

IMPACT OF SINGLE PARENTHOOD AMONG ADOLESCENTS' ACHIEVEMENT MOTIVATION, SELF-CONCEPT, ADJUSTMENT, AND MENTAL HEALTH

*A thesis submitted in partial fulfillment of
the requirements for the award of the degree of*

Doctor of Philosophy in Psychology

**by
Shiny P. K.**

Under the guidance of
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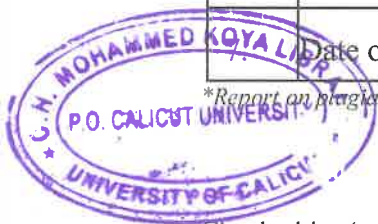


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This is to certify that this thesis entitled **“IMPACT OF SINGLE PARENTHOOD AMONG ADOLESCENTS’ ACHIEVEMENT MOTIVATION, SELF CONCEPT, ADJUSTMENT AND MENTAL HEALTH”** is a Bonafide record of research work carried out by SHINY P K under my supervision and guidance and that no part of this has been presented before for the award of any degree, associateship, or fellowship of other similar title or recognition

Pudukad

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This is to certify that the corrections suggested by the two adjudicators of the Ph.D thesis entitled **“IMPACT OF SINGLE PARENTHOOD AMONG ADOLESCENTS’ ACHIEVEMENT MOTIVATION, SELF-CONCEPT, ADJUSTMENT, AND MENTAL HEALTH”** submitted by Ms Shiny P K under my supervision from the Department of Psychology, Prajyoti Niketan College, Pudukad have been duly incorporated in the thesis and that the contents in the thesis and the soft copy herewith are one and the same.

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02.06.2026

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DECLARATION

I, Shiny P. K., do hereby declare that the thesis entitled “Impact of Single Parenthood Among Adolescents’ Achievement Motivation, Self-Concept, Adjustment, and Mental Health” is a bonafide record of the research work done by me under the guidance of Dr. Soumya Starlet C. T., Associate Professor, Department of Psychology, Prajyoti Niketan College, Pudukad, for the award of the degree of Doctor of Philosophy in Psychology at the University of Calicut. I further declare that this work has not been submitted to any other University for the award of any Degree, Diploma, Associateship, Fellowship, or any other similar title of recognition. The contents of the thesis are undergone plagiarism check using iThenticate software at C.H.M.K. Library, University of Calicut, and the similarity index found within the permissible limit. I also declare that the thesis is free from AI generated contents.

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PRAJYOTI NIKETAN COLLEGE, PUDUKAD - 680 301, THRISSUR Dt., KERALA
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Impact of Single Parenthood Among Adolescents' Achievement Motivation, Self-Concept, Adjustment, and Mental Health

Shiny PK (Research Scholar), Dr. Soumya Starlet CT (supervisor)

Abstract

The family structure plays a critical role in shaping the psychological and academic development of adolescents. In recent years, there has been a noticeable rise in single-parent households in India, driven by factors such as divorce, separation, migration, and the death of a parent. Adolescents from single-parent families may experience unique challenges that influence their achievement motivation, self-concept, adjustment, and mental health. While previous research has examined these variables individually, integrated studies addressing all four variables within the Indian socio-cultural context remain scarce. To address this gap, the present study aimed to investigate differences in these psychological outcomes between adolescents from single-parent and two-parent families and to explore the interrelationships among the variables, including the mediating role of adjustment between self-concept and mental health.

Grounded in the positivist research paradigm, the study employed a quantitative cross-sectional research design. The study was descriptive, comparative, correlational, and predictive in nature. Data were collected from 505 adolescents (250 from single-parent households and 255 from two-parent households) aged 13–19 years, selected from four districts of Kerala. Standardized instruments were used to measure achievement motivation, self-concept, adjustment, and mental health. Phase I involved a pilot study and expert consultation to refine the research tools. Phase II constituted the main study, comprising descriptive statistics, group comparisons, analyses of demographic influences, correlational assessments, regression models, and mediation analysis.

