719	17.834	.001
Total	651924.221	1231			

The F-ratio calculated on comparing the psychological resilience of higher secondary school students in different birth order is significant at 99.9% confidence interval ($F = 17.834$; $p < .001$). It indicates the presence of an actual difference among only child, firstborn, middleborn and lastborn students in their recovery power on the face of adversity. The mean difference in the psychological resilience of students in different birth orders are pictured in Figure 4.14.

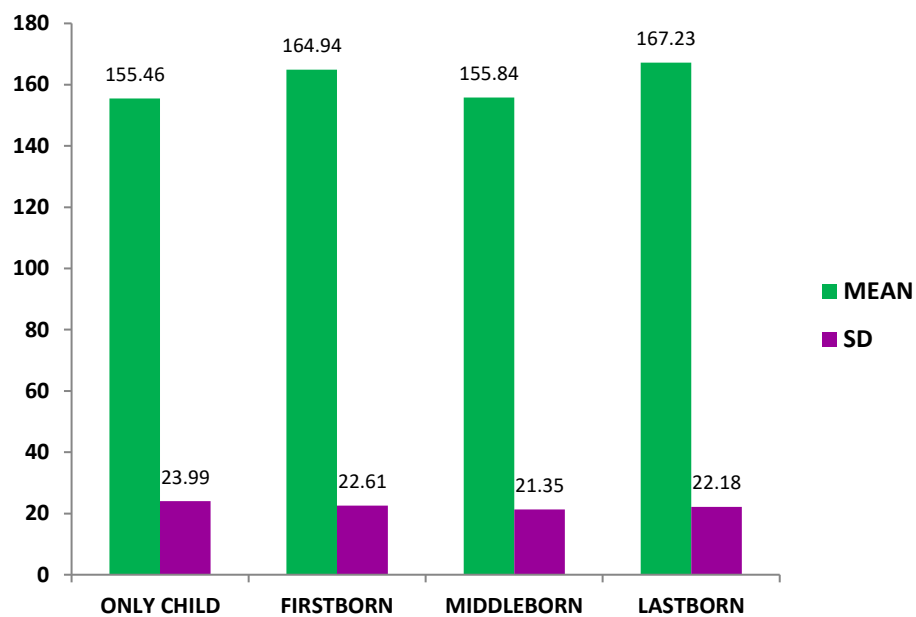


Figure 4.14: Mean Difference in psychological resilience of students in different ordinal positions

The one-way ANOVA was followed by post-hoc test of multiple comparison so as to find out the group pairs which truly exhibit the difference in psychological resilience. The result of the Scheffe's post-hoc test conducted in this context is given in Table 4.20.

Table 4.20: Post hoc tests for comparison of the psychological resilience of students in different ordinal positions.

(I) OP	(J) OP	(I-J) Mean Difference	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
ONLY CHILD (O)	F	-9.487*	1.926	.000	-14.88	-4.10
	M	-.386	2.572	.999	-7.59	6.81
	L	-11.771*	1.935	.000	-17.19	-6.35
FIRSTBORN (F)	O	9.487*	1.926	.000	4.10	14.88
	M	9.101*	2.260	.001	2.78	15.43
	L	-2.284	1.496	.507	-6.47	1.90
MIDDLE BORN (M)	O	.386	2.572	.999	-6.81	7.59
	F	-9.101*	2.260	.001	-15.43	-2.78
	L	-11.385*	2.267	.000	-17.73	-5.04
LASTBORN (L)	O	11.771*	1.935	.000	6.35	17.19
	F	2.284	1.496	.507	-1.90	6.47
	M	11.385*	2.267	.000	5.04	17.73

* The mean difference is significant at the 0.05 level.

The results of Scheffe's post-hoc test exposes the following:

- 1) The 'only children' differ significantly from the firstborns in their psychological resilience (Mean difference = 9.487; $p < .001$), the firstborns excelling the 'only children' in their ability to cope with adversity and return to normal.
- 2) The 'only children' and middleborn children are almost alike in their psychological resilience, as there is no significant difference between the groups (Mean difference = 0.386; $p > .05$).
- 3) There is a significant difference between the 'only children' and lastborn children in their psychological resilience (Mean difference = 11.771;

$p < .001$), the 'last-born children' excel 'firstborn children' in their psychological resilience.

- 4) Significant difference also observed between the 'firstborn children' and the middleborn children in their psychological resilience (Mean difference = 9.101; $p > .05$), the firstborns excelling the middleborns.
- 5) No significant difference was noticed between 'firstborn children' and 'last-born children' in their psychological resilience (Mean difference = 2.284; $p > .05$); and
- 6) The middleborn children differed significantly from the lastborn children with respect to their psychological resilience (Mean difference = 11.385; $p < .001$), the lastborn children outshining the middleborn children in their ability to maintain a stable psychological equilibrium.

The forgoing analysis clearly shows that except for two paired group, i.e., (i) between 'only children' and middleborn children, and (ii) between 'firstborn children' and lastborn children, all the groups based on birth order of higher secondary school students show significant differences with respect to their psychological resilience.

4.3.2.4. Comparison of psychological resilience of students in different socio-economic status

The differential effect of socio-economic status of the family on psychological resilience of higher secondary school students was examined by

comparing the PRSA scores of students high, average and low SES. Table 4.21 presents the summary of one-way ANOVA performed in this context.

Table 4.21: Comparison of the psychological resilience scores of students from high, average and low socio-economic status (Summary of ANOVA)

AST	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	731.148	2	365.574		
Within Groups	651193.073	1229	529.856	0.690	NS
Total	651924.221	1231			

Comparison of the PRSA scores of students from families of different socio-economic status produced a F-ratio which is not significant ($F = 0.690$; $p > .05$). It exposes that socio-economic status of the family is not a significant factor that discriminate higher secondary school students based on their psychological resilience.

4.3.2.5. Tenability of Hypothesis-3

The results of the inferential statistical analyses made in Section 4.3.2 revealed the following:

- 1) No significant difference exists between male and female students with respect to their psychological resilience ($t = 1.787$; $p > .05$; vide Table 4.17).
- 2) Students from extended families and nuclear families differ significantly in their psychological resilience ($t = 3.569$; $p < .001$; vide Table 4.18).

- 3) Students in different ordinal positions differ significantly in their psychological resilience ($F = 17.834$; $p < .001$: vide Table 4.19).
- 4) There is no significant difference among students from high, average and low socio-economic status regarding their psychological resilience ($F = 0.690$; $p > .05$: vide Table 4.21).

The hypothesis formulated in this context, viz., Hypothesis-3 (*there is no significant difference in the psychological resilience of higher secondary school students with respect to gender, type of family, ordinal position, and socio-economic status*) is, therefore, partially accepted.

4.4 LOCUS OF CONTROL OF HIGHER SECONDARY SCHOOL STUDENTS AND COMPARISON OF SUBGROUPS

This section of the analysis is given over to examine the locus of control of the higher secondary school students, measured from an internal point of view by administering the Malayalam Version of Rotter's Internal-External Locus of Control Scale (MRIES). The distribution of internal locus of control (ILC) in the whole sample and relevant sub-samples was studied by estimating descriptive statistical indices. The various sub-samples were further compared to find out the differential influence of gender, type of family, ordinal position and socio-economic status on the distribution of locus of control in the population. The details of the analysis done incidentally are presented below.

4.4.1 Descriptive Analysis of Locus of Control Scores

The descriptive statistical indices such as Mean (M), Median (Mdn), Standard Deviation (σ), Skewness (Sk), Kurtosis (Ku), Standard Error of Mean (SE_M) and Mean Population Values (M_{POP}), calculated from the internal locus of control scores of the whole group and sub-groups based on gender, type of family, birth order and socio-economic status are presented in Table 4.22.

Table 4.22: Statistical indices pertaining to internal locus of control of higher secondary school students

Groups	Sample	N	Range	M	Mdn	σ	Sk	Ku	SE_M	$M_{POP.05}$	$M_{POP.01}$
Whole	Total	1232	12	15.96	16.0	2.13	-0.710	0.873	0.06	15.84 16.08	15.80 16.12
Gender	Male	583	12	16.24	16.0	2.21	-0.557	0.384	0.09	16.06 16.42	16.00 16.48
	Female	649	11	15.71	16.0	2.02	-0.995	1.374	0.08	15.55 15.86	15.50 15.91
Family Type	Extended	532	12	16.17	16.0	2.06	-0.881	1.232	0.09	15.99 16.35	15.94 16.40
	Nuclear	700	12	15.80	16.0	2.17	-0.590	0.721	0.08	15.64 15.96	15.59 16.01
Ordinal Position	Only	195	11	15.62	16.0	2.27	-0.977	0.999	0.16	15.30 15.94	15.20 16.04
	First	462	12	15.79	16.0	2.02	-0.474	0.455	0.09	15.60 15.97	15.55 16.03
	Middle	127	11	15.93	16.0	2.16	-1.184	1.870	0.19	15.55 16.31	15.43 16.43
	Last	448	12	16.29	16.0	2.12	-0.684	0.880	0.10	19.09 16.49	16.03 16.55
Socio-economic Status	High	254	12	15.72	16.0	2.07	-0.897	1.158	0.13	15.46 15.98	15.38 16.06
	Average	703	12	16.08	16.0	2.09	-0.664	0.704	0.08	15.92 16.23	15.87 16.28
	Low	275	12	15.88	16.0	2.26	-0.678	0.942	0.14	15.61 16.15	15.53 16.23

The descriptive statistical indices presented in Table 4.22 disclose the heterogeneity with respect to the distribution of internal locus of control in the total sample as well as the sub-samples. The total sample has an estimated range of 12, with the highest obtained score of 20 and lowest obtained score of 8. The arithmetic mean estimated for the total sample is 15.96 and the median score estimated (Mdn = 16.0) lies very close to the arithmetic mean, revealing the normality of the distribution. The standard deviation (σ) estimated for the total sample is 2.13, and the standard error of mean (SE_M) calculated is very small ($SE_M = 0.06$). The mean population value lies between 15.84 and 16.08 at 95% confidence interval and between 15.08 and 16.12 at 99% confidence interval. The distribution of internal locus of control in the total sample of higher secondary school students is shown in Figure 4.15.

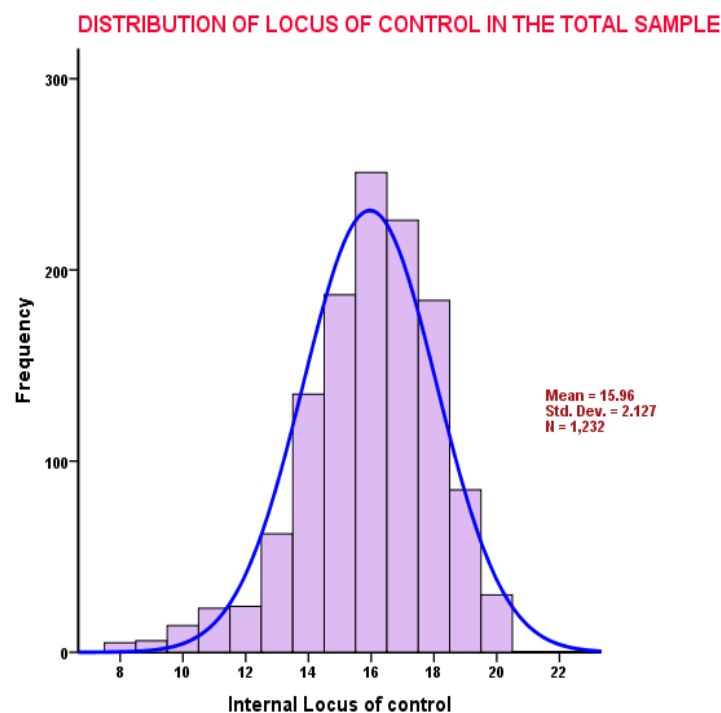


Figure 4.15: Distribution of internal locus of control in total sample of higher secondary school students

4.4.2 Extent of Internal Locus of Control among Higher Secondary School Students

Based on the Mean (M) and Standard Deviation (σ) of scores obtained on Adapted version of Rotter's Internal-External Locus of Control Scale (ARIES), the total sample was categorized into five levels of Internal Locus of Control (ILC) by employing the standard deviation method of classification. The groups thus constituted are: (i) Very High Internal Locus of Control Group (the score 20 and above), (ii) High Internal Locus of Control Group (between 18 and 19), (iii) Average Internal Locus of Control Group (between 15 and 17), (iv) Low Internal Locus of Control Group (between 12 and 14), and (v) Very Low Internal Locus of Control Group (the score 11 and below). The extent of internal locus of control in the whole sample of HSS students is given in Table 4.23.

Table 4.23: Extent of internal locus of control in the total sample of HSS students

Sl. No.	Category	Norm	Score Range	No.	%
1	Very High ILC	Above $M+2\sigma$	≥ 20	30	2.44
2	High ILC	Above $M+\sigma$ and below $M+2\sigma$	18 - 19	269	21.83
3	Average ILC	Between $M+\sigma$ and $M-\sigma$	15 - 17	799	64.85
4	Low ILC	Below $M-\sigma$ and above $M-2\sigma$	14 - 12	86	6.98
5	Very Low ILC	Below $M-2\sigma$	≤ 11	48	3.90
Total				1232	100.00

The result shows that approximately 65% of HSS students fall within the average range for ILC (scores 15–17), suggesting that most believe they have a moderate degree of influence over their life outcomes. About 22% exhibit a high

level of internal control (scores 18–19), and roughly 2.5% demonstrate a very high level (scores above 20), collectively indicating that nearly a quarter of the students are confident in their ability to shape events through their own actions. Contrarywise, around 7% of students are in the low range (scores 12–14), and approximately 4% fall into the very low range (scores below 11), highlighting a smaller yet notable group who may feel that external factors, such as chance or fate, play a larger role in their outcomes. Overall, the data suggests that most students possess a moderate to strong ILC, which is positive. However, the minority with low or very low scores may benefit from interventions aimed at fostering greater self-agency and confidence in their ability to influence their circumstances. The proportion of different ILC groups in the total sample of HSS students are illustrated in Figure 4.16

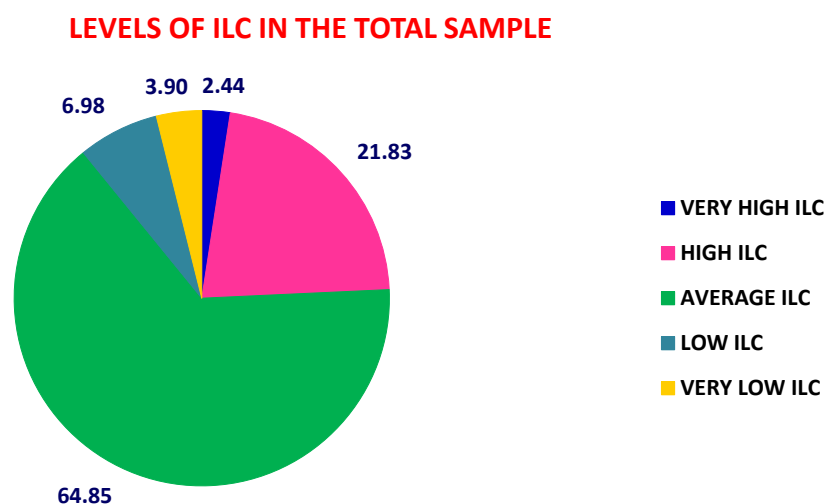


Figure 4.16: Proportion of different ILC groups in the total sample

4.4.3 Comparison of Locus of Control of the Sub-samples

In this section of analysis, the different sub-samples were compared with respect to the internal-external scale scores to examine whether the demographic factors like gender, type of family, ordinal position and socio-economic status exert any significant differential influence on locus of control of higher secondary school students. The analysis is followed by testing the tenability of Hypothesis-4.

Hypothesis-4: There is no significant difference in the locus of control of higher secondary school students with respect to gender, type of family, ordinal position, and socio-economic status.

4.4.2.1. *Comparison of locus of control of sub-samples based on gender*

The male and female students were compared with respect to the ILC scores so as to examine the differential influence of gender on the locus of control of higher secondary school students. The result of the two-tailed test performed in this regard is given in Table 4.24.

Table 4.24: Comparison of the locus of control of male and female students

Groups	Statistical Indices				t-value	Sig.
	N	M	SD	SE _M		
Male	583	16.24	2.206	.091	4.438	.001
Female	649	15.71	2.021	.079		

The t-value obtained on comparing the locus of control of gender bases sub-samples of higher secondary school students is significant at 99.9% confidence interval ($t = 4.438$; $p < .001$), showing that male and female students differ significantly in their locus of control. The mean ILC score estimated for the male students ($M = 16.24$) is greater than that estimated for the female students ($M = 15.71$), indicating that the former excels the later in the internal orientation of mind. In another words, compared to female students in the higher secondary schools, their male counterparts believe that they have greater control over the outcome of events in their life. The mean difference in the locus of control of male and female students in the higher secondary schools is illustrated in Figure 4.17.

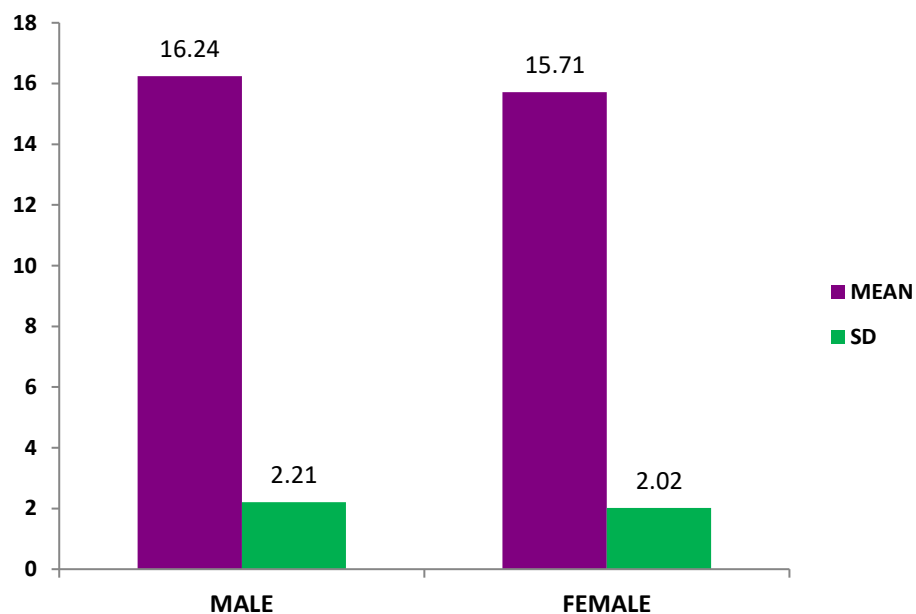


Figure 4.17: Mean difference between male and female students in locus of control

4.4.2.2. *Comparison of locus of control of students from extended families and nuclear families*

Differential effect of type of family on the locus of control orientation of higher secondary school students was studied by comparing ILC scores of students from extended- and nuclear families. The data and result of independent sample t-test conducted in this context is given in Table 4.25.

Table 4.25: Comparison of locus of control of students from extended families and nuclear families

Groups	Statistical Indices				t-value	Sig.
	N	M	SD	SE _M		
Extended	532	16.17	2.057	.089	3.067	.01
Nuclear	700	15.80	2.165	.082		

The t-value estimated on comparing the internal locus of control scores of students from extended families and nuclear families is significant at 99% confidence interval ($t = 3.067$; $p < .01$). It exposes the presence of an actual difference between the family types with regard to the locus of control of higher secondary school students. Scrutiny of the mean estimates for the extended families ($M = 16.17$) and the nuclear families ($M = 15.80$) shows that students from extended families outshine their counterparts from nuclear families in their belief that individuals have control over their own actions and outcomes. The mean difference in the internal locus of control of students from extended families and nuclear families is shown in Figure 4.18.

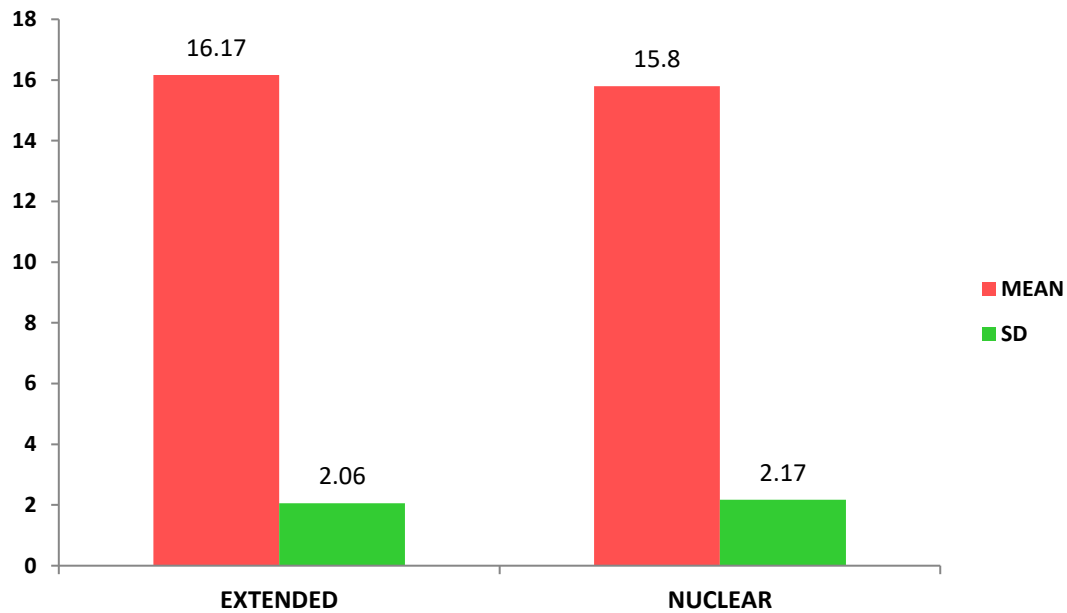


Figure 4.18: Mean difference between students from extended families and nuclear families in internal locus of control

4.4.2.3. Comparison of locus of control of students in different birth orders

The higher secondary school students in different birth orders were compared with respect to the MRIES scores so as to find out the differential influence of ordinal position on the distribution of their internal locus of control. Table 4.26 presents the summary of the one-way ANOVA performed incidentally.

Table 4.26: Comparison of the locus of control of students in different ordinal positions (Summary of ANOVA)

AST	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	85.120	3	28.373		
Within Groups	5481.769	1228	4.464	6.356	.001
Total	5566.889	1231			

The F-ratio estimated on comparing the ILC scores of the only child, firstborn, middleborn and lastborn children, are significant beyond 99.9% confidence interval ($F = 6.356$; $p < .001$). It shows the presence of a true difference among higher secondary school students in different birth orders regarding their perception about the underlying causes of events in their life. The mean difference in the locus of control of students in different birth orders is represented in Figure 4.19.

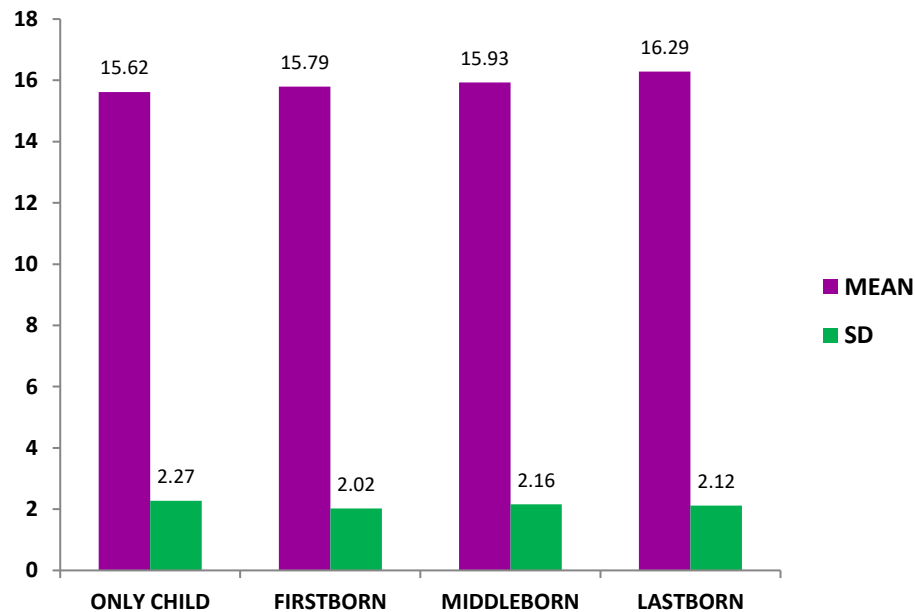


Figure 4.19: Mean difference in locus of control of students in different ordinal positions

The one-way analysis of variance was followed by post-hoc test of multiple comparison of the groups so as to identify exactly which birth order groups differ from each other. The result of the Scheffe's post-hoc test performed in this regard is given in Table 4.27.

Table 4.27: Post hoc tests for comparison of the locus of control of students in different ordinal positions.

(I) OP	(J) OP	(I-J) Mean Difference	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
ONLY CHILD (O)	F	-.167	.180	.835	-.67	.34
	M	-.309	.241	.650	-.98	.37
	L	-.670*	.181	.004	-1.18	-.16
FIRSTBORN (F)	O	.167	.180	.835	-.34	.67
	M	-.141	.212	.931	-.73	.45
	L	-.502*	.140	.005	-.89	-.11
MIDDLEBORN (M)	O	.309	.241	.650	-.37	.98
	F	.141	.212	.931	-.45	.73
	L	-.361	.212	.409	-.96	.23
LASTBORN (L)	O	.670*	.181	.004	.16	1.18
	F	.502*	.140	.005	.11	.89
	M	.361	.212	.409	-.23	.96

* The mean difference is significant at the 0.05 level.

The results of Scheffe's post-hoc test presented in Table 4.27 reveals the following:

- 1) There is no significant difference between the 'only children' and the firstborns regarding their internal locus of control (Mean difference = 0.164; $p > .05$).
- 2) The 'only children' do not differ significantly from the 'middleborn children' in their locus of control (Mean difference = 0.309; $p > .05$).
- 3) Significant difference exists between the 'only children' and the 'lastborn children' in their locus of control (Mean difference = 0.670;

$p < .01$), the 'last-born children' are more internally oriented than the 'only children'.

- 4) The 'firstborn children' and the middleborn children are alike in their locus of control as there is no significant difference between the groups (Mean difference = 0.141; $p > .05$).
- 5) There exists significant difference between the 'firstborn children' and the 'last-born children' in their internal locus of control (Mean difference = 0.502; $p < .01$), the difference favouring the later; and
- 6) No significant difference exists between the middleborn children and lastborn children in regard to their locus of control (Mean difference = 0.361; $p > .05$).

The results of the post-hoc show that out of the six paired groups compared, no significant differences were noticed between three group pairs, viz., (i) only children and middleborn children, (ii) 'firstborn children' and middleborn children, and (iii) middleborn children and lastborn children. Significant difference, however, was observed between remaining three group pairs, viz., (i) 'only children' and 'firstborn children', (ii) 'only children' and lastborn children, and (iii) 'firstborn children' and lastborn children.

4.4.2.4. Comparison of locus of control of students in different socio-economic status

The sub-samples of higher secondary school students from high, average and low socio-economic status were compared to find out the differential influence of SES on their locus of control. The summary of the one-way ANOVA conducted incidentally is given in Table 4.28.

Table 4.28: Comparison of the locus of control scores of students from high, average and low socio-economic status (Summary of ANOVA)

AST	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	25.691	2	12.845		
Within Groups	5541.198	1229	4.509	2.849	NS
Total	5566.889	1231			

Comparison of higher secondary school students from high, average and low socio-economic status, by employing one-way ANOVA, produced an F-ratio which is not large enough to be significant at least at 95% confidence interval ($F = 2.489$; $p > .05$). It reveals that no significant difference exists among students in different SES with respect to their locus of control. In another words, socio-economic status is not a significant factor which discriminate higher secondary school students based on their locus of control.

4.4.2.5. *Tenability of Hypothesis-4*

The results of the statistical analyses done in Section 4.4.2 revealed the following:

- 1) Gender significantly differentiates higher secondary school students based on their locus of control ($t = 4.438$; $p < .001$; vide Table 4.24).
- 2) Types of family also significantly differentiate higher secondary school students based on their locus of control ($t = 3.067$; $p < .01$; vide Table 4.25).

- 3) Higher secondary school students in different birth orders differ significantly in their locus of control ($F = 6.356$; $p < .001$: vide Table 4.26).
- 4) Higher secondary school students from high, average and low socio-economic status do not differ significantly in their locus of control ($F = 2.489$; $p > .05$: vide Table 4.28).

The hypothesis formulated in this context, viz., Hypothesis-4 (*there is no significant difference in the locus of control of higher secondary school students with respect to gender, type of family, ordinal position, and socio-economic status*) is, hence, partially substantiated.

4.5 RELATIONSHIP BETWEEN EMOTIONAL MATURITY AND ACADEMIC STRESS OF HIGHER SECONDARY SCHOOL STUDENTS

The relationship between emotional maturity and academic stress of higher secondary school students were found by calculating the coefficient of correlation of between the variables. The Pearson product moment method was employed for estimating the coefficient of correlation between the variables for the total sample and sub-samples based on gender, type of family, ordinal position and socio-economic status, followed by testing of Hypothesis-5.

Hypothesis-5: There is no significant relationship between emotional maturity and academic stress of higher secondary school students.

Table 4.29: Relationship between emotional maturity and academic stress of higher secondary school students

Group	Samples	N	r	SE _r	Sig.	r _{POP}	
						.05 level	.01 level
Whole Group	Total Sample	1232	-0.621	0.018	.001	-0.66 – -0.59	-0.67 – -0.57
Gender	Male	538	-0.701	0.022	.001	-0.74 – -0.66	-0.76 – -0.64
	Female	649	-0.514	0.029	.001	-0.57 – -0.46	-0.59 – -0.44
Type of Family	Extended	532	-0.573	0.029	.001	-0.63 – -0.52	-0.65 – -0.50
	Nuclear	700	-0.611	0.024	.001	-0.66 – -0.56	-0.67 – -0.55
Ordinal Position	Only child	195	-0.609	0.045	.001	-0.70 – -0.52	-0.73 – -0.49
	Firstborn	462	-0.670	0.026	.001	-0.72 – -0.62	-0.74 – -0.60
	Middleborn	127	-0.731	0.041	.001	-0.81 – -0.65	-0.84 – -0.63
	Lastborn	448	-0.533	0.034	.001	-0.60 – -0.47	-0.62 – -0.45
SES	High	254	-0.691	0.033	.001	-0.76 – -0.63	-0.78 – -0.61
	Average	703	-0.576	0.025	.001	-0.76 – -0.63	-0.78 – -0.61
	Low	275	-0.672	0.033	.001	-0.74 – -0.61	-0.76 – -0.59

The coefficients of correlation (r) between emotional maturity and academic stress computed for the whole group and different subgroups of higher secondary school students show that the variables are correlated negatively, but significantly. The r -value calculated for the total sample of the higher secondary school students is -0.621 with a standard error (SE_r) of 0.018. The population value of coefficient of correlation (r_{POP}) is positioned between -0.66 and -0.59 at 95% confidence interval and between -0.67 and -0.57 at 99% confidence interval. The maximum value of correlation computed is for the subgroup of middleborn children ($r = -0.731$; $p < 0.001$) and the minimum r -value estimated is for the sub-sample of female students ($r = -0.514$; $p < 0.001$). The coefficients of correlation estimated for the entire group and the sub-groups show that for every increase in emotional maturity of the higher secondary school students there is a corresponding decrease

in the stress they experience while engaging in academic activities. The scatterplot with regression line output obtained for the emotional maturity and academic stress of the higher secondary school students is shown in Figure 4.20.

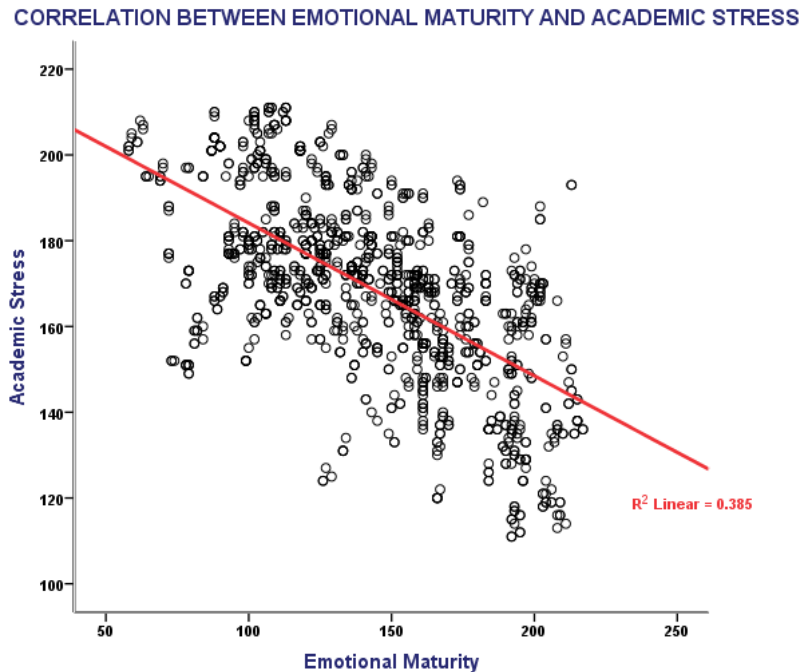


Figure 4.20: Scatterplot with regression line output: Emotional maturity and academic stress (Total Sample)

Tenability of Hypothesis-5

The correlational analysis done in Section 4.5 revealed that emotional maturity of higher secondary school students is correlated significantly and negatively with their academic stress ($r = -0.621$; $p < .001$). The hypothesis formulated in this context, viz., Hypothesis-5 (*there is no significant relationship between emotional maturity and academic stress of higher secondary school students*), is, therefore, rejected.

4.6 COMPARISON OF THE RELATIONSHIP BETWEEN EMOTIONAL MATURITY AND ACADEMIC STRESS OF SUBSAMPLES

In this section of analysis, the coefficient of correlation (r) between emotional maturity and academic stress of higher secondary school students, estimated for the sub-samples based on gender, type of family, ordinal position and socio-economic status were compared to find out whether the groups differ significantly with respect to the degree of relationship between the variables. The significance of the differences between two independent coefficients of correlation was done by employing Fisher's z -transformation test, followed by testing of the tenability of Hypothesis-6.

Hypothesis-6: There is no significant difference in the degree of relationship between emotional maturity and academic stress of higher secondary school students with respect to gender, type of family, ordinal position and socio-economic status.

Table 4.30: Comparison of male and female students with respect to the correlation between emotional maturity and academic stress

Group	Sub-samples	Statistical Indices			Z_{observed}	Sig.
		N	r	z		
Gender	Male	538	-0.701	0.867	5.151	.001
	Female	649	-0.514	0.563		

The Z_{observed} obtained on comparing the male and female higher secondary school students regarding the coefficients of correlation between their emotional maturity and academic stress is significant beyond 99.9% confidence interval ($Z_{\text{observed}} = 5.151$; $p < .001$). It reveals that the correlation between emotional maturity and academic stress is not the same in male and female students in the higher secondary schools. Inspection of the r -values estimated for the gender groups exposes that the association between the variables are stronger in male students than that in their female counterparts. In another words, the emotional maturity of male students in the higher secondary schools are more strongly correlated to their academic stress than the variables correlated in female students. The difference in coefficient of correlation between emotional maturity and academic stress in gender based sub-samples are illustrated in Figure 4.21.

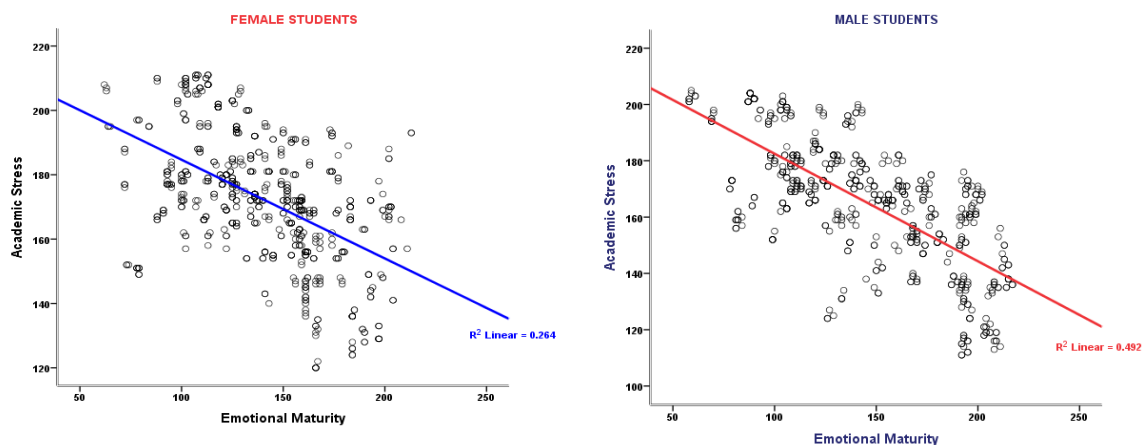


Figure 4.21: Correlation between emotional maturity and academic stress: Scatterplots with regression line outputs for male and female students

The sub-samples based on type of family were compared with regard to the coefficient of correlation between emotional maturity and academic stress, so as to find out the significant difference, if any, between the family groups. The data and result of the two-tailed test performed in this context is given in Table 4.31.

Table 4.31: Comparison of students from extended families and nuclear families with respect to the correlation between emotional maturity and academic stress

Group	Sub-samples	Statistical Indices			Z_{observed}	Sig.
		N	r	z		
Type of family	Extended	532	-0.573	0.648	1.02	NS
	Nuclear	700	-0.611	0.709		

The Z_{observed} estimated on comparing students from extended families and nuclear families with respect to their coefficients of correlation between emotional maturity and academic stress is not significant ($Z_{\text{observed}} = 1.02$; $p > .05$). It shows that there is no significant difference between students from extended families and nuclear families regarding the degree of relationship between their emotional maturity and academic stress. To put differently, the academic stress of students from both the extended families and nuclear families is affected almost in the same manner by their emotional maturity.

In order to find out the differential influence of birth order on the association between emotional maturity and academic stress of higher secondary school students, the sub-samples based on ordinal positions were compared by

employing Fisher's z-transformation test. Table 4.32 presents the result of the two-tailed test of significance for the differences between two independent coefficients of correlation.

Table 4.32: Comparison of students in different ordinal positions with respect to the correlation between emotional maturity and academic stress

Group	Sub-samples	Statistical Indices			Z_{observed}	Sig.
		N	r	z		
Birth Order Pair-1	Only-child	195	-0.609	0.709	1.20	NS
	Firstborn	462	-0.670	0.811		
Birth Order Pair-2	Only-child	195	-0.609	0.709	1.94	NS
	Middleborn	127	-0.731	0.929		
Birth Order Pair-3	Only-child	195	-0.609	0.709	1.31	NS
	Last-born	448	-0.533	0.590		
Birth Order Pair-4	Firstborn	462	-0.670	0.811	1.19	NS
	Middleborn	127	-0.731	0.929		
Birth Order Pair-5	Firstborn	462	-0.670	0.811	3.25	.001
	Last-born	448	-0.533	0.590		
Birth Order Pair-6	Middleborn	127	-0.731	0.929	3.31	.001
	Last-born	448	-0.533	0.590		

The results of the Fisher's z-transformation test performed to compare students in different birth orders with respect to the coefficients of correlation between their emotional maturity and academic stress reveal the following:

- 1) There is no significant difference between 'only children' and 'firstborn children' in respect of the relationship between their emotional maturity and academic stress ($Z_{\text{observed}} = 1.20$; $p > .05$).
- 2) The 'middleborn children' do not differ significantly from the 'only children' in the degree of relationship of their emotional maturity to academic stress ($Z_{\text{observed}} = 1.94$; $p > .05$).
- 3) The 'only children' and the 'lastborn children' are almost alike regarding the coefficient of correlation between their emotional maturity and academic stress ($Z_{\text{observed}} = 1.31$; $p > .05$).
- 4) There is no significant difference between the 'firstborn children' and 'middleborn children' in the correlation between emotional maturity and academic stress ($Z_{\text{observed}} = 1.19$; $p < .05$).
- 5) The 'firstborn children' differ significantly from the 'lastborn children' in the degree of relationship between their emotional maturity and academic stress ($Z_{\text{observed}} = 3.25$; $p < .001$). A closer observation of the r-values estimated for the sub-samples shows that the relationship between the variables is stronger in 'firstborn children' than in 'lastborn children'.
- 6) There is significant difference between 'middleborn children' and 'lastborn children' regarding the degree of relationship between their emotional maturity and academic stress ($Z_{\text{observed}} = 3.31$; $p < .001$).

Scrutiny of the coefficients of correlation estimated for the subsamples reveals that emotional maturity of ‘middleborn children’ is more strongly associated with their academic stress than that in ‘lastborn children’.

The difference between ‘firstborn children’ and ‘lastborn children’ in the coefficient of correlation between emotional maturity and academic stress is illustrated in Figure 4.22.

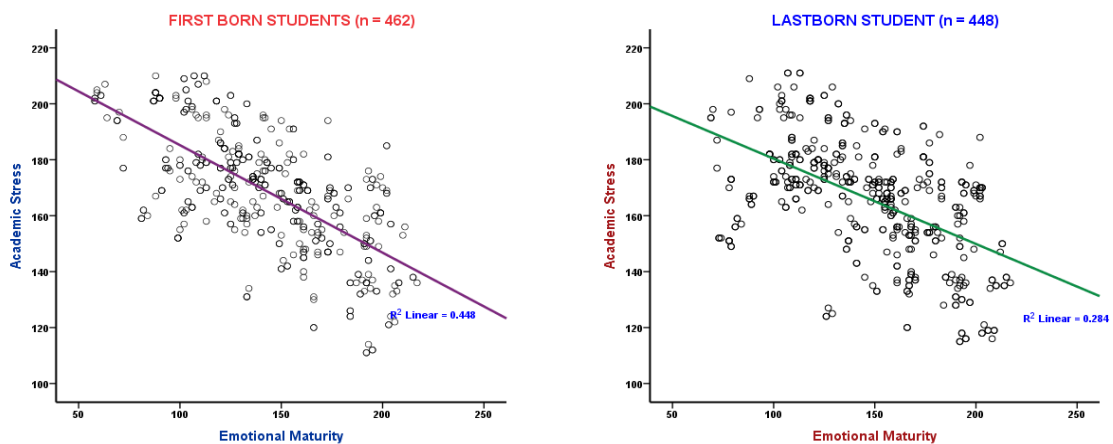


Figure 4.22: Correlation between emotional maturity and academic stress: Scatterplots with regression line outputs for firstborn and last-born students.

The difference between ‘middleborn children’ and ‘lastborn children’ in the degree of relationship between their emotional maturity and academic stress is portrayed in Figure 4.23.

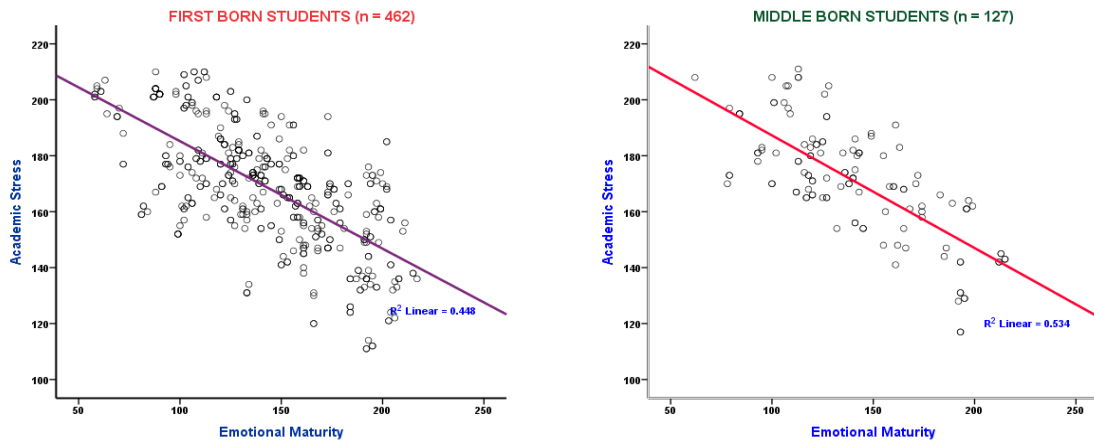


Figure 4.23: Correlation between emotional maturity and academic stress: Scatterplots with regression line outputs for firstborn and middleborn students.

The differential effect of socio-economic status on the coefficient of correlation between emotional maturity and academic stress of higher secondary school students were studied by comparing the r -values estimated for sub-samples based on SES. Table 4.33 presents the result of Fisher's z -transformation test performed in this context.

Table 4.33: Comparison of students in different SES with respect to the correlation between emotional maturity and academic stress

Group	Sub-samples	Statistical Indices			Z_{observed}	Sig.
		N	r	z		
SES Pair-1	High SES	254	-0.691	0.848	2.63	.01
	Average SES	703	-0.576	0.648		
SES Pair-2	High SES	254	-0.691	0.848	0.41	NS
	Low SES	275	-0.672	0.811		
SES Pair-3	Average SES	703	-0.576	0.648	2.21	.05
	Low SES	275	-0.672	0.811		

The results of the analysis, done to find out the significant difference, if any, between higher secondary school students in different socio-economic status with respect to the degree of relationship between their emotional maturity and academic stress revealed the following:

- 1) Students from high socio-economic status and average socio-economic status differ significantly regarding the coefficient of correlation between their emotional maturity and academic stress ($Z_{\text{observed}} = 2.63$; $p < .01$). The variables are more strongly correlated in students from High SES than in students from Average SES.
- 2) There is no significant difference between higher secondary school students from High SES and Low SES with respect to the degree of relationship between their emotional maturity and academic stress ($Z_{\text{observed}} = 0.41$; $p > .05$).
- 3) There is significant difference between higher secondary school students from Average SES and Low SES in respect of the correlation between their emotional maturity and academic stress ($Z_{\text{observed}} = 2.21$; $p < .05$). Inspection of the r -values estimated for the groups shows that the association between the variables is stronger in students from Low SES than in students from average SES.

The difference between higher secondary school students from High SES and Average SES in the coefficients of correlation between emotional maturity and academic stress is picturized in Figure 4.24.

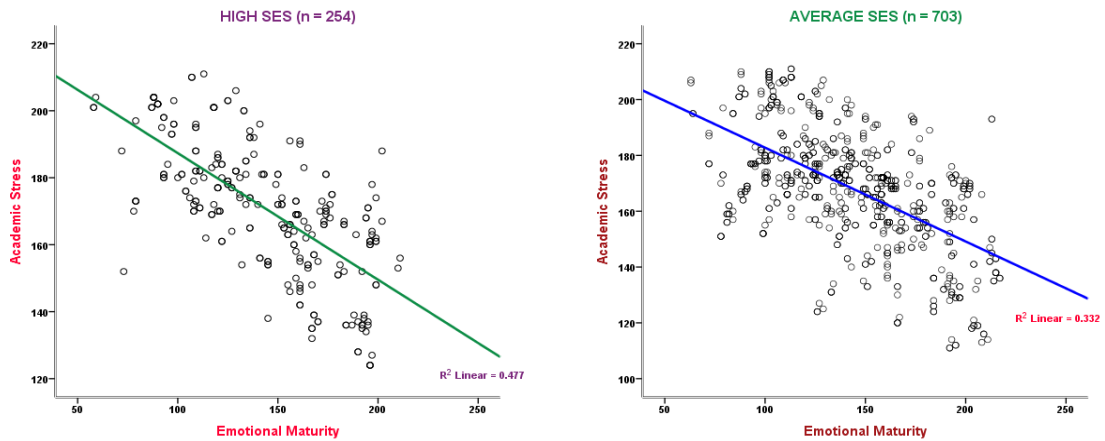


Figure 4.24: Correlation between emotional maturity and academic stress: Scatterplots with regression line outputs for students from high socio-economic status and average socio-economic status.

The difference between higher secondary school students from Average SES and Low SES in the degree of relationship between their emotional maturity and academic stress is depicted in Figure 4.25.

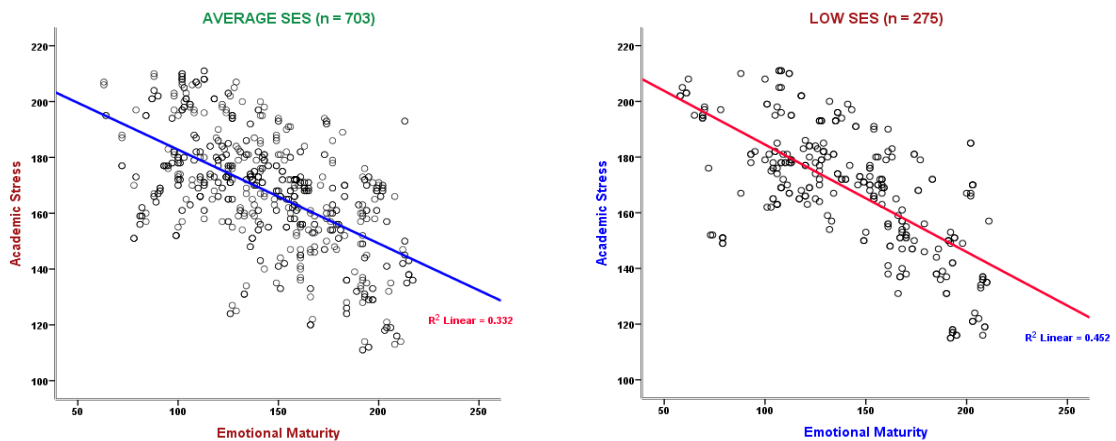


Figure 4.25: Correlation between emotional maturity and academic stress: Scatterplots with regression line outputs for students from average socio-economic status and low socio-economic status.

Tenability of Hypothesis-6

The analyses performed in Section 4.6 have brought out the following:

- 1) There is significant difference between male and female students regarding the coefficient of correlation between their academic stress and emotional maturity ($Z_{\text{observed}} = 5.151$; $p < .001$: vide Table 4.30).
- 2) Higher secondary school students coming from extended families and nuclear families do not differ significantly in the association between their academic stress and emotional maturity ($Z_{\text{observed}} = 1.02$; $p > .05$: vide Table 4.31).
- 3) The following paired birth order groups do not differ significantly in the degree of relationship between their academic stress and emotional maturity: (i) 'only children' and 'firstborn children' ($Z_{\text{observed}} = 1.20$; $p > .05$), (ii) 'only children' and middleborn children ($Z_{\text{observed}} = 1.94$; $p > .05$), (iii) 'only children' and lastborn children ($Z_{\text{observed}} = 1.31$; $p < .05$), and (iv) 'firstborn children' and middleborn children ($Z_{\text{observed}} = 1.19$; $p < .05$) (vide Table 4.32).
- 4) Significant differences exist between the following birth order pairs of HSS students in the coefficient of correlation between academic stress and emotional maturity: (i) firstborn children' and lastborn children ($Z_{\text{observed}} = 3.25$; $p < .001$), and (ii) middleborn children and lastborn children ($Z_{\text{observed}} = 3.31$; $p < .001$), (vide Table 4.32).

- 5) Though there is no significant difference between students in High SES and Low SES regarding the correlation between their academic stress and emotional maturity ($Z_{\text{observed}} = 0.41$; $p > .05$), significant difference exists between students from High SES and Average SES ($Z_{\text{observed}} = 2.63$; $p < .01$), and also between students from Average SES and Low SES ($Z_{\text{observed}} = 2.21$; $p < .05$), (vide Table 4. 33).

In the light of the above findings, Hypothesis-6 (*there is no significant difference in the degree of relationship between emotional maturity and academic stress of higher secondary school students with respect to gender, type of family, ordinal position and socio-economic status*) is partially accepted.

4.7 RELATIONSHIP BETWEEN PSYCHOLOGICAL RESILIENCE AND ACADEMIC STRESS OF HIGHER SECONDARY SCHOOL STUDENTS

This section of analysis is given over to the estimation of the relationship between psychological resilience and academic stress of higher secondary school students by considering the sample as total and sub-samples based on gender, type of family, ordinal position and socio-economic status. The coefficient of correlation (r) between the variables were estimated by employing the Pearson product moment method followed by computation of the standard error of coefficient of correlation (SE_r), estimation of population values of the coefficient of correlation at .05 level and .01 level, and testing of the tenability of Hypothesis-7.

Hypothesis-7: There is no significant relationship between psychological resilience and academic stress of higher secondary school students.

Table 4.34: Relationship between psychological resilience and academic stress of higher secondary school students

Group	Samples	N	r	SE _r	Sig.	r _{POP}	
						.05 level	.01 level
Whole Group	Total Sample	1232	-0.379	0.024	.001	-0.43 – -0.33	-0.44 – -0.32
Gender	Male	538	-0.453	0.034	.001	-0.52 – -0.39	-0.54 – -0.37
	Female	649	-0.311	0.035	.001	-0.38 – -0.24	-0.40 – -0.22
Type of Family	Extended	532	-0.333	0.039	.001	-0.41 – -0.26	-0.43 – -0.23
	Nuclear	700	-0.399	0.032	.001	-0.46 – -0.34	-0.48 – -0.32
Ordinal Position	Only child	195	-0.407	0.060	.001	-0.52 – -0.29	-0.56 – -0.25
	Firstborn	462	-0.429	0.038	.001	-0.50 – -0.35	-0.53 – -0.33
	Middleborn	127	-0.381	0.076	.001	-0.53 – -0.23	-0.58 – -0.18
	Lastborn	448	-0.279	0.044	.001	-0.37 – -0.19	-0.39 – -0.17
SES	High	254	-0.341	0.055	.001	-0.45 – -0.23	-0.48 – -0.20
	Average	703	-0.379	0.032	.001	-0.44 – -0.32	-0.46 – -0.30
	Low	275	-0.412	0.050	.001	-0.51 – -0.31	-0.54 – -0.28

The value of coefficient of correlation (r) between psychological resilience and academic stress calculated for the entire sample and relevant sub-samples of higher secondary school students reveals that there exists significant and negative correlation between the variables. The coefficient of correlation estimated for the whole sample of the higher secondary school students is -0.379 ($p < .001$) with a standard error (SE_r) of 0.024. The confidence interval value (rPOP) of the coefficient of correlation for the total sample lies between -0.43 and -0.33 at .05 level and between -0.44 and -0.32 at .01 level. The highest value of coefficient of

correlation was obtained for the sub-sample of male students ($r = -0.459$; $p < .001$), whereas the lowest r -value was obtained for the sub-sample of female students ($r = -0.311$; $p < .001$). The correlational analysis shows that the academic stress of higher secondary school students increases with their reducing ability to cope with a crisis and to return to the pre-crisis position quickly. The scatterplot with regression line output generated for the psychological resilience and academic stress of the higher secondary school students is shown in Figure 4.26.

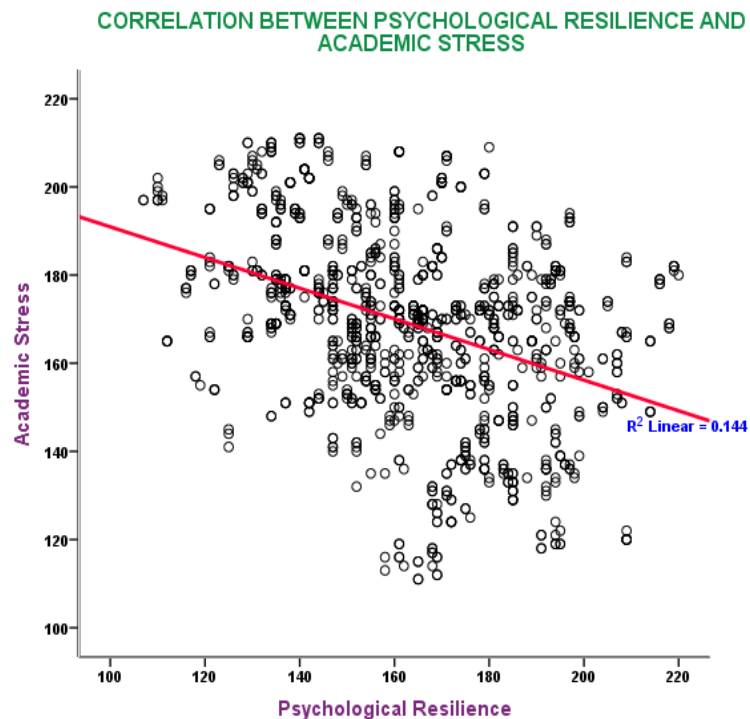


Figure 4.26: Scatterplot with regression line output: Psychological resilience and academic stress (Total Sample)

Tenability of Hypothesis-7

The correlational analysis between psychological resilience and academic stress brought out that the variables are correlated significantly and negatively in

the total sample ($r = -0.379$; $p < .001$) as well as sub-samples based on gender, type of family, ordinal position and socio-economic status. The hypothesis formulated in this context, viz., Hypothesis-7 (*there is no significant relationship between psychological resilience and academic stress of higher secondary school students*), is, subsequently, rejected.

4.8 COMPARISON OF THE RELATIONSHIP BETWEEN PSYCHOLOGICAL RESILIENCE AND ACADEMIC STRESS OF SUBSAMPLES

The coefficients of correlation (r -values) between psychological resilience and academic stress, estimated for the various sub-samples of higher secondary school students were compared to find out whether the groups differ significantly with respect to the degree of relationship between the variables. The comparison of the sub-samples with respect to the coefficient of correlation between psychological resilience and academic stress was done by employing Fisher's z -transformation test, followed by testing of the tenability of Hypothesis-8.

Hypothesis-8: There is no significant difference in the degree of relationship between psychological resilience and academic stress of higher secondary school students with respect to gender, type of family, ordinal position and socio-economic status.

The sub-samples of higher secondary school students based on gender were compared regarding the coefficient of correlation between their psychological

resilience and academic stress, so as to find out the significant difference, if any, between male and female students in the association between the variables. Table 4.35 shows the data and results of the Fisher's z-transformation test carried out in this context.

Table 4.35: Comparison of male and female students with respect to the correlation between psychological resilience and academic stress

Group	Sub-samples	Statistical Indices			Z_{observed}	Sig.
		N	r	z		
Gender	Male	538	-0.453	0.485	2.85	.01
	Female	649	-0.311	0.321		

Comparison of the male and female students regarding the coefficients of correlation between psychological resilience and academic stress produced a critical value which is significant beyond 99% confidence interval ($Z_{\text{observed}} = 2.85$; $p < .01$). It discloses the presence of a significant difference between male and female students in the degree of relationship between psychological resilience and academic stress. Since the coefficient of correlation between the variables estimated for the male students ($r = -0.453$) is greater in magnitude than that estimated for the female students, the association between the variables are stronger in male students than in female students. In other words, any change in psychological resilience is reflected more on the academic stress of male students than that of female students. The difference in degree of relationship between psychological resilience and academic stress in male and female students are depicted in Figure 4.27.

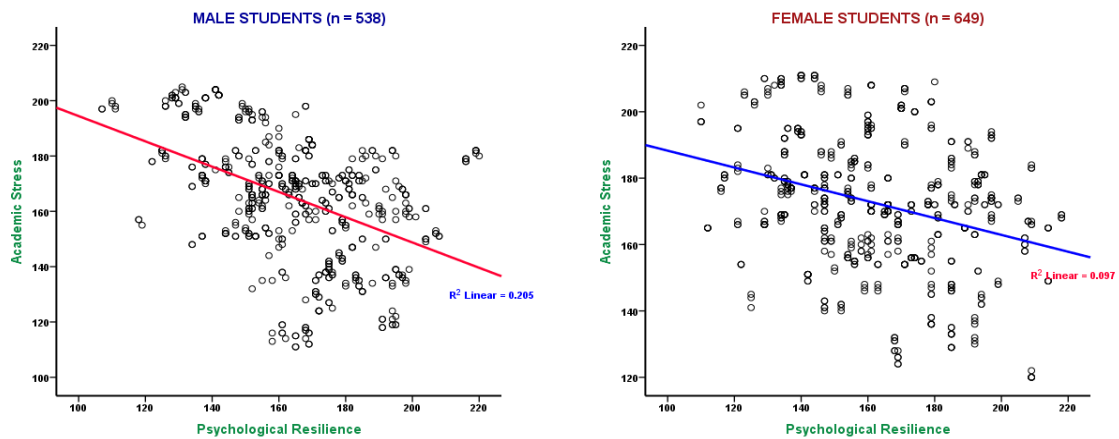


Figure 4.27: Correlation between psychological resilience and academic stress: Scatterplots with regression line outputs for male and female students.

Students from the extended families and nuclear families were compared as regards to the coefficient of correlation between psychological resilience and academic stress so as to find out the differential influence of type of family on the association between the variables. Table 4.36 presents the result of Fisher's z-transformation test performed in this regard.

Table 4.36: Comparison of students from extended families and nuclear families with respect to the correlation between psychological resilience and academic stress

Group	Sub-samples	Statistical Indices			Z_{observed}	Sig.
		N	r	z		
Type of family	Extended	532	-0.333	0.343	1.32	NS
	Nuclear	700	-0.399	0.412		

The result of the comparison of the family groups regarding the correlation between psychological resilience and academic stress is not significant ($Z_{\text{observed}} =$

1.32; $p > .05$). It indicates that students from extended families and nuclear families are almost alike with regard to the association between their psychological resilience and academic stress. In other words, type of family is not a significant factor that discriminates higher secondary school students on the basis of the correlation between their psychological resilience and academic stress.

Higher secondary school students in different ordinal positions were compared to explore the differential influence of birth order on the relationship between their psychological resilience and academic stress. Table 4.37 presents the data and results of the Fisher's z-transformation test performed in this regard.

Table 4.37: Comparison of students in different ordinal positions with respect to the correlation between psychological resilience and academic stress

Group	Sub-samples	Statistical Indices			Z_{observed}	Sig.
		N	r	z		
Birth Order Pair-1	Only-child	195	-0.407	0.436	0.31	NS
	Firstborn	462	-0.429	0.460		
Birth Order Pair-2	Only-child	195	-0.407	0.436	0.27	NS
	Middleborn	127	-0.381	0.400		
Birth Order Pair-3	Only-child	195	-0.407	0.436	1.68	NS
	Last-born	448	-0.279	0.288		
Birth Order Pair-4	Firstborn	462	-0.429	0.460	0.57	NS
	Middleborn	127	-0.381	0.400		
Birth Order Pair-5	Firstborn	462	-0.429	0.460	2.59	.01
	Last-born	448	-0.279	0.288		
Birth Order Pair-6	Middleborn	127	-0.381	0.400	1.13	NS
	Last-born	448	-0.279	0.288		

The results of the Fisher's z-transformation test carried out to compare higher secondary school students in different ordinal positions regarding the coefficients of correlation between their psychological resilience and academic stress reveal the following:

- 1) The 'only children' do not differ from the 'firstborn children' in the degree of relationship between their psychological resilience and academic stress ($Z_{\text{observed}} = 0.31$; $p > .05$).
- 2) There is no significant difference between the 'middleborn children' and the 'only children' in the correlation between their psychological resilience and academic stress ($Z_{\text{observed}} = 0.27$; $p > .05$).
- 3) No true difference exists between the 'only children' and the 'lastborn children' in the coefficient of correlation between their psychological resilience and academic stress ($Z_{\text{observed}} = 1.68$; $p > .05$).
- 4) The 'firstborn children' do not differ significantly from the 'middleborn children' in the degree of relationship between their psychological resilience and academic stress ($Z_{\text{observed}} = 0.57$; $p > .05$).
- 5) Significant difference exists between the 'firstborn children' and the 'lastborn children' in the coefficient of correlation between their psychological resilience and academic stress ($Z_{\text{observed}} = 2.59$; $p < .001$). Inspection of the r-values calculated for the groups shows

that the variables are strongly bonded in the ‘firstborn children’ than in the ‘lastborn children’.

- 6) There is no significant difference between ‘middleborn children’ and ‘lastborn children’ regarding coefficient of correlation between their psychological resilience and academic stress ($Z_{\text{observed}} = 1.13$; $p > .05$).

The difference between ‘firstborn children’ and ‘lastborn children’ in the coefficient of correlation between psychological resilience and academic stress is portrayed in Figure 4.28.

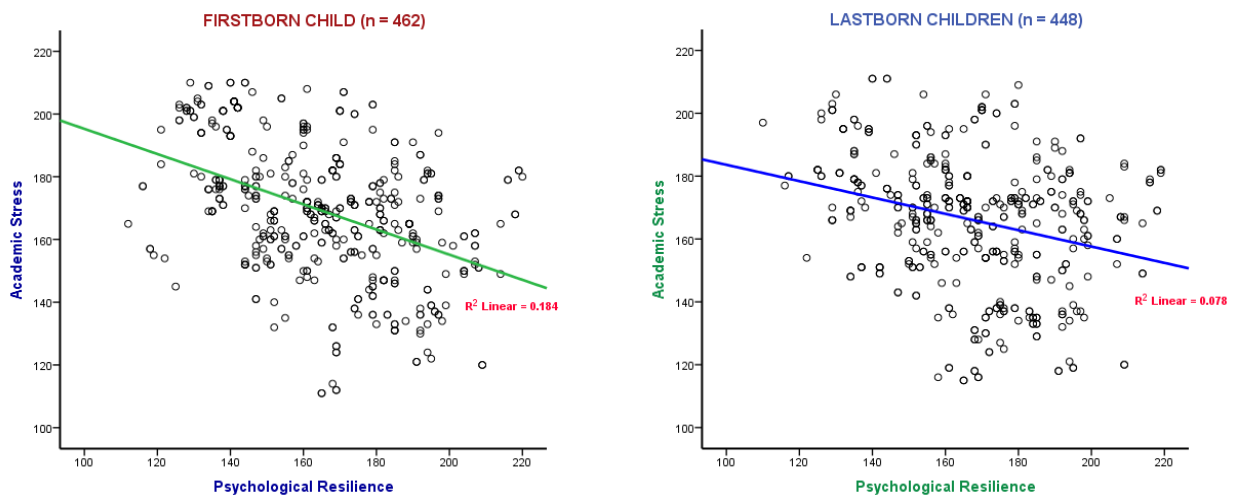


Figure 4.28: Correlation between psychological resilience and academic stress: Scatterplots with regression line outputs for firstborn and last-born.

Higher secondary school students from different socio-economic status were compared with regard to the coefficient of correlation between their psychological resilience and academic stress so as to find out whether the groups differ

significantly in the degree of relationship between the variables. The result of the Fisher's z-transformation test conducted in this regard is given in Table 4.38.

Table 4.38: Comparison of students in different socio-economic status with respect to the correlation between psychological resilience and academic stress

Group	Sub-samples	Statistical Indices			Z_{observed}	Sig.
		N	r	z		
SES Pair-1	High SES	254	-0.341	0.354	0.59	NS
	Average SES	703	-0.379	0.400		
SES Pair-2	High SES	254	-0.341	0.354	0.95	NS
	Low SES	275	-0.412	0.437		
SES Pair-3	Average SES	703	-0.379	0.400	0.55	NS
	Low SES	275	-0.412	0.437		

Comparison of students in different socio-economic status regarding the coefficient of correlation between their psychological resilience and academic stress showed that none of the Z_{observed} value estimated is significant. It indicates that higher secondary school students in high, average and low socio-economic status do not differ significantly with respect to the relationship between their psychological resilience and academic stress.

Tenability of Hypothesis-8

The analyses conducted in Section 4.8 have exposed the following major findings:

- 1) The male and female students differ significantly in the degree of relationship between their psychological resilience and academic stress ($Z_{\text{observed}} = 2.85$; $p < .001$: vide Table 4.35).
- 2) Students from extended families and nuclear families do not differ significantly in the coefficient of correlation between their psychological resilience and academic stress ($Z_{\text{observed}} = 1.32$; $p > .05$: vide Table 4.36).
- 3) No significant difference exists between the following birth order pairs of higher secondary school students with respect to the coefficient of correlation between their psychological resilience and academic stress:
 - (i) 'only children' and 'firstborn children' ($Z_{\text{observed}} = 0.31$; $p > .05$), (ii) 'only children' and middleborn children ($Z_{\text{observed}} = 0.27$; $p > .05$), (iii) 'only children' and lastborn children ($Z_{\text{observed}} = 1.68$; $p < .05$), (iv) 'firstborn children' and middleborn children ($Z_{\text{observed}} = 0.57$; $p < .05$), and (v) middleborn children and lastborn children ($Z_{\text{observed}} = 1.13$; $p > .05$), (vide Table 4.37).
- 4) There is significant difference between the 'firstborn children' and lastborn children regarding the coefficient of correlation between their

psychological resilience and academic stress ($Z_{\text{observed}} = 2.59$; $p < .001$: vide Table 4. 37).

- 5) Higher secondary school students in different socio-economic status do not differ significantly in the degree of relationship between their psychological resilience and academic stress. The critical ratios estimated for different SES pairs are as follows: (i) High SES and Average SES groups ($Z_{\text{observed}} = 0.59$; $p > .05$), (ii) High SES and Low SES groups ($Z_{\text{observed}} = 0.95$; $p > .05$), and (iii) Average SES and Low SES ($Z_{\text{observed}} = 0.55$; $p > .05$), (vide Table 4. 38).

Considering the above findings, Hypothesis-8 (*there is no significant difference in the degree of relationship between psychological resilience and academic stress of higher secondary school students with respect to gender, type of family, ordinal position and socio-economic status*) is partially accepted.

4.9 RELATIONSHIP BETWEEN LOCUS OF CONTROL AND ACADEMIC STRESS OF HIGHER SECONDARY SCHOOL STUDENTS

The relationship between locus of control and academic stress for the total group and different sub-samples of the higher secondary school students was found out by computing the coefficient of correlation. The coefficient of correlation (r) was calculated by employing the Pearson product moment method with the help of SPSS, followed by computation of the Standard Error of

Correlation (SE_r) to set the confidence intervals (at .05 level and .01 level) within which the r -value for the population will fall. The computation of the coefficients of correlation for the entire sample and the sub-samples based on gender, type of family, ordinal position and socio-economic status were followed by testing of the hypothesis.

Hypothesis-9: There is no significant relationship between locus of control and academic stress of higher secondary school students.

Table 4.39: Relationship between locus of control and academic stress of higher secondary school students

Group	Samples	N	r	SE_r	Sig.	r_{pop}	
						.05 level	.01 level
Whole Group	Total Sample	1232	-0.323	0.026	.001	-0.37 – -0.27	-0.39 – -0.26
Gender	Male	538	-0.303	0.039	.001	-0.38 – -0.23	-0.40 – -0.20
	Female	649	-0.313	0.035	.001	-0.38 – -0.24	-0.40 – -0.22
Type of Family	Extended	532	-0.313	0.039	.001	-0.39 – -0.24	-0.41 – -0.21
	Nuclear	700	-0.315	0.034	.001	-0.38 – -0.25	-0.40 – -0.23
Ordinal Position	Only child	195	-0.346	0.063	.001	-0.47 – -0.22	-0.51 – -0.18
	Firstborn	462	-0.279	0.043	.001	-0.36 – -0.19	-0.39 – -0.17
	Middleborn	127	-0.284	0.082	.001	-0.44 – -0.12	-0.50 – -0.07
	Lastborn	448	-0.345	0.042	.001	-0.43 – -0.26	-0.45 – -0.24
SES	High	254	-0.357	0.055	.001	-0.46 – -0.25	-0.50 – -0.22
	Average	703	-0.221	0.036	.001	-0.29 – -0.15	-0.31 – -0.13
	Low	275	-0.517	0.044	.001	-0.60 – -0.43	-0.63 – -0.40

As evident from Table 4.39, the coefficient of correlation (r) between locus of control and academic stress worked out for the entire sample of higher

secondary school students is -0.323 , which is significant beyond 99.9% confidence interval ($r = -0.323$; $p < .001$). It exposes that internal locus of control and academic stress of higher secondary school students are functionally related. The standard error of coefficient of correlation (SE_r) computed for the total sample is 0.026. The population value of coefficient of correlation (r_{POP}) is positioned between -0.37 and -0.27 at 0.05 confidence interval; and between -0.39 and -0.26 at .01 confidence interval. Since the value of the coefficient of correlation ($r = -0.323$) lies between ± 0.20 and ± 0.40 , the variables exhibit only low relationship in the total group. The highest value of 'r' worked out for the sub-samples under study was -0.517 , obtained for students from the low socio-economic status where the variables show marked relationship. The lowest correlation between the variables was estimated for the sub-sample of students from average socio-economic status ($r = -0.221$; $p < .001$). The coefficient of correlation estimated for the total sample and the sub-samples shows that any increase in the internal locus of control of higher secondary school students is escorted by an equivalent fall in their academic stress. The scatterplot with regression line output obtained for the internal locus of control and academic stress of the higher secondary school students is shown in Figure 4.29.

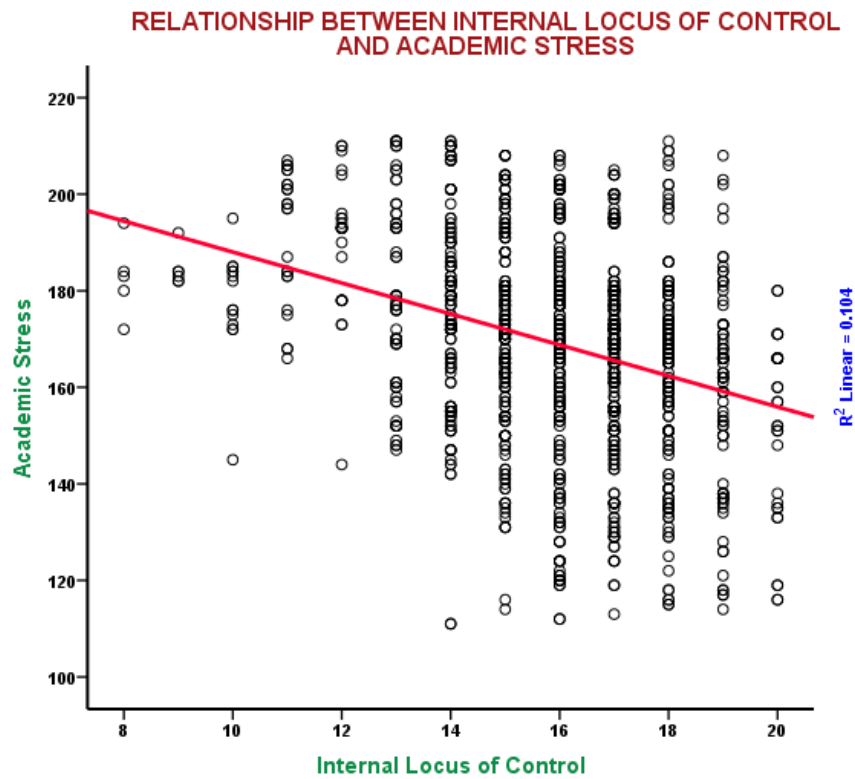


Figure 4.29: Scatterplot with regression line output: Locus of control and academic stress (Total Sample)

Tenability of Hypothesis-9

The correlational analysis done in Section 4.9 brought out that internal locus of control of higher secondary school students is correlated significantly and negatively with their academic stress ($r = -0.323$; $p < .001$). The hypothesis formulated in this context, viz., Hypothesis-9 (*there is no significant relationship between locus of control and academic stress of higher secondary school students*) is, hence, rejected.

4.10 COMPARISON OF THE RELATIONSHIP BETWEEN LOCUS OF CONTROL AND ACADEMIC STRESS OF SUBSAMPLES

The coefficient of correlation between locus of control and academic stress, estimated for different sub-samples were compared in this section to find out the differential influence of gender, type of family, ordinal position and socio-economic status on the association between the variables. The comparison of the coefficients of correlation was done by using Fisher's z-transformation test, followed by testing of the tenability of Hypothesis-10.

Hypothesis-10: There is no significant difference in the degree of relationship between locus of control and academic stress of higher secondary school students with respect to gender, type of family, ordinal position and socio-economic status.

The male and female higher secondary school students were compared with respect to the coefficient of correlation between their internal locus of control and academic stress, so as to examine whether the gender groups are alike in the degree of relationship between the variables. The data and result of the Fisher's z-transformation test is given in Table 4.40.

Table 4.40: Comparison of male and female students with respect to the correlation between locus of control and academic stress

Group	Sub-samples	Statistical Indices			Z_{observed}	Sig.
		N	r	z		
Gender	Male	538	-0.303	0.309	0.19	NS
	Female	649	-0.313	0.321		

The result of the z-transformation test produced a critical ratio which is not large enough to be significant at least at 95% confidence interval ($Z_{\text{observed}} = 0.19$; $p > .05$). It exposes that the male and female students in the higher secondary schools of Kerala are alike with respect to the relationship between their internal locus of control and academic stress. Putting differently, gender is not a significant decisive factor in the degree of relationship between internal locus of control and academic stress of higher secondary school students of Kerala.

Students hailing from extended families and nuclear families were compared in regard to the correlation between internal locus of control and academic stress so as to discover the differences between the family groups in the association between the variables. The result of the z-transformation test carried out in this connection is presented in Table 4.41.

Table 4.41: Comparison of students from extended families and nuclear families with respect to the correlation between locus of control and academic stress

Group	Sub-samples	Statistical Indices			Z_{observed}	Sig.
		N	r	z		
Type of family	Extended	532	-0.313	0.321	0.04	NS
	Nuclear	700	-0.315	0.332		

The z-value computed by comparing the coefficients of correlation between locus of control and academic stress from students from extended families and nuclear families is not significant ($Z_{\text{observed}} = 0.04$; $p > .05$). It demonstrates that there is no true difference between students from nuclear families and extended families in the magnitude of association between their locus of control and academic stress. To rephrase, the type of family from where the higher secondary school students are hailing does not influence the association between their locus of control and academic stress.