The results revealed significant differences between adolescents from single-parent and two-parent families in achievement motivation, self-concept, adjustment, and mental health. Adolescents from two-parent families generally obtained higher scores in achievement motivation, self-concept, and mental health, while also demonstrating better adjustment in specific domains. However, both groups largely scored within average or above-average ranges. Within the single-parent group, certain demographic variables such as gender, educational level, sibling status, custodial parent, reason for single parenthood, and family type showed significant differences in selected psychological variables, while some variables showed no significant variation. Correlational analysis indicated significant relationships among achievement motivation, self-concept, adjustment, and mental health. Regression analysis identified self-concept and adjustment as important predictors of mental health. Mediation analysis further revealed that adjustment partially mediated the relationship between self-concept and mental health among adolescents from single-parent families.

The findings provide useful insights for educators, counsellors, and policymakers to support adolescents' achievement motivation, self-concept, adjustment, and mental health, particularly among those from single-parent families. The study also contributes to future research in adolescent development.

Keywords: single-parent families, achievement motivation, self-concept, adjustment, mental health, adolescents, Kerala.

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കൗമാരക്കാരുടെ നേട്ടപ്രദന, സ്വയംസങ്കല്പം, പൊരുത്തപ്പെടൽ, മാനസികാരോഗ്യം എന്നിവയിൽ ഏകരക്ഷാകർതൃത്വത്തിന്റെ സ്വാധീനം

സാരാംശം

കുട്ടികളുടെ മാനസികവും വിദ്യാഭ്യാസപരവുമായ വളർച്ചയ്ക്ക് കുടുംബത്തിന്റെ ഘടന നിർണ്ണായകമാണ്. വിവാഹമോചനം, വേർപിരിയൽ, കുടിയേറ്റം, മാതാപിതാക്കളിൽ ഒരാളുടെ മരണം എന്നിവ കാരണം ഇന്ത്യയിൽ ഒറ്റ രക്ഷിതാവ് മാത്രമുള്ള (Single-parent) കുടുംബങ്ങൾ വർദ്ധിച്ചുവരുന്നു. ഇത്തരം സാഹചര്യങ്ങളിൽ വളരുന്ന കൗമാരക്കാർ ലക്ഷ്യബോധം (നേട്ടപ്രദന), സ്വയത്തെക്കുറിച്ചുള്ള കാഴ്ചപ്പാട് (സ്വയംസങ്കല്പം), സാഹചര്യങ്ങളുമായി ഇണങ്ങിപ്പോകൽ (പൊരുത്തപ്പെടൽ), മാനസികാരോഗ്യം എന്നിവയിൽ സവിശേഷമായ വെല്ലുവിളികൾ നേരിടുന്നുണ്ട്. മുൻകാല പഠനങ്ങൾ ഇവയെ പ്രത്യേകം പരിശോധിച്ചിട്ടുണ്ടെങ്കിലും, ഈ നാല് ഘടകങ്ങളെയും ഒരുമിച്ച് വിശകലനം ചെയ്ത സമഗ്ര പഠനങ്ങൾ കുറവാണ്. ഒറ്റ രക്ഷിതാവുള്ള കുട്ടികളും, മാതാപിതാക്കൾ രണ്ടുപേരുമുള്ള കുട്ടികളും തമ്മിൽ ഈ മാനസിക ഘടകങ്ങളിൽ എന്തെല്ലാം വ്യത്യാസങ്ങളുണ്ടെന്ന് കണ്ടെത്തുകയാണ് ഈ പഠനത്തിന്റെ ലക്ഷ്യം. ഒപ്പം, കുട്ടികളുടെ സ്വയംസങ്കല്പവും മാനസികാരോഗ്യവും തമ്മിലുള്ള ബന്ധത്തിൽ 'പൊരുത്തപ്പെടൽ ശേഷി' എത്രത്തോളം മധ്യവർത്തിയായി (Mediation) പ്രവർത്തിക്കുന്നുണ്ടെന്നും ഈ ഗവേഷണം പരിശോധിക്കുന്നു.