The differential effect of birth order on the relationship between locus of control and academic stress were studied by comparing students in different ordinal positions in regard to the coefficient of correlation between the variables. The result of the Fisher's z-transformation test performed in this regard is given in Table 4.42.

Table 4.42: Comparison of students in different ordinal positions with respect to the correlation between locus of control and academic stress

Group	Sub-samples	Statistical Indices			Z_{observed}	Sig.
		N	r	z		
Birth Order Pair-1	Only-child	195	-0.346	0.365	0.86	NS
	Firstborn	462	-0.279	0.288		
Birth Order Pair-2	Only-child	195	-0.346	0.365	0.60	NS
	Middleborn	127	-0.284	0.288		
Birth Order Pair-3	Only-child	195	-0.346	0.365	0.01	NS
	Last-born	448	-0.345	0.365		
Birth Order Pair-4	Firstborn	462	-0.279	0.288	0.05	NS
	Middleborn	127	-0.284	0.288		
Birth Order Pair-5	Firstborn	462	-0.279	0.288	1.10	NS
	Last-born	448	-0.345	0.365		
Birth Order Pair-6	Middleborn	127	-0.284	0.288	0.62	NS
	Last-born	448	-0.345	0.365		

The results of the Fisher's z-transformation test performed to compare students in different birth orders with respect to the coefficients of correlation between their locus of control and academic stress show that none of the critical ratios are significant. It reveals that birth order is not a significant decisive factor in discriminating higher secondary school students of Kerala on the basis of the correlation between their locus of control and academic stress. The relationship between academic stress and internal locus of control is independent of the birth

order of higher secondary school students. In simpler terms, internal locus of control of higher secondary school students in different ordinal positions is related almost equally to the academic stress.

The differential influence of socio-economic status on the relationship between locus of control and academic stress of higher secondary school students were examined by comparing the coefficients of correlation estimated for students from high, average and low SES. The result of Fisher's z-transformation test conducted in this regard is given in Table 4.43.

Table 4.43: Comparison of students in different SES with respect to the correlation between locus of control and academic stress

Group	Sub-samples	Statistical Indices			Z _{observed}	Sig.
		N	r	z		
SES Pair-1	High SES	254	-0.357	0.377	2.02	.05
	Average SES	703	-0.221	0.224		
SES Pair-2	High SES	254	-0.357	0.377	2.27	.05
	Low SES	275	-0.517	0.576		
SES Pair-3	Average SES	703	-0.221	0.224	4.86	.01
	Low SES	275	-0.517	0.576		

The results of the analyses carried out to compare higher secondary school students from high, average and low socio-economic status regarding the coefficients of correlation between locus of control and academic stress revealed the following:

- 1) There is significant difference between students from high socio-economic status and average socio-economic status concerning the coefficient of correlation between their locus of control and academic stress ($Z_{\text{observed}} = 2.02$; $p < .05$). Students from High SES excel their colleagues from Average SES in the degree of relationship between locus of control and academic stress.
- 2) Significant difference also exists between higher secondary school students from High SES and Low SES in regard to the degree of relationship between their locus of control and academic stress ($Z_{\text{observed}} = 2.27$; $p < .05$). Since the estimated coefficient of correlation between the variables for students from Low SES ($r = -0.517$) is greater than that estimated for students from High SES ($r = -0.357$), the relationship between the variables is stronger in the former group.
- 3) Secondary school students in the Average SES differ significantly from their colleagues in the Low SES in the degree of relationship between their locus of control and academic stress ($Z_{\text{observed}} = 4.86$; $p < .01$). Scrutiny of the r -values estimated for the groups shows that the relationship between the variables is stronger in students from Low SES ($r = -0.517$) than in students from Average SES ($r = -0.221$).

The difference between higher secondary school students from High SES and Average SES in the coefficients of correlation between locus of control and academic stress is depicted in Figure 4.30.

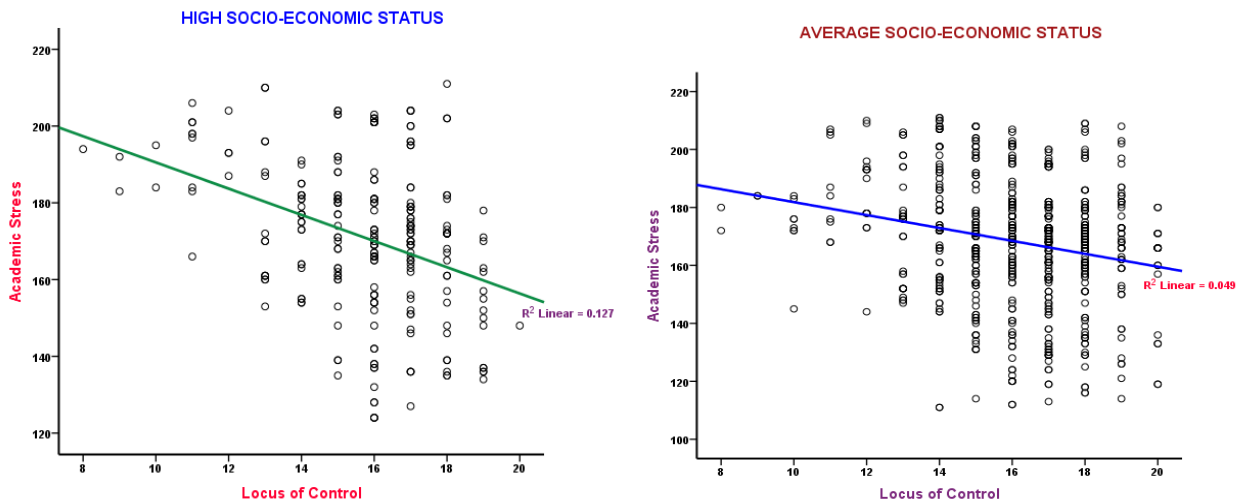


Figure 4.30: Correlation between locus of control and academic stress: Scatterplots with regression line outputs for students from high socio-economic status and average socio-economic status.

The difference between higher secondary school students from Average SES and Low SES in the coefficients of correlation between their locus of control and academic stress is shown in Figure 4.31.

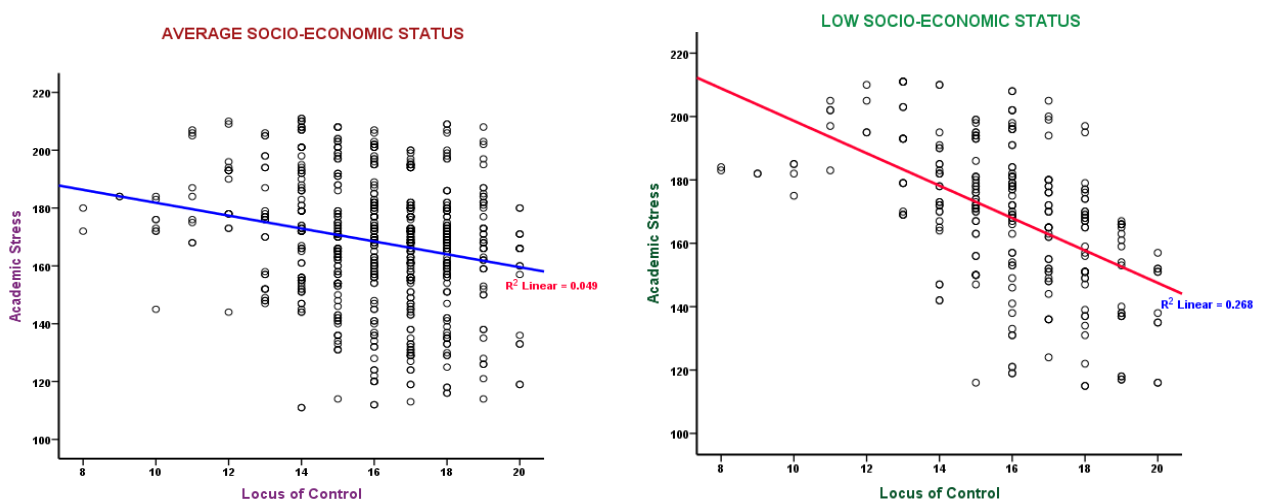


Figure 4.31: Correlation between locus of control and academic stress: Scatterplots with regression line outputs for students from average socio-economic status and low socio-economic status.

Tenability of Hypothesis-10

The following are the major findings emerged from analyses conducted in Section 4.10:

- 1) The male and female students in the higher secondary schools of Kerala do not differ significantly regarding the coefficient of correlation between their academic stress and locus of control ($Z_{\text{observed}} = 0.19$; $p > .05$: vide Table 4.40).
- 2) There is no significant difference between higher secondary school students coming from extended families and nuclear families regarding the correlation between their locus of control and academic stress ($Z_{\text{observed}} = 0.04$; $p > .05$: vide Table 4. 41).
- 3) Students in different birth orders do not differ significantly with regard to the degree of relationship between their locus of control and academic stress (vide Table 4. 42).
- 4) Significant differences were observed between higher secondary school students in different socio-economic status with respect to the coefficient of correlation between locus of control and academic stress. The estimated differences in different SES pairs include: (i) between High SES and Average SES ($Z_{\text{observed}} = 2.02$; $p < .05$), (ii) between High SES and Low SES ($Z_{\text{observed}} = 2.27$; $p < .05$), and (iii) between Average SES and Low SES ($Z_{\text{observed}} = 4.86$; $p < .01$).

The hypothesis formulated in this context, viz., Hypothesis-10 (*there is no significant difference in the degree of relationship between locus of control and academic stress of higher secondary school students with respect to gender, type of family, ordinal position and socio-economic status*) is partially accepted.

4.11 EFFECT OF EMOTIONAL MATURITY, PSYCHOLOGICAL RESILIENCE AND LOCUS OF CONTROL ON ACADEMIC STRESS OF HIGHER SECONDARY SCHOOL STUDENTS

The main effect refers to the influence that an independent variable exerts on a dependent variable. An interaction effect happens when two independent variables exhibit an association in the manner in which they influence a dependent variable. Since the present study involves three independent variables (factors), viz., emotional maturity, psychological resilience, and locus of control, the main effect presents the influence of each of these psychological constructs on academic stress (the dependent variable). Interaction effect examines the influence exerted by different combinations of these factors on the dependent variable. The possible combinations of the factors in the present study include: (i) Emotional Maturity in interaction with Psychological Resilience, (ii) Emotional Maturity in interaction with Locus of Control, (iii) Psychological Resilience in interaction with Locus of Control, and (iv) interaction of Emotional Maturity, Psychological Resilience and Locus of Control.

In order to find out the effect of emotional maturity, psychological resilience and locus of control on academic stress of higher secondary school students, three-way factorial ANOVA was used. In a factorial design there is two or more factors (independent variables), each level of one factor is in conjunction with each level of other factor(s) to produce a series of combinations. Each combination, then, turns out to be a condition in the experiment. The 3-way factorial design accepted for the study necessitated transfiguration of the factors (independent variables) from the continuous scale to discrete (categorical) scale. To achieve this, the mean (M) and standard deviation (σ) of the scores obtained on the Emotional Maturity Scale for Higher Secondary School Students (EMSS) were computed and the sample was then divided into High- ($M+\sigma$ and above), Average- (between $M+\sigma$ and $M-\sigma$) and Low ($M-\sigma$ and below) emotional maturity groups. Likewise, based on the Arithmetic Mean (M) and Standard Deviation (σ) of the scores obtained on the Psychological Resilience Scale for Adolescents (PRSA) and the Malayalam Version of Rotter's Internal-External Locus of Control Scale (MRIES), the sample was separated into High, Average and Low groups. Three-way ANOVA with 3X3X3 factorial design was then performed to explore the main effect and interaction effects of the independent variables, viz., Emotional Maturity (EM), Psychological Resilience (PR) and Locus of Control (LC) upon Academic Stress (AST), the dependent variable, which is followed by the testing of Hypothesis-11.

Hypothesis-11: There is no significant main effect and interaction effects of emotional maturity, psychological resilience and locus of control on academic stress of higher secondary school students.

Table 4.44: Summary of factorial ANOVA for the main effect and interaction effects of emotional maturity, psychological resilience, and locus of control on academic stress of higher secondary school students

Dependent variable: AST

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial η^2
Corrected Model	228385.054 ^a	22	10381.139	39.288	.000	.417
Intercept	3848699.063	1	3848699.063	14565.556	.000	.923
EM	7957.276	2	3978.638	15.057	.000	.024
PR	2868.387	2	1434.193	5.428	.005	.009
LC	9380.119	2	4690.060	17.750	.000	.029
EM * PR	4507.460	4	1126.865	4.265	.002	.014
EM * LC	1564.461	4	391.115	1.480	.206	.005
PR * LC	2788.911	4	697.228	2.639	.033	.009
EM * PR * LC	3693.236	4	923.309	3.494	.008	.011
Error	319457.582	1209	264.233			
Total	35696811.000	1232				
Corrected Total	547842.636	1231				

a. R Squared = .417 (Adjusted R Squared = .406)

The result of the factorial ANOVA executed to discover the main effect and interaction effects of Emotional Maturity (EM), Psychological Resilience (PR) and Locus of Control (LC) on the Academic Stress (AST) of higher secondary school students, presented in Table 4.44, discloses that all the independent

variables, viz., emotional maturity, psychological resilience, and locus of control exert significant main effects on academic stress of higher secondary school students. Whereas the main effects of Emotional Maturity ($F = 15.057$, $p < 0.001$), and Locus of Control ($F = 17.750$; $p < 0.001$) are significant at 99.9% confidence interval, that exerted by Psychological Resilience is significant at 99% confidence interval ($F = 5.428$; $p < .01$). The partial eta square (η_p^2) estimated shows that the effect size is small for the main effects of all the independent variables. The results designate that the mean scores of academic stress for higher secondary school students having different levels of emotional maturity, psychological resilience and internal locus of control differ significantly. The main effects of the selected independent variables, i.e., Emotional Maturity, Psychological Resilience and Locus of Control on the Academic Stress of higher secondary school students are illustrated in Figure 4.32, Figure 4.33 and Figure 4.34 respectively.

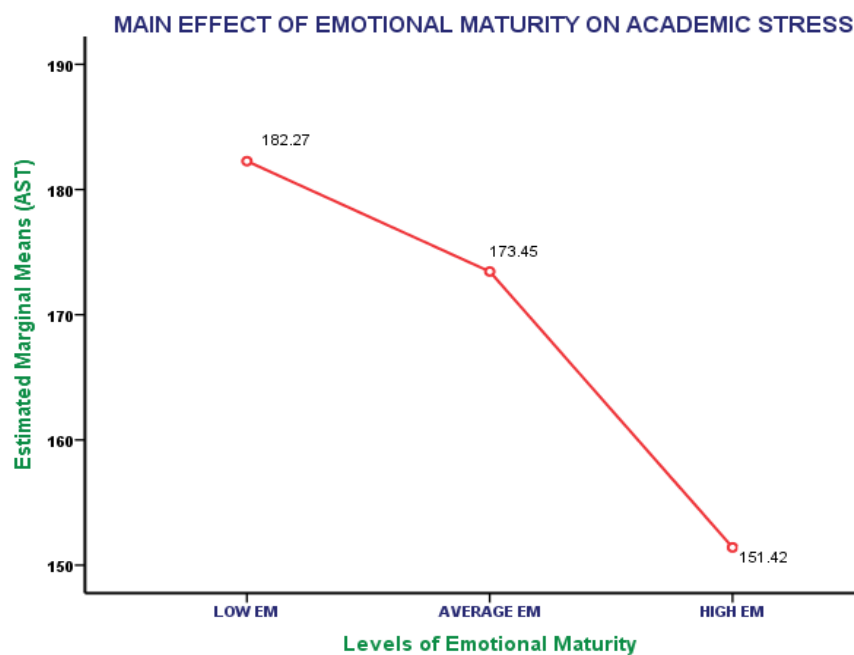


Figure 4.32: Main effect of emotional maturity on academic stress of higher secondary school students

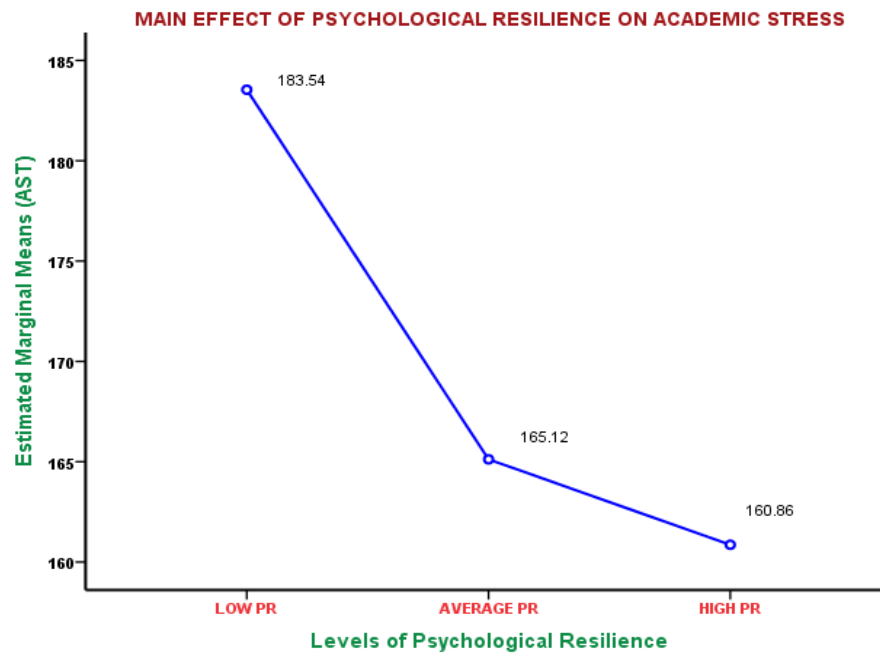


Figure 4.33: Main effect of psychological resilience on academic stress of higher secondary school students

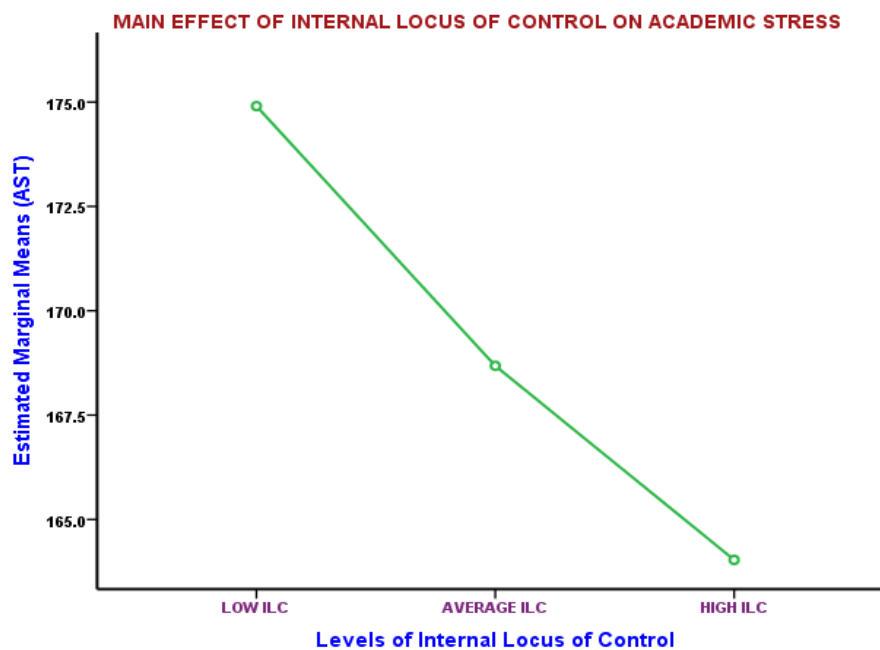


Figure 4.34: Main effect of internal locus of control on academic stress of higher secondary school students

The F-ratio estimated for the interaction effect of Emotional Maturity (EM) and Psychological Resilience (PR) on Academic Stress (AST) is significant at 99% confidence interval ($F = 4.265$; $p < .01$). It shows that mean scores of academic stress of higher secondary school students at different levels of emotional maturity having different levels of psychological resilience vary significantly. The interaction effects of emotional maturity and psychological resilience on the academic stress of higher secondary school students are portrayed in Figure 4.35.

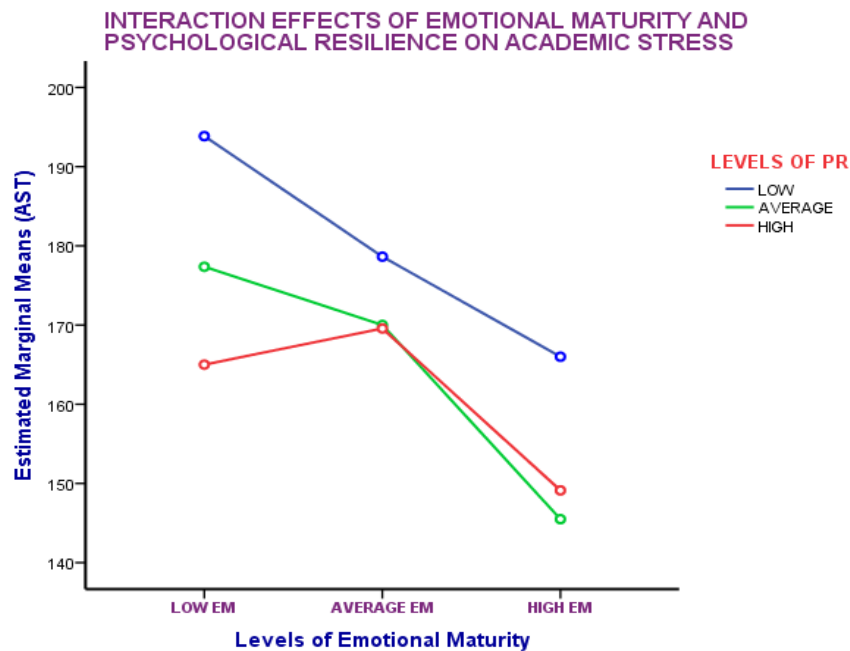


Figure 4.35: Interaction effects of emotional maturity and psychological resilience on academic stress of higher secondary school students

The F-ratio calculated for the interaction effects of Emotional Maturity (EM) and Locus of Control (LC) on Academic Stress (AST) is not significant ($F = 1.480$; $p > .05$). It demonstrates that mean scores of academic stress of higher

secondary school students in different levels of emotional maturity having different levels of locus of control do not differ significantly.

The F-ratio obtained for the interaction effects of Emotional Maturity and Internal Locus of Control is significant at 95% confidence interval ($F = 2.639$; $p < 0.05$). It designates that higher secondary school students in different levels of emotional maturity having different levels of internal locus of control differ significantly in their academic stress. The interaction effects of emotional maturity and internal locus of control on the academic stress of higher secondary school students are illustrated in Figure 4.36.

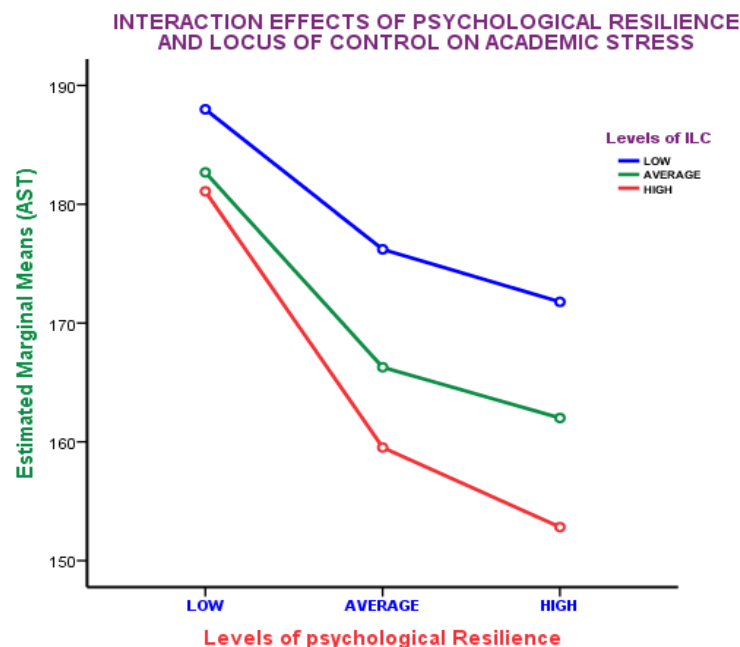


Figure 4.36: Interaction effects of psychological resilience and internal locus of control on academic stress of higher secondary school students

The F-ratio calculated for the interaction of independent variables on the dependent variable is significant at 99% confidence interval ($F = 3.494$; $p > 0.01$). It demonstrates that there exists significant interaction effects of emotional maturity, psychological resilience and locus of control on academic stress of higher secondary school students. Putting differently, higher secondary school students in different levels of emotional maturity having different levels of psychological resilience with various degrees of internal locus of control differ significantly in their academic stress. The interaction effects of emotional maturity, psychological resilience and internal locus of control on the academic stress of higher secondary school students are portrayed in Figure 4.37.

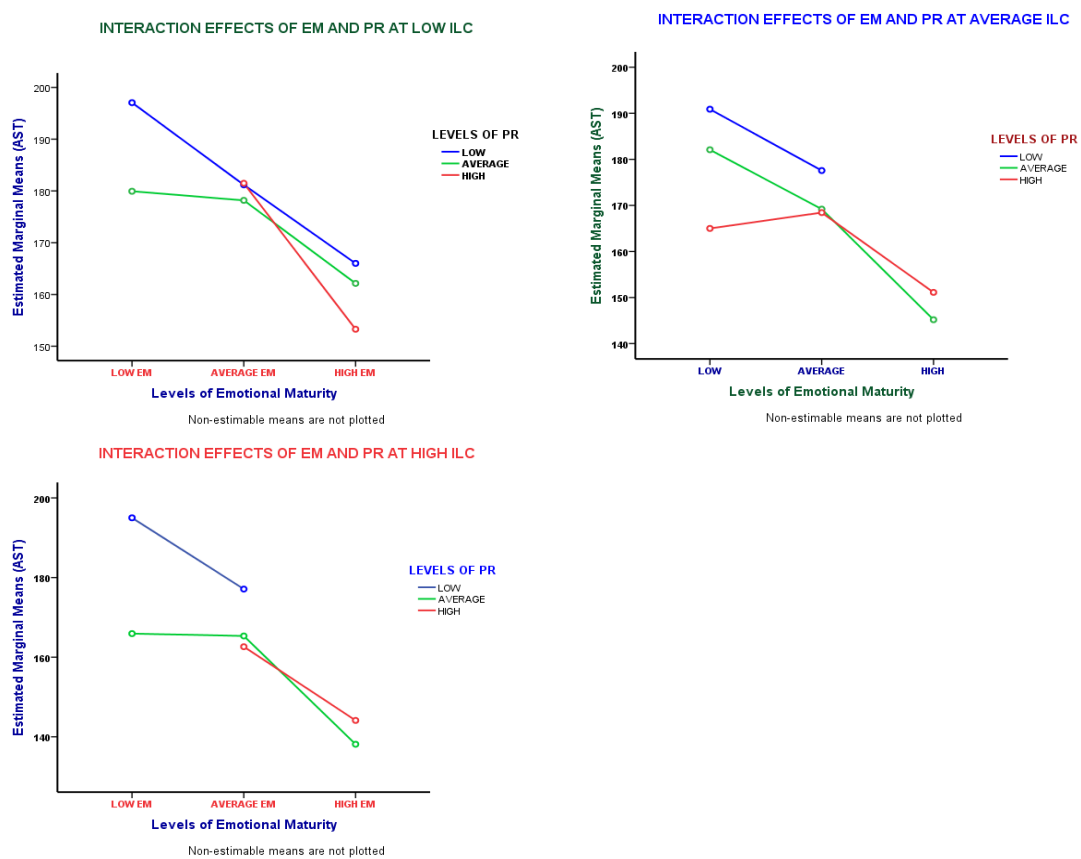


Figure 4.37: Interaction effects of emotional maturity, psychological resilience and locus of control on academic stress of higher secondary school students

4.11.1 Post-hoc Comparison of Group Means

Considering the significant main effect and interaction effects of Emotional Maturity (EM), Psychological Resilience (PR) and Locus of Control (LC) on Academic Stress (AST) of higher secondary school students, post-hoc comparisons of group means were carried out to understand the level(s) of the independent variables (factors) that create significant changes in the dependent variable. Scheffé's post-hoc test was used for comparing groups separated into three different levels (high, average and low) on the basis of emotional maturity, psychological resilience, and locus of control. The comparison of the mean scores of Academic Stress (AST) between groups formed on the basis of High, Average and Low levels of Emotional Maturity (EM) were carried out, and the details are given in Table 4.45.

Table 4.45: Post-hoc test for the comparison of the academic stress scores of students with high, average and low levels of emotional maturity (Total sample)

Dependent variable: AST

(I) EM	(J) EM	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
LOW	Average	11.96*	1.231	.000	8.94	14.97
	High	36.68*	1.505	.000	32.99	40.37
AVERAGE	Low	-11.96*	1.231	.000	-14.97	-8.94
	High	24.73*	1.201	.000	21.78	27.67
HIGH	Low	-36.68*	1.505	.000	-40.37	-32.99
	Average	-24.73*	1.201	.000	-27.67	-21.78

The error term is Mean Square (Error) = 264.233.

* Significant at the .05 level.

The result of the post-hoc comparison undoubtedly indicates the presence of significant difference between all the different paired combinations of high, average and low groups of emotional maturity. The significant differences observed are in the order of: (i) between Low and Average emotional maturity (Mean difference = 11.96; $p < .001$), (ii) between Low and High emotional maturity (Mean difference = 36.68; $p < .001$), and (iii) between Average and High emotional maturity (Mean difference = 24.73; $p < .001$). The means of academic stress for groups in homogeneous subsets of emotional maturity are given in Table 4.46.

Table 4.46: Means of emotional maturity for groups in homogeneous subsets of academic stress (Total Sample)

Levels of EM	N	Subset ($\alpha = .01$)		
		1	2	3
Low	226	183.51		
Average	765		171.55	
High	241			146.83

The error term is Mean Square (Error) = 264.233.

Table 4.46 displays that the arithmetic mean estimated for academic stress scores of higher secondary school students with Low level of emotional maturity is 183.51, which is significantly higher than that for students with Average ($M = 171.55$) and High ($M = 146.83$) levels of emotional maturity. It is obvious that the higher secondary school students with high levels of emotional maturity experience low academic stress compared to students with average and low levels

of emotional maturity. The mean scores of academic stress estimated for students having high, average and low levels of emotional maturity are depicted in Figure 4.38.

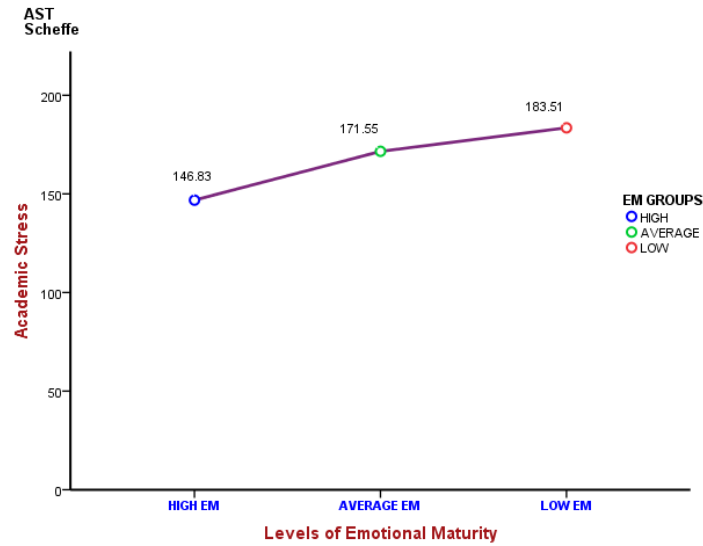


Figure 4.38: Summary plot of post-hoc test for the mean scores of academic stress with respect to different levels of emotional maturity

Likewise, post-hoc test of multiple comparison of academic stress scores between groups formed on the basis of high, average and low levels of psychological resilience was also carried out, the result of the same is given in Table 4.47.

Table 4.47: Post-hoc test for the comparison of high, average and low levels of psychological resilience with respect to academic stress.

(I) PR	(J) PR	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
LOW	Average	17.97*	1.213	.000	14.99	20.94
	High	23.10*	1.554	.000	19.29	26.91
AVERAGE	Low	-17.97*	1.213	.000	-20.94	-14.99
	High	5.13*	1.269	.000	2.02	8.24
HIGH	Low	-23.10*	1.554	.000	-26.91	-19.29
	Average	-5.13*	1.269	.000	-8.24	-2.02

The error term is Mean Square (Error) = 264.233. *Significant at the .05 level.

As evident from Table 4.47, the results of the Scheffe's post-hoc test demonstrates that significant difference exists between all the paired combinations of high, average and low levels of psychological resilience counted in the study. The significant differences observed are in the order of: (i) between Low and Average psychological resilience (Mean difference = 17.97; $p < .001$), (ii) between Low and High psychological resilience (Mean difference = 23.10; $p < .001$), and (iii) between Average and High psychological resilience (Mean difference = 5.13; $p < .001$). The means of academic stress for groups in homogeneous subsets based on psychological resilience are given in Table 4.48.

Table 4.48: Means of psychological resilience for groups in homogeneous subsets of academic stress (total sample)

Levels of PR	N	Subset ($\alpha = .01$)		
		1	2	3
Low	226			183.51
Average	765		171.55	
High	241	146.83		

The error term is Mean Square (Error) = 264.233

It is obvious from the outcome of analysis given in Table 4.48 that the mean scores of academic stress of higher secondary school students with low level of psychological resilience is 183.51, which is significantly greater than that for students with average ($M = 171.55$) and high ($M = 146.83$) levels of psychological resilience. It is, therefore, can be inferred that the higher secondary school students with low levels of psychological resilience experience higher levels of academic stress compared to students in average level of psychological resilience, who in turn experience greater academic stress compared to students having low psychological resilience. The mean scores of academic stress estimated for students having high, average and low levels of psychological resilience are illustrated in Figure 4.39.

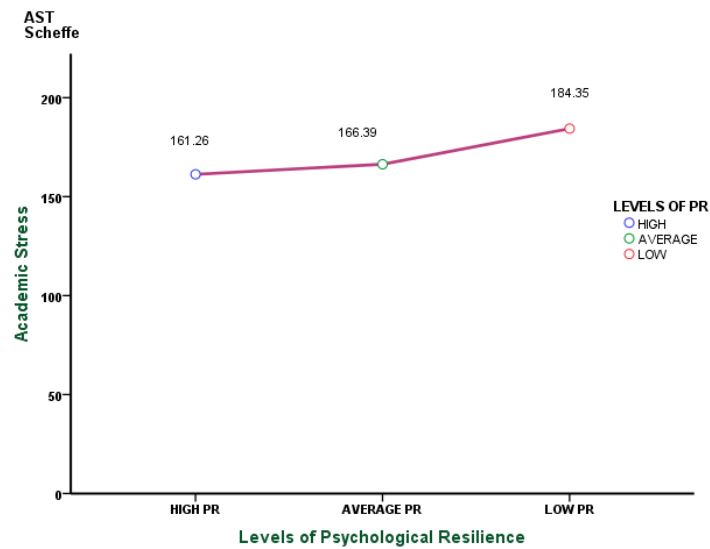


Figure 4.39: Summary plot of post-hoc test for the mean scores of academic stress with respect to different levels of psychological resilience

Scheffe's post-hoc test of multiple comparisons of the mean scores of academic stress in high, average and low level groups of locus of control were also done to examine the significant difference, in any, between the groups. The result of the post-hoc test performed in this regard is given in Table 4.49.

Table 4.49: Post-hoc test for the comparison of high, average and low levels of locus of control with respect to academic stress.

(I) LC	(J) LC	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
LOW	Average	11.11*	1.175	.000	8.23	13.99
	High	18.38*	1.366	.000	15.03	21.73
AVERAGE	Low	-11.11*	1.175	.000	-13.99	-8.23
	High	7.27*	1.132	.000	4.50	10.04
HIGH	Low	-18.38*	1.366	.000	-21.73	-15.03
	Average	-7.27*	1.132	.000	-10.04	-4.50

The error term is Mean Square (Error) = 264.233.

*Significant at the .05 level.

The data and results of the post-hoc test, given in Table 4.49, exposes the presence of significant differences between all the pairs of high, average and low levels of locus of control groups. The significant differences observed are in the order of: (i) between Low and Average locus of control (Mean difference = 11.11; $p < .001$), (ii) between Low and High locus of control (Mean difference = 18.38; $p < .001$), and (iii) between Average and High locus of control (Mean difference = 7.27; $p < .001$). The means of academic stress for groups in homogeneous subsets based on locus of control are presented in Table 4.50.

Table 4.50: Means of locus of control for groups in homogeneous subsets of academic stress (total sample)

Levels of LC	N	Subset ($\alpha = .01$)		
		1	2	3
Low	269			179.36
Average	664		168.25	
High	299	160.98		

The error term is Mean Square (Error) = 264.233

The results of the analysis shown in Table 4.50 make it clear that the mean scores of academic stress of students with low level of locus of control is 179.36, which is significantly greater than that for students with average ($M = 168.25$) and high ($M = 160.98$) levels of locus of control. It reveals that higher secondary school students in low levels of internal locus of control have higher levels of academic stress compared to students in average level of internal locus of control, who in turn experience greater academic stress compared to students having low

internal locus of control. The mean scores of academic stress obtained for students in high, average and low levels of internal locus of control are pictured in Figure 4.40.

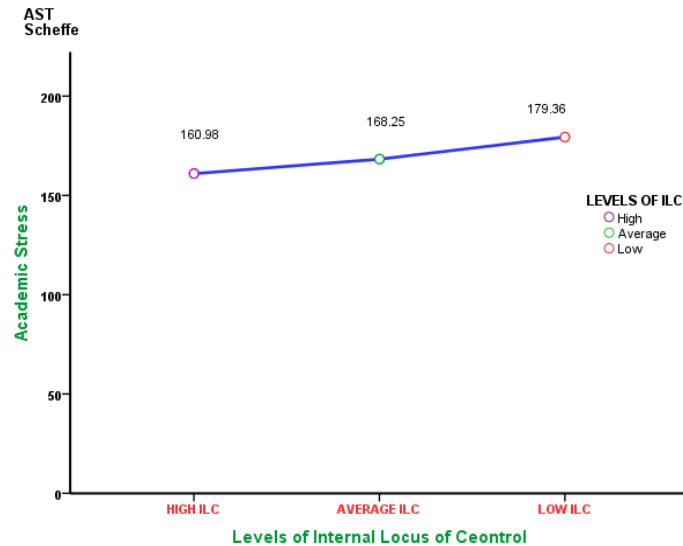


Figure 4.40: Summary plot of post-hoc test for the mean scores of academic stress with respect to different levels of internal locus of control

The F-ratios estimated by performing the three-way ANOVA (vide Table 4.44) elucidate that there is significant main effect of Emotional Maturity ($F = 15.057$; $p < .001$), Psychological Resilience ($F = 5.428$; $p < .01$), and Locus of Control ($F = 17.750$; $p < .001$) on Academic Stress of higher secondary school students. The analysis further revealed that Emotional Maturity and Psychological Resilience have significant interaction effects on academic stress of students ($F = 4.265$; $p < .01$). Similarly, Psychological Resilience and Locus of Control also have significant interaction effects on academic stress ($F = 2.639$; $p < .05$). Another noteworthy finding generated from the analysis is that all the independent variables, viz., Emotional Maturity, Psychological Resilience, and

Locus of Control, have significant interaction effects on Academic Stress of higher secondary school students of Kerala ($F = 3.494$; $p < .01$).

Tenability of Hypothesis-11

The results of the 3X3X3 Factorial ANOVA revealed significant main effect of emotional maturity, psychological resilience and locus of control on academic stress of higher secondary school students. While the interactive effects of emotional maturity and locus of control on academic stress of students is not significant, emotional maturity and psychological resilience have significant interaction effects on academic stress. The interaction effects of psychological resilience and locus of control is also found to be significant. The three independent variables (emotional maturity, psychological resilience, and locus of control) were found to have significant interaction effects on dependent variable. Overall, Hypothesis-11 (*there is no significant main effect and interaction effects of emotional maturity, psychological resilience and locus of control on academic stress of higher secondary school students*) is supported partially based on the findings emerged from the analysis.

4.12 INFLUENCE OF EMOTIONAL MATURITY, PSYCHOLOGICAL RESILIENCE, AND LOCUS OF CONTROL ON ACADEMIC STRESS

This segment of the analysis is set apart for exposing the influence of emotional maturity, psychological resilience, and locus of control on academic stress of higher secondary school students. Linear regression analysis was

performed to find out the influence of each of the independent variables on the dependent variable, followed by testing of Hypothesis-12.

Hypothesis-12: Emotional maturity, psychological resilience, and locus of control have no significant influence on the academic stress of higher secondary school students.

4.12.1 Influence of Emotional Maturity on Academic Stress of Higher Secondary School Students

To understand the influence of Emotional Maturity (EM) on Academic Stress (AST) of higher secondary school students, linear regression analysis was performed by using emotional maturity as the predictor variable and academic stress as criterion variable. The Model Summary of the linear regression analysis conducted is given in Table 4.51.

Table 4.51: Model Summary of Linear Regression Analysis (Emotional Maturity vs. Academic Stress)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.621	0.385	0.385	16.548

a. Predictors: (Constant), EM

The value of R^2 estimated for the model shows that 38.5% of the total variation in the outcome variable (academic stress) can be explained by the predictor variable (emotional maturity). One way ANOVA was subsequently

carried out to examine the significance of the influence exercised by emotional maturity on academic stress. The data and result of the one-way ANOVA performed in this regard is given in Table 4.52.

Table 4.52: Result of ANOVA for testing the significance of the influence of emotional maturity of academic stress

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	211018.724	1	211018.724	770.590	.001
	Residual	336823.912	1230	273.841		
	Total	547842.636	1231			

a. Predictors: (Constant), EM

b. Dependent Variable: AST

The F-value obtained is significant at 99.9% confidence interval showing that the regression model predicts the outcome variable (academic stress) significantly well ($F = 770.590$; $p < .001$). In other words, the predictor variable (emotional maturity) has significant influence on the criterion variable (academic stress). The scatterplot of standardized predicted value with the standardized residual for the influence of emotional maturity on academic stress is shown in Figure 4.41.

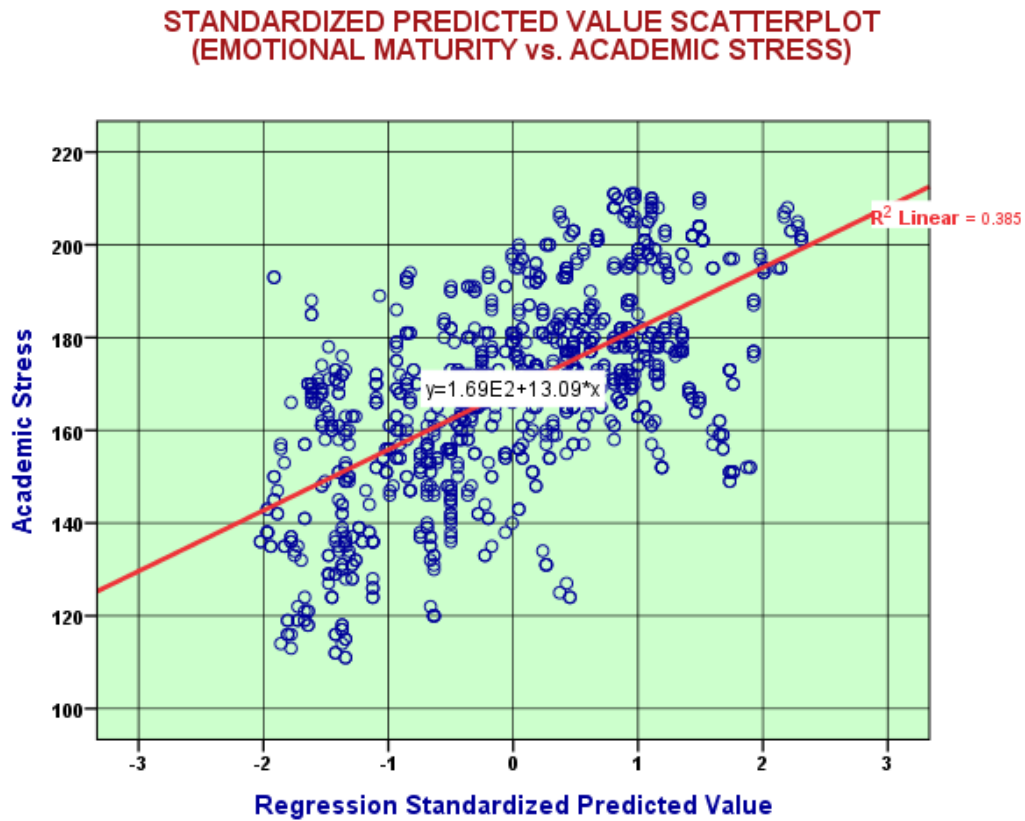


Figure 4.41: Scatterplot of the standardized predicted value with the standardized residual for the influence of emotional maturity on academic stress

The standardized residual is computed by dividing the raw residual by the standard deviation of the residuals, which is indicative of the measure of the strength of the difference between observed and expected values. The standardized residual histogram for the regression analysis of academic stress from the predictor variable of emotional maturity is given in Figure 4.42.

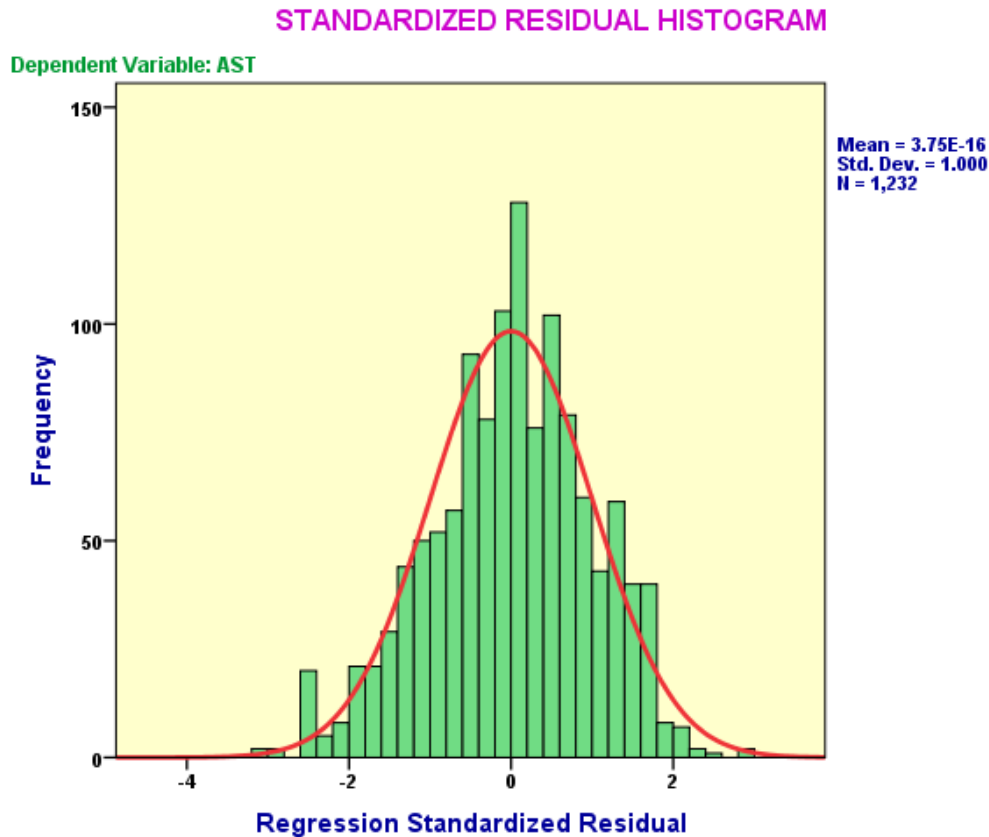


Figure 4.42: Standardized residual histogram for the linear regression of emotional maturity on academic stress

It is clear from Figure 4.42 that the standardized residual histogram is normally distributed exposing that the standardized residuals follow a normal distribution around the combined effect size. The normal distribution of the standardized residuals shows that the regression model is valid.

4.12.2 Influence of Psychological Resilience on Academic Stress of Higher Secondary School Students

The linear regression analysis was executed to examine the influence of psychological resilience on academic stress by entering psychological resilience as the predictor variable and academic stress of HSS students as the outcome

(criterion) variable into the model. The Model Summary of the regression analysis performed is presented in Table 4.53.

Table 4.53: Model Summary of Linear Regression Analysis (Psychological Resilience vs. Academic Stress)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.379 ^a	0.144	0.143	19.527

a. Predictors: (Constant), PR

The R-square computed for the model demonstrates that 14.4% of the overall variation in the academic stress of HSS students can be explained by their psychological resilience. One way ANOVA was subsequently carried out to understand the significance of the influence exercised by psychological resilience on academic stress. Table 4.54 presents the result of the one-way ANOVA conducted in this regard.

Table 4.54: Result of ANOVA for testing the significance of the influence of psychological resilience on academic stress

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	78838.324	1	78838.324	206.760	.000 ^b
	Residual	469004.312	1230	381.304		
	Total	547842.636	1231			

a. Predictors: (Constant), PR

b. Dependent Variable: AST

The F-ratio calculated is significant beyond 99.9% confidence interval, exposing the significance of the regression model in predicting the outcome variable ($F = 206.760$; $p < .001$). In other words, the influence exerted by psychological resilience on academic stress is statistically significant. The scatterplot of standardized predicted value with the standardized residual for the influence of psychological resilience on academic stress is depicted in Figure 4.43.

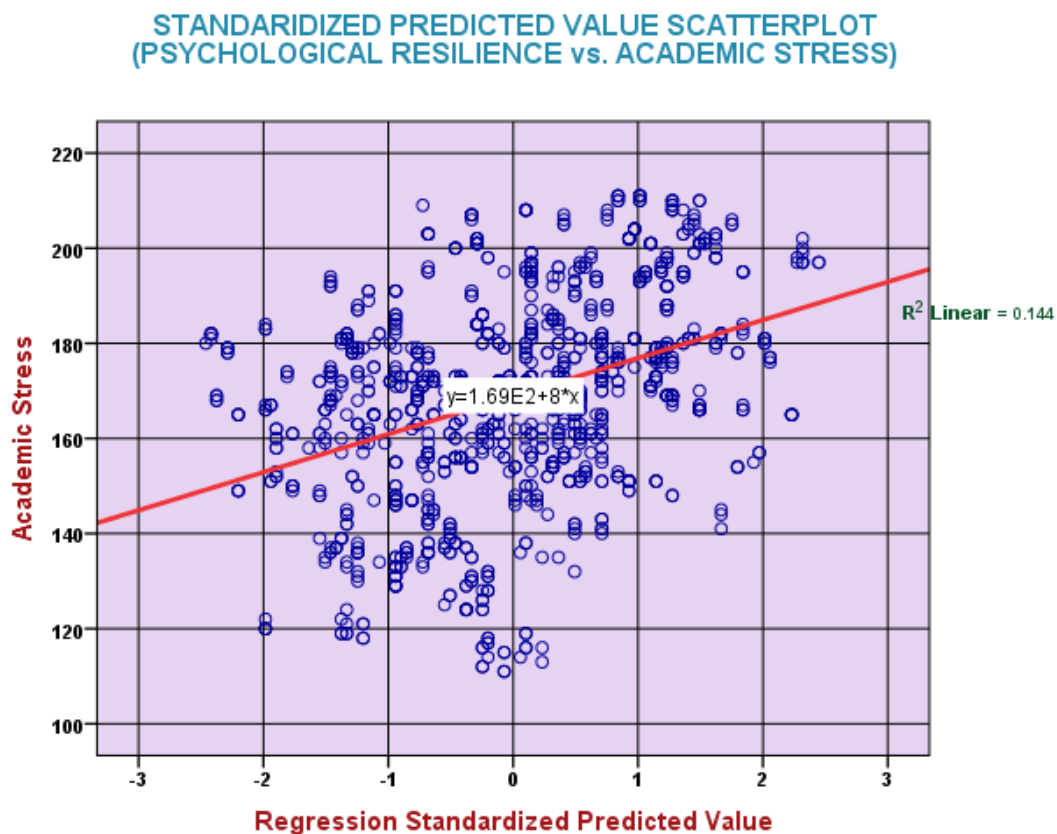


Figure 4.43: Scatterplot of the standardized predicted value with the standardized residual for the influence of psychological resilience on academic stress

The standardized residual was estimated by dividing the raw residual by the standard deviation of the residuals, which is suggestive of the power of the

difference between observed and expected values. The standardized residual histogram for the regression analysis of academic stress from the scores of psychological resilience is shown in Figure 4.44.

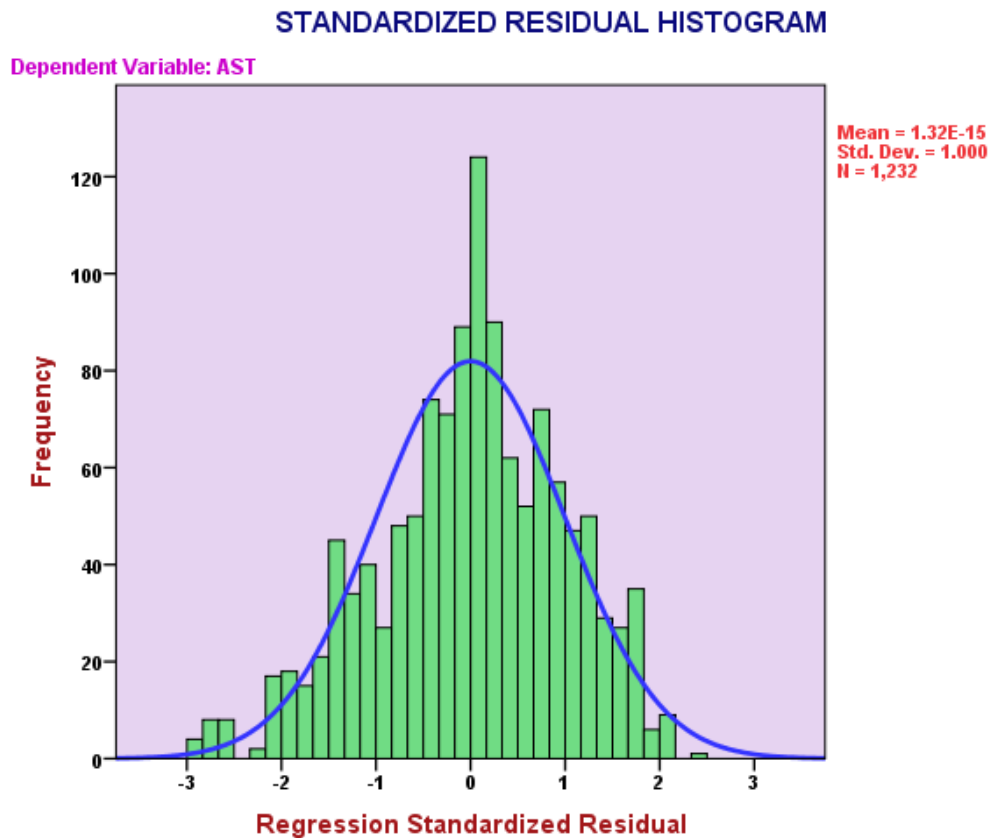


Figure 4.44: Standardized residual histogram for the linear regression of psychological resilience on academic stress

The histogram plot of the residuals (Figure 4.44) exhibits a symmetric bell-shaped distribution, evenly spread around zero, and without any outliers, demonstrating that normality assumption is true. It exposes that the regression model developed to explain the influence of psychological resilience on academic stress is valid.

4.12.3 Influence of Internal Locus of Control on Academic Stress of Higher Secondary School Students

In order to realize the influence of internal locus of control on academic stress of HSS students of Kerala, linear regression analysis was performed in SPSS by entering locus of control as the predictor variable and academic stress as the outcome variable into the model. Table 4.55 gives the Model Summary of the linear regression analysis done in this regard.

Table 4.55: Model Summary of Linear Regression Analysis (Locus of control vs. Academic Stress)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.323	0.104	0.104	19.971

a. Predictors: (Constant), LC

The value of R^2 obtained for the model shows that 10.4% of the total variation in the academic stress of the population can be explained by the locus of control. One way ANOVA was then carried out to examine the significance of the influence wielded by locus of control on academic stress. Table 4.56 gives the result of the one-way ANOVA done in this context.

Table 4.56: Result of ANOVA for testing the significance of the influence of locus of control on academic stress

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	57246.051	1	57246.051	143.525	.000 ^b
	Residual	490596.585	1230	398.859		
	Total	547842.636	1231			

a. Predictors: (Constant), PR

b. Dependent Variable: AST

The F-ratio obtained is significant at 99.9% confidence interval, disclosing that the regression model is capable of predicting the outcome variable significantly ($F = 143.525$; $p < .001$). Putting differently, internal locus of control exerts significant influence on academic stress of HSS students of Kerala. The scatterplot of standardized predicted value with the standardized residual for the influence of locus of control on academic stress is shown in Figure 4.45.

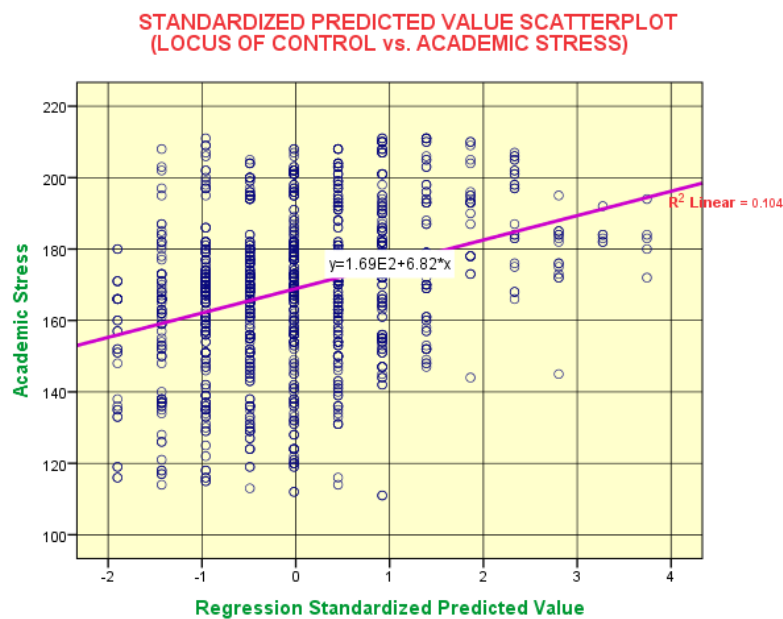


Figure 4.45: Scatterplot of the standardized predicted value with the standardized residual for the influence of locus of control on academic stress

The standardized residual was computed by dividing the raw residual by the standard deviation of the residuals, which indicates the power of the difference between observed and expected values. The standardized residual histogram for the regression analysis of academic stress from the scores of 'locus of control' is illustrated in Figure 4.46.

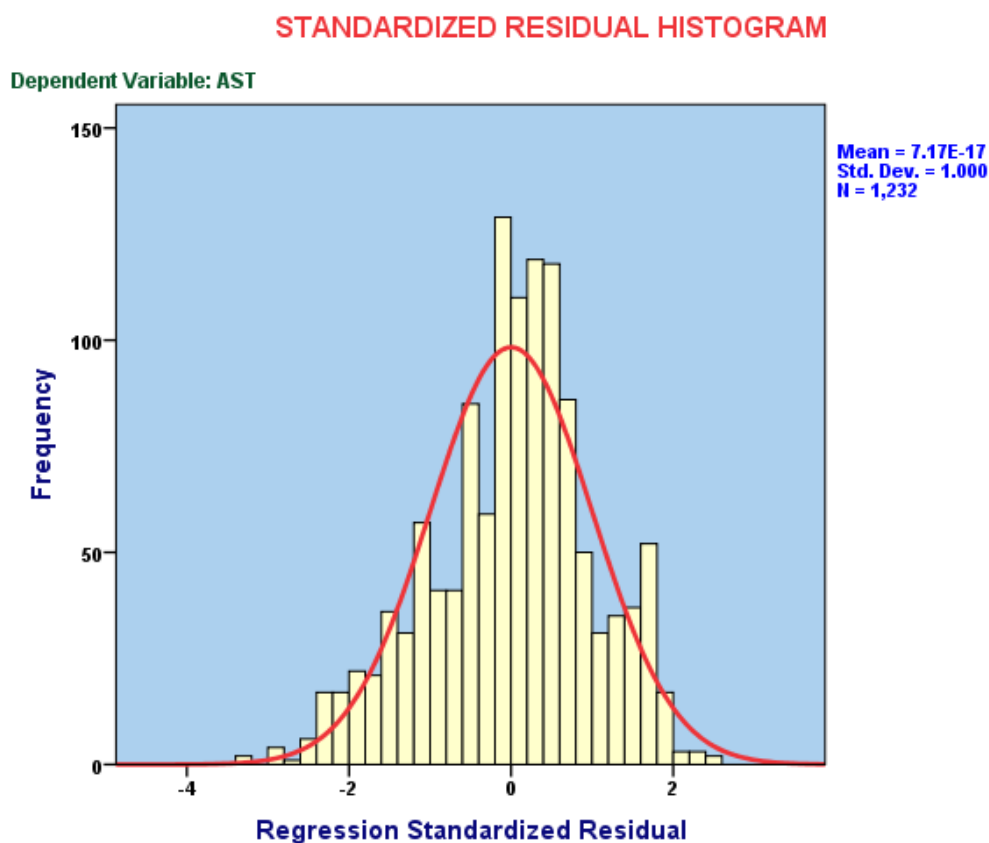


Figure 4.46: Standardized residual histogram for the liner regression of locus of control on academic stress

The histogram plot of the residuals shows a symmetrical bell-shaped distribution with no outliers and evenly spread around zero. The symmetry of the distribution makes clear that normality assumption is true. It adds to the validity

of the regression model developed to explain the influence of locus of control on academic stress.

Tenability of Hypothesis-12

The results of the linear regression analyses carried out to understand the influence of emotional maturity, psychological resilience, and locus of control on academic stress exposed the following:

- 1) Emotional maturity is capable of exerting significant influence on the variation in academic stress (38.5%) of higher secondary school students of Kerala ($F = 770.590$; $p < .001$).
- 2) Psychological resilience has significant influence on the overall variation in the academic stress (14.4%) of higher secondary school students of Kerala ($F = 206.760$; $p < .001$).
- 3) Academic stress experienced by the population of higher secondary school students of Kerala is significantly influenced (10.4% variation) by their internal locus of control ($F = 143.525$; $p < .001$).

The results of the linear regression analysis show that all the independent variables, viz., emotional maturity, psychological resilience, and locus of control are capable of significantly predicting variation in academic stress of higher secondary school students. Hypothesis-12 (*emotional maturity, psychological*

resilience, and locus of control have no significant influence on the academic stress of higher secondary school students) is, therefore, rejected.

4.13 PREDICTION OF ACADEMIC STRESS FROM EMOTIONAL MATURITY, PSYCHOLOGICAL RESILIENCE AND INTERNAL LOCUS OF CONTROL

This segment of the analyses is given over to developing a suitable mathematical expression for calculating values of academic stress based on the values of emotional maturity, psychological resilience, and locus of control by using Multiple Regression Analysis (MRA). The MRA is typically applied to test a conceptual model to be able to check which independent variables are most related to the dependent variable and set a more exact dependent variable. The Multiple Regression Analysis was performed with the help of SPSS software (IBM SPSS Statistics 21) by taking independent factors, viz., Emotional Maturity (EM), Psychological Resilience (PR) and Internal Locus of Control (ILC), as predictor variables and Academic Stress (AST) as the criterion variable. This is followed by testing the tenability of Hypothesis-13.

Hypothesis-13: The emotional maturity, psychological resilience and locus of control of higher secondary school students do not significantly predict their academic stress.

The variables that were entered into the multiple regression model by using the ‘enter method’ is presented in Table 4.57.

Table 4.57: Multiple regression analysis (Variables Entered / Removed^a)

Model	Variables Entered	Variables Removed	Method
1	LC, PR, EM ^b	.	Enter

a. Dependent Variable: AST

b. All requested variables entered

The summary of multiple regression analysis for independent variables predicting academic stress of higher secondary school students is presented in Table 4.54. It indicates the degree of relationship between the observed value and the predicted value of the criterion variable (R), the proportion of the variance in the criterion variable which is accounted for by the model (R^2), adjusted R^2 for variables entered model summary, and the standard error of the estimate.

Table 4.58: Multiple Regression Analysis (Adjusted R^2 for Variables Entered Model Summary^b)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.658 ^a	0.434	0.432	15.897

a. Predictors: (Constant), LC, PR, EM

b. Dependent Variable: AST

The data and result of the multiple regression analysis given in Table 4.58 reveals that, as a whole, these predictors accounted for 43.4% (43.2% adjusted) of the variability in the academic stress of the population of the higher secondary school students. In another words, 43.2% of the variance in the academic stress can

be predicted from the independent variables, emotional maturity, psychological resilience, and internal locus of control combined. One-way ANOVA was then performed (Table 4.59) to examine the degree of variability in the regression model and also to evaluate whether the overall regression model is a good fit for the data.

Table 4.59: ANOVA^a for Multiple Regression Analysis

	Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	237492.809	3	79164.270		
	Residual	310349.826	1228	252.728	313.239	.000 ^b
	Total	547842.636	1231			

a. Dependent Variable: AST

b. Predictors (Constant), LC, PR, EM

The result of the one-way analysis of variance, given in Table 4.59, shows that the F-ratio of 313.239 with 3 and 1228 degrees of freedom is significant beyond 99.9% confidence interval ($F_{(3, 1228)} = 313.239$; $p < .001$). It reveals that the regression model is a good fit of the data, and that the combination of the predictors (emotional maturity, psychological resilience, and internal locus of control) significantly predict academic stress of the population of higher secondary school students of Kerala. The relative contribution of each explanatory variable (predictor variable) in the regression model was found out by scrutinizing the beta weights (standardized regression coefficients). The coefficients and constant entered for regression equation is given in Table 4.60.

Table 4.60: Coefficients and Constant Entered for Regression Equation^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	
	B	Std. Error	Beta			
1	(Constant)	258.904	4.380		59.116	.000
	EM	-.308	.014	-.536	-21.745	.000
	PR	-.087	.022	-.095	-3.873	.000
	LC	-2.000	.218	-.202	-9.173	.000

a. Dependent Variable: AST

The results given in Table 4.60 show that the Standardized Beta Coefficients (β) which give a measure of the contributions of each of the independent variable to the model, are significant beyond 99.9% confidence interval. The degree of change in the outcome variable (academic stress) for every one unit of change in the predictor variables (emotional maturity, psychological resilience, and internal locus of control) is given by the Beta (β) values. The t-values estimated show that all the β -coefficients are significantly different from zero. Further, the β -values computed for the different predictor variables indicate that Emotional Maturity (EM) made the greatest contribution in the model with a standardized regression coefficient of -0.536, and then by Internal Locus of Control (ILC: $\beta = -0.202$). The lowest contribution of the predictor variables is made by Psychological Resilience (PR: $\beta = -0.095$). The values of β , estimated for all the predictor variables are negative demonstrating that for every one unit increase in the independent variables (predictors), the outcome variable (dependent variable) will decrease by β -coefficient value. The

statistically significant prediction equation for this study containing the standard regression coefficients (β) for the multiple linear regression model is:

$$AST = 258.904 - (0.536 \times EM) - (0.095 \times PR) - (0.202 \times ILC)$$

The standardized residual plots for the contribution of different predictor variables (emotional maturity, psychological resilience, and locus of control) on the outcome variable (academic stress) are shown in Figures 4.47, Figure 4.48, and Figure 4.49.

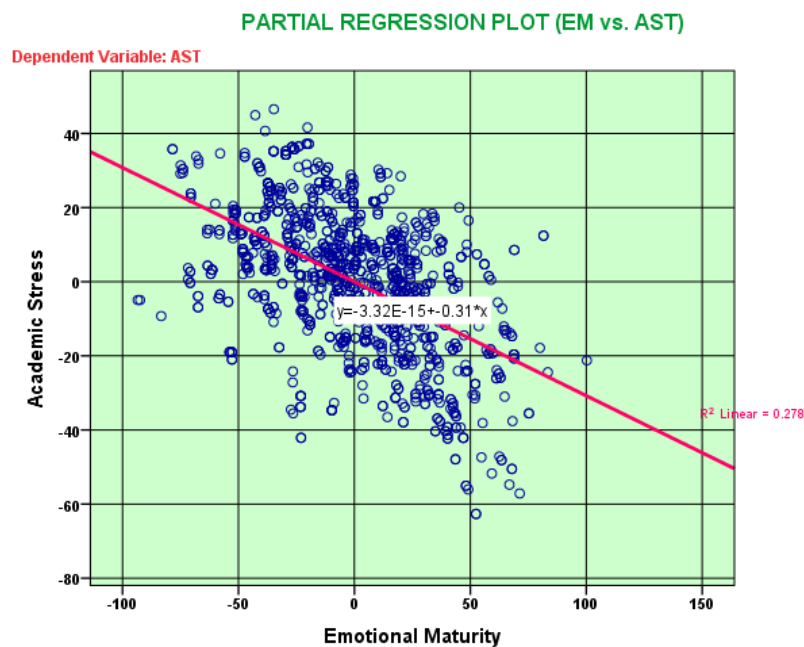


Figure 4.47: Partial regression plot for the contribution of emotional maturity on academic stress

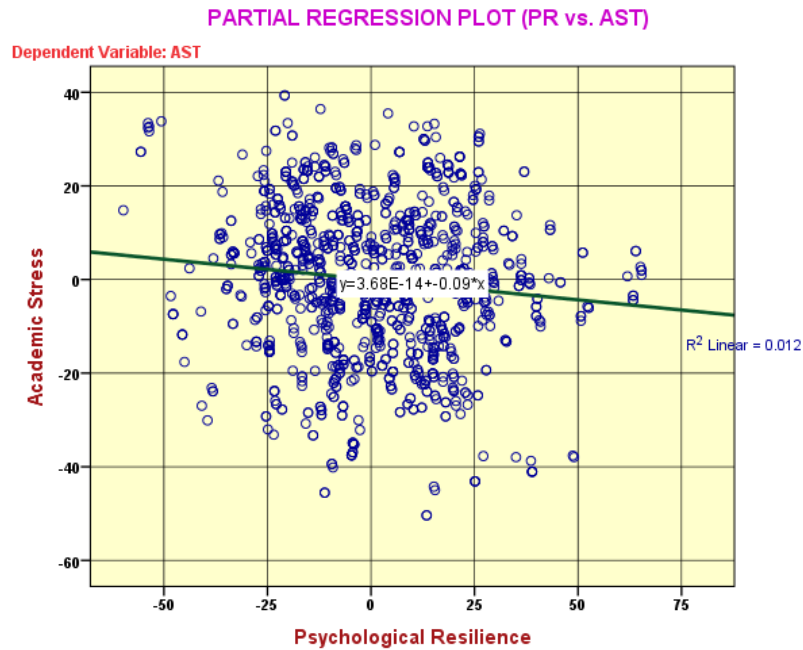


Figure 4.48: Partial regression plot for the contribution of psychological resilience on academic stress

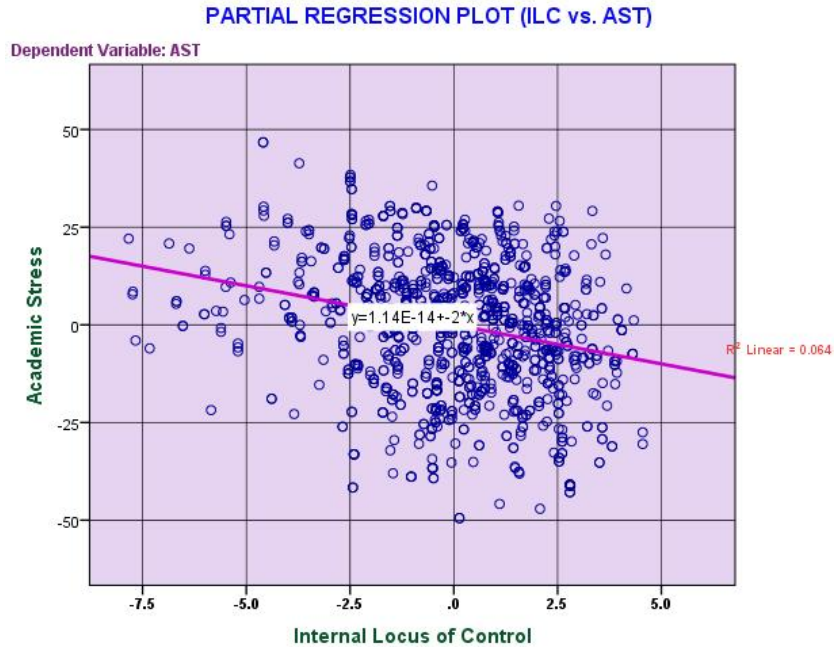


Figure 4.49: Partial regression plot for the contribution of internal locus of control on academic stress

The Standardised Residual Histogram and the Normal Probability Plot developed for the multiple regression model are given in Figure 4.50 and Figure 4.51.

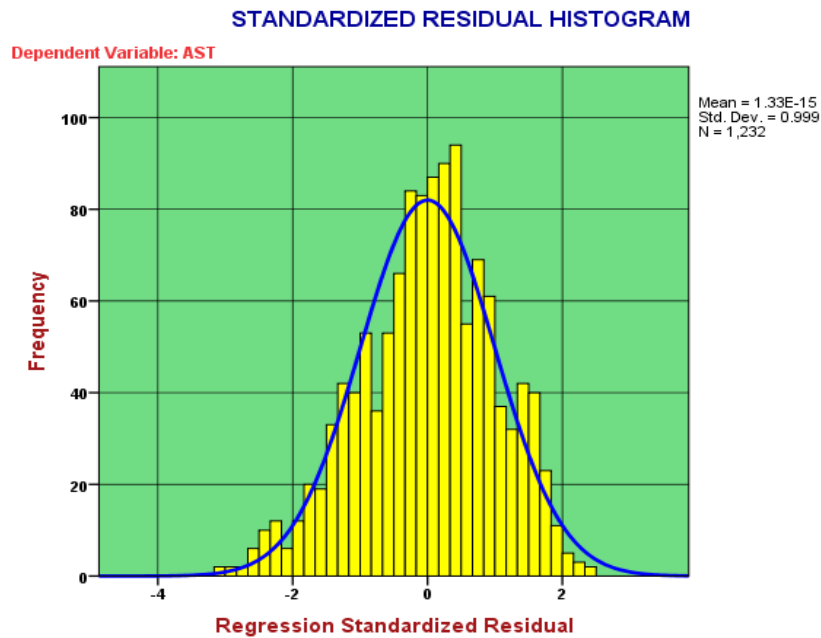


Figure 4.50: Histogram of standardized multiple regression residuals

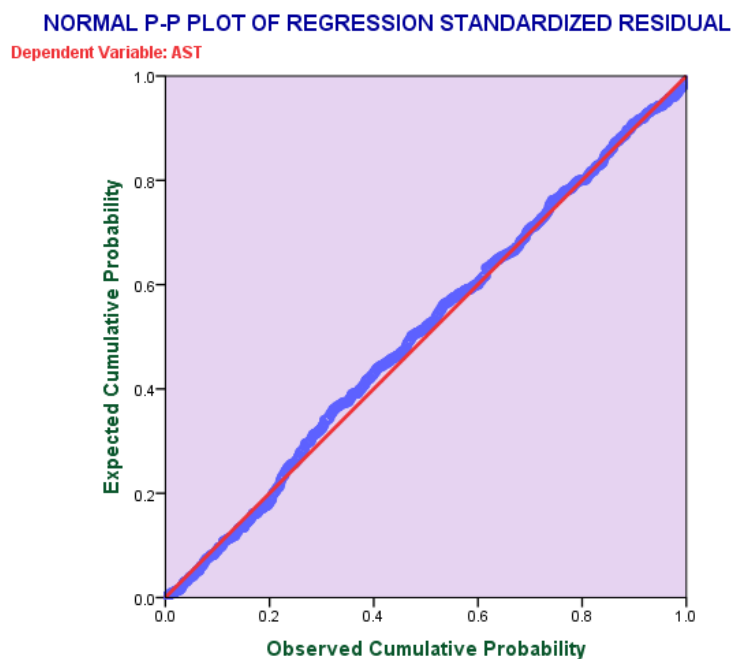


Figure 4.51: Normal probability plot of standardized multiple regression residuals

The standardized residual histogram (Figure 4.50) shows a bell-shaped curve revealing that the residuals are normal in their distribution, indicating that the model's assumptions are met. This claim is further substantiated by the normal probability plot which displays the standardized residuals against theoretical quantiles from a normal distribution. As evident from Figure 4.51, the residuals closely follow a straight line on the plot underscoring the normality of distribution. The histogram of standardized multiple regression residuals shows no outliers guaranteeing accuracy in regression model's parameters and predictions. Since there is a consistent spread of standardized residuals across different values of the predictors, it also assures homoscedasticity, i.e., the variance of the residuals is constant across all levels of the independent variables. As the residuals are centered around zero with a roughly symmetric distribution, the regression model developed is a well-fitted one.

Tenability of Hypothesis-13

The multiple regression analysis done in Section 4.13 produced an R^2 of 0.434 (adjusted $R^2 = 0.432$), indicating that 43.2% of the variance in academic stress of higher secondary school students could be accounted for by the linear combination of emotional maturity, psychological resilience, and internal locus of control. This model was found to be significant ($F_{(3, 1228)} = 313.239$; $p < .001$), which subsequently led to the composition of a multiple regression equation for predicting academic stress of the population from the independent variables. Hypothesis-13 (*the emotional maturity, psychological resilience and locus of*

control of higher secondary school students do not significantly predict their academic stress) is, subsequently rejected.