ശാസ്ത്രീയവും അളവാധിഷ്ഠിതവുമായ (ക്വാണ്ടിറ്റേറ്റീവ് കോസ് സെക്ഷനൽ) ഗവേഷണ രീതിയാണ് ഇതിനായി സ്വീകരിച്ചത്. കേരളത്തിലെ നാല് ജില്ലകളിൽ നിന്നുള്ള 13 മുതൽ 19 വയസ്സ് വരെയുള്ള 505 കൗമാരക്കാരിൽ നിന്നാണ് വിവരങ്ങൾ ശേഖരിച്ചത്. ഇതിൽ 250 പേർ ഒറ്റ രക്ഷിതാവുള്ള കുടുംബങ്ങളിൽ നിന്നും 255 പേർ മാതാപിതാക്കൾ രണ്ടുപേരുമുള്ള കുടുംബങ്ങളിൽ നിന്നുമാണ്. കുട്ടികളുടെ മാനസികാവസ്ഥ കൃത്യമായി അളക്കാൻ മാനദണ്ഡപ്പെടുത്തിയ ചോദ്യാവലികൾ ഉപയോഗിച്ചു. ആദ്യ ഘട്ടത്തിൽ ഒരു പ്രാഥമിക പഠനം (Pilot Study) നടത്തി ചോദ്യാവലികൾ മെച്ചപ്പെടുത്തി. രണ്ടാം ഘട്ടത്തിൽ വിവരങ്ങൾ ശേഖരിച്ച് അവയെ വിശദമായ സ്ഥിതിവിവരക്കണക്കുകൾ, ഗ്രൂപ്പ് താരതമ്യങ്ങൾ, റെഗ്രഷൻ മോഡലുകൾ, ഇടനില വിശകലനം (Mediation Analysis) എന്നിവയിലൂടെ വിശകലനം ചെയ്തു.

പഠനത്തിന്റെ ഫലങ്ങൾ സൂചിപ്പിക്കുന്നത്, ചില മാനസിക ഘടകങ്ങളിൽ ഈ രണ്ട് വിഭാഗം കുട്ടികൾ തമ്മിൽ കാര്യമായ വ്യത്യാസങ്ങളുണ്ടെന്നാണ്. എങ്കിലും, രണ്ട് ഗ്രൂപ്പുകളിലെയും കുട്ടികൾ പൊതുവെ നല്ല രീതിയിലുള്ള നിലവാരം പുലർത്തുന്നതായി കണ്ടെത്തി. ഒറ്റ രക്ഷിതാവുള്ള ഗ്രൂപ്പിനകത്ത് ലിംഗഭേദം, വിദ്യാഭ്യാസം, സഹോദരങ്ങളുടെ സാന്നിധ്യം, കൂടെയുള്ളത് അമ്മയാണോ അച്ഛനാണോ എന്നത്, ഒറ്റ രക്ഷിതാവുകാണുള്ള കാരണം തുടങ്ങിയ ജനസംഖ്യാ ഘടകങ്ങൾ കുട്ടികളുടെ മാനസികാവസ്ഥയെ സ്വാധീനിക്കുന്നതായി കണ്ടെത്തി. കുട്ടികളിലെ ലക്ഷ്യബോധം, സ്വയംസങ്കല്പം, പൊരുത്തപ്പെടൽ എന്നിവയെല്ലാം പരസ്പരബന്ധിതമാണെന്ന് പഠനം തെളിയിക്കുന്നു; മാനസികാരോഗ്യം മറ്റ് എല്ലാ ഘടകങ്ങളുമായും അടുത്ത ബന്ധം പുലർത്തുന്നു. കൂടാതെ, ഒറ്റ രക്ഷിതാവുള്ള കുട്ടികളിൽ അവരുടെ സ്വയംസങ്കല്പവും മാനസികാരോഗ്യവും തമ്മിലുള്ള ബന്ധത്തിൽ 'പൊരുത്തപ്പെടാനുള്ള കഴിവ്' ഒരു ഭാഗികമായ ഇടനിലപങ്ക് (മീഡിയേഷൻ) വഹിക്കുന്നതായും സ്ഥിരീകരിച്ചു.

കുടുംബത്തിന്റെ സാഹചര്യം കുട്ടികളുടെ മാനസികാവസ്ഥയെയും പഠനത്തിനുള്ള പ്രചോദനത്തെയും പല രീതിയിൽ സ്വാധീനിക്കുന്നുണ്ടെന്ന് ഈ പഠനം വ്യക്തമാക്കുന്നു. പ്രത്യേകിച്ച്, ഒറ്റ രക്ഷിതാവുള്ള കുടുംബങ്ങളിലെ കുട്ടികളിൽ ആത്മവിശ്വാസം വളർത്താനും, സാഹചര്യങ്ങളുമായി പൊരുത്തപ്പെടാൻ സഹായിക്കാനും, മാനസികാരോഗ്യം വർദ്ധിപ്പിക്കാനും ആവശ്യമായ കൗൺസിലിംഗുകളും പദ്ധതികളും രൂപകൽപ്പന ചെയ്യാൻ അധ്യാപകർക്കും, കൗൺസിലർമാർക്കും, അധികാരികൾക്കും ഈ പഠനം കൃത്യമായ നിർദ്ദേശങ്ങൾ നൽകുന്നു. പരസ്പരം ബന്ധപ്പെട്ടിരിക്കുന്ന നാല് മാനസിക ഘടകങ്ങളെ ഒരുമിച്ച് പരിശോധിച്ചതിലൂടെ, ഈ രംഗത്തെ വലിയൊരു അറിവില്ലായ്മ നികത്താനും ഭാവി ഗവേഷണങ്ങൾക്ക് ഒരു നല്ല വഴികാട്ടിയാകാനും ഈ പഠനത്തിന് കഴിഞ്ഞിട്ടുണ്ട്.

മുഖ്യപദങ്ങൾ: ഏകരക്ഷാകർതൃ കുടുംബങ്ങൾ, നേട്ടപ്രദന, സ്വയംസങ്കല്പം, പൊരുത്തപ്പെടൽ, മാനസികാരോഗ്യം, കൗമാരക്കാർ.

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ABBREVIATIONS

Ach	- Achievement motivation
Self-Concept	- SC
AD	- Adjustment
MH	- Mental Health

CHAPTER 1

INTRODUCTION

-
- *Background of the Study*
 - *Family and Its Changing Structure*
 - *Types of Families*
 - *Single Parenthood in India and Kerala*
 - *Adolescents in Single-Parent Families*
 - *Psychological Challenges of Adolescents in Single-Parent Families*
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-

Back ground of the study

The family is universally recognised as the fundamental unit of society, offering emotional, social, and economic support to its members. Family relationships reflect the quality of bonding and attachment among individuals, encompassing interactions between parents, siblings, grandparents, and extended relatives. Positive and supportive family relationships create a sense of security and stable attachment, both of which are essential for healthy individual development.

Family is widely recognised as the primary social institution for nurturing and raising children. However, the form and composition of families differ considerably across cultures and historical periods, reflecting changing social and economic contexts (Georgas et al., 2006; Roopnarine & Gielen, 2005; Slobodskaya, 2015). In recent decades, globalisation and socio-demographic transitions have led to profound structural changes in families worldwide, affecting traditional, developing and industrialised societies alike. Declining fertility rates have reduced family size, while decreased marriage rates and risen divorce, separation, remarriage, cohabitation and single parenthood have redefined household patterns.

Globally, family structures have shifted away from traditional extended and multigenerational households comprising parents, children, and extended kin towards smaller nuclear families of parents and their children. Even this conventional nuclear model, with two married parents and gender-specialised roles (breadwinner father and homemaker mother), has become less prevalent in many developed countries. Increasingly, children are being born to unmarried couples or single mothers and often experience multiple family transitions throughout

childhood and adolescence. Alongside this transformation, working mothers, ageing populations, and changing gender roles have produced a greater variety of family forms, including single-parent, cohabiting, step or reconstituted, non-residential father, and same-sex families. Importantly, these households remain embedded in extended kinship networks that continue to play a critical role in childrearing and social support (Slobodskaya, 2015; Amato, 2010; McLanahan & Schwartz, 2002).