4.14 CONCLUSION

Analysis of the data were carried out in this chapter to test the hypotheses by keeping the objectives in mind. Comparison of the academic stress, emotional maturity, locus of control and psychological resilience in sub-samples based on gender, type of family, birth order of the student, and socio-economic status of the family, correlation analysis of dependent and independent variables, comparison of the estimated coefficients of correlation for sub-samples, exploration of the main effect and interaction effects of the independent variable on the dependent variable, examining the influence of each of independent variable on academic stress, the prediction of the dependent variable from the independent variables etc. were done for finding valid answers to the research questions.



SUMMARY, FINDINGS, AND CONCLUSIONS

- Study in Retrospect
- Major Findings
- Conclusions

CHAPTER V

SUMMARY, FINDINGS AND CONCLUSIONS

This chapter of the dissertation is given over to present an overview of the context and the major phases of the study in retrospection, findings emerged from the analysis of data, and the major conclusions drawn based on the findings. Arriving at meaningful conclusions of the study is possible only after logical synthesis of the findings emerging from the statistical analysis of the data collected. The validity of such conclusions depends largely on the validity of the data collected which in turn rest on the validity of the instruments employed for data collection, representativeness of the sample drawn, and appropriateness and robustness of the statistical techniques employed. Meaningful interpretation of the findings emerged from analysis is possible only in the context of the study, its aim, the research questions raised, objectives kept in view and hypotheses. This makes a revisit of the study imperative, prior to drawing conclusions.

5.1. STUDY IN RETROSPECT

The major phases covered in the effort to answer the research questions raised at the beginning of the study are summarized under appropriate sub-headings:

5.1.1. Aim of the Study

This study aimed to find out how psychological factors like emotional maturity, psychological resilience, and locus of control are related to, exercise influence on, and brings to bear effect on academic stress of higher secondary school students.

5.1.2. Restatement of the Problem

The major research questions set were: (i) what relationship do the independent variables have on academic stress? (ii) what influence do the independent variables exert on academic stress? and (iii) what interaction effects do the independent variables have on academic stress? As the investigation had been geared to answer these questions, the problem of the study is restated as *“Emotional Maturity, Psychological Resilience, and Locus of Control as Correlates of Academic Stress among Higher Secondary School Students”*.

5.1.3. Variables of the Study

The psychological as well as the demographic factors involved in the study were designated to following variable categories:

- 1) ***Dependent variable:*** Academic Stress was taken as the dependent variable in the study. It was taken as the mental pressure and unpleasant psychological situations experienced by higher secondary

school students due to overload of academic work and high parental expectation.

- 2) ***Independent variables:*** Emotional maturity, psychological resilience, and locus of control were taken as independent variables of the study. Emotional maturity was defined as one's ability to respond to situations, control his/her emotions and behave in an adult manner when dealing with others. Psychological resilience was defined in the context of the study as the ability to adapt well in the face of adversity, trauma, tragedy, threats or even significant sources of stress. Locus of control was defined as the extent to which individuals see themselves as in control of and responsible for the course of occurrences which they experience.
- 3) ***Mediating variables:*** Demographic factors likely to exert differential effect on the distribution of the dependent and independent variables such as were taken as mediating variables in the study. This included gender, type of family, ordinal position, and socio-economic status of the family of the

5.1.4. Objectives of the Study

The study had the following specific objectives in view:

1. To find out the extent of academic stress, emotional maturity, psychological resilience and locus of control higher secondary school students.
2. To compare academic stress, emotional maturity, psychological resilience and locus of control higher secondary school students with respect to gender, type of family, ordinal position, and socio-economic status of the family.
3. To find out the relationship of emotional maturity, psychological resilience and locus of control to academic stress of higher secondary school students (for total sample and sub-samples based on gender, type of family, ordinal position, and socio-economic status of the family).
4. To compare the relationship between academic stress and each of the independent variables for sub-samples based on gender, type of family, ordinal position, and socio-economic status of the family.
5. To find out the main effect and interaction effects of emotional maturity, psychological resilience and locus of control on academic stress of higher secondary school students.
6. To find out the influence of emotional maturity, psychological resilience, and locus of control on academic stress of higher secondary school students.

7. To predict the academic stress of higher secondary school students from their emotional maturity, psychological resilience and locus of control.

5.1.5. Hypotheses of the Study

The study tested the tenability of the following hypotheses:

1. There is no significant difference in the academic stress of higher secondary school students with respect to gender, type of family, ordinal position and socio-economic status.
2. There is no significant difference in the emotional maturity of higher secondary school students with respect to gender, type of family, ordinal position and socio-economic status.
3. There is no significant difference in the psychological resilience of higher secondary school students with respect to gender, type of family, ordinal position and socio-economic status.
4. There is no significant difference in the locus of control of higher secondary school students with respect to gender, type of family, ordinal position and socio-economic status.
5. There is no significant relationship between academic stress and emotional maturity of higher secondary school students.
6. There is no significant difference in the degree of relationship between academic stress and emotional maturity of higher secondary school

students with respect to gender, type of family, ordinal position and socio-economic status.

7. There is no significant relationship between academic stress and psychological resilience of higher secondary school students.
8. There is no significant difference in the degree of relationship between academic stress and psychological resilience of higher secondary school students with respect to gender, type of family, ordinal position and socio-economic status.
9. There is no significant relationship between academic stress and locus of control of higher secondary school students.
10. There is no significant difference in the degree of relationship between academic stress and locus of control of higher secondary school students with respect to gender, type of family, ordinal position and socio-economic status.
11. There is no significant main effect and interaction effects of emotional maturity, psychological resilience and locus of control on academic stress of higher secondary school students.
12. Emotional maturity, psychological resilience, and locus of control have no significant influence on the academic stress of higher secondary school students.

13. Emotional maturity, psychological resilience and locus of control of higher secondary school students do not significantly predict their academic stress.

5.1.6. Methodology of the Study

- 1) **Method:** The study employed was descriptive and cross-sectional which employed survey method for collecting data to get a picture of the measured psychological phenomena and their interrelationship in the population.
- 2) **Population:** Female and male students in the age range 16-19, studying in higher secondary schools affiliated to the Kerala Board of Higher Secondary Education were the population for the study.
- 3) **Sample:** A stratified random sample of 1232 higher secondary school students selected from Government, Aided and Unaided schools located in Thiruvananthapuram, Ernakulam, Thrissur, and Kozhikode districts of Kerala constituted the sample for the study.
- 4) **Variables:** The study was designed with academic stress as dependent variable and emotional maturity, psychological resilience and locus of control as independent variables. Individual factors like gender, type of family, ordinal position, and socio-economic status of the family were taken as classificatory variable.

5) Tools Used: The study utilized the following standardized instruments for data collection:

- (i) *Academic Stress Scale for Higher Secondary School Students [ASHS]* (Bindu & Happy, 2023): The ASHS is a 50-item, five-point Likert Scale covering six dimensions of academic stress, viz., Cognitive, Affective, Behavioural, Physical, Interpersonal and Motivational. The ASHS has a validity of 0.69 (teacher rating as external criteria) and test re-test reliability (four weeks interval) of 0.84.
- (ii) *Emotional Maturity Scale for Higher Secondary School Students [EMSS]* (Bindu & Happy, 2023): The EMSS is a five-point rating scale consisting of 50 items which cover five dimensions of the construct of emotional maturity, viz, Lack of psychological independence, Personality disintegration, Emotional maladjustment, Emotional regression, and Emotional steadiness. The EMSS has a concurrent validity of 0.69 and test-retest reliability of 0.79.
- (iii) *Psychological Resilience Scale for Adolescents [PRSA]* (Bindu & Happy, 2023): It is also a fifty-item five-point Likert type scale comprising five key domains of psychological resilience - Goal setting and planning, Self-

efficacy, Emotional regulation, Social attractiveness, and Empathy. PRSA has a criterion validity of 0.76 and test-retest reliability of 0.87.

(iv) *Malayalam version of Rotter's Internal-External Locus of Control Scale [MRIES] (Arjunan & Abraham, 2003):* The MRIES is a 32-item forced choice (between internal and external) test, including 9 filler items. The reported concurrent validity of the MRIES is 0.93 and test-retest reliability is 0.88.

(v) *Brief Socio-Economic Status Scale [BSES] (Arjunan, 2022):* BSES is a non-standardized instrument covering three domains, viz., Education (of the parents), Occupation (of the parents) and Income (of the family).

6. ***Statistical Techniques Used:*** The data were analyzed both descriptively and inferentially. The descriptive statistical analysis included computation of Mean, Median, Mode, Skewness, Kurtosis, Standard Error of Mean etc. The inferential statistical techniques included independent sample t-test, One-way ANOVA, Scheffe's post-hoc test of multiple comparison, Pearson's Product Moment coefficient of correlation (r), Fisher's z-transformation test, Factorial Analysis and Multiple Regression Analysis.

5.2. MAJOR FINDINGS OF THE STUDY

The major findings emerged from the statistical analysis of the data are the following:

1. Female and male students differed significantly regarding their academic stress ($t = 6.380$; $p < 0.001$). The female students ($M = 172.49$) experience greater stress than that of the male students ($M = 164.93$), (vide Table 4.2).
2. Significant difference exists between students from extended families and nuclear families concerning their academic stress ($t = 12.913$; $p < .001$). Students hailing from nuclear families ($M = 175.26$) experience greater stress than that experienced by their counterparts from extended families ($M = 160.55$), (vide Table 4.3).
3. HSS-students having different birth orders differ significantly in their academic stress ($F = 5.843$; $p < .001$), (vide Table 4.4).
4. Though the 'only children' do not differ significantly from the 'firstborn' (Mean difference = 3.996; $p > .05$) and the 'middleborn' (Mean difference = 2.265; $p > .05$) in their academic stress, differ significantly from the 'lastborn' children (Mean difference = 7.110; $p < .001$) (vide Table 4.5).

5. The firstborn children do not differ significantly either from the middleborn children (Mean difference = 1.731; $p > .05$), or from the lastborn children (Mean difference = 3.113; $p > .05$), (vide Table 4.5).
6. Students from different socio-economic status do not vary significantly in the stress they experience in school environment $F = 1.579$; $p > .05$), (vide Table 4.6).
7. The female and male students differ significantly regarding their emotional maturity ($t = 3.033$; $p < .01$). The male students ($M = 146.02$) in the higher secondary schools are emotionally more matured than their female counterparts ($M = 139.69$), (vide Table 4. 8).
8. Emotional maturity varies significantly between students from extended families and nuclear families ($t = 8.215$; $p < .001$). Students from extended families ($M = 152.29$) excels students from nuclear families ($M = 135.39$) in their emotional maturity (vide Table 4. 9).
9. Students in different ordinal positions differ significantly in their emotional maturity ($F = 3.560$; $p < .01$), (vide Table 4.10).
10. No significant difference exists between 'only children' and 'firstborn children' (Mean difference = 4.253; $p > .05$), between 'only children' and middleborn children (Mean difference = 3.189; $p > .05$), between 'firstborn children' and 'middleborn children' (Mean difference =

1.064; $p > .05$), between 'firstborn children' and 'lastborn children' and Mean difference = 5.210; $p > .05$), and between 'middleborn children' and 'lastborn children' (Mean difference = 6.274; $p > .05$) in their emotional maturity (vide Table 4.11).

11. The 'lastborn children' differ significantly from the 'only children' in their emotional maturity (Mean difference = 9.463; $p < .001$). The 'firstborn children' trail behind the 'lastborn children' in their emotional maturity (vide Table 4.11).
12. HSS-students from families in different SES do not differ significantly in their emotional maturity ($F = 0.269$; $p > .05$), (vide Table 4.12).
13. The male and female HSS-students do not differ significantly in their psychological resilience ($t = 1.787$; $p > .05$), (vide Table 4.14).
14. HSS-students from extended families differ significantly from their counterparts from nuclear families in their psychological resilience ($t = 3.569$; $p < .001$). Students from extended families have greater psychological resilience than students from nuclear families, (vide Table 4.15).
15. Students in different ordinal positions differ significantly in their psychological resilience ($F = 17.834$; $p < .001$), (vide Table 4.17).

16. The 'firstborn children' have significantly higher psychological resilience than the 'only children' (Mean difference = 9.487; $p < .001$), the 'lastborn children' excelling the 'firstborn children' in their psychological resilience (Mean difference = 11.771; $p < .001$), the 'firstborn children' surpassing the 'middleborn children' (Mean difference = 9.101; $p > .05$), and the 'lastborn children' outshining the 'middleborn children' (Mean difference = 11.385; $p < .001$) in their psychological resilience (vide Table 4.17).
17. There is no significant difference between 'only children' and 'middleborn children' (Mean difference = 0.386; $p > .05$), and between 'firstborn children' and 'lastborn children' in their psychological resilience (Mean difference = 2.284; $p > .05$), (vide Table 4.17).
18. No true difference was observed among HSS-students from different SES regarding their psychological resilience ($F = 0.690$; $p > .05$), (vide Table 4.18).
19. There is significant gender difference in the locus of control of HSS-students ($t = 4.438$; $p < .001$). The male students are more internally oriented than the female students (vide Table 4.20).
20. HSS-students from extended families are significantly different from their counterparts from nuclear families in their locus of control ($t =$

- 3.067; $p < .01$). Students from extended families are more internally oriented than students from nuclear families (vide Table 4.21).
21. There is significant difference among HSS-students of different birth orders in their locus of control ($F = 6.356$; $p < .001$), (vide Table 4.22).
 22. Significant differences do not exist between 'only children' and 'firstborn children' (Mean difference = 0.164; $p > .05$), between 'only children' and 'middleborn children' (Mean difference = 0.309; $p > .05$), between the 'firstborn children' and 'middleborn children' (Mean difference = 0.141; $p > .05$), and between the 'middleborn children' and 'lastborn children' (Mean difference = 0.361; $p > .05$) in their locus of control (vide Table 4.23).
 23. The 'only children' differ significantly from the 'lastborn children' in their locus of control (Mean difference = 0.670; $p < .01$). The 'lastborn children' are more internally oriented than the 'only children' (vide Table 4.23).
 24. Significant difference was also observed between the 'firstborn' and the 'lastborn' children regarding their locus of control (Mean difference = 0.502; $p < .01$), the lastborn children being more internally oriented than the former (vide Table 4.23).

25. HSS-students from low, average and high SES do not differ significantly regarding their locus of control ($F = 2.489$; $p > .05$), (vide Table 4.24).
26. Emotional maturity of HSS-students is significantly and negatively correlated to their academic stress ($r = -0.621$; $p < .001$). The relationship between the variables in sub-samples based on gender, type of family, ordinal position, and SES of family are all significant and negative (vide Table 4.25).
27. Male and female HSS-students differ significantly regarding the degree of relationship between their emotional maturity and academic stress ($Z_{\text{observed}} = 5.151$; $p < .001$). The correlation between the variables is stronger in male students than in female students (vide Table 4.26).
28. No true difference present between HSS-students from extended families and nuclear families regarding the degree of association between their academic stress and emotional maturity ($Z_{\text{observed}} = 1.02$; $p > .05$), (vide Table 4.27).
29. The 'only children' and the 'firstborn children' do not differ significantly in the degree of relationship between their academic stress and emotional maturity ($Z_{\text{observed}} = 1.20$; $p > .05$), (vide Table 4.28).

30. The 'middleborn children' and 'only children' do not differ significantly in the degree of association between their emotional maturity and academic stress ($Z_{\text{observed}} = 1.94$; $p > .05$), (vide Table 4.28).
31. No statistical difference is present between 'lastborn children' and 'only children' in the relationship between emotional maturity and academic stress ($Z_{\text{observed}} = 1.31$; $p > .05$), (vide Table 4.28).
32. No significant difference was noticed between 'firstborn children' and 'middleborn children' in the association between academic stress and emotional maturity ($Z_{\text{observed}} = 1.19$; $p < .05$), (vide Table 4.28).
33. The 'firstborn' and the 'last-born' students differ significantly in the correlation between academic stress and emotional maturity ($Z_{\text{observed}} = 3.25$; $p < .001$), the relationship between the variables is stronger in 'firstborn children' (vide Table 4.28).
34. The 'middleborn' and 'lastborn' students differ significantly in the association between emotional maturity and academic stress ($Z_{\text{observed}} = 3.31$; $p < .001$), the correlation between the variables is stronger in middle-born students (vide Table 4.28).
35. The High SES and Average SES students differ significantly in the relationship between emotional maturity and academic stress ($Z_{\text{observed}} =$

- 2.63; $p < .01$), the relationship between the variables is stronger in students from high SES family (vide Table 4.29).
36. HSS-students from high SES and low SES do not vary significantly concerning the correlation between emotional maturity and academic stress ($Z_{\text{observed}} = 0.41$; $p > .05$), (vide Table 4.29).
37. Average SES and Low SES students differ significantly regarding the association between academic stress and emotional maturity ($Z_{\text{observed}} = 2.21$; $p < .05$), the relationship between the variables is stronger in low SES group (vide Table 4.29).
38. Psychological resilience is significantly and negatively correlated to academic stress of the total sample ($r = -0.379$; $p < .001$) and different sub-samples of HSS-students based on gender, type of family, ordinal position and SES of family (vide Table 4.30).
39. There is significant difference between female and male students regarding the degree of relationship between their psychological resilience and academic stress ($Z_{\text{observed}} = 2.85$; $p < .01$). The relationship between the variables is stronger in male students than in female students (vide Table 4.31).

40. No true difference exists between students from extended families and nuclear families concerning the association between psychological resilience and academic stress ($Z_{\text{observed}} = 1.32$; $p > .05$), (vide Table 4.32).
41. Birth order difference in the relationship between psychological resilience and academic stress was not found between 'only children' and 'firstborn children' ($Z_{\text{observed}} = 0.31$; $p > .05$), between 'middleborn children' and 'only children' ($Z_{\text{observed}} = 0.27$; $p > .05$), between 'only children' and 'lastborn children' ($Z_{\text{observed}} = 1.68$; $p > .05$), between 'firstborn children' and 'middleborn children' ($Z_{\text{observed}} = 1.68$; $p > .05$), and between 'middleborn children' and 'lastborn children' ($Z_{\text{observed}} = 1.13$; $p > .05$), (vide Table 4.33).
42. The 'firstborn children' differ significantly from the 'lastborn children' in the coefficient of correlation between psychological resilience and academic stress ($Z_{\text{observed}} = 2.59$; $p < .001$). The association between the variables is stronger in 'firstborn children' compared to that in 'lastborn children' (vide Table 4.33).
43. No significant difference was noticed among HSS-students in different SES regarding the correlation between psychological resilience and academic stress (vide Table 4.34).

44. Internal locus of control (ILC) is negatively and significantly correlated with academic stress in the total sample ($r = -0.323$; $p < .001$) and different sub-samples of HSS-students (vide Table 4.35).
45. No significant difference was noticed between female and male students regarding the correlation between ILC and academic stress ($Z_{\text{observed}} = 0.19$; $p > .05$), (vide Table 4.36).
46. Students from extended families and nuclear families do not vary significantly concerning the relationship between ILC and academic stress ($Z_{\text{observed}} = 0.04$; $p > .05$), (vide Table 4.37).
47. No significant difference was noticed among students from different birth orders regarding the relationship between their ILC and academic stress (vide Table 4.38).
48. HSS-students from different SES vary significantly regarding the correlation between their ILC and academic stress (vide Table 4.39). Students in Low SES excel students in High SES ($Z_{\text{observed}} = 2.27$; $p < .05$) and students in Average SES ($Z_{\text{observed}} = 4.86$; $p < .01$) in the degree of relationship between ILC and academic stress. Further, the High SES students surpass those in the Average SES in the correlation between the variables ($Z_{\text{observed}} = 2.02$; $p < .05$), (vide Table 4.39).

49. Factors like Emotional Maturity ($F = 15.057$; $p < .001$), Psychological Resilience ($F = 5.428$; $p < .01$) and Locus of Control ($F = 17.750$; $p < .001$) exert significant main effects on Academic Stress of HSS-students (vide Table 4.40).
50. Emotional maturity and psychological resilience have significant interaction effects on academic stress of HSS-students ($F = 4.265$; $p < .01$), (vide Table 4.40).
51. The interaction effects of emotional maturity and ILC on academic stress is not significant ($F = 1.480$; $p > .05$), (vide Table 4.40).
52. Psychological resilience and ILC have significant interaction effects on academic stress of HSS-students ($F = 2.639$; $p < .05$), (vide Table 4.40).
53. The independent variables, emotional maturity, psychological resilience, and locus of control, have significant interaction effects on academic stress of HSS-students ($F = 3.494$; $p < .01$), (vide Table 4.40).
54. HSS-students in different levels of emotional maturity differ significantly in their academic stress (vide Table 4.41 & Table 4.42).
55. Students having Low, Average, and High levels of psychological resilience have significantly different levels of academic stress (vide Table 4.43 & Table 4.44).

56. Students having different levels of internal locus of control have significantly different levels of academic stress (vide Table 4.45 & Table 4.46).
57. Emotional maturity significantly influences academic stress of HSS-students ($F = 770.590$; $p < .001$), (vide Table 4.48). An estimated 38.5% of the total variation in academic stress of HSS-students can be explained by their emotional maturity (vide Table 4.47).
58. Psychological resilience exerts significant influence on academic stress of HSS-students ($F = 206.760$; $p < .001$), (vide Table 4.50). A total of 14.4% variation in the academic stress of the students can be explained by their psychological resilience (vide Table 4.49).
59. Locus of control significantly influences academic stress of HSS-students ($F = 143.525$; $p < .001$) (vide Table 4.52). An estimated 10.4% of the total variation in academic stress of HSS-students can be explained by locus of control (vide Table 4.51).
60. Emotional maturity, psychological resilience, and locus of control significantly predict academic stress of HSS-students ($F = 313.239$; $p < .001$). A total of 43.4% variability in the academic stress of the population of HSS-students can be predicted jointly by the independent variables. All the independent variables significantly contribute to the prediction of the dependent variable. The multiple regression equation

for academic stress (AST) worked out to be **AST = 258.904 – (0.536 X EM) – (0.095 X PR) – (0.202 X ILC).**

5.3. CONCLUSIONS OF THE STUDY

The inferences drawn based on the statistical analysis of the data substantiate that gender, type of family and ordinal position of the students are significant factors exerting differential influence on academic stress HSS-students. Socio-economic status of the family, however, do not differentiate HSS-students based on their academic stress. Female students from nuclear families experience greater academic stress than male students from extended families. The magnitude of academic stress experienced by HSS-students is highest when they are the 'only child'. Gender, type of family and birth order are significant factors that differentiate HSS-students based on their emotional maturity. Male students from extended families outshine the female students from nuclear families in their capacity to understand and manage emotions. Being the firstborn child of the family has the disadvantage of regulating their emotions in maintaining agreeable relationship with others. Conversely, 'lastborn children' are emotionally more mature, take accountability of their feelings, and show empathy to others. The SES of the family is not a significant factor that differentiates HSS-students based on their emotional maturity.

The male and female students are alike in their ability to adapt adequately in the face of adversity. Students from nuclear families trail behind their counterparts from extended families in psychological resilience as the former is likely to get lesser social support in the family in developing and maintaining resilience. Birth order is a significant decisive factor in the psychological resilience of HSS-students. The 'only children' have the greatest disadvantage of developing psychological resilience, followed by the 'middleborn children'. The 'lastborn children' in the family naturally get more emotional and social support, attention, care and companionship from elder siblings, which foster their ability to maintain and regain mental health in the face of adversity. Family SES is not a significant factor in the psychological resilience of HSS-students. Gender significantly differentiates HSS-students based on their locus of control too. Boys are mostly internal while the girls are external in their orientation. Family structure is also contributory to internal-external mental orientation of HSS-students; the extended family atmosphere being more conducive in nurturing beliefs in youngsters that they can influence outcomes through their actions. Certain ordinal positions were found to exert significant differential influence on locus of control of HSS-students. Birth order difference in locus of control was noticed between the 'only children' and the 'lastborn children', and also between the 'firstborn children' and the 'lastborn children'. SES do not exert any significant differential effect on locus of control of HSS-students.

The independent variables, viz., emotional maturity, psychological resilience, and internal locus of control, are negatively, but significantly, correlated with academic stress of HSS-students. The highest degree of association with the dependent variable was observed in the case of emotional maturity, followed by psychological resilience and then by internal locus of control. Though the correlation between the variables, observed in the total sample, was found to exist in different sub-samples also, significant differential influences of gender, type of family, ordinal position and socio-economic status were noticed in some cases. Gender was found to be a significant factor that discriminates HSS-students based on the correlation between emotional maturity and academic stress and between psychological resilience and academic stress. The correlation between ILC and academic stress was found to be the same in male and female students. Types of family do not exert any significant differential influence on the degree of relationship of any of the independent variables to the dependent variable.

Though the ordinal position of the students does not exert any significant differential influence in the relationship of the independent variables with the dependent variable in most cases, the firstborn and the last-born differ significantly in the relationship between emotional maturity and academic stress, and between psychological resilience and academic stress. The relationship between the variables in both cases is stronger in the 'firstborn children'. Though family SES do not have any significant differential effect on the distribution of

the variables, some levels of SES exert significant differential influence in the association between academic stress and each of the independent variables. Students in the Average SES differed significantly from those in the High SES and Low SES concerning the correlation between emotional maturity and academic stress. Compared to the High SES and Low SES groups, the variables are weakly associated in students from Average SES. However, the SES of the family does not have any significant differential influence on the association between psychological resilience and academic stress. Conversely, family SES is a significant decisive factor in the association between ILC and academic stress. The relationship between the variables is significantly stronger among students at both ends of socio-economic status.

The independent variables exert significant main effect on academic stress of HSS-students. Students having different levels of emotional maturity, psychological resilience, and locus of control have significantly different levels of academic stress. Emotional maturity and psychological resilience interactively affect the academic stress of HSS-students. It means that the effect of emotional maturity on academic stress varies with the level of psychological resilience of the students. Likewise, psychological resilience and locus of control also have significant interaction effects on academic stress of the HSS-students. Students who have high psychological resilience and believe they control their academic success are likely to experience low academic stress. The interaction effects of emotional maturity and locus of control on academic stress, however, is not

significant. The independent variables (emotional maturity, psychological resilience, and locus of control) have significant interaction effects on academic stress of HSS-students. It concludes that HSS-students in different levels of emotional maturity having different levels of psychological resilience with various degrees of internal locus of control differ significantly in their academic stress.

The independent variables exert significant influence on academic stress of HSS-students. The highest variability in academic stress is contributed by emotional maturity, followed by psychological resilience and then by locus of control. Multiple regression analysis brought out that 43.4% of variability in the Academic Stress (AST) of HSS-students can be significantly predicted by their Emotional Maturity (EM), Psychological Resilience (PR) and Internal Locus of Control (ILC). The greatest contribution to the model was made by emotional maturity, followed by internal locus of control and the lowest contribution is made by psychological resilience. The multiple regression equation for academic stress (AST) scores figured out to be: $AST = 258.904 - (0.536 \times EM) - (0.095 \times PR) - (0.202 \times ILC)$. This model was found to be significant at 0.001 level, fully supporting the hypothesis that emotional maturity, psychological resilience, and locus of control would predict academic stress of HSS-students.



Chapter Six

RECOMMENDATIONS OF THE STUDY

- Educational Implications
- Suggestions for Further Research

CHAPTER VI

RECOMMENDATIONS OF THE STUDY

This chapter of the thesis is dedicated to putting forward some theoretical as well as practical suggestions based on the findings of the study. Recommendations are an important part of the thesis as they help translate research results into real-world actions and provide practical guidance and propose future actions and areas for further improvement based on the findings emerged. The major recommendations based on the findings of the present study are given under two sub-headings:

6.1. EDUCATIONAL IMPLICATIONS

Educational implications are the potential applications of the study's findings in educational settings. The present study covered four selected psychological factors having direct and indirect influence on academic performance and psychological wellbeing of the learners at higher secondary level of school education. School education in any modern society aims to optimize the all-round harmonious development of the personality of the learner concurrent with accomplishing the objectives of the curriculum. An understanding of the interplay of the emotional maturity, psychological resilience, and locus of control on academic stress will be helpful for the curriculum planners, teachers, school counsellors, parents, and administrators to organize

physical and psychological resources and synthesize their specific roles and activities in such way to be supportive to emotional and academic needs of the students. The specific implications of the findings of the study are as detailed below:

1. The descriptive data on academic stress shows that only a small proportion of HSS-students are free from academic stress. This situation calls for the immediate attention of educational agencies and authorities to take positive steps to mitigate the various academic pressures and demands experienced by the students. Alleviating academic stress requires a multi-faceted approach that involves a nurturing educational environment, addressing both academic demands, psychological wellbeing, and teaching students with efficient stress management strategies. In the light of the present study all schools should introduce some psycho-pedagogic programmes like Mindfulness Based Programmes, Transactional Analysis Based Group Programmes, Cognitive-Behavioural Skill Training, Life Skills Education, Socio-emotional Learning Interventions, Time Management and Study Skills Workshops, Relaxation and Stress-Reduction Techniques etc., to assist their students to acquire skills and abilities to manage academic stress.
2. The finding that the female students experience greater academic stress compared to the male students implies that any step taken by the school to

mitigate the academic stress should address the female students on a priority basis rather than male students. Extended stress management programmes should be made available to female students. School counselling services, art and music therapy, yoga and mindfulness classes etc. should be more accessible to female students than to male students.

3. The finding that students from nuclear families experience greater academic stress than their counterparts from extended families implies the need for home-school collaboration for abating academic stress of HSS-students. The socio-emotional atmosphere of the family is critical in developing the ability to manage stress in general and academic stress in particular. Students coming from nuclear families must be identified at the time of school admission and oriented to more rigorous and frequent stress management activities. Parental stress transfer, high parental expectations, loneliness and social isolation, more direct attention from parents, increased autonomy etc. are some of the family related reasons for high academic stress of students from nuclear families. The class teacher and the school counsellor/psychologist should extend support to parents of students coming from nuclear families in understanding and dealing the enhanced academic stress of their children, the role parents to play reducing stress associated with learning at home, minimizing the burden of home tuition, getting adequate rest and sleep at home, moderating the expectation on their ward, in setting realistic parental expectation, so on.

4. In the light of the finding that birth order of students is a significant decisive factor in the academic stress they experience, teachers and school counsellor/psychologist should be aware of the ordinal position of individual students. The study has revealed that 'only children' are more susceptible to academic stress than students in any other ordinal position. This is often because they are the sole focus of their parents' attention and bear the full weight of their parents' academic expectations. In the absence of any sibling for emotional support and sharing of school experiences, the high parental expectations and over emphasis of their academic performance contributes to enhanced stress in 'only children'. While offering any school-based programme to lessen academic stress, special attention should be given to 'only children'. Maintaining a record of the periodic assessment of academic stress along with ordinal position and academic performance of the students will be helpful for the teachers to understand any excessive academic pressure on the student from the family.
5. Since SES of the family do not exert any significant differential effect on academic stress of HSS-students, any programme launched by the school or educational agencies to abate academic stress of students should address academic stress should, therefore, be equally available to students from all the socio-economic status.

6. The present study has revealed a negative but significant correlation between emotional maturity and academic stress of HSS-students. Students who have higher emotional maturity are more adept at controlling their emotions to situations which trigger academic stress. They use positive coping strategies such as engaging in problem solving or seeking social support, when students with low emotional maturity resort to denial or avoidance behaviour. It shows that any step taken to nurture emotional maturity of students will be escorted by lower academic stress. Taking positive steps like encouraging students to recognize their feelings, encourage open communication, encouraging reflection before reacting emotionally to situations which trigger academic stress, encouraging students to consider the perspectives of others, listening to students actively etc. will foster emotional maturity in children which in turn will help to abate academic stress.
7. Since the female students trail behind the male students in their emotional maturity, any measure adopted by the school to foster emotional maturity should address the needs of female students. Integrating mindfulness practices or yogic exercises with co-scholastic activities meant for female students will be useful for fostering independence and taking responsibility for their actions, which are contributory to promoting emotional maturity. Female students in higher secondary classes are less physically active than their male counterparts. Physical activities play a

critical role in promoting emotional wellbeing and managing stress. The school should encourage participation of female students in sports and physical activities which will be helpful for regulating emotions.

8. The study further exposed that HSS-students coming from nuclear families drop behind their colleagues from extended families in their emotional maturity. Fewer interpersonal relationships, lack of peer interaction, reduced emotional support, limited social interaction in nuclear families etc. are major reasons behind this. Students from nuclear families should be identified in the beginning of school year and ensure that they get maximum opportunities to interact with others in the school environment and ensure that they are exposed to a broader and more diverse emotional landscape where they can learn empathy, compromise and emotional regulation.
9. The study revealed that birth order is a significant factor affecting emotional maturity of HSS-students. The 'only children' is at the low end of the spectrum, followed by middleborn and firstborn. Therefore, it is recommended that any organized programme for fostering emotional maturity should be given after a birth order grouping to optimize the outcome. Social and emotional learning programmes like role-playing, mindfulness practices, emotion identification programmes etc. will be

more effective in establishing healthy relationships and making responsible decisions, if organized after birth order grouping of students.

10. Since SES of the family has no significant differential influence on emotional maturity, as revealed in the present study, any school activity organized for nurturing emotional maturity of the students should be made equally available to students from different socio-economic status.
11. The descriptive analysis of the psychological resilience of HSS-students has brought out that only a small proportion of HSS-students have high psychological resilience, majority of the students are either average or low in their psychological resilience. The study has also exposed the presence of a significant negative correlation between psychological resilience and academic stress. It shows that any step taken by the school to strengthen the psychological resilience of the students will be accompanied by a corresponding reduction in their academic stress. Encouraging students to learn from their mistakes and failures, rewarding perseverance, creating safe and supportive school environment to express thoughts, promote collaborative works, teaching positive self-talk, nurture reflective thinking, make allowances for autonomy and decision making, helping students to set realistic and achievable goals, model resilience etc. are some practical measures to foster psychological resilience in students.

12. Since the male and female students are almost alike in their psychological resilience, any programme launched by the school for nurturing the psychological resilience of students should address both the gender groups alike.
13. The finding that students from extended families excel their counterparts from nuclear families in their psychological resilience necessitates differential treatment of the groups for nurturing their psychological resilience. In nuclear families, the social support system is smaller and more concentrated compared to that in extended families. In extended families, the children and adolescents get social support from a larger network of caregivers, which act as a buffer against adversity and stress. Moreover, in extended families, children are exposed to a wider circle of cultural teaching and mentorship from multiple caregivers which can promote children's resilience by expanding their understanding of challenges. Children from nuclear families must be identified at the time of school admission and a wider range of social support activities arranged for them. While planning group activities, students from nuclear families must be made into groups with students from extended families. While allotting peer mentors, students from extended families must be given to students from nuclear families which will help them to build strong social connections, feel less isolated, and develop problem-solving skills by learning from the experiences of children from his fellow student from

extended families. Teachers and school counsellors/psychologists can organize Social and Emotional Learning Programmes for the benefit of students from nuclear families which equip them with emotional tools they need to handle challenges and bounce back from difficulty.

14. The significant difference observed in the psychological resilience of students from different ordinal positions calls for differential treatment to be given based on their birth order for developing the ability to cope with and adapt to stress and adversity. The 'only children' trail behind their peers in all other ordinal positions regarding their psychological resilience. Teachers, therefore, identify the 'only children' in the class and strengthen their resilience through leadership, independence and responsibility. Teachers can model resilience behaviour by showing how to manage stress, adapt to challenges and maintain calmness when faced with difficulties. Teaching problem-solving skills, encouraging positive relationship, normalizing setbacks and challenges, providing safe and predictable environment, encouraging self-reflection and goal setting, promoting healthy risk-taking, teaching coping skills for stress and anxiety etc. given after grouping students based on their ordinal position will be more effective for nurturing psychological resilience in HSS-students.
15. Since SES of the family do not exert any significant differential effect on psychological resilience of HSS-students, any programme implemented by

educational agencies to promote resilience in students should address children from all socio-economic status equally. The family SES should not be criterion for accessing any school-based programme for nurturing psychological resilience of HSS-students.

16. The study has disclosed a significant negative correlation between internal locus of control and academic stress of HSS-students. Steps taken to strengthen the internal orientation of mind will be helpful for alleviating the academic stress of the students. Therefore, the entire school activities should be geared to orient the mind of students internally rather than externally. Encourage students to develop a sense of purpose and direction behind all school activities, help them to set time-bound, achievable goals, break it into manageable steps, and help them to recognize how their actions contribute to the accomplishment of the goals. Encourage decision making and foster accountability in students. Encourage students to take challenges and failure as openings to learn and grow. Teach and practice problem solving methods and appreciate the outcomes. Teach students to minimize attributing success to external factors like fate, luck, or powerful others.
17. The descriptive analysis of the data pertaining to locus of control of HSS-students revealed that most of the students do not have high internal locus of control. The teachers should help the students to set specific, achievable

goals and help them to understand the role of their effort in achieving them. Encourage them to maintain 'progress journals', where they reflect on the steps adopted to achieve their goals, difficulties they faced, strategies employed to overcome the difficulties and so on. The school should take steps to promote self-efficacy of students through mastery experiences. Positive measures to promote rational and critical mind rather than belief in supernatural powers must be taken by the school. Teaching scientific method, fostering scientific temper, and spirit of inquiry, nurturing open mindedness etc. will be helpful in strengthening internal locus of control in students.

18. As revealed in the study, female students are less internally oriented than the male students. In the light of this finding, the female students should be given preference to activities launched by the school to strengthen the ILC of HSS-students. The traditional social roles and expectations make the female students more external. Participation in activities like sports, games, athletics, SPC, NSS, NCC etc. make the female students more assertive and independent as they give immediate feedback of their effort which are reinforcing.
19. Since no significant difference was noticed among students from high, average and low SES regarding their locus of control, any measure taken

by the school authorities to foster the mental health of the students should be made equally available to students of all socio-economic statuses.

20. The present study has brought out a significant negative correlation between emotional maturity and academic stress. This implies that any step taken to nurture the emotional maturity of the HSS-students will be helpful to reduce their academic stress. Acknowledging one's own emotions is a first step to managing negative emotions. Mental health practices in schools will be helpful in making the students sensitive to their own emotions as well as that of others. Teachers and school counsellors/psychologists shall help the students to practice mindfulness, deep breathing technique, or simple yoga prior to entering examination, which will be helpful in regulating their emotions. Help students to set realistic goals which will reduce unwarranted pressure and keep the students motivated. In classroom, teachers can use positive reframing which helps the students to view stress as a challenge or opportunity to grow, rather than perceive it as something harmful. Empathy and social support are critical factors in one's goal of attaining emotional maturity. Teachers and school counsellors/psychologists can help students to develop supportive friendship, effective communication skills, to detach from perfectionism, and separate the identity from academic achievement.