Types of Families

As the primary social institution, the family plays a central part in guiding children's development, social adaptation, and emotional well-being. While family arrangements vary across cultural and social settings, they are typically classified into broad categories reflecting their structure, composition, and functions. Traditionally, two dominant family systems have been recognized in India, the joint (or extended) family and the nuclear family. Over time, however, social change, globalization, migration, and shifts in gender roles have given rise to newer forms of families, such as single-parent families, blended or stepfamilies, cohabiting families, and same-sex parent families. Thus, families today can be understood as diverse and dynamic rather than fixed or uniform (Georgas et al., 2006; Roopnarine & Gielen, 2005).

Joint or Extended Families

Joint families are characterized by multiple generations living together under one roof, often including grandparents, uncles, aunts, cousins, and siblings. This traditional Indian structure emphasizes collective living, shared resources, and

mutual responsibilities in child-rearing. Emotional support, care for the elderly, and cultural continuity are often cited as strengths of the joint family system (Patel et al. 2007). However, in recent decades, urbanization, career mobility, and economic independence have reduced the prevalence of joint families, especially in cities.

Nuclear Families

Nuclear families consist of parents and their children living in a single household. This system emphasizes privacy, independence, and self-sufficiency. It has become the most common family structure in urban India due to space limitations, job mobility, and the desire for (Allendorf, 2013; Uberoi, 2000). While nuclear families provide focused parental attention, they may lack the social buffering and support traditionally available in extended family systems.

Single-Parent Families

Single-parent families are households where one parent, the mother or the father, takes the main responsibility for raising children. This can happen due to divorce, separation, death, migration, or abandonment. In Kerala, the growing number of divorce and separation cases has become a major reason for the rise in mother-headed families, with family courts reporting a steady increase in such petitions (Tharakan, 2025). The Census of India (2011) reported that Kerala has one of the largest shares of female-headed households in the nation, accounting for approximately 23%. While migration also changes family patterns, studies show that women living without their husbands, whether widowed, divorced, or separated, are far more in number than men living without their wives. This highlights that divorce

and separation play a bigger role than migration in the growth of mother-headed households (CDS, 2018).

Blended or Stepfamilies

Blended families are formed when divorced or widowed individuals remarry, creating households that may include step-parents, step-siblings, or half-siblings. Such families can offer new sources of emotional and practical support, but they also face challenges such as adjustment difficulties, role conflicts, and loyalty issues among family members. In India, stepfamilies are gradually becoming more visible, though they are still less common compared to many Western societies. Research highlights that while stepfamilies provide opportunities for resilience and renewed family bonds, they also require considerable adaptation and communication to overcome the complexities of their structure (Cherlin, 2010; Ganong & Coleman, 2017; Jensen & Shafer, 2013).

Cohabiting Families

Cohabiting families are formed when unmarried partners live together and may raise children. While cohabitation is common in many countries, it remains relatively uncommon in India due to strong cultural norms and limited legal recognition. Indian scholarship notes a wide “marriage–cohabitation gap,” reflecting social disapproval and institutional barriers (Dommaraju, 2016). Legally, Indian courts have extended certain protections only to relationships “in the nature of marriage,” and have repeatedly clarified that live-in partnerships are not marriages, illustrating their constrained legal status (Indra Sarma v. V.K.V. Sarma, 2013; D.

Velusamy v. D. Patchaiammal, 2010). For global context, demographic reviews document the broad rise and normalization of cohabitation in the West (Raley, Sweeney, & Wondra, 2015).

Same-Sex Parent Families

Families headed by same-sex parents consist of two individuals of the same gender who share the responsibilities of raising children. In many Western societies, such families are now legally and socially recognized, with adoption and marriage rights extended to same-sex couples. Research shows that children raised in same-sex households fare just as well as those in heterosexual families on measures of adjustment, well-being, and social development (Patterson, 2015; Oakley, Farr, & Scherer, 2017). At the same time, stigma and minority stress can create additional challenges, though supportive family processes often buffer these effects (Farr & Goldberg, 2020). In India, however, such families remain rare and face strong cultural and legal barriers. Adoption by same-sex couples is still not formally permitted, and social acceptance is limited, though public discourse around family diversity is slowly expanding (Saxena, 2025). Despite these barriers, same-sex families highlight the growing diversity of family forms worldwide and the importance of recognizing varied pathways to parenting.

Parenthood and the Emergence of Single-Parent Families

Parenthood is one of the most fundamental social roles, encompassing the responsibility to nurture, protect, and guide children to support their physical, emotional, and social development. Parents provide the primary environment in

which children develop their physical, emotional, cognitive, and social capacities. Effective parenthood involves meeting children's basic needs, offering affection and security, and preparing them to function successfully in society. The influence of parents is considered so profound that it often outweighs the impact of schools, peers, or communities during their developmental years.

Traditionally, parenthood is shared by two parents who assume complementary roles. Fathers are often associated with providing economic stability, protection, and discipline, while mothers are typically linked to emotional care, nurturing, and day-to-day management of the household. Although such distinctions vary across cultures and are increasingly blurred in modern contexts, the dual presence of both parents has historically been viewed as ideal for providing balance in caregiving and ensuring healthy development. Studies consistently indicate that the quality of parental involvement and the stability of the parental relationship exert profound effects on children's outcomes, shaping their emotional well-being, academic achievement, social competence, and long-term adjustment (Bornstein, 2015; Berns, 2022).

However, parenthood today is being reshaped by powerful social and demographic forces. Rising divorce rates, non-marital childbearing, prolonged spousal migration, remarriage, and the death of a parent have all contributed to a transformation in how parenting is experienced. In many households, one parent is left with the primary responsibility for raising children, giving rise to what is commonly known as single parenthood. Unlike the traditional two-parent model, single parenthood requires one parent to simultaneously fulfil the economic,

emotional, and supervisory roles typically shared between two individuals. This dual burden can create significant stress, yet many single parents develop resilience and close bonds with their children.

In general terms, a single-parent family refers to a household headed by either the mother or the father, who alone holds custodial responsibility for the child or children (Amato, 2010). These families may arise under varied circumstances, including marital dissolution, widowhood, separation, desertion, or intentional decisions such as adoption by a single adult. They often function with fewer financial, social, and emotional resources compared to two-parent households. While the absence of one parent can create vulnerabilities, single-parent families also reveal adaptive capacities, particularly when supported by extended kin, community networks, or institutional systems.

Globally, single-parent households have been steadily rising. High rates of single parenthood are reported in countries such as the United States, the United Kingdom, and across parts of Europe, largely due to evolving social norms, the normalization of divorce, and the prevalence of non-marital childbearing (World Population Review, 2025). In India, the scenario is different but evolving. Traditionally, single-parent families were rare, given the strong cultural emphasis on marital permanence and extended family networks. However, recent demographic and cultural changes have altered this landscape. Census 2011 reported that about 4.5% of Indian households over 13 million were headed by single parents, a figure that has grown in the last decade. Data from the National Family Health Survey (NFHS-5, 2019–21) shows that roughly 6% of Indian households are single-parent

households now (International Institute for Population Sciences, 2022). While this is still lower than in many Western countries, it's significant for us because it challenges the traditional Indian view of family stability and marriage permanence

Several reasons explain why single-parent households are growing in India. Family breakdown is the main one—usually because of ongoing marital conflict, infidelity, forced marriages, or simply couples not being compatible (Falana et al., 2012). Financial stress, disputed paternity, and one parent abandoning the family also play a role. Beyond this, the death of a spouse, unplanned pregnancies, single adults adopting children, and families split by migration have all increased single-parent households (Stephen & Udisi, 2016). Bigger social changes matter too—urbanization has changed how communities work, ideas about gender roles have shifted, and people are more focused on personal choice now. All this has made divorce and remarriage more acceptable, which reduces the shame that once attached to single parenthood. Early marriages and teenage pregnancies, which tend to be unstable, have also pushed up the number of single-parent families (Ali & Soomar, 2019; Gupta & Kashyap, 2020).