21. The study has exposed a gender difference in the relationship between emotional maturity and academic stress of HSS-students, the relationship being significantly stronger in male students than in female students. It indicates that any step taken to foster the emotional maturity will be more successful in abating their academic stress of male students, than that of female students. It implies that teachers and school psychologists/counsellors have to choose more effective strategies and more frequent interventions to alleviate academic stress of female students by influencing their emotional maturity. Likewise, the variables were found significantly more strongly associated in the 'firstborn' and the 'middleborn' students compared to the 'last-born' students. These findings imply that a higher 'dosage' of psycho-pedagogic intervention must be needed for the 'last-born' children to bring about a comparable result when a reduction in academic stress is expected by influencing their emotional maturity. Likewise, significant differences in the association between emotional maturity and academic stress were also noticed among students in different socio-economic levels. Compared to students in Average SES, students in the High SES and the Low SES groups might require 'heavy dose' or 'longer treatment' when the teacher/counsellor think about relieving their academic stress by influencing their emotional maturity.
22. The study has demonstrated a negative but significant correlation between psychological resilience and academic stress of HSS-students. It opens

avenues for lowering academic stress by promoting psychological resilience of learners. Any measure taken by the school in nurturing the resilience of the students will be helpful for curtailing academic stress of the students. Strengthening students' mental fortitude, adaptive coping mechanism, and emotional regulation are key to reducing academic stress by fostering their resilience. Teaching the students that abilities are malleable through effort and persistence will help to reset the mind and perceive challenges as opportunities for growth rather than threats. Resilience can be nurtured through EI-Training, Relaxation techniques, Yogic exercises, Mindfulness meditation etc. So, the school should offer one or more of these techniques in combination to promote psychological resilience of students. The classroom atmosphere should be so tuned to promote positive coping strategies in learners. Teach them problem-solving skills, adaptive coping strategies, and time management. The school system should be restructured to foster a strong network of social support.

23. Comparison of the gender groups regarding the correlation between psychological resilience and academic stress brought out that the relationship between the variables is weaker in female students than in male students. Likewise, compared to that in the 'lastborn children' the correlation between the variables is stronger in 'firstborn children'. These findings point to the need for offering a more intense and longer psycho-

pedagogic intervention for the female students and the 'lastborn' students to strengthen their psychological resilience for attaining a corresponding reduction in academic stress comparable to that in male students and the 'firstborn' students.

24. A significant, negative correlation was worked out between academic stress and ILC revealing that any shift in the mental orientation from external to internal will be followed by a corresponding fall in academic stress of the HSS-students. To this end, teachers have to extend help students to plan and manage their time, to set priorities, to break down larger tasks into simpler achievable units and so on. Introduce growth mindset which enables students to understand that they can improve their abilities and skills with effort and dedication. This will help them to see failure as a learning opportunity rather than as an end. Cultivate in every learner a sense of control over their learning process by offering choices in assignment topics, permitting flexible time for submissions, giving feedback opportunities etc. Strengthen the sense of agency of learners by giving opportunities to make decisions about classroom arrangements, time needed for completing assignments, areas of class tests etc. Appreciate and reward the improvement made by individual learners, rather than comparing the performance of a student with others. Help students to make individualized learning plans and persuade them to take ownership of their academic journey.

25. The study exposed no significant difference between students from nuclear families and extended families, and between students in different ordinal positions regarding the correlation between ILC and academic stress. It shows that any step taken to strengthen the ILC will bring out the same degree of reduction in academic stress in sub-samples based on type of family and ordinal position of HSS-students. This finding implies that while planning school-based programme for abating academic stress by strengthening the internal orientation of mind, neither the type of family nor the birth order of the students should be a decisive factor.
26. Students in different SES vary significantly regarding the correlation between their ILC and academic stress. Students in Average SES trail behind their colleagues in High and Low SES concerning the correlation between the variables. This implies that more intense and longer intervention must be needed for students from Average SES, compared to students from High and Low SES, for attaining the same extent of drop in academic stress by building up their ILC.
27. The findings of the study have revealed that the independent variables (emotional maturity, psychological resilience, and locus of control) have significant main effect and interaction effects on academic stress. It is evident that emotional maturity, psychological resilience, and locus of control jointly influence how pupils experience and deal with academic

demands. Emotionally mature students are more adept at managing negative emotions such as anger, anxiety, and frustration associated with academic stress. Resilience enhances their ability to recuperate from negative emotions arise from academic stress. These resources in students, when combined with the belief that they can change the situation and influence its outcome enables them to overcome adverse effect of academic stress rapidly. The study underpins that interaction effect of emotional maturity, psychological resilience, and internal locus of control creates a powerful combination that enhances a student's ability to manage and reduce academic stress effectively. In the light of this finding, teachers and school counsellors/psychologists should consider the above psychological factors together while planning therapeutic and counselling service for HSS-students to overcome academic stress. The finding will be particularly useful while giving small group counselling or therapeutic intervention. If grouping is done based on the combination of different levels of these psychological factors (e.g., Group-1: High EM + High PR + High ILC; Group-2: High EM + High PR + Average ILC; Group-3: High EM + High PR + Low ILC etc.), then counselling/intervention will be more effective, and economical in terms time, effort and resources.

28. The finding that emotional maturity significantly influence academic stress of HSS-students has its implications for introducing EI-training in schools for developing emotional maturity of students. Such EI-Training

Programme should focus on developing skills like self-awareness, emotional regulation, effective communication and empathy. Mental health education should be a part of Physical and Health Education in schools, and lessons on managing negative emotions, and strategies to cope with stress, good listening habits etc. should be provided. Identify students with emotional immaturity and offer personalized counselling to develop skills for managing negative emotions. In-service psychological training should be given to teachers for handling students who are less emotionally matured and exhibit frequent emotional outbursts. Teachers should create a supportive classroom environment by modelling and demonstrating emotionally matured relationship and behaviour. The school should organize coping skill training and stress management training for the benefit of HSS-students. Incorporating Social-Emotional Learning into curriculum as part of core subjects will help the students to recognize and manage emotions, improve social skills, build empathy concurrent with learning school subjects. Policy level decision must be taken to introduce emotional skill development as part of education at all levels to enable students to grow emotionally as they move higher in educational ladder.

29. The study has disclosed the significant influence exerted by psychological resilience on academic stress of students. This finding has the implication for prioritizing resilience building programmes in schools. Instilling pro-

social values, social competence, optimism, problem-solving skill, positive self-image, effective coping style etc. in students by diverse school activities will be helpful for fostering psychological resilience in students. Such activities should be made as an inseparable part of the school life of a learner. Teach the students guided breathing techniques, mindfulness meditation, body scan, ashtanga yoga etc. for gaining mental strength to remain calm under pressure. School can organize “Resilience Workshop” to equip students with practical tools for handling setbacks and adversity in academic and personal life to provide students with practical tools for managing setbacks and hardship in academic and personal life. At curricular level, resilience concepts can be integrated with curriculum through social studies, literature and history where the students come across historic and epic figures who overcame adversity.

30. The finding that locus of control (internal) has significant influence of academic stress of HSS-students points to the need for promoting ILC of students through school activities. The scholastic activities should be so arranged to encourage students to take responsibility of their learning. Project methods where autonomy is given for learners to choose topics, set learning goals and offer provision for self-assessment will be helpful for strengthening internal orientation of mind. Students with an internal locus of control generally perceive themselves as more adept at stress management; hence, imparting skills such as goal setting, time

management, and self-regulation can alleviate academic stress. By providing more freedom and choices over learning and opportunities for autonomy and decision making, the school can breed a sense of ownership in students. Teachers can promote ILC by emphasizing the how planning, effort and dedication lead to success rather than external factors like luck, or fate. In classroom, teachers can use strategies that foster a growth mindset by highlighting effort, progress and the capacity to improve through practice. Teachers should not spare any opportunity to disprove that external agents have no role in one's success and achievement. Teachers should identify students with external locus of control (ELC) rightly in the beginning of the academic year. Teaching resilience and coping strategies will make them feel more empowered to deal with stress. Personalized learning approaches, immediate feedback, knowledge of results etc. will promote ILC in learners. Since collaborative learning helps to develop a sense of shared control over learning, the teachers should encourage peer collaboration in the classroom. Group projects, reciprocal teaching, peer tutoring etc. will help them feel more self-efficacious and empowered as they share responsibility for success with others.

31. The study has generated a regression equation for predicting the academic stress of HSS-students from their emotional maturity, psychological resilience, and locus of control. This equation will find its implications for

teachers, school counsellors/psychologists, administrators, curriculum planners, teacher educators and researchers to find out the value of one factor provided the value of other factors are known. The equation will help school counsellors/psychologists to understand which factor contributes most to academic stress. This knowledge will help them to focus more on nurturing that particular factor through intervention. Further, knowing the relative contribution of each factor helps in generating focused plans to address the specific areas of weakness. The regression equation will be helpful for the school counsellors/psychologists to plan personalized support system for students who are low in some of these factors. The regression equation will help teachers/counsellors/psychologists to track changes in the academic stress level of the students. The school administrator can use the equation for monitoring, evaluation purposes and for improving student support services. The regression equation will be helpful for curriculum designers to prepare the content modules and instructional materials in such a manner to foster the psychological variable(s) which strongly predict academic stress. It will provide the policymaker with insight into activities that enhance learners' sense of control over their academic experiences, hence alleviating stress through a heightened sense of autonomy.

Above all, the present understanding of the level of academic stress of HSS-students, the differential influence of gender, type of family, ordinal position and

socio-economic status, its correlation with emotional maturity, psychological resilience, and locus of control, the differential effect of the selected demographic factors on the association of the factors to academic stress, the main effect and interaction effects of the independent factors on academic stress, and their influence on academic stress, the multiple regression equation developed etc. are expected to exert their direct and indirect influence on educational theory, classroom practice, social action, and educational policy.

6.2. SUGGESTIONS FOR FURTHER RESEARCH

The current study aims to pave the way for further research in the chosen field of interest. A few potential avenues for further research are presented below:

1. Academic stress experienced by school students are highly dependent on a diversified set of psycho-social and cultural factors. The present study has covered only three independent variables due to multiple reasons. The investigation can be continued with a new set of independent variables or variables in combination with those covered in the present study to disclose the interactive effects of these variables on academic stress.
2. In the present study academic stress was taken as a single unified psychological factor. The Academic Stress Scale used in the present study consisted of six domains, viz., (i) Cognitive, (ii) Affective, (iii) Behavioural, (iv) Physical, (v) Interpersonal, and (vi) Motivational. The

present study had not investigated how the demographic factors differentially influence the distribution of stress in each of the domains, or the domain wise relationship of academic stress with the independent variables, or the interactive effect as well as the influence of the independent variables on academic stress in each of the domains. Further study may be initiated to explore the relationship, effect and influence of the independent variables on each domain of academic stress.

3. In the current study, sub-samples based on only four demographic factors, viz., gender, type of family, ordinal position, and socio-economic status, were considered to examine their differential influence on the distribution of academic stress and the independent variables. The population of HSS-students of Kerala is a heterogeneous group likely to show differences in distribution based on many other socio-demographic factors like academic streams of study (Commerce, Humanities & Science), residential locale (Rural, Urban & Semi-urban), age (in the range of 16-19 years), major religious groups (Hindu, Christian, Muslim & Secular), levels of academic achievement (High, Average and Low) and so on. Future researchers may look into the differential effect of these demographic factors which were not considered in the present investigation.

4. The correlational analyses carried out as part of the study was confined to the total scores generated by the measuring instruments. The tools used in the study, except that used for assessing the locus of control, were all multidimensional in their construction measuring five or six dimensions of the construct. The total score generated from the assessment of the different dimensions of the instrument was taken as the measure of the variable. This condition leaves avenue for future researchers to explore how each dimension of emotional maturity and psychological resilience are correlated to different dimensions of academic stress. The dimension wise correlational analysis can be further extended to examine sub-sample differences in the degree of relationship between dimensions.
5. The birth order analyses of the variables have disclosed the greatest disadvantage experienced by the 'only child' in academic stress, emotional maturity, psychological resilience and internal locus of control. In Kerala, one-child families are more common than ever and any other state of India. In the light of the mounting trend of the Kerala society to limit the family size to a single child for the parents, further investigation is needed on an urgent basis to bring out the factors contributing to the observed psychological disadvantage of 'only children'.
6. Likewise, children from nuclear families also face the psychological disadvantage of experiencing more academic stress, having lower

emotional maturity, psychological resilience and less internally oriented than their counterparts from extended families. The nuclear family system has already reached the majority position in Kerala, and its growth is always up. Since persistent academic stress can lead to depression, chronic anxiety, insomnia, emotional exhaustion, memory problems and many physical health problems, further research is needed to understand the family related factors contributing to the greater academic stress, lower emotional maturity, poor psychological resilience and external mental orientation of students from nuclear families.

7. In the present study HSS-students studying in school affiliated to Kerala Board of Higher Secondary Education alone were taken as sample. In Kerala, there are higher secondary schools affiliated to the Central Boards (CBSE, CISCE, NIOS etc.) and International Boards. A further study may be conducted by broadening the sample to include students from schools affiliated with Central Boards and International Boards.
8. In the present study main effect and interaction effects of the independent variables on the dependent variable was limited to the total sample, and not to the sub-samples considered. The researcher is not sure that the effect of the independent variables on the dependent variable of the different sub-samples will be the same noticed in the whole sample. Further research can be taken up in this direction exploring the main effect

and interaction effect of the independent variables on academic stress in sub-samples based on gender, type of family, ordinal position, and socio-economic status.

9. Likewise, in the present study, influence of each of the independent variables on the dependent variable was examined only for the total sample. Further study is needed to find out whether such significant influences exist in the selected sub-samples too.



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APPENDICES

SCHOOLS SELECTED FOR SAMPLING

SL. NO.	SCHOOL NAME	DISTRICT	SECTOR
1	GOVT. MODEL BOYS HSS, ATTINGAL	Thiruvananthapuram	Government
2	GOVT GIRLS HSS, KARAMANA.	Thiruvananthapuram	Government
3	NSS HSS, MG COLLEGE.	Thiruvananthapuram	Private Aided
4	ST MARY'S HSS, VIZHINJAM.	Thiruvananthapuram	Private Aided
5	LOYOLA HSS, SREEKARIYAM	Thiruvananthapuram	Private Unaided
6	GOVT. HSS, MOOKKANNUR.	Ernakulam	Government
7	GOVT. HSS, PIRAVOM.	Ernakulam	Government
8	ST ANTONY'S HSS, KACHERIPPADI.	Ernakulam	Private Aided
9	ST SEBASTIANS HSS, PALLURUTHY.	Ernakulam	Private Aided
10	ST GEORGE HSS, KOTHAMANGALAM.	Ernakulam	Private Aided
11	CHRISTAVA MAHILALAYAM GIRLS HS, ALUVA	Ernakulam	Private Unaided
12	GOVT. HSS, CHAVAKKAD	Thrissur	Government
13	GOVT. MODEL GHSS, IRINJALAKUDA	Thrissur	Government
14	GOVT. HSS, CHERPU	Thrissur	Government
15	CHALDEAN SYRIAN HSS, THRISSUR	Thrissur	Private Aided
16	SOCCRASO HSS, MALA	Thrissur	Private Aided
17	HFCG HSS, CHEMBUKAVU	Thrissur	Private Unaided
18	CARMEL HSS, CHALAKUDY	Thrissur	Private Unaided
19	GOVT HSS, EAST HILL.	Kozhikode	Government
20	GOVT HSS, BEYPORE.	Kozhikode	Government
21	SEVAMANDIR HSS, RAMANATTUKARA.	Kozhikode	Private Aided
22	MKHNNO HSS FOR GIRLS, MUKKOM.	Kozhikode	Private Aided
23	PRESENTATION HSS, CHEVAYUR.	Kozhikode	Private Unaided

ACADEMIC STRESS SCALE FOR HIGHER SECONDARY SCHOOL STUDENTS

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(2023)

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IASE, THRISSUR-680020

പ്രിയ വിദ്യാർത്ഥി സുഹൃത്തേ,

നിങ്ങളെപ്പോലുള്ള സെക്കൻഡറി സ്കൂൾ വിദ്യാർത്ഥികൾക്ക് പഠനത്തിന്റെ ഭാഗമായി ധാരാളം അക്കാദമിക് പ്രവർത്തനങ്ങൾ ചെയ്യേണ്ടതുണ്ടല്ലോ. പതിവായുള്ള പരീക്ഷകൾ, ഹോംവർക്കുകളുടെയും അസൈൻമെന്റുകളുടെയും സമയബന്ധിതമായ സമർപ്പണം, പ്രോജക്ടുകളുടെ പൂർത്തീകരണം, ദൈനംദിന ക്ലാസിലെ ചോദ്യോത്തരങ്ങൾ മുതലായവ നിങ്ങളെ സമ്മർദ്ദത്തിലാക്കുകയും ക്ലാസിലെ നിങ്ങളുടെ അക്കാദമിക് പ്രകടനത്തെക്കുറിച്ച് ഉൽക്കണ്ഠപ്പെടുത്തുകയും ചെയ്യാം. നിങ്ങൾ അനുഭവിക്കുന്ന പഠനസമ്മർദ്ദത്തെക്കുറിച്ചും മറ്റ് മാനസിക അവസ്ഥകളെക്കുറിച്ചും അതുമായി ബന്ധപ്പെടുന്ന മറ്റ് മനഃശാസ്ത്ര ഘടകങ്ങളെ കുറിച്ചും ഞാൻ ഒരു ഗവേഷണ പഠനം നടത്തിക്കൊണ്ടിരിക്കുകയാണ്. അതിലേക്ക് ആവശ്യമായ വിവരങ്ങൾ ശേഖരിക്കുന്നതിനുവേണ്ടിയുള്ള ഒരു ടെസ്റ്റാണ് ഇതോടൊപ്പം ചേർത്തിരിക്കുന്നത്. ടെസ്റ്റിന്റെ നിർദ്ദേശങ്ങൾ വായിച്ച് ശരിയായി മനസ്സിലാക്കിയ ശേഷം പ്രതികരിക്കാൻ തുടങ്ങുക. ടെസ്റ്റ് എടുക്കുന്നതിന് മുമ്പ് നിങ്ങളുടെ ചില വ്യക്തിഗത വിവരങ്ങൾ ആവശ്യമാണ്. അതിനായി താഴെ നൽകിയിരിക്കുന്ന Personal Data Sheet പൂരിപ്പിക്കുക. നിങ്ങൾ നൽകുന്ന വിവരങ്ങൾ രഹസ്യമായി വയ്ക്കുന്നതും ആയത് ഗവേഷണ ആവശ്യങ്ങൾക്ക് മാത്രം ഉപയോഗിക്കുന്നതുമായിരിക്കും.

വിശ്വസ്തതയോടെ

ബിന്ദു കെ. പി.

PERSONAL DATA SHEET

1. Name :
2. Gender : Boy ☐ Girl ☐ 3. Completed age:
4. Name of the School :

5. Syllabus following : State ☐ CBSE ☐ ICSE ☐ Other ☐
6. School Type : Govt. ☐ Aided ☐ Unaided ☐
7. Class : Plus One ☐ Plus Two ☐
8. Academic Stream : Arts ☐ Commerce ☐ Humanities ☐ Science ☐
9. Residential Area : Rural ☐ Urban ☐ Semi-urban ☐
10. Family Type : Nuclear ☐ Extended ☐
11. Your birth order : Only child ☐ Firstborn ☐ Middleborn ☐ Last-born ☐

Date.....

Signature.....

ടെസ്റ്റിനുള്ള നിർദ്ദേശങ്ങൾ

പഠനവും പള്ളിക്കൂടവും നിങ്ങളിൽ എത്രമാത്രം മാനസിക സമ്മർദ്ദം സൃഷ്ടിക്കുന്നുണ്ടെന്ന് മനസ്സിലാക്കാൻ വേണ്ടിയുള്ള ഒരു ടെസ്റ്റാണ് ഇതോടോപ്പമുള്ളത്. ഇതിലെ ഓരോ പ്രസ്താവനക്കും എതിരെ 'സമ്മർദ്ദമില്ല', 'ചെറിയ സമ്മർദ്ദം', 'മിതമായ സമ്മർദ്ദം', 'വലിയ സമ്മർദ്ദം', 'വളരെ വലിയ സമ്മർദ്ദം' എന്നിങ്ങനെ അഞ്ച് പ്രതികരണങ്ങൾ കൊടിത്തിട്ടുണ്ട്. ടെസ്റ്റിലെ ഓരോ പ്രസ്താവനയും ശ്രദ്ധാപൂർവ്വം വായിച്ച്, ആയത് നിങ്ങളിൽ എത്രമാത്രം സമ്മർദ്ദത്തിന് കാരണമാകുന്നുണ്ടെന്നുള്ളത് പ്രസ്താവനക്കെതിരെ തന്നിരിക്കുന്ന പ്രതികരണങ്ങളിൽ അനുയോജ്യമായ കള്ളിയിൽ 'ടിക്' (✓) അടയാളമിട്ട് രേഖപ്പെടുത്തുക. ഒരു ഉദാഹരണം താഴെ തന്നിരിക്കുന്നു.

ഉദാ: സ്കൂളിലെ മോശം പഠന സൗകര്യങ്ങൾ

സ്കൂളിലെ പഠനസൗകര്യമില്ലായ്മ നിങ്ങളിൽ ഒരു സമ്മർദ്ദവും ഉണ്ടാക്കുന്നില്ലെങ്കിൽ 'സമ്മർദ്ദമില്ല' എന്നുകോളത്തിൽ '✓' ഇടുക. അഥവാ പഠനസൗകര്യങ്ങളുടെ അഭാവം നിങ്ങളിൽ ഉയർന്ന തോതിൽ സമ്മർദ്ദം ഉണ്ടാക്കുന്നുവെങ്കിൽ 'ഉയർന്ന സമ്മർദ്ദം' എന്നതിനു താഴെയുള്ള കള്ളിയിൽ വേണം '✓' ഇടാൻ. ഒരു പ്രസ്താവനക്കും ഒന്നിൽകൂടുതൽ കള്ളിയിൽ '✓' ഇടരുത്. ദയവായി എല്ലാ പ്രസ്താവനയോടും പ്രതികരിക്കുക.

ശ്രദ്ധിക്കുക : ഇതൊരു പരീക്ഷയല്ല. ഇതിലെ നിങ്ങളുടെ പ്രകടനം ഒരു കാരണവശാലും നിങ്ങളുടെ പഠനത്തെയോ, ക്ലാസ്സ് പ്രമോഷനെയോ അല്ലെങ്കിൽ ഏതെങ്കിലും തരത്തിലുള്ള സ്കോളർഷിപ്പിനോ, സമ്മാനങ്ങൾക്കോ നിങ്ങളെ അർഹരാക്കുന്നവയല്ല. മാത്രമല്ല ഈ ടെസ്റ്റിൽ നിങ്ങളുടെ പ്രകടനം എങ്ങനെയിരുന്നെന്ന് നിങ്ങളുടെ രക്ഷകർത്താക്കളേയോ, സ്കൂൾ അധികാരികളേയോ, സഹപാഠികളേയോ അറിയിക്കുന്നതല്ല. ആയതിനാൽ ഓരോ പ്രസ്താവനയോടും സത്യസന്ധമായി തന്നെ പ്രതികരിക്കുക. നിങ്ങൾ നൽകുന്ന വിവരങ്ങൾ രഹസ്യമാക്കി വയ്ക്കുന്നതും ആയത് ഗവേഷണാവശ്യങ്ങൾക്ക് മാത്രം ഉപയോഗപ്പെടുത്തുന്നതുമായിരിക്കും.

ക്രമ നമ്പർ	പ്രസ്താവന	പ്രതികരണങ്ങൾ				
		സമ്മർദ്ദമില്ല	ചെറിയ സമ്മർദ്ദം	മിതമായ സമ്മർദ്ദം	വലിയ സമ്മർദ്ദം	വളരെ വലിയ സമ്മർദ്ദം
		1	2	3	4	5
1	ദിവസേനയുള്ള ഹോംവർക്ക്					
2	ക്ലാസ്സിൽ സഹപാഠികളുമായുള്ള മത്സരത്തിൽനിന്നുള്ള സമ്മർദ്ദം					
3	ക്ലാസ്സിൽ അധ്യാപകരുടെ ചോദ്യത്തിന് ഉത്തരം പറയാൻ പറ്റാതെ വരിക					
4	ക്ലാസ്സിൽ മറ്റുകുട്ടികളേക്കാൾ പിന്നിലാണെന്ന തോന്നൽ					
5	പഠനത്തിൽ എന്നെ സഹായിക്കാൻ ആരുമില്ലെന്ന തോന്നൽ					
6	ക്ലാസ്സിൽ ശ്രദ്ധകേന്ദ്രീകരിക്കാൻ പറ്റാതിരിക്കുക					
7	ക്ലാസ്സിലായിരിക്കുമ്പോൾ പലപ്പോഴും തലവേദനയനുഭവപ്പെടുക					
8	അധ്യാപകരെ കാണുമ്പോൾ നെഞ്ചിടിപ്പ് കൂടുക					
9	ക്ലാസ്സിൽ അധ്യാപകൻ എന്തെങ്കിലും ചോദിച്ചാൽ കൈകാലുകൾ വിറയ്ക്കുക					
10	അധ്യാപകർ ഉപയോഗിക്കുന്ന ദുർഗ്രാഹ്യമായ ഭാഷ.					
11	ക്ലാസ്സിൽ അധ്യാപകരുടെ വിവേചനപരമായ പെരുമാറ്റം					
12	പഠനവുമായി ബന്ധപ്പെട്ട് ആരെങ്കിലും എന്തെങ്കിലും ചോദിച്ചാൽ ദേഷ്യം വരിക					
13	ഇടത്സവില്ലാത്ത ക്ലാസ്സുകൾ					
14	ഹോംവർക്കുകൾ മുഴുമിപ്പിക്കാൻ പറ്റാതെ വരിക					
15	മടുപ്പുണ്ടാക്കുന്ന പാഠഭാഗങ്ങൾ പഠിക്കുമ്പോൾ					
16	തിങ്ങി ഞെരുങ്ങിയ ബഞ്ചുകൾ					
17	ഗൗരവക്കാരായ അധ്യാപകർ					

ക്രമ നമ്പർ	പ്രസ്താവന	പ്രതികരണങ്ങൾ				
		സമ്മർദ്ദമില്ല	ചെറിയ സമ്മർദ്ദം	മിതമായ സമ്മർദ്ദം	വലിയ സമ്മർദ്ദം	വളരെ വലിയ സമ്മർദ്ദം
		1	2	3	4	5
18	പഠിപ്പിക്കുന്ന അധ്യാപകരുടെ ഭീഷണി					
19	അധ്യാപകൻ തരുന്ന കൂടെക്കൂടെയുള്ള ഇമ്പോസിഷൻ					
20	ഹോംവർക്കുകളുടേയും അസൈൻമെന്റുകളുടേയും ആധിക്യം.					
21	മടുപ്പിക്കുന്നതും വിരസവുമായ ക്ലാസ്സുകൾ					
22	ക്ലാസ്സിലെ കർക്കശമായ അച്ചടക്കം.					
23	പഠനത്തിൽ പൂർണ്ണത വരുത്താൻവേണ്ടിയുള്ള അമിതമായ ഊന്നൽ					
24	ക്ലാസ്സിൽ വേണ്ടത്ര ശ്രദ്ധ/അംഗീകാരം കിട്ടാതിരിക്കുക					
25	പഠിപ്പിക്കുന്ന അധ്യാപകരുടെ പക്ഷപാതപരമായ സമീപനം.					
26	അധ്യാപകരുടെ അനാവശ്യ വഴക്കുപറച്ചിൽ					
27	പഠിച്ചകാര്യങ്ങൾ ഓർക്കാൻ പറ്റാതിരിക്കുക					
28	മാതാപിതാക്കളുടെ പ്രതീക്ഷക്കൊത്ത് ഉയരാൻ വേണ്ടി എടുക്കുന്ന പഠനഭാരത്തിന്റെ സമ്മർദ്ദം.					
29	മാർക്ക് കുറഞ്ഞാൽ വീട്ടുകാരുടെ വിമർശനത്തിന്/ കുറ്റപ്പെടുത്തലിന് കാരണമാകുമെന്നതുമൂലമുള്ള സമ്മർദ്ദം.					
30	അടിക്കടിയുള്ള ടെസ്റ്റുകളും/ പരീക്ഷകളും ചെലുത്തുന്ന സമ്മർദ്ദം.					
31	ക്ലാസ്സിൽ അധ്യാപകരുടെ ചോദ്യങ്ങൾക്ക് ഉത്തരം പറഞ്ഞ് ബോധ്യപ്പെടുത്താൻ പറ്റാത്തത്					
32	പരീക്ഷകളിൽ മാർക്ക് കുറഞ്ഞുപോകുമ്പോൾ					
33	സംശയദൂരീകരണത്തിന് അധ്യാപകരുടെ സഹായമില്ലായ്മ.					
34	ക്ലാസ്സിൽ അധ്യാപകരുടെ ശകാരം/പരിഹാസം/ശിക്ഷ ഏറ്റെടുക്കേണ്ടിവരുമ്പോൾ					

ക്രമ നമ്പർ	പ്രസ്താവന	പ്രതികരണങ്ങൾ				
		സമ്മർദ്ദമില്ല	ചെറിയ സമ്മർദ്ദം	മിതമായ സമ്മർദ്ദം	വലിയ സമ്മർദ്ദം	വളരെ വലിയ സമ്മർദ്ദം
		1	2	3	4	5
35	പരീക്ഷകളിലെ മോശം മാർക്കുമായി വീട്ടിൽ ചെല്ലുമ്പോൾ രക്ഷാകർത്താക്കളുടെ പ്രതികരണം ഓർത്ത്.					
36	സ്കൂളിലെ പഠനം, ട്യൂഷൻ പഠനം/രക്ഷാകർത്താക്കളുടെ പഠിപ്പിക്കൽ മുതലായവ ചെലുത്തുന്ന സമ്മർദ്ദം.					
37	പഠനഭാരം					
38	പരീക്ഷയെ കുറിച്ചോർക്കുമ്പോൾ					
39	അധ്യാപകരോട്/രക്ഷാകർത്താക്കളോട് പഠനത്തിലുള്ള പ്രയാസങ്ങൾ തുറന്നുപറയാനുള്ള ബുദ്ധിമുട്ട്					
40	ഭീഷണി നിറഞ്ഞ സ്കൂൾ അന്തരീക്ഷം					
41	ഇൻസ്റ്റ്രുമെന്റേഷൻ ബോക്സ്, നിലങ്ങളു മുതലായ പഠനസഹായികളുടെ അഭാവം					
42	പാഠഭാഗങ്ങൾ കാണാപ്പാഠം പഠിക്കേണ്ടിവരുന്നത്					
43	ക്ലാസ്സിൽ പഠിപ്പിക്കുന്നത് മനസ്സിലാക്കാതെ വരുന്നത്					
44	കലാ-കായിക പ്രകടനങ്ങൾക്ക് അവസരമില്ലായ്മ					
45	ക്ലാസ്സിൽ മാർക്കിന്/ഗ്രേഡിന് നൽകുന്ന അമിത പ്രാധാന്യം					
46	സ്കൂളിലേക്കുള്ള യാത്ര സൗകര്യങ്ങളുടെ അപര്യാപ്തത.					
47	കലുഷിതമായ സ്കൂൾ പരിസരം					
48	സൗഹൃദ ശൂന്യമായ അദ്ധ്യാപകർ					
49	പരീക്ഷകളിൽ അടിയ്ക്കടിയുണ്ടാകുന്ന തോൽവി					
50	അധ്യാപകർ പഠനമികവുള്ള കുട്ടികളെ മാത്രം കേന്ദ്രീകരിച്ച് പഠിപ്പിക്കുന്നത്					

ACADEMIC STRESS SCALE FOR HIGHER SECONDARY SCHOOL STUDENTS

Bindu, K. P., & Happy, P. V.

[Institute of Advanced Study in Education, Thrissur-680020]

(2023)

BINDU K. P.
Research Scholar
IASE, THRISSUR-680020

Dear student friend,

Secondary school students like you have a lot of academic work to be done as part of your studies. The frequent tests, timely submission of homework and assignments, completion of projects, daily class questioning etc. may put you under stress and you become anxious about your performance in the class. A few tests are attached herewith for gathering information about the stress you experience and other mental conditions, which are needed for the research work taken up by me. You may go through the instructions of the test, understand it properly and then start responding. Before taking the test some personal information about you are also needed, and the Personal Data Sheet given below is for the purpose of gathering your personal details. Kindly fill-up the details. The information furnished by you will be kept confidential and will be used only for research purpose.

Yours faithfully,

BINDU K. P.

PERSONAL DATA SHEET

1. Name :
2. Gender : Boy ☐ Girl ☐ 3. Completed age:
4. Name of the School :

5. Syllabus following : State ☐ CBSE ☐ ICSE ☐ Other ☐
6. School Type : Govt. ☐ Aided ☐ Unaided ☐
7. Class : Plus One ☐ Plus Two ☐
8. Academic Stream : Arts ☐ Commerce ☐ Humanities ☐ Science ☐
9. Residential Area : Rural ☐ Urban ☐ Semi-urban ☐
10. Family Type : Nuclear ☐ Extended ☐
11. Your birth order : Only child ☐ Firstborn ☐ Middleborn ☐ Last-born ☐

Date.....

Signature.....

Instructions for the Test

This is a test to understand the magnitude of the academic pressure that the school and the learning activities create in you. Against each sentence in the test five alternative responses such as ‘No Stress’, ‘Mild Stress’, ‘Moderate Stress’, ‘High Stress’ and ‘Very High Stress’ are given. Read each sentence carefully and appraise the intensity of the stress that the given situation causes. Mark your response by putting a ‘tick mark’ (✓) in the appropriate cell. An example is given below.

Example: The poor learning facilities of the school.

If the poor learning facilities of the school do not give you any stress, you put the ‘✓’ mark in the cell below the column ‘**No Stress**’. Conversely, if the poor learning facilities of the school creates reasonably good amount of stress in you, put the ‘✓’ mark below the column ‘**High Stress**’. Please respond to all the statements. Don’t put more than one ‘✓’ mark against a statement.

Please note, this is not an examination. The score of this test is not going to affect your studies or class promotion; not it makes you eligible for any scholarship or awards. Moreover, your performance in the test will not be informed to your parents, teachers or classmates. So kindly respond to the statements very honestly. The information given by you will be kept confidential and will be used only for research purposes.

Sl. No.	Statements	Responses				
		NO STRESS	MILD STRESS	MODERATE STRESS	HIGH STRESS	SEVERE STRESS
		1	2	3	4	5
1	Daily homework.					
2	Pressure of competition from classmates.					
3	Failure to answer the questions of teachers in the class.					
4	The feeling that I am falling behind others in the class.					
5	The feeling that no one is there to help me in studies.					
6	Inability to pay attention in class.					
7	Feeling frequent headache while in the class.					
8	Pondering of heart while seeing the teachers.					
9	Shivering of limbs when teachers ask something in the class.					
10	The mysterious language used by the teachers in the class.					
11	Discriminatory behaviour of teachers in the class.					
12	Getting irritated when someone ask about my studies.					
13	Continuous classes.					
14	Difficulty in completing the homework.					
15	While studying boring topics.					
16	Crowded classroom.					
17	Serious nature of the teachers.					
18	Threats of teachers.					
19	Frequent impositions given by the teachers.					
20	Too many homework and assignments.					
21	Dull and monotonous classes.					
22	Strict discipline in the classroom.					

Sl. No.	Statements	Responses				
		NO STRESS	MILD STRESS	MODERATE STRESS	HIGH STRESS	SEVERE STRESS
		1	2	3	4	5
23	Unnecessary importance given for perfection in studies.					
24	When fail to get adequate attention or acceptance in the class.					
25	Prejudice of teachers.					
26	Unnecessary reproof of teachers.					
27	Not able to recall learned materials.					
28	Load of studies taken to rise up to the expectation of parents.					
29	Pressure from the likely blame and criticism of family members if scored low in examinations.					
30	Pressure from frequent tests and examinations.					
31	Inability to given convincible answer to the questions of teachers in the class.					
32	When scored low in examinations					
33	Not getting support of teachers for clearing doubts.					
34	When you face the criticism/ridicule/punishment of teachers in class.					
35	While thinking about the reaction of parents they come to know my poor score in examination.					
36	The pressure of learning in the school, private tuition and teaching of parents.					
37	Lead of studies					
38	When thinking about examinations					
39	Reluctance to speak out the difficulties in learning to teachers/parents.					
40	Threatening school ambience.					
41	Lack of learning aids like dictionary, instrumentation box etc.					
42	Strain of byhearting answers.					

Sl. No.	Statements	Responses				
		NO STRESS	MILD STRESS	MODERATE STRESS	HIGH STRESS	SEVERE STRESS
		1	2	3	4	5
43	Difficulty in understanding what is taught in the class.					
44	Lack of openings for arts and sports in the school.					
45	Undue importance given to marks or grade in the class.					
46	Shortage of transportation facilities to the school					
47	Agitated school atmosphere.					
48	Unfriendly teachers					
49	Frequent failure in examinations.					
50	Teaching by focus on high achieving students in the class.					



EMOTIONAL MATURITY SCALE FOR HIGHER SECONDARY SCHOOL STUDENTS

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(2023)

BINDU K. P.
Research Scholar
IASE, THRISSUR-680020

പ്രിയ വിദ്യാർത്ഥി സുഹൃത്തേ,

നിങ്ങളെപ്പോലുള്ള സെക്കൻഡറി സ്കൂൾ വിദ്യാർത്ഥികൾക്ക് പഠനത്തിന്റെ ഭാഗമായി ധാരാളം അക്കാദമിക് പ്രവർത്തനങ്ങൾ ചെയ്യേണ്ടതുണ്ടല്ലോ. പതിവായുള്ള പരീക്ഷകൾ, ഹോംവർക്കുകളുടെയും അസൈൻമെന്റുകളുടെയും സമയബന്ധിതമായ സമർപ്പണം, പ്രോജക്ടുകളുടെ പൂർത്തീകരണം, ദൈനംദിന ക്ലാസിലെ ചോദ്യോത്തരങ്ങൾ മുതലായവ നിങ്ങളെ സമ്മർദ്ദത്തിലാക്കുകയും ക്ലാസിലെ നിങ്ങളുടെ അക്കാദമിക് പ്രകടനത്തെക്കുറിച്ച് ഉൽക്കണ്ഠപ്പെടുത്തുകയും ചെയ്യാം. നിങ്ങൾ അനുഭവിക്കുന്ന പഠനസമ്മർദ്ദത്തെക്കുറിച്ചും മറ്റ് മാനസിക അവസ്ഥകളെക്കുറിച്ചും അതുമായി ബന്ധപ്പെടുന്ന മറ്റ് മനഃശാസ്ത്ര ഘടകങ്ങളെ കുറിച്ചും ഞാൻ ഒരു ഗവേഷണ പഠനം നടത്തിക്കൊണ്ടിരിക്കുകയാണ്. അതിലേക്ക് ആവശ്യമായ വിവരങ്ങൾ ശേഖരിക്കുന്നതിനുവേണ്ടിയുള്ള ഒരു ടെസ്റ്റാണ് ഇതോടൊപ്പം ചേർത്തിരിക്കുന്നത്. ടെസ്റ്റിന്റെ നിർദ്ദേശങ്ങൾ വായിച്ച് ശരിയായി മനസ്സിലാക്കിയ ശേഷം പ്രതികരിക്കാൻ തുടങ്ങുക. ടെസ്റ്റ് എടുക്കുന്നതിന് മുമ്പ് നിങ്ങളുടെ ചില വ്യക്തിഗത വിവരങ്ങൾ ആവശ്യമാണ്. അതിനായി താഴെ നൽകിയിരിക്കുന്ന Personal Data Sheet പൂരിപ്പിക്കുക. നിങ്ങൾ നൽകുന്ന വിവരങ്ങൾ രഹസ്യമായി വയ്ക്കുന്നതും ആയത് ഗവേഷണ ആവശ്യങ്ങൾക്ക് മാത്രം ഉപയോഗിക്കുന്നതുമായിരിക്കും.