Kerala shows these trends clearly. The state used to follow a matrilineal joint family system where different generations lived together and shared childcare and money. Over time, this changed to nuclear families, which are what you see now. Census 2011 found that 68.45% of Kerala households are nuclear, showing a real break from the old extended family arrangements (Zachariah & Rajan, 2012). Divorce and separation have become normal, and Kerala has one of the highest numbers of divorce petitions in all of India (Devika & Kodoth, 2018; Rajasenan,

Tharakan, & Rajeev, 2022). Men leaving for jobs in the Gulf countries have also led to more female-headed households, where women handle both money and raising children alone (Kerala State Planning Board, 2020). These changes show how much Kerala has moved away from its old family values and how common single-parent households have become.

All this shows why we need to look at both traditional and modern forms of parenthood. Single-parent families represent a real break from the old way families worked and how people shared childcare. For teenagers, this has real effects: growing up with just one parent can affect how driven they are in school, how they see themselves, how well they adapt, and their mental health. But close relationships, being able to bounce back from difficulty, and parents staying involved can help protect against these risk

Types of Families in the Present Study

Although multiple family types exist, the present study focuses specifically on two-parent families and single-parent families. These types were chosen because they are the most prevalent in Kerala today and because their structural differences, presence of both parents versus one are directly relevant to the psychological outcomes being studied.

- Two-parent families are defined as households where both parents live with and raise their children.
- Single-Parent Families are defined as households where either the mother or father is the sole custodial parent due to separation, divorce, or death.

Current Status of Families in India and Kerala

In India, the family continues to serve as the central institution of social life, but its forms have undergone significant changes in recent decades. Nuclear families now represent the dominant family type across the country, a shift driven by urbanization, economic independence, and mobility. According to Census 2011, more than 70% of Indian households were nuclear, while only about 16% were joint or extended families, with the remainder consisting of other forms, including single-parent and complex households (Office of the Registrar General, 2011). The National Family Health Survey (NFHS-5, 2019–21) also confirmed the growing prevalence of nuclear families, especially in urban areas and among younger generations. Thus, while joint families continue to exist, particularly in rural areas, India today is predominantly characterized by nuclear households.

Single-parent families are also on the rise in India. Census 2011 recorded about 4.5% of households (over 13 million) headed by single parents, and NFHS-5 data estimate that this proportion has now grown to around 6% (International Institute for Population Sciences, 2022). Although the percentage remains lower than in many Western countries, its cultural significance is considerable, since single parenthood challenges long-standing ideals of family stability and marital permanence in Indian society.

The situation in Kerala reflects these national trends but in a more pronounced manner. Traditionally, Kerala followed a matrilineal joint family system, where extended kin shared resources and caregiving responsibilities (Chakraborty & Singh, 2019). Over time, however, this structure has eroded due to

socio-economic development, migration, and changing gender roles. Census 2011 reported that 68.45% of Kerala households were nuclear, making it one of the states with the highest prevalence of nuclear families (Zachariah & Rajan, 2012). At the same time, Kerala consistently registers the highest absolute number of divorce petitions in India, despite the country's overall divorce rate being among the lowest globally (Rajasenan, Tharakan, & Rajeev, 2022). This has directly contributed to the rise of single-parent households, especially mother-headed families.

Adolescents in Single-Parent Families

Adolescence, typically defined as ages 10–19 years (WHO, 2014), is a critical developmental period characterised by rapid physical, cognitive, and emotional changes, identity formation, and increased academic and social demands (Steinberg, 2014). During this stage, adolescents rely heavily on family support for emotional stability, academic guidance, and social modelling. In single-parent households, however, the absence of one parent often results in reduced supervision, increased household responsibilities, financial constraints, and heightened emotional strain (Hetherington & Kelly, 2002).

Research in Kerala suggests that adolescents in single-parent families face more stress, academic struggles, and adjustment issues than their peers in two-parent families (Thomas & Jacob, 2020). These challenges are further compounded by societal perceptions and stigma surrounding single parenthood, which can negatively influence adolescents' emotional climate and self-perception (George & Varghese, 2022). In a state known for high academic competitiveness, such stressors may be even more pronounced, increasing vulnerability to psychological distress.