വിശ്വസ്തതയോടെ

ബിന്ദു കെ. പി.

PERSONAL DATA SHEET

1. Name :
2. Gender : Boy ☐ Girl ☐ 3. Completed age:
4. Name of the School :

5. Syllabus following : State ☐ CBSE ☐ ICSE ☐ Other ☐
6. School Type : Govt. ☐ Aided ☐ Unaided ☐
7. Class : Plus One ☐ Plus Two ☐
8. Academic Stream : Arts ☐ Commerce ☐ Humanities ☐ Science ☐
9. Residential Area : Rural ☐ Urban ☐ Semi-urban ☐
10. Family Type : Nuclear ☐ Extended ☐
11. Your birth order : Only child ☐ Firstborn ☐ Middleborn ☐ Last-born ☐

Date.....

Signature.....

ടെസ്റ്റിനുള്ള നിർദ്ദേശങ്ങൾ

നിങ്ങളുടെ വൈകാരിക പ്രതികരണങ്ങളെ മനസ്സിലാക്കാൻ വേണ്ടിയുള്ള എതാനും പ്രസ്താവനകളാണ് താഴെ തന്നിരിക്കുന്നത്. ആ പ്രസ്താവനകൾ നിങ്ങളെ സംബന്ധിച്ചിടത്തോളം എത്രമാത്രം ശരിയാണ് എന്നത് പരിശോധിച്ച് അതിനൊടുള്ള നിങ്ങളുടെ യോജിപ്പ് അല്ലെങ്കിൽ വിരോധിപ്പ് രേഖപ്പെടുത്തുക. ഇതിലെ ഓരോ പ്രസ്താവനക്കും എതിരെ ‘ശക്തമായി വിരോധിക്കുന്നു’, ‘വിരോധിക്കുന്നു’, ‘തീർച്ചയില്ല’, ‘യോജിക്കുന്നു’, ‘ശക്തമായി യോജിക്കുന്നു’, എന്നിങ്ങനെ അഞ്ച് പ്രതികരണങ്ങൾ കൊടിത്തിട്ടുണ്ട്. ഓരോ പ്രസ്താവനയും സശ്രദ്ധം വായിച്ച് അതിനോട് നിങ്ങൾ എത്രമാത്രം യോജിക്കുന്നു അല്ലെങ്കിൽ വിരോധിക്കുന്നു എന്നത് പ്രസ്താവനക്കുനേരെ തന്നിരിക്കുന്ന പ്രതികരണങ്ങളിൽ അനുയോജ്യമായതിനു താഴെയുള്ള കള്ളിയിൽ ശരി (✓) അടയാളമിട്ട് രേഖപ്പെടുത്തുക. ഒരു ഉദാഹരണം താഴെ തന്നിരിക്കുന്നു.

ഉദാ: ഞാൻ ഏകാന്തത ഇഷ്ടപ്പെടുന്ന വ്യക്തിയാണ്.

നിങ്ങൾ ഏകാന്തത തീരെ ഇഷ്ടപ്പെടാത്ത വ്യക്തിയാണെങ്കിൽ ഈ പ്രസ്താവനയോട് നിങ്ങൾക്ക് ശക്തമായ വിരോധിപ്പായിരിക്കുമല്ലോ ഉണ്ടാവുക. അങ്ങനെയൊന്നെങ്കിൽ പ്രസ്താവനക്കുനേരെ “ശക്തമായി വിരോധിക്കുന്നു” എന്ന കോളത്തിനുതാഴെയുള്ള കള്ളിയിൽ ‘✓’ ഇടുക. അഥവാ എകാന്തത കുറച്ചെല്ലാം ഇഷ്ടപ്പെടുന്ന ഒരാളാണ് നിങ്ങൾ എങ്കിൽ ‘**യോജിക്കുന്നു**’ എന്നതിനുതാഴെയുള്ള കള്ളിയിൽവേണം ‘✓’ ഇടാൻ. ഒരു പ്രസ്താവനക്കും ഒന്നിൽകൂടുതൽ കള്ളിയിൽ ‘✓’ ഇടരുത്. ദയവായി എല്ലാ പ്രസ്താവനയോടും പ്രതികരിക്കുക.

ശ്രദ്ധിക്കുക : ഇതൊരു പരീക്ഷയല്ല. ഇതിലെ നിങ്ങളുടെ പ്രകടനം ഒരുകാരണവശാലും നിങ്ങളുടെ പഠനത്തെയോ, ക്ലാസ്സ് പ്രമോഷനെയോ അല്ലെങ്കിൽ ഏതെങ്കിലും തരത്തിലുള്ള സ്കോളർഷിപ്പിനോ, സമ്മാനങ്ങൾക്കോ നിങ്ങളെ അർഹരാക്കുന്നവയല്ല. മാത്രമല്ല ഈ ടെസ്റ്റിൽ നിങ്ങളുടെ പ്രകടനം എങ്ങനെയിരുന്നെന്ന് നിങ്ങളുടെ രക്ഷകർത്താക്കളേയോ, സ്കൂൾ അധികാരികളേയോ, സഹപാഠികളേയോ അറിയിക്കുന്നതല്ല. ആയതിനാൽ ഓരോ പ്രസ്താവനയോടും സത്യസന്ധമായി തന്നെ പ്രതികരിക്കുക. നിങ്ങൾ നൽകുന്ന വിവരങ്ങൾ രഹസ്യമാക്കി വയ്ക്കുന്നതും ആയത് ഗവേഷണാവശ്യങ്ങൾക്ക് മാത്രം ഉപയോഗപ്പെടുത്തുന്നതുമായിരിക്കും.

Sl. No.	Statements	Response				
		ശക്തമായി വിരോധിക്കുന്നു	വിരോധിക്കുന്നു	തീർച്ചയില്ല	തോർക്കുന്നു	ശക്തമായി തോർക്കുന്നു
		5	4	3	2	1
1	ഒരു കാര്യം എങ്ങനെ ചെയ്യാമെന്ന് തീരുമാനിച്ചതിനുശേഷം മറ്റൊരു വിധത്തിൽ അക്കാര്യം ചെയ്യാറുണ്ട്.					
2	പല കാര്യങ്ങളും പാതിവഴിയിൽ ഉപേക്ഷിക്കുക എന്റെ സ്വഭാവമാണ്.					
3	എന്റെ ആഗ്രഹങ്ങളും ലക്ഷ്യങ്ങളും തമ്മിൽ പലപ്പോഴും പൊരുത്തപ്പെടാറില്ല.					
4	പെട്ടെന്ന് ദേഷ്യം വരുന്ന ആളാണ് ഞാൻ.					
5	ഞാൻ ആഗ്രഹിച്ചതുപോലെ കാര്യങ്ങൾ നടക്കുന്നില്ലെങ്കിൽ മറ്റു പലവരോട് ഞാൻ ദേഷ്യപ്പെടാറുണ്ട്.					
6	എന്നെ പരാജയപ്പെടുത്തിയവരോട് പകരംവിട്ടാൻ അവസരം കിട്ടിയയാൽ ഞാൻ കളയാറില്ല.					
7	ടീച്ചർമാർ പരീക്ഷയുടെ ഉത്തരപേപ്പറുമായി വരുന്നതുകണ്ടാൽ എന്റെ ഹൃദയം അതിവേഗം ഇടിക്കാറുണ്ട്.					
8	സ്കൂൾ യുവജനോത്സവത്തിന്/കായിക മേളയിൽ പലയിനത്തിനും പേരുന്നൽകിയിട്ട് ഞാൻ അതിൽനിന്നും പിൻവാങ്ങാറുണ്ട്.					
9	എന്റെ ആശയങ്ങൾ പലപ്പോഴും നടപ്പാക്കാൻ പറ്റാത്തവയാണ്.					
10	എന്റെ വ്യക്തിപരമായ കാര്യങ്ങളിൽ ഇടപെടുമ്പോൾ അടുത്ത സുഹൃത്തുക്കളോടുപോലും ഞാൻ കയർക്കാറുണ്ട്.					
11	ഞാൻ പ്രായഭേദമന്യേ പലരോടും പൊട്ടിത്തെറിക്കാറുണ്ട്.					
12	ആഗ്രഹിച്ച കാര്യങ്ങൾ നടക്കാതെപോകുമ്പോൾ ഞാൻ കുറച്ചുനാൾ ആരോടും മിണ്ടാതെ നടക്കാറുണ്ട്.					
13	ഞാൻ ചിലപ്പോൾ കൊച്ചുകുട്ടികളെപ്പോലെ പൊട്ടിക്കരയാറുണ്ട്.					
14	എന്റെ വീഴ്ചകൾക്ക് ഞാൻ മറ്റുള്ളവരെ കുറ്റപ്പെടുത്താറുണ്ട്.					
15	യഥാർത്ഥത്തിൽ ഇല്ലാത്ത പലതും ഓർത്ത് ഞാൻ ഭയപ്പെടാറുണ്ട്.					
16	ഞാൻ ചിലപ്പോൾ കൊച്ചുകുട്ടികളെപ്പോലെ വാശിപിടിക്കാറുണ്ട്.					
17	വികാരക്ഷോഭത്താൽ പരിസരം മറന്ന് ഞാൻ പലതും വിളിച്ചുപറയാറുണ്ട്.					
18	ദേഷ്യപ്പെട്ടിരിക്കുന്ന അവസ്ഥയിൽനിന്നും ആഘോദകരമായ അവസ്ഥയിലേക്ക് എത്തിച്ചേരാൻ എനിക്ക് കുറഞ്ഞ സമയം മതി.					
19	ഞാൻ പെട്ടെന്ന് നിരാശനാകും.					
20	പ്രത്യേകിച്ച് കാരണമൊന്നുമില്ലാതെ തന്നെ ഞാൻ അസ്വസ്ഥനാകാറുണ്ട്.					
21	എന്നെക്കൊണ്ട് ഒരു പ്രയോജനവുമില്ലെന്ന് ചിലപ്പോൾ എനിക്ക് തോന്നാറുണ്ട്.					
22	ഞാൻ ചിലപ്പോൾ പൊങ്ങച്ചം പറയാറുണ്ട്.					
23	പെട്ടെന്ന് അഭിമാനക്ഷതം സംഭവിക്കുന്ന ഒരാളാണ് ഞാൻ.					
24	അപരിചിതരുമായി ഇടപെടാൻ എനിക്ക് വലിയ ലജ്ജയാണ്.					
25	മറ്റുള്ളവർ എന്നെക്കുറിച്ച് അപവാദം പറയാറുണ്ടെന്ന് എനിക്ക് ചിലപ്പോൾ തോന്നും.					

Sl. No.	Statements	Response				
		ശക്തമായി വിരോധിക്കുന്നു	വിരോധിക്കുന്നു	തീർച്ചയില്ല	തോർക്കുന്നു	ശക്തമായി തോർക്കുന്നു
		5	4	3	2	1
26	എന്നെ ആരും മനസ്സിലാക്കുന്നില്ലെന്ന് എനിക്കറിയാം.					
27	സുഹൃത്തുക്കളിൽ പലരെയും ഞാൻ വിശ്വസിക്കുന്നില്ല.					
28	ചിലപ്പോൾ എനിക്ക് ഒന്നുംചെയ്യാനുള്ള ആത്മവിശ്വാസമില്ല.					
29	ചിലപ്പോൾ എനിക്ക് വല്ലാത്ത നൈരാശ്യം തോന്നാറുണ്ട്.					
30	അപരിചിതമായ എന്തൊരു സാഹചര്യവും എന്നെ ഭയപ്പെടുത്താറുണ്ട്.					
31	എന്റെ ഒരാഗ്രഹവും ഒരിക്കലും നടക്കാൻപോകുന്നില്ലെന്ന് എനിക്ക് നന്നായിട്ടറിയാം.					
32	മറ്റുള്ളവർ എന്നെ കുറ്റപ്പെറ്റുത്തുമോ എന്ന തോന്നൽ എനിക്ക് എപ്പോഴുമുണ്ട്.					
33	ആരും എന്നെ ഒരുകാര്യത്തിലും വിശ്വാസത്തിലെടുക്കുന്നില്ല.					
34	ചുറ്റുമുള്ള എല്ലാവരെയും നിയന്ത്രിക്കണമെന്ന് എനിക്ക് ചിലപ്പോൾ തോന്നും.					
35	ആരും ആശ്രയിക്കാൻനില്ക്കെന്ന് എനിക്ക് ചിലപ്പോൾ തോന്നാറുണ്ട്.					
36	ഞാൻ എന്തും നേരിട്ട് വെട്ടിത്തുറന്ന് പറയുന്ന ആളാണ്.					
37	എന്റെ ചിന്തകൾ വിരസവും നിറംമങ്ങിയതുമാണ്.					
38	ചെയ്യാനുള്ള കാര്യങ്ങൾ എപ്പോഴും നീട്ടിവയ്ക്കുന്ന ഒരു സ്വഭാവം എനിക്കുണ്ട്.					
39	മറ്റുള്ളവരോട് മനസ്സിൽ വിദ്വേഷം സൂക്ഷിക്കുന്നവനാണ് ഞാൻ.					
40	ചിലപ്പോൾ ദേഷ്യംകൊണ്ട് പലതും ഞാൻ നശിപ്പിക്കാറുണ്ട്.					
41	ചെറിയ ചെറിയ കാര്യങ്ങൾക്കുപോലും ഞാൻ മറ്റുള്ളവരെ ആശ്രയിക്കാറുണ്ട്.					
42	എന്നെ സഹായിക്കാത്തവരോട് ഞാൻ ശത്രുത പുലർത്താറുണ്ട്.					
43	കൂട്ടായ പ്രവർത്തനങ്ങളിൽ എന്റെ പങ്ക് വളരെ ചെറുതായിരിക്കും.					
44	പുതിയ സാഹചര്യങ്ങളുമായോ വസ്തുക്കളുമായോ പരിചയമാകാൻ എനിക്ക് ഏറെ സമയം വേണ്ടിവരും.					
45	എന്റെ സഹായം മറ്റുള്ളവർ വളരെ അപൂർവ്വമായേ തേടാറുള്ളൂ.					
46	ആരും ഒരുകാര്യവും എന്നെ ഉത്തരവാദിത്വത്തോടെ ഏൽപ്പിക്കാറില്ല.					
47	എന്നെ ഏൽപ്പിച്ച ജോലി സമയത്ത് തീർക്കാറില്ല.					
48	ക്ലാസ്സിൽ ഒരു സംഘപ്രവർത്തനം ചെയ്യേണ്ടിവന്നാൽ അത് ഗ്രൂപ്പിൽ മറ്റുള്ളവരുടെ ചുമലിലിട്ടിട്ട് ഞാൻ രക്ഷപെടും.					
49	ഒരുകാര്യം തനിച്ച് ചെയ്യാൻ എനിക്ക് ആത്മവിശ്വാസമില്ല.					
50	മറ്റുള്ളവരുടെ സഹായമില്ലാതെ ജീവിതത്തിലെ പ്രധാന തീരുമാനങ്ങളെടുക്കാൻ എനികാകുമെന്ന് ഞാൻ കരുതുന്നില്ല.					

EMOTIONAL MATURITY SCALE FOR HIGHER SECONDARY SCHOOL STUDENTS

Bindu, K. P., & Happy, P. V.

[Institute of Advanced Study in Education, Thrissur-680020]

(2023)

BINDU K. P.
Research Scholar
IASE, THRISSUR-680020

Dear student friend,

Secondary school students like you have a lot of academic work to be done as part of your studies. The frequent tests, timely submission of homework and assignments, completion of projects, daily class questioning etc. may put you under stress and you become anxious about your performance in the class. A few tests are attached herewith for gathering information about the stress you experience and other mental conditions, which are needed for the research work taken up by me. You may go through the instructions of the test, understand it properly and then start responding. Before taking the test some personal information about you are also needed, and the Personal Data Sheet given below is for the purpose of gathering your personal details. Kindly fill-up the details. The information furnished by you will be kept confidential and will be used only for research purpose.

Yours faithfully,

BINDU K. P.

PERSONAL DATA SHEET

1. Name :
2. Gender : Boy ☐ Girl ☐ 3. Completed age:
4. Name of the School :

(2)

5. Syllabus following : State ☐ CBSE ☐ ICSE ☐ Other ☐
6. School Type : Govt. ☐ Aided ☐ Unaided ☐
7. Class : Plus One ☐ Plus Two ☐
8. Academic Stream : Arts ☐ Commerce ☐ Humanities ☐ Science ☐
9. Residential Area : Rural ☐ Urban ☐ Semi-urban ☐
10. Family Type : Nuclear ☐ Extended ☐
11. Your birth order : Only child ☐ Firstborn ☐ Middleborn ☐ Last-born ☐

Date.....

Signature.....

Instructions for the Test

Below given are some statements to understand your emotional responses. Mark your agreement or disagreement to each statement after examining their correctness in your case. Against each statement, five responses alternatives, viz., ‘Strongly Disagree’, ‘Disagree’, ‘Not Sure’, ‘Agree’, and ‘Strongly Agree’ are given. Read each statement carefully and mark the degree of your agreement or disagreement to the statement by putting a tick mark (✓) in the appropriate cell. An example is given below:

Example: I am a solitary person

If you are a person who never like solitude, you will have strong disagreement to this statement. If so, you mark your response by putting ‘✓’ in the cell below the column ‘**Strongly Disagree**’. Conversely, if you are a person who like solitude some extent, you mark response in the cell below ‘**Agree**’. Don’t mark more than one ‘✓’ mark against a statement. Please respond to all statements.

Please note, this is not an examination. The score of this test is not going to affect your studies or class promotion; not it makes you eligible for any scholarship or awards. Moreover, your performance in the test will not be informed to your parents, teachers or classmates. So kindly respond to the statements very honestly. The information given by you will be kept confidential and will be used only for research purposes.

Sl. No.	Statements	Response				
		STRONGLY DISAGREE	DISAGREE	NOT SURE	AGREE	STRONGLY AGREE
		5	4	3	2	1
1	After deciding how to do one thing, it is done in another way					
2	It is my nature to leave many things halfway					
3	My desires and goals often don't match up					
4	I am quick to anger					
5	I get angry with others when things don't go the way I want them to.					
6	I don't pass up an opportunity to get back at those who failed me					
7	My heart beats faster when I see the teachers bring the exam answer sheets					
8	I tend to withdraw from school youth fests/sporting events by naming various events.					
9	My ideas are often impractical					
10	I get angry even with close friends when it interferes with my personal affairs					
11	I crack up with a lot of people regardless of age					
12	When things don't work out, I don't talk to anyone for a while					
13	I cry like a little baby sometimes					
14	I tend to blame others for my failures					
15	I am afraid of many things that are not in reality					
16	I rant like little kids sometimes					
17	I tend to shout a lot of things, forgetting the context in my excitement					
18	It takes me less time to go from angry to happy.					
19	I get frustrated quickly					
20	I get upset for no particular reason					
21	Sometimes I feel that I am of no use					

Sl. No.	Statements	Response				
		STRONGLY DISAGREE	DISAGREE	NOT SURE	AGREE	STRONGLY AGREE
		5	4	3	2	1
22	I brag sometimes					
23	I am a person who loses pride quickly					
24	I am very shy to interact with strangers					
25	Sometimes I feel that other people talk about me					
26	I know no one understands me					
27	I don't trust many of my friends					
28	Sometimes I don't have the confidence to do anything					
29	Sometimes I feel very depressed					
30	Any unfamiliar situation scares me					
31	I know very well that none of my wishes will ever come true					
32	I always feel that others will blame me					
33	No one trusts me with anything					
34	Sometimes I feel like I have to control everyone around me					
35	Sometimes I feel like I have no one to depend on					
36	I am a straight forward person					
37	My thoughts are dull and boredom					
38	I have a tendency to procrastinate					
39	I am one who harbors hatred towards others					
40	Sometimes I destroy many things in my anger					
41	I depend on others even for small things					
42	I am hostile towards those who do not help me					
43	My role in collective activities will be very small					
44	It takes me a long time to get used to new situations or things					
45	My help is rarely sought by others					

(5)

Sl. No.	Statements	Response				
		STRONGLY DISAGREE	DISAGREE	NOT SURE	AGREE	STRONGLY AGREE
		5	4	3	2	1
46	No one gives me responsibility for anything					
47	The work assigned to me is not completed on time					
48	If I had to do a group activity in class, I would get away with putting it on the shoulders of others in the group					
49	I don't have the confidence to do something alone					
50	I don't think I can make important decisions in life without the help of others					



PSYCHOLOGICAL RESILIENCE SCALE FOR ADOLESCENTS

Bindu, K. P., & Happy, P. V.

[Institute of Advanced Study in Education, Thrissur-680020]

(2023)

BINDU K. P.

Research Scholar

IASE, THRISSUR-680020

പ്രിയ വിദ്യാർത്ഥി സുഹൃത്തേ,

നിങ്ങളെപ്പോലുള്ള സെക്കൻഡറി സ്കൂൾ വിദ്യാർത്ഥികൾക്ക് പഠനത്തിന്റെ ഭാഗമായി ധാരാളം അക്കാദമിക് പ്രവർത്തനങ്ങൾ ചെയ്യേണ്ടതുണ്ടല്ലോ. പതിവായുള്ള പരീക്ഷകൾ, ഹോംവർക്കുകളുടെയും അസൈൻമെന്റുകളുടെയും സമയബന്ധിതമായ സമർപ്പണം, പ്രോജക്ടുകളുടെ പൂർത്തീകരണം, ദൈനംദിന ക്ലാസിലെ ചോദ്യോത്തരങ്ങൾ മുതലായവ നിങ്ങളെ സമ്മർദ്ദത്തിലാക്കുകയും ക്ലാസിലെ നിങ്ങളുടെ അക്കാദമിക് പ്രകടനത്തെക്കുറിച്ച് ഉൽക്കണ്ഠപ്പെടുത്തുകയും ചെയ്യാം. നിങ്ങൾ അനുഭവിക്കുന്ന പഠനസമ്മർദ്ദത്തെക്കുറിച്ചും മറ്റ് മാനസിക അവസ്ഥകളെക്കുറിച്ചും അതുമായി ബന്ധപ്പെടുന്ന മറ്റ് മനഃശാസ്ത്ര ഘടകങ്ങളെ കുറിച്ചും ഞാൻ ഒരു ഗവേഷണ പഠനം നടത്തിക്കൊണ്ടിരിക്കുകയാണ്. അതിലേക്ക് ആവശ്യമായ വിവരങ്ങൾ ശേഖരിക്കുന്നതിനുവേണ്ടിയുള്ള ഒരു ടെസ്റ്റാണ് ഇതോടൊപ്പം ചേർത്തിരിക്കുന്നത്. ടെസ്റ്റിന്റെ നിർദ്ദേശങ്ങൾ വായിച്ച് ശരിയായി മനസ്സിലാക്കിയ ശേഷം പ്രതികരിക്കാൻ തുടങ്ങുക. ടെസ്റ്റ് എടുക്കുന്നതിന് മുമ്പ് നിങ്ങളുടെ ചില വ്യക്തിഗത വിവരങ്ങൾ ആവശ്യമാണ്. അതിനായി താഴെ നൽകിയിരിക്കുന്ന Personal Data Sheet പൂരിപ്പിക്കുക. നിങ്ങൾ നൽകുന്ന വിവരങ്ങൾ രഹസ്യമായി വയ്ക്കുന്നതും ആയത് ഗവേഷണ ആവശ്യങ്ങൾക്ക് മാത്രം ഉപയോഗിക്കുന്നതുമായിരിക്കും.

വിശ്വസ്തതയോടെ

ബിന്ദു കെ. പി.

PERSONAL DATA SHEET

1. Name :
2. Gender : Boy ☐ Girl ☐ 3. Completed age:
4. Name of the School :

(2)

5. Syllabus following : State ☐ CBSE ☐ ICSE ☐ Other ☐
6. School Type : Govt. ☐ Aided ☐ Unaided ☐
7. Class : Plus One ☐ Plus Two ☐
8. Academic Stream : Arts ☐ Commerce ☐ Humanities ☐ Science ☐
9. Residential Area : Rural ☐ Urban ☐ Semi-urban ☐
10. Family Type : Nuclear ☐ Extended ☐
11. Your birth order : Only child ☐ Firstborn ☐ Middleborn ☐ Last-born ☐

Date.....

Signature.....

ടെസ്റ്റിനുള്ള നിർദ്ദേശങ്ങൾ

ജീവിത പ്രതിസന്ധികളിൽ വീണുപോകാതെ പൊരുതി ജയിക്കാനുള്ള നിങ്ങളുടെ ശേഷി എത്രമാത്രമുണ്ടെന്ന് മനസ്സിലാക്കാൻ വേണ്ടി തയ്യാറാക്കിയ കുറെ പ്രസ്താവനകളാണ് താഴെ തന്നിരിക്കുന്നത്. ഇതിലെ ഓരോ പ്രസ്താവനക്കും എതിരെ 'ശക്തമായി യോജിക്കുന്നു', 'യോജിക്കുന്നു', 'തീർച്ചയില്ല', 'വിയോജിക്കുന്നു', 'ശക്തമായി വിയോജിക്കുന്നു' എന്നിങ്ങനെ അഞ്ച് പ്രതികരണങ്ങൾ കൊടുത്തിട്ടുണ്ട്. ഓരോ പ്രസ്താവനയും സശ്രദ്ധം വായിച്ച് അതിനോട് നിങ്ങൾ എത്രമാത്രം യോജിക്കുന്നു അല്ലെങ്കിൽ വിയോജിക്കുന്നു എന്നത് പ്രസ്താവനക്കുനേരെ തന്നിരിക്കുന്ന പ്രതികരണങ്ങളിൽ അനുയോജ്യമായതിനു താഴെയുള്ള കള്ളിയിൽ ശരി (✓) അടയാളമിട്ട് രേഖപ്പെടുത്തുക. ഒരു ഉദാഹരണം താഴെ തന്നിരിക്കുന്നു.

ഉദാ: ഒരു പരാജയം സംഭവിച്ചാലും അതിൽനിന്നും എന്ത് പാഠമാണ് പഠിക്കാനുള്ളതെന്ന് ഞാൻ ചിന്തിക്കുക.

പരാജയങ്ങളിൽ നിന്നും എപ്പോഴും പാഠമുൾക്കൊള്ളുന്ന ഒരു വ്യക്തിയാണ് നിങ്ങൾ എങ്കിൽ നിങ്ങൾക്കു പ്രസ്താവനയോട് ശക്തമായി യോജിക്കാം. അങ്ങനെയൊന്നെങ്കിൽ പ്രസ്താവനക്കുനേരെ '**ശക്തമായി യോജിക്കുന്നു**' എന്ന കോളത്തിനുതാഴെയുള്ള കള്ളിയിൽ '✓' ഇടുക. അഥവാ പരാജയത്തിൽ നിന്നും പാഠം ഉൾക്കൊള്ളുന്ന സ്വഭാവം നിങ്ങൾക്കില്ല എങ്കിൽ '**വിയോജിക്കുന്നു**' എന്നതിനുതാഴെയുള്ള കള്ളിയിൽവേണം '✓' ഇടാൻ. ഒരു പ്രസ്താവനക്കും ഒന്നിൽകൂടുതൽ കള്ളിയിൽ '✓' ഇടരുത്. ദയവായി എല്ലാ പ്രസ്താവനയോടും പ്രതികരിക്കുക.

ശ്രദ്ധിക്കുക : ഇതൊരു പരീക്ഷയല്ല. ഇതിലെ നിങ്ങളുടെ പ്രകടനം ഒരുകാരണവശാലും നിങ്ങളുടെ പഠനത്തെയോ, ക്ലാസ്സ് പ്രമോഷനെയോ അല്ലെങ്കിൽ ഏതെങ്കിലും തരത്തിലുള്ള സ്കോളർഷിപ്പിനോ, സമ്മാനങ്ങൾക്കോ നിങ്ങളെ അർഹരാക്കുന്നവയല്ല. മാത്രമല്ല ഈ ടെസ്റ്റിൽ നിങ്ങളുടെ പ്രകടനം എങ്ങനെയിരുന്നെന്ന് നിങ്ങളുടെ രക്ഷകർത്താക്കളേയോ, സ്കൂൾ അധികാരികളേയോ, സഹപാഠികളേയോ അറിയിക്കുന്നതല്ല. ആയതിനാൽ ഓരോ പ്രസ്താവനയോടും സത്യസന്ധമായി തന്നെ പ്രതികരിക്കുക. നിങ്ങൾ നൽകുന്ന വിവരങ്ങൾ രഹസ്യമാക്കി വയ്ക്കുന്നതും ആയത് ഗവേഷണാവശ്യങ്ങൾക്ക് മാത്രം ഉപയോഗപ്പെടുത്തുന്നതുമായിരിക്കും.

Sl. No.	Statements	Response				
		STRONGLY AGREE	AGREE	NOT SURE	DISAGREE	STRONGLY DISAGREE
		5	4	3	2	1
1	എന്റെ ലക്ഷ്യങ്ങളെല്ലാം എനിക്ക് നേടിയെടുക്കാൻ കഴിയുന്നവയാണ്					
2	ഒരു വലിയ ലക്ഷ്യമാണ് എന്റെ മുന്നിലുള്ളതെങ്കിൽ ഞാൻ അതിനെ നേടിയെടുക്കാനാകുന്ന ചെറിയ ചെറിയ ലക്ഷ്യങ്ങളാക്കി വിഭജിക്കാറുണ്ട്					
3	എന്റെ ലക്ഷ്യത്തിലെത്താനുള്ള തടസങ്ങളെ മാറ്റുകയോ ലഘൂകരിക്കുകയോ ചെയ്യാനുള്ള നടപടികൾ ഞാൻ സ്വീകരിക്കാറുണ്ട്					
4	ഒരു ലക്ഷ്യം മനസ്സിൽ കണ്ടാൽ അത് നേടാതെ ഞാൻ പിന്തിരിയില്ല					
5	ലക്ഷ്യത്തിലെത്താൻ ഞാൻ പല സമന്തരമാർഗ്ഗങ്ങളും അവലംബിക്കാറുണ്ട്.					
6	എന്റെ ലക്ഷ്യത്തിലെത്താൻ മറ്റ് ആരേക്കാളും ഞാൻ എന്നെതന്നെയാണ് ആശ്രയിക്കുന്നത്.					
7	എന്റെ ലക്ഷ്യങ്ങളെ പാതിവഴിയിൽ ഉപേക്ഷിക്കുന്ന പതിവെനിക്കില്ല					
8	എന്റെ പ്രശ്നങ്ങളേയും അവ എങ്ങനെ പരിഹരിക്കാം എന്നതിനെക്കുറിച്ചും ഞാൻ ചിന്തിച്ചുകൊണ്ടിരിക്കും.					
9	ഒരു ലക്ഷ്യം മുൻപിലുണ്ടെങ്കിൽ മറ്റുകാര്യങ്ങൾക്കുവേണ്ടി അനാവശ്യമായി സമയം നഷ്ടപ്പെടുത്തുന്നത് ഞാൻ അവസാനിപ്പിക്കും.					
10	ജീവിതത്തിലെ വിവിധ മേഖലകളിൽ വിജയം നേടിയവരുടെ അനുഭവങ്ങൾ മനസ്സിലാക്കാൻ ഞാൻ ശ്രമിക്കാറുണ്ട്					
11	ഒരു പ്രശ്നം പരിഹരിക്കാൻ എനിക്ക് മറ്റുള്ളവരുടെ സഹായം ആവശ്യമില്ല					
12	എനിക്ക് ആവശ്യമുള്ള ഏതുജോലിയും സ്വയം ചെയ്യാനാകുമെന്ന് എനിക്കുറപ്പുണ്ട്					
13	എനിക്ക് ഒരേസമയം പലജോലികളും ചെയ്യാനാകും.					
14	നിശ്ചിത സമയത്തിനുള്ളിൽ ഞാനെന്റെ ജോലികൾ ചെയ്യുകാഴിഞ്ഞിരിക്കും.					
15	എനിക്കുപറ്റുന്ന തെറ്റുകൾ തിരുത്താൻ എനിക്ക് മടിയില്ല					
16	ഒരു പ്രശ്നത്തിന്റെ പരിഹാരത്തിനായി വിവിധ വഴികളെക്കുറിച്ച് ഞാൻ ചിന്തിച്ചിരിക്കും.					
17	മറ്റുള്ളവരെ ആശ്രയിക്കാതെതന്നെ എന്റെ ജോലി ചെയ്യുതീർക്കാൻ എനിക്കാകും.					
18	അനിവാര്യ സാഹചര്യത്തിൽ ആരിൽനിന്നുമാണ് സഹായം തേടേണ്ടതെന്ന് എനിക്കറിയാം.					
19	ഒരിക്കൽ പരാജയപ്പെട്ടാലും എന്റെ ശ്രമം ഞാൻ തുടർന്നുകൊണ്ടേയിരിക്കും.					

(4)

Sl. No.	Statements	Response				
		STRONGLY AGREE	AGREE	NOT SURE	DISAGREE	STRONGLY DISAGREE
		5	4	3	2	1
20	മുൻപുണ്ടായിട്ടുള്ള ജയപരാജയങ്ങളൊന്നും എന്റെ ഭാവി പ്രവർത്തനങ്ങളെ ബാധിക്കുകയില്ല.					
21	വിജയത്തിൽ ഞാൻ അതിയായി സന്തോഷിക്കുകയോ പരാജയത്തിൽ അതിയായി ദുഃഖിക്കുകയോ ചെയ്യുന്നില്ല					
22	സമ്മർദ്ദങ്ങൾക്ക് മുൻപിൽ തളരാതെ പിടിച്ചുനിൽക്കാൻ എനിക്കാകും.					
23	നഷ്ടബോധങ്ങളിൽനിന്നും ഞാൻ പെട്ടെന്ന് കരകയറും.					
24	നല്ലതായലും ചീത്തയായലും എന്റെ വികാരങ്ങളെ ഞാൻ തുറന്ന് പ്രകടിപ്പിച്ചിരിക്കും.					
25	മറ്റുള്ളവരുടെ വൈകാരികപ്രകടനങ്ങൾക്കൊത്ത് ഞാൻ പ്രവർത്തിക്കാറില്ല					
26	ഏത് സാഹചര്യത്തിലായലും എന്റെ വികാരങ്ങൾ കൈവിട്ടുപോകാറില്ല					
27	പരാജയങ്ങളും ബുദ്ധിമുട്ടുകളും എന്നെ ജീവിതത്തിൽ കരുത്തനാക്കിയിട്ടുണ്ട്					
28	പരാജയങ്ങൾ താൽക്കാലികമാണെന്നാണ് ഞാൻ കരുതുന്നത്					
29	ദുഃഖചിന്തകൾ മനസ്സിലേക്ക് വരുമ്പോൾ ഞാനെന്റെ ചിന്തകളെ മാറ്റും.					
30	വിഷമം തോന്നുന്ന സാഹചര്യത്തിൽനിന്നും പെട്ടെന്ന് സന്തോഷകരമായ അവസ്ഥയിലേക്ക് എത്താൻ എനിക്കാകും.					
31	എന്റെ സാമീപ്യം മറ്റുള്ളവർ ഇഷ്ടപ്പെടാറുണ്ട്					
32	ഏതുപ്രായക്കാരായാലും എനിക്ക് എളുപ്പത്തിൽ അടുക്കുവാനാകും.					
33	ആർക്കും എന്നോട് വിദ്വേഷമുള്ളതായി തോന്നിയിട്ടില്ല					
34	മറ്റുള്ളവരോട് ഞാൻ സൗമ്യമായാണ് ഇടപെടാറുള്ളത്					
35	മറ്റുള്ളവരുടെ കാര്യത്തിൽ ഞാൻ തൽപര്യം കാണിക്കാറുണ്ട്					
36	എന്നോട് പലരും ആശംസകൾ പറയാറുണ്ട്					
37	ഞാനുള്ള ടീമിൽ ഉൾപ്പെടാൻ ക്ലസ്സിൽ എല്ലാവർക്കും തൽപര്യമാണ്					
38	വിശേഷദിവസങ്ങളിൽ എനിക്ക് ധാരാളം പേർ ആശംസകൾ അറിയിക്കാറുണ്ട്					
39	അധ്യാപകരും മുതിർന്നവരും എന്നോട് സൗമ്യമായിട്ടാണ് ഇടപെടുന്നത്					
40	എന്റെ ക്ലാസ്സിലെ പലരും എന്നോട് പലവിധ സഹായങ്ങളും തേടാറുണ്ട്					
41	മറ്റുള്ളവരുടെ വികാരങ്ങൾ എനിക്ക് പെട്ടെന്ന് മനസ്സിലാകും.					
42	സഹപാഠികളിൽ ആരെങ്കിലും വിഷമിക്കുന്നുണ്ടെങ്കിൽ ഞാനത് പെട്ടെന്ന് മനസ്സിലാക്കും.					

(5)

Sl. No.	Statements	Response				
		STRONGLY AGREE	AGREE	NOT SURE	DISAGREE	STRONGLY DISAGREE
		5	4	3	2	1
43	ആരെങ്കിലും നീതികേട് കാണിച്ചാൽ ഞാൻ അതോർത്ത് ദുഃഖിക്കാറുണ്ട്					
44	പരീക്ഷയിൽ പരജിതരായ സഹപാഠികളെ ഞാൻ സ്വാന്തര്യപ്പെടാറുണ്ട്					
45	ആർക്കെങ്കിലും എന്നോട് അനിഷ്ടംതോന്നിയാൽ അതെനിക്ക് പെട്ടെന്ന് മനസ്സിലാക്കാറുണ്ട്.					
46	അച്ചനോ അമ്മയോ അസ്വസ്ഥമാണെങ്കിൽ എന്നേയും ഒരുതരം അസ്വസ്ഥത പിടിപെടാറുണ്ട്					
47	സഹപാഠികളിൽ ആരെങ്കിലും ദുഃഖിച്ചിരിക്കുന്നതുകണ്ടാൽ ഞാൻ അവരോട് കാരണം അന്വേഷിക്കാറുണ്ട്					
48	മറ്റുള്ളവർക്ക് എന്തെങ്കിലും സമ്മാനിക്കുന്നത് എനിക്ക് ഇഷ്ടമുള്ള കാര്യമാണ്.					
49	ഒരാളെ കണ്ടാൽ അയാൾ സന്തോഷവാനാണോ ദുഃഖിതനാണോ എന്ന് എനിക്ക് വേഗത്തിൽ പറയാനാകും.					
50	ഒരാൾ ഏത് മാനസികാവസ്ഥയിലാണോ അത് നോക്കി അയാളോട് ഇടപെടാൻ എനിക്കാകും.					