National and state-level studies consistently report that adolescents from single-parent households are at an elevated risk of depression, anxiety, behavioural issues, and social stigma when compared with those from intact families (Bhargava, 2022; Sivanandan & Mayya, 2023; Rajalakshmi et al., 2021). Systematic reviews highlight that family disruption, especially parental divorce, has a significant impact on adolescents' cognitive, emotional, and social functioning, leading to greater psychological distress and behavioural challenges (Aneesh & Sujata, 2025).

However, research also identifies protective factors such as resilience, strong peer networks, and social competence that can mitigate these risks. Adolescents with higher social competence defined as the ability to build and maintain healthy peer relationships often demonstrate better mental health and academic outcomes, even when raised in single-parent households (Sia, 2024).

Kerala's demographic trends, including rising divorce rates and increasing female-headed households, have created new economic and emotional pressures on single parents, influencing the overall family environment and adolescent development (Tharakan, 2024). These developments make it clear that adolescents in single-parent families need mental health support and social help that's meant specifically for their situation.

Adolescents who grow up with just one parent face experiences that are shaped by the changes in their family. This could be because their parents divorced, separated, because one parent had to leave for work somewhere else for a long time, or because a parent died. Whatever the reason, it changes everything in the family, how people get along, whether there's enough money, what emotional support is

there. All this affects how an adolescent feels inside, how they do in school, and what their friendships are like. Some things can help, though. If an adolescent is the kind of person who can bounce back from hard times, if they have family members who support them, if they have friends they can trust, these things can protect them from the worst of it (Aneesh & Sujata, 2025; Sia, 2024; Tharakan, 2024). Because each single-parent family situation is different, we need to really understand what problems each adolescent faces when they are growing up with one parent.

Challenges Faced by Adolescents in Single-Parent Families

Adolescents growing up in single-parent families do face unique challenges. These come from the way their family has changed, the extra responsibilities they might have around the house, and the way relationships work in their family now. Many of them do manage well and adapt fine, but research shows that adolescents from single-parent homes are more likely to struggle with emotions, do less well in school, have trouble in their social lives, and act out in ways that are concerning compared to adolescents with two parents (Amato, 2010; Hetherington & Kelly, 2002). These problems come not only from the absence of one parent but also from the money problem, emotional strain, and social difficulties associated with single parenthood.

Emotional and Psychological Challenges

When an adolescent loses daily contact with one parent, whether because of divorce, separation, death, or because a parent has to be away for work for a long time, it creates feelings of abandonment, sadness, and insecurity. Adolescents in

these situations often report feeling stressed, anxious, and sometimes depressed (Aneesh & Sujata, 2025). The emotional pain can be intensified when parental conflict precedes separation or if they keep fighting afterward.

Gupta and Kashyap (2020) found that children respond to parental separation differently depending on their age: Younger children tend to feel grief and fear, and they often hope their parents will get back together. Older children are more likely to feel angry and bitter. Growing up in a single-parent home can also affect how teenagers see themselves and their physical health. Some experience shame, confusion, and emotional pain that can lead to depression. They may also act out in ways like being withdrawn, being restless and unable to focus, acting aggressive, or having discipline problems. These emotional problems often show up at school too, their grades drop and their friendships suffer because they're dealing with anxiety and worry about whether their family is stable.

These emotional problems have a direct impact on how adolescents feel mentally. Studies have shown that adolescents in single-parent families experience lower mental well-being overall. They have higher rates of depression, anxiety, and emotional problems compared to teenagers living with both parents (Amato, 2010; Hiko et al., 2023). Research in Kerala has found the same thing, parental absence and family breakdown significantly affect how adolescents' mental health develops (George & Varghese, 2022).

Academic and Motivational Challenges

Parental separation can also influence academic performance and motivation. Single parents often manage both caregiving and income-generation responsibilities, leaving limited time for school involvement, academic monitoring, or participation in parent–teacher