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PSYCHOLOGICAL RESILIENCE SCALE FOR ADOLESCENTS

Bindu, K. P., & Happy, P. V.

[Institute of Advanced Study in Education, Thrissur-680020]

(2023)

BINDU K. P.
Research Scholar
IASE, THRISSUR-680020

Dear student friend,

Secondary school students like you have a lot of academic work to be done as part of your studies. The frequent tests, timely submission of homework and assignments, completion of projects, daily class questioning etc. may put you under stress and you become anxious about your performance in the class. A few tests are attached herewith for gathering information about the stress you experience and other mental conditions, which are needed for the research work taken up by me. You may go through the instructions of the test, understand it properly and then start responding. Before taking the test some personal information about you are also needed, and the Personal Data Sheet given below is for the purpose of gathering your personal details. Kindly fill-up the details. The information furnished by you will be kept confidential and will be used only for research purpose.

Yours faithfully,

BINDU K. P.

PERSONAL DATA SHEET

1. Name :
2. Gender : Boy ☐ Girl ☐ 3. Completed age:
4. Name of the School :
5. Syllabus following : State ☐ CBSE ☐ ICSE ☐ Other ☐

(2)

6. School Type : Govt. ☐ Aided ☐ Unaided ☐
7. Class : Plus One ☐ Plus Two ☐
8. Academic Stream : Arts ☐ Commerce ☐ Humanities ☐ Science ☐
9. Residential Area : Rural ☐ Urban ☐ Semi-urban ☐
10. Family Type : Nuclear ☐ Extended ☐
11. Your birth order : Only child ☐ Firstborn ☐ Middleborn ☐ Last-born ☐

Date.....

Signature.....

Instructions for the Test

Below given are some statement to know your ability to cope with and recover from setbacks. Against each statement, five responses alternatives, viz., ‘Strongly Agree’, ‘Agree’, ‘Not Sure’, ‘Disagree’, and ‘Strongly Disagree’ are given. Read each statement carefully and mark the degree of your agreement or disagreement to the statement by putting a tick mark (✓) in the appropriate cell. An example is given below:

Example: Even if a failure happens in life, I think about what lesson to learn from it.

If you are a person who always try to learn lessons from your failure, mark your response by putting ‘✓’ in the cell below the column ‘**Strongly Agree**’. On the contrary, if you are a person who never try to learn anything from your failure, mark response in the cell below ‘**Strongly Disagree**’. Don’t mark more than one ‘✓’ mark against a statement. Please respond to all statements.

Please note, this is not an examination. The score of this test is not going to affect your studies or class promotion; not it makes you eligible for any scholarship or awards. Moreover, your performance in the test will not be informed to your parents, teachers or classmates. So kindly respond to the statements very honestly. The information given by you will be kept confidential and will be used only for research purposes.

(3)

Sl. No.	Statements	Response				
		STRONGLY AGREE	AGREE	NOT SURE	DISAGREE	STRONGLY DISAGREE
1	All my goals are achievable					
2	If I have a big goal in front of me, I break it down into smaller, achievable goals					
3	I take steps to change or mitigate obstacles to reaching my goals					
4	If I set a goal in mind, I will not back down until I achieve it					
5	I use many parallel methods to reach my goal					
6	I depend on myself more than anyone else to reach my goals					
7	I am not in the habit of giving up on my goals halfway					
8	I keep thinking about my problems and how to solve them					
9	With a goal in mind, I stop wasting time unnecessarily on other things					
10	I try to understand the experiences of people who have achieved success in different areas of life					
11	I don't need help from others to solve a problem					
12	I am confident that I can do any work that I need to do myself					
13	I can multitask					
14	I will have done my work within the stipulated time					
15	I do not hesitate to correct my mistakes					
16	I will think of different ways to solve a problem					
17	I can get my work done without depending on others					
18	I know who to turn to for help in an emergency					
19	Even if I fail once, I will keep trying					
20	Any past success or failure will not affect my future actions					
21	I don't get overly happy with success or overly sad with failure					
22	I am able to withstand stressful situations.					
23	I quickly recover from feelings of loss					
24	I will be open about my feelings, good or bad					
25	I don't act on other people's emotions					

(4)

Sl. No.	Statements	Response				
		STRONGLY AGREE	AGREE	NOT SURE	DISAGREE	STRONGLY DISAGREE
26	No matter what the situation, my feelings never go away					
27	Failures and hardships have made me stronger in life					
28	I think failures are temporary					
29	I change my thoughts when sad thoughts come to mind					
30	I can quickly go from a sad situation to a happy one					
31	Others like my closeness					
32	I can easily get along with any age group					
33	No one ever felt hostile toward me					
34	I am gentle with others					
35	I take an interest in others					
36	Many people greets me					
37	Everyone in the class wants to join my team					
38	Many people wish me on special days					
39	Teachers and seniors are gentle with me					
40	Many people in my class seek help from me					
41	I can easily understand other people's feelings					
42	If any of my classmates are worried, I can sense it immediately					
43	If someone shows injustice, I am saddened by it					
44	I used to pacify my classmates who failed the exam					
45	If someone dislikes me, I can sense it immediately					
46	If mom or dad is upset, I get kind of upset too					
47	If I see any of my classmates sad, I ask them why					
48	Giving something to others is something I love					
49	I can quickly tell if someone is happy or sad when I see them					
50	I can see what mood a person is in and interact with him					

LOCUS OF CONTROL SCALE FOR SECONDARY SCHOOL STUDENTS

[Adapted Version of Rotter's Internal-External Locus of Control Scale]

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[Dept. of Education, University of Kerala, Thiruvananthapuram, Kerala-6950014]

(2003)

BINDU K. P.

Research Scholar

IASE, THRISSUR-680020

പ്രിയ വിദ്യാർത്ഥി സുഹൃത്തേ,

നിങ്ങളെപ്പോലുള്ള സെക്കൻഡറി സ്കൂൾ വിദ്യാർത്ഥികൾക്ക് പഠനത്തിന്റെ ഭാഗമായി ധാരാളം അക്കാദമിക് പ്രവർത്തനങ്ങൾ ചെയ്യേണ്ടതുണ്ടല്ലോ.. പതിവായുള്ള പരീക്ഷകൾ, ഹോംവർക്കുകളുടെയും അസൈൻമെന്റുകളുടെയും സമയബന്ധിതമായ സമർപ്പണം, പ്രോജക്ടുകളുടെ പൂർത്തീകരണം, ദൈനംദിന ക്ലാസിലെ ചോദ്യോത്തരങ്ങൾ മുതലായവ നിങ്ങളെ സമ്മർദ്ദത്തിലാക്കുകയും ക്ലാസിലെ നിങ്ങളുടെ അക്കാദമിക് പ്രകടനത്തെക്കുറിച്ച് ഉൽക്കണ്ഠപ്പെടുത്തുകയും ചെയ്യാം. നിങ്ങൾ അനുഭവിക്കുന്ന പഠനസമ്മർദ്ദത്തെക്കുറിച്ചും മറ്റ് മാനസിക അവസ്ഥകളെക്കുറിച്ചും അതുമായി ബന്ധപ്പെടുന്ന മറ്റ് മനഃശാസ്ത്ര ഘടകങ്ങളെ കുറിച്ചും ഞാൻ ഒരു ഗവേഷണ പഠനം നടത്തിക്കൊണ്ടിരിക്കുകയാണ്. അതിലേക്ക് ആവശ്യമായ വിവരങ്ങൾ ശേഖരിക്കുന്നതിനുവേണ്ടിയുള്ള ഒരു ടെസ്റ്റാണ് ഇതോടൊപ്പം ചേർത്തിരിക്കുന്നത്. ടെസ്റ്റിന്റെ നിർദ്ദേശങ്ങൾ വായിച്ച് ശരിയായി മനസ്സിലാക്കിയ ശേഷം പ്രതികരിക്കാൻ തുടങ്ങുക. ടെസ്റ്റ് എടുക്കുന്നതിന് മുമ്പ് നിങ്ങളുടെ ചില വ്യക്തിഗത വിവരങ്ങൾ ആവശ്യമാണ്, അതിനായി താഴെ നൽകിയിരിക്കുന്ന Personal Data Sheet പൂരിപ്പിക്കുക.. നിങ്ങൾ നൽകുന്ന വിവരങ്ങൾ രഹസ്യമായി വയ്ക്കുന്നതും ആയത് ഗവേഷണ ആവശ്യങ്ങൾക്ക് മാത്രം ഉപയോഗിക്കുന്നതുമായിരിക്കും.

വിശ്വസ്തതയോടെ

ബിന്ദു കെ. പി.

PERSONAL DATA SHEET

1. Name :
2. Gender : Boy ☐ Girl ☐ 3. Completed age:
4. Name of the School :
5. Syllabus following : State ☐ CBSE ☐ ICSE ☐ Other ☐

6. School Type : Govt. ☐ Aided ☐ Unaided ☐
7. Class : Plus One ☐ Plus Two ☐
8. Academic Stream : Arts ☐ Commerce ☐ Humanities ☐ Science ☐
9. Residential Area : Rural ☐ Urban ☐ Semi-urban ☐
10. Family Type : Nuclear ☐ Extended ☐
11. Your birth order : Only child ☐ Firstborn ☐ Middleborn ☐ Last-born ☐

Date..... Signature.....

ടെസ്റ്റിനുള്ള നിർദ്ദേശങ്ങൾ

ജീവിതത്തിലെ ചില പ്രത്യേക സന്ദർഭങ്ങളോട്/സാഹചര്യങ്ങളോട് നിങ്ങൾ എങ്ങനെ പ്രതികരിക്കുന്നു എന്നറിയാൻവേണ്ടി തയ്യാറാക്കിയ ഒരു ചോദ്യാവലിയാണിത്. ഇതിലെ ഓരോ ഇനത്തിലും **(a)** എന്നും **(b)** എന്നും രണ്ട് പ്രസ്ഥാവനകളുണ്ട്. അതിൽ നിങ്ങൾക്ക് കൂടുതൽ സ്വീകാര്യമായ ഒന്ന് തിരഞ്ഞെടുക്കുക. രണ്ട് പ്രസ്ഥാവനയോടും നിങ്ങൾക്ക് കുറെയൊക്കെ യോജിപ്പാണുള്ളതെങ്കിൽ, ഏറ്റവും കൂടുതൽ യോജിപ്പുള്ളത് തിരഞ്ഞെടുക്കുക. അഥവാ രണ്ട് പ്രസ്ഥാവനയോടും നിങ്ങൾക്ക് വലിയ യോജിപ്പില്ലെങ്കിൽ, വിധേയമായി കൂറുണ്ടാക്കി തിരഞ്ഞെടുക്കുക. ഈ ചോദ്യാവലി നിങ്ങളുടെ അഭിപ്രായം അറിയാനുള്ളതു മാത്രമായതുകൊണ്ട് ഇതിൽ ഒരു ഉത്തരവും ശരിയോ തെറ്റോ അല്ല. ഓരോ ഇനത്തിനും എതിരെ കൊടുത്തിരിക്കുന്ന ബ്രാക്കറ്റിൽ '✓' അടയാളമിട്ട് നിങ്ങളുടെ പ്രതികരണം രേഖപ്പെടുത്തുക. ദയവായി എല്ലാപ്രസ്താവനയോടും പ്രതികരിക്കുക.

1	(a) കുട്ടികൾ പ്രശ്നക്കാരാകുന്നത് മാതാപിതാക്കൾ അവരെ കഠിനമായി ശിക്ഷിക്കുന്നതുകൊണ്ടാണ് () (b) ഇപ്പോഴത്തെ കുട്ടികൾ പ്രശ്നക്കാരാകാനുള്ള പ്രധാന കാരണം മാതാപിതാക്കൾ അവരോട് വളരെ മൃദുവായി പെരുമാറുന്നതാണ് ()
2	(a) ഒരാളുടെ ജീവിതം ദുരിതപൂർണ്ണമാകുന്നതിന്റെ പ്രധാന-കാരണം അവന്റെ ദൗർഭാഗ്യമാണ് () (b) ഒരുത്തന്റെ തെറ്റായ പ്രവൃത്തികളാണ് അവന്റെ ജീവിതത്തെ ദുരിതപൂർണ്ണമാക്കുന്നത് ()
3	(a) വർഗ്ഗീയ സംഘർഷങ്ങൾ ഉണ്ടാകാനുള്ള പ്രധാന കാരണങ്ങളിൽ ഒന്ന് ജനങ്ങൾ രാഷ്ട്രീയത്തിൽ താൽപ്പര്യം കാണിക്കാത്തതാണ്. ()

- (b) ജനങ്ങൾ എത്ര ശക്തമായി ചെറുത്താലും വർഗ്ഗീയ സംഘർഷങ്ങൾ ഉണ്ടാവുക തന്നെ ചെയ്യും. ()
- 4 (a) ഒടുവിൽ ഓരോ മനുഷ്യനും അവനർഹിക്കുന്ന അംഗീകാരം തീർച്ചയായും കിട്ടിയിരിക്കും. ()
- (b) നിർഭാഗ്യവശാൽ ചിലമനുഷ്യർ എത്രശ്രമിച്ചാലും അർഹമായ അംഗീകാരം കിട്ടാതെ പോകുന്നു. ()
- 5 (a) പാഠപുസ്തകത്തിന് പുറത്തുനിന്നും പരീക്ഷക്ക് ചോദ്യങ്ങൾ ചോദിക്കുന്നത് അനീതിയാണ്. ()
- (b) പാഠപുസ്തകവും പരീക്ഷാചോദ്യവും തമ്മിൽ എപ്പോഴും ബന്ധപ്പെട്ടതല്ലെന്ന ആയിരിക്കണമെന്ന വാദം അസംബന്ധമാണ്. ()
- 6 (a) മാർക്കിടുന്ന കാര്യത്തിൽ അധ്യാപകർ വിദ്യാർത്ഥികളോട് പലപ്പോഴും അനീതി കാണിക്കുന്നു എന്ന് പറയുന്നത് വെറുതെയാണ്. ()
- (b) ഭാഗ്യമുണ്ടെങ്കിൽ പഠിച്ചുകൊണ്ടുപോയ ചോദ്യങ്ങൾ തന്നെ പരീക്ഷിക്കുവരും. ()
- 7 (a) ശരിയായ ഒരു അവസരം വീണ്ടുകിട്ടാതെ ഒരാൾക്ക് നല്ലൊരു നേതാവകാനാകില്ല. ()
- (b) കൈയ്യിൽ വന്ന അവസരങ്ങളെ വേണ്ടവിധം പ്രയോജനപ്പെടുത്താതിരുന്നതുകൊണ്ടാണ് കഴിവുള്ള പല ആളുകളും നേതാക്കളാകാതിരുന്നത്. ()
- 8 (a) നിങ്ങൾ എത്രതന്നെ ശ്രമിച്ചാലും ചിലർക്ക് നിങ്ങളെ ഇഷ്ടപ്പെടുന്നുവരില്ല. ()
- (b) മറ്റുള്ളവരുമായി എങ്ങനെ ഇടപഴകണമെന്ന് അറിയാത്തതുകൊണ്ടാണ് ചിലരെ ആളുകൾ ഇഷ്ടപ്പെടാത്തത്. ()
- 9 (a) ഒരാളുടെ സ്വഭാവത്തെ നിശ്ചയിക്കുന്നത് അയാളുടെ പാരമ്പര്യ ഗുണങ്ങളാണ്. ()
- (b) ജീവിതസാഹചര്യങ്ങളാണ് ഒരാളുടെ സ്വഭാവത്തെ നിശ്ചയിക്കുന്നത്. ()
- 10 (a) നമ്മൾ എന്തൊക്കെ ചെയ്താലും സംഭവിക്കാനുള്ളത് സംഭവിക്കുക തന്നെ ചെയ്യും. ()
- (b) എന്റെ അനുഭവത്തിൽ വിധിയിൽ വിശ്വസിക്കുന്നതിലും നല്ലതാണ് വിജയത്തിനായി പ്രവൃത്തിക്കുന്നത്. ()
- 11 (a) നന്നായിട്ടു പഠിച്ചാൽ ഏതൊരാൾക്കും നല്ലമാർക്ക് വാങ്ങാൻ പറ്റും. ()

- (b) ചില കുട്ടികൾ എത്ര കഷ്ടപ്പെട്ടുപഠിച്ചിട്ടും കാര്യമില്ല; അവർക്ക് മാർക്ക് കിട്ടാൻ പോകുന്നില്ല ()
- 12 (a) കഠിന പരിശ്രമം കൊണ്ടേ ജീവിതവിജയമുണ്ടാകൂ. വിധിക്ക് ഇതിൽ പങ്കൊന്നുമില്ല. ()
- (b) നല്ല ജോലികിട്ടുക എന്നത് ഒരാളുടെ ഭാഗ്യം പോലിരിക്കും. ()
- 13 (a) നല്ലവരായിപ്പോയി എന്ന ഒറ്റക്കാരണത്താൽ ചിലർ ജീവിതത്തിൽ കൂടുതൽ കഷ്ടപ്പെടുന്നു. ()
- (b) അധികം കഷ്ടപ്പെടാതെ ജീവിക്കുന്നവനാണ് ബുദ്ധിമാൻ ()
- 14 (a) ഒരു സാധാരണക്കാരനും സർക്കാർ തീരുമാനങ്ങളെ സാധിനിക്കാൻ പറ്റും. ()
- (b) അധികാരങ്ങളിലുള്ള ഏതാനുംപേരാണ് ഈ രാജ്യം ഭരിക്കുന്നത്. സാധാരണക്കാരന് ഇതിൽ പങ്കൊന്നുമില്ല ()
- 15 (a) ഞാൻ ഒരു കാര്യം പ്ലാൻ ചെയ്താൽ അത് നടപ്പാക്കാൻ പറ്റുമെന്ന് എനിക്ക് വിശ്വാസമുണ്ട് ()
- (b) ജീവിതത്തിലെ പലതും ഭാഗ്യ-ദുർഭഗ്യങ്ങളെ ആശ്രയിച്ചിരിക്കുന്നതുകൊണ്ട് വിദൂരഭാവിലുള്ള ഒരു കാര്യം ഇപ്പോഴേ പ്ലാൻ ചെയ്യുന്നത് ബുദ്ധിയല്ല ()
- 16 (a) ചില ആളുകൾ നല്ലവരേ അല്ല ()
- (b) എല്ലാവരിലും കുറച്ച് നന്മകളുണ്ടാകും. ()
- 17 (a) എന്നെ സംബന്ധിച്ചിടത്തോളം ആഗ്രഹിച്ചത് നേടുന്ന കാര്യത്തിൽ ഭാഗ്യത്തിന് യാതൊരുസ്ഥാനവുമില്ല ()
- (b) ഒരു തീരുമാനത്തിലെത്താൻ ബുദ്ധിമുട്ടുന്ന സന്ദർഭങ്ങളിൽ ഒരു നാണയം ടോസ്സുചെയ്യുപോലും നമുക്ക് ശരിയായ തീരുമാനങ്ങൾ എടുക്കാനാകും. ()
- 18 (a) ഭാഗ്യംകൊണ്ട് ഉന്നതസ്ഥാനങ്ങളിൽ എത്തിച്ചേരാൻ സാധിച്ചവരാണ് പലപ്പോഴും നമ്മെ ഭരിക്കുന്നത് ()
- (b) ഉന്നതസ്ഥാനത്ത് എത്തുക എന്നത് ഒരാളുടെ കഴിവിനെ ആശ്രയിച്ചാണിരിക്കുന്നത്, ഭാഗ്യത്തെല്ല ()
- 19 (a) പാഠഭാഗങ്ങൾ എത്രതന്നെ നന്നായി പഠിച്ചാലും ചില അധ്യാപകരെ തൃപ്തിപ്പെടുത്താനാകില്ല ()
- (b) കൃത്യമായും വ്യക്തമായും പാഠഭാഗങ്ങൾ പഠിച്ചുകൊണ്ട് ഏത് അധ്യാപകനേയും നമുക്ക് തൃപ്തിപ്പെടുത്താനാകും. ()
- 20 (a) എന്തൊക്കെ ആയാലും വിധിയെ തടക്കാൻ ആർക്കും ആകില്ല ()

- (b) യഥാർത്തിൽ വിധി എന്നൊന്നില്ല ()
- 21 (a) തെറ്റുകൾ സമ്മതിക്കാൻ ഒരാൾ എപ്പോഴും തയ്യാറാകണം ()
- (b) ഒരാൾ അവന്റെ തെറ്റുകൾ മൂടിവക്കുന്നതാണ് നല്ലത് ()
- 22 (a) ഒരാൾ നിങ്ങളെ യഥാർത്ഥത്തിൽ ഇഷ്ടപ്പെടുന്നുണ്ടോ ഇല്ലയോ എന്ന് അറിയുക ബുദ്ധിമുട്ടുള്ള കാര്യമാണ് ()
- (b) നിങ്ങൾക്ക് എത്ര സുഹൃത്തുക്കളുണ്ട് എന്നത് നിങ്ങൾ എത്രമാത്രംനല്ലതാണ് എന്നതിനെ ആശ്രയിച്ചാണിരിക്കുന്നത് ()
- 23 (a) എന്റെ ജീവിതത്തിൽ സംഭവിച്ച നല്ലകാര്യങ്ങളിലേക്ക് തിരിഞ്ഞുനോക്കുമ്പോൾ, എനിക്കുതോന്നുന്നത് അവയെല്ലാം എന്റെ പ്രവൃത്തിയുടെതന്നെ ഫലമാണെന്നാണ് ()
- (b) എന്റെ ജീവിതത്തിൽ സംഭവിച്ച പരാജയങ്ങളെല്ലാം തന്നെ എന്റെ നിയന്ത്രണത്തിനു പുറത്തുള്ള കാരണങ്ങൾ കൊണ്ടാണ് ഉണ്ടായിട്ടുള്ളത് ()
- 24 (a) മറ്റുള്ളവർക്കെതിരെ അടിസ്ഥാനമില്ലാത്ത ആരോപണം ഉന്നയിക്കുന്നത് ദുർബല മനസ്സുള്ളവരാണ് ()
- (b) ആരോപണങ്ങളെ നേരിടേണ്ടത് പ്രത്യാരോപണങ്ങൾ കൊണ്ടാണ് ()
- 25 (a) ശ്രമിച്ചാൽ രാഷ്ട്രീയത്തിലെ അഴിമതി നമുക്ക് തുടച്ചു നീക്കാനാകും ()
- (b) ഭരണാധികാരികളെ നിയന്ത്രിക്കുക സാധാരണക്കാരനെ സംബന്ധിച്ചിടത്തോളം പ്രയാസമുള്ളകാര്യമാണ് ()
- 26 (a) അധ്യാപകർ പരീക്ഷക്ക് മാർക്കിടുന്നത് പലപ്പോഴും പക്ഷപാതപരമായിട്ടാണെന്നാണ് എനിക്കുതോന്നുന്നത് ()
- (b) എനിക്കുകിട്ടുന്ന മാർക്കും എന്റെ കഠിനാധ്വാനവും തമ്മിൽ അടുത്തബന്ധമാണുള്ളത് ()
- 27 (a) ചെയ്തത് ശരിയാണെങ്കിലും തെറ്റാണെങ്കിലും ക്ലാസ്സിലെ മറ്റുകുട്ടികളുടെ കൂടെ നിൽക്കുന്നവനാണ് നല്ലൊരു ക്ലാസ്സ് ലീഡർ ()
- (b) നല്ലൊരു ക്ലാസ്സ് ലീഡർ ക്ലാസ്സിലെ മറ്റുകുട്ടികളെ അവരുടെ ഉത്തരവാദിത്വത്തെ കുറിച്ച് ബോധവാനാക്കുന്നു ()
- 28 (a) തുടക്കത്തിൽ എന്തൊക്കെ സംഭവിച്ചാലും ക്രിക്കറ്റ് കളിയിൽ ഒടുവിൽ ജയിക്കുന്നത് ഏറ്റവും കൂടുതൽ ഭാഗ്യം ഏതു ഭാഗത്താണോ ആ ടീം ആയിരിക്കും ()

- (b) മികച്ച കളിക്കാരും നല്ലതയ്യാറെടുപ്പുമുള്ള ടീമായിരിക്കും ഏതുകളിയിലും വിജയിക്കുന്നത് ()
- 29 (a) മറ്റുള്ളവരുമായി ചങ്ങാത്തമുണ്ടാക്കാൻ ശ്രമിക്കാത്തതു കൊണ്ടാണ് ആളുകൾ ഒറ്റപ്പെട്ടുപോകുന്നത് ()
- (b) മറ്റുള്ളവരുമായി ചങ്ങാത്തമുണ്ടാക്കാൻ കഷ്ടപ്പെട്ടിട്ടൊന്നും കാര്യമില്ല; അവർ നമ്മെ ഇഷ്ടപ്പെടാൻ ആഗ്രഹിക്കുന്നുണ്ടെങ്കിൽ ഇഷ്ടപ്പെട്ടിരിക്കും ()
- 30 (a) ശാസ്ത്രവിഷയങ്ങൾ പഠിക്കുന്നത് ചിന്താശക്തിയും അപഗ്രഥന ശേഷിയും ഉണ്ടാക്കാൻ സഹായിക്കും ()
- (b) മാനവിക വിഷയങ്ങൾ പഠിച്ചെന്നുകരുതി മാനുഷിക മൂല്യങ്ങൾ ഉണ്ടാകുമെന്ന വാദം ശരിയല്ല ()
- 31 (a) എന്റെ ജീവിതത്തിൽ ഉണ്ടായിട്ടുള്ള എല്ലാ വിജയത്തിന്റേയും പരാജയത്തിന്റേയും ഉത്തരവാദി ഞാൻ തന്നെയാണ് ()
- (b) ഞാനല്ല മറ്റൊരു ശക്തിയാണ് എന്റെ ജീവിതത്തിലെ ജയ-പരാജയങ്ങളെ നിശ്ചയിക്കുന്നത് ()
- 32 (a) എത്ര ശ്രമിച്ചാലും ചില പാഠഭാഗങ്ങൾ പഠിക്കാനാകില്ല ()
- (b) കഠിനധ്വനം ചെയ്താൽ പഠിക്കാൻ പറ്റാത്തതായി ഒരു പാഠഭാഗവുമില്ല ()



LOCUS OF CONTROL SCALE FOR SECONDARY SCHOOL STUDENTS

[Adapted Version of Rotter's Internal-External Locus of Control Scale]

Arjunan, N. K., & Mercy Abraham

[Dept. of Education, University of Kerala, Thiruvananthapuram, Kerala-6950014]

(2003)

BINDU K. P.

Research Scholar

IASE, THRISSUR-680020

Dear student friend,

Secondary school students like you have a lot of academic work to be done as part of your studies. The frequent tests, timely submission of homework and assignments, completion of projects, daily class questioning etc. may put you under stress and you become anxious about your performance in the class. A few tests are attached herewith for gathering information about the stress you experience and other mental conditions, which are needed for the research work taken up by me. You may go through the instructions of the test, understand it properly and then start responding. Before taking the test some personal information about you are also needed, and the Personal Data Sheet given below is for the purpose of gathering your personal details. Kindly fill-up the details. The information furnished by you will be kept confidential and will be used only for research purpose.

Yours faithfully,

BINDU K. P.

PERSONAL DATA SHEET

1. Name :
2. Gender : Boy ☐ Girl ☐ 3. Completed age:
4. Name of the School :

5. Syllabus following : State ☐ CBSE ☐ ICSE ☐ Other ☐
6. School Type : Govt. ☐ Aided ☐ Unaided ☐
7. Class : Plus One ☐ Plus Two ☐
8. Academic Stream : Arts ☐ Commerce ☐ Humanities ☐ Science ☐
9. Residential Area : Rural ☐ Urban ☐ Semi-urban ☐
10. Family Type : Nuclear ☐ Extended ☐
11. Your birth order : Only child ☐ Firstborn ☐ Middleborn ☐ Last-born ☐

Date.....

Signature.....

Instructions for the Test

The statements provided below are meant to know how you respond to certain occasions in life. For each item in the scale there are two statements: **(a)** and **(b)**. Select the statement which is more agreeable to you. If you agree with both statements, then select the one with which you agree more. If you cannot agree with any of the statements, then select the one with which you disagree less. Since this test is intended to measure your personal belief in social matters, none of the statements is wrong. Mark your choice by putting a tick mark (✓) in the bracket given against the statement. Kindly try to respond to all the items given.

- 1 (a) Children become problematic because their parents punish them too much. ()
- (b) The main reason for children becoming problematic is that parents are too easy with them. ()
- 2 (a) One's life becomes troublesome mainly because of his bad luck. ()
- (b) It is one's mistakes that make his life troublesome. ()

- 3 **(a)** One of the major reasons for communal riots is that people don't show sufficient interest in politics. ()
- (b)** There will always be communal riots, no matter how hard people try to prevent them. ()
- 4 **(a)** In the end people get the recognition they deserve in this world. ()
- (b)** Unfortunately, some people never get the recognition they deserve, no matter how hard they try. ()
- 5 **(a)** It is highly unjust to ask questions in examinations from the portions that are not taught in the class. ()
- (b)** It is absurd to insist that the questions asked in the examination should always be related to textbook. ()
- 6 **(a)** It is senseless to say that teachers are unfair to students while valuing their answer scripts. ()
- (b)** If you are lucky, the same questions you studied will be asked for the examination. ()
- 7 **(a)** Without getting the right opportunity one cannot be an effective leader. ()
- (b)** Many capable people have not succeeded in becoming leaders, as they failed to take advantage of their opportunities. ()
- 8 **(a)** No matter how hard you try, some people just don't like you. ()
- (b)** Some people are not liked by others, because they don't know how to get along with others. ()
- 9 **(a)** It is heredity that determines a person's character. ()
- (b)** It is living environment that determines a person's character. ()
- 10 **(a)** Whatever we do, what has to happen will happen. ()
- (b)** In my experience, it is always better to work for success, rather than believing in fate. ()
- 11 **(a)** Anyone can get good marks if s/he works hard enough. ()

- (b) Some people are never going to get good marks, no matter how hard they try. ()
- 12 (a) Only hard work will bring success in life; fate has no role in it. ()
- (b) Getting a good job is a matter of luck. ()
- 13 (a) Some people struggle hard in life by virtue of the fact that they are good. ()
- (b) Intelligent are those who live without much struggles. ()
- 14 (a) Even an ordinary man can have an influence in government decisions. ()
- (b) This country is governed by few people in power, and there is not much that the ordinary man can do about it. ()
- 15 (a) When I make plans, I am almost certain that I can make them work. ()
- (b) It is not always wise to plan too far ahead, because many things in life is a matter of good or bad fortune. ()
- 16 (a) Some people are not at all good. ()
- (b) There is some good in everybody. ()
- 17 (a) In my case, getting what I want has little or nothing to do with luck. ()
- (b) When in confusion we could take a right decision even by tossing a coin. ()
- 18 (a) Often we are governed by people who luckily reached higher positions in life. ()
- (b) Reaching a high position depends not on luck but on ability and hard work. ()
- 19 (a) No matter how well you learn, you cannot please some teachers. ()
- (b) You can please any teacher by studying lessons regularly and clearly. ()

- 20 (a) No matter, nobody could control the fate. ()
- (b) There is nothing like fate. ()
- 21 (a) One should always be prepared to admit his mistakes. ()
- (b) It is always safe to hide one's mistakes. ()
- 22 (a) It is hard to know whether or not a person really likes you. ()
- (b) How many friends you have depends upon how nice a person you are. ()
- 23 (a) When I think back on the good things that happened to me, I believe they happened mainly because of something I did. ()
- (b) The bad things that have happened in my life have mainly resulted from circumstances outside my control. ()
- 24 (a) It is feeble-minded people who pose baseless allegations against others. ()
- (b) Allegations should be defended with counter allegations. ()
- 25 (a) If we take pains, we can wipe out political corruption. ()
- (b) It is difficult for ordinary people to control those who are in power. ()
- 26 (a) In my experience, teachers are highly biased in giving marks to students. ()
- (b) There is a direct connection between my hard work and the marks I obtained. ()
- 27 (a) A good class leader is one who support other students irrespective of what they did is right or wrong. ()
- (b) A good class leader makes others conscious about their responsibilities. ()
- 28 (a) Whatever may happen in the beginning, in cricket, the team that wins the game are usually the team that have the most luck. ()

- (b) In any game, the team that wins championships are those with most talented players and the best preparation. ()
- 29 (a) People are lonely because they don't try to be friendly with others. ()
- (b) There is not much use in trying too hard to be friendly with others, if they like us, they like us. ()
- 30 (a) Learning of Science subjects will help to sharpen our thinking ability and analytical powers. ()
- (b) The argument that learning Humanities will breed human values is not true. ()
- 31 (a) I am solely responsible for the success and failure that happen in my life. ()
- (b) Forces over which I have little control are responsible for the success or failure that happens in my life. ()
- 32 (a) I cannot learn some portions no matter how hard I try. ()
- (b) If you try hard, you can learn any subject. ()



LOCUS OF CONTROL SCALE FOR SECONDARY SCHOOL STUDENTS

Arjunan, N. K., & Mercy Abraham (2003)

SCORING KEY

This scoring key can be used for scoring the filled-up Locus of Control Scale either from an *internal orientation* point of view or from an *external orientation* point of view. Value only those alternatives below the column title **Internal LOC** when a measure of internal locus of control is desired; conversely, when a measure of external locus of control is required, value the alternatives below the column title **External LOC**. Score one point for each of the right response.

Item No.	Internal LOC	External LOC
1	FILLER ITEM	
2	b	a
3	a	b
4	a	b
5	FILLER ITEM	
6	a	b
7	b	a
8	b	a
9	FILLER ITEM	
10	b	a
11	a	b
12	a	b
13	FILLER ITEM	
14	a	b
15	a	b
16	FILLER ITEM	

Item No.	Internal LOC	External LOC
17	a	b
18	b	a
19	b	a
20	b	a
21	FILLER ITEM	
22	b	a
23	b	a
24	FILLER ITEM	
25	a	b
26	b	a
27	FILLER ITEM	
28	b	a
29	a	b
30	FILLER ITEM	
31	a	b
32	b	a

BRIEF SOCIO-ECONOMIC STATUS SCALE

[Arjunan, N. K, TEC, JMC, University of Calicut, Thrissur, Kerala-680618]

2022

BINDU K. P.

RESEARCH SCHOLAR

IASE, THRISSUR-680020

പ്രിയ വിദ്യാർത്ഥിസുഹൃത്തേ,

നിങ്ങളെപ്പോലുള്ള സെക്കൻഡറി സ്കൂൾ വിദ്യാർത്ഥികൾക്ക് പഠനത്തിന്റെ ഭാഗമായി ധാരാളം അക്കാദമിക് പ്രവർത്തനങ്ങൾ ചെയ്യേണ്ടതുണ്ടല്ലോ. പതിവായുള്ള പരീക്ഷകൾ, ഹോം-വർക്കുകളുടെയും അസൈൻമെന്റുകളുടെയും സമയബന്ധിതമായ സമർപ്പണം, പ്രോജക്ടുകളുടെ പൂർത്തീകരണം, ദൈനംദിന ക്ലാസിലെ ചോദ്യോത്തരങ്ങൾ മുതലായവ നിങ്ങളെ സമ്മർദ്ദത്തിലാക്കുകയും ക്ലാസിലെ നിങ്ങളുടെ അക്കാദമിക് പ്രകടനത്തെക്കുറിച്ച് ഉൽക്കണ്ഠപ്പെടുത്തുകയും ചെയ്യാം. നിങ്ങൾ അനുഭവിക്കുന്ന പഠനസമ്മർദ്ദത്തെക്കുറിച്ചും മറ്റ് മാനസിക അവസ്ഥകളെക്കുറിച്ചും അതുമായി ബന്ധപ്പെട്ടു മറ്റ് മനഃശാസ്ത്ര ഘടകങ്ങളെ കുറിച്ചും ഞാൻ ഒരു ഗവേഷണ പഠനം നടത്തിക്കൊണ്ടിരിക്കുകയാണ്. അതിലേക്ക് ആവശ്യമായ വിവരങ്ങൾ ശേഖരിക്കുന്നതിനുവേണ്ടിയുള്ള ഒരു ടെസ്റ്റാണ് ഇതോടൊപ്പം ചേർത്തിരിക്കുന്നത്. ടെസ്റ്റിന്റെ നിർദ്ദേശങ്ങൾ വായിച്ച് ശരിയായി മനസ്സിലാക്കിയ ശേഷം പ്രതികരിക്കാൻ തുടങ്ങുക. ടെസ്റ്റ് എടുക്കുന്നതിന് മുമ്പ് നിങ്ങളുടെ ചില വ്യക്തിഗത വിവരങ്ങൾ ആവശ്യമാണ്. അതിനായി താഴെ നൽകിയിരിക്കുന്ന PERSONAL DATA SHEET പൂരിപ്പിക്കുക. നിങ്ങൾ നൽകുന്ന വിവരങ്ങൾ രഹസ്യമായി വയ്ക്കുന്നതും ആയത് ഗവേഷണ ആവശ്യങ്ങൾക്ക് മാത്രം ഉപയോഗിക്കുന്നതുമായിരിക്കും.

വിശ്വസ്തതയോടെ

ബിന്ദു കെ. പി.

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11. Your birth order : Only child ☐ Firstborn ☐ Middleborn ☐ Last-born ☐

Date.....

Signature.....

BRIEF SOCIO-ECONOMIC STATUS SCALE

[Arjunan, N. K, TEC, JMC, University of Calicut, Thrissur, Kerala-680618]

2022

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- Date..... Signature.....

Instructions

This scale is for gathering some information regarding the socio-economic status of your family. Though the questions are about your family members, most of the information required is known to you. If you are not sure about the answer of an item, make entries in consultation with your parents/guardians.

Family Member		Socio-Economic Status							
		Education						Occupation	Monthly Income
		Illiterate	Primary Education (STD 1-8)	Secondary Education (STD 9-12)	ITI, Trade Certificates	Degree in Arts & Science, Diploma	Professional Degree, . PG in Arts & Science		
Father/Guardian									
Mother									
Brothers									
	1								
	2								
	3								
	4								
Sisters									
	1								
	2								
	3								
	4								
Others									
	1								
	2								
	3								
	4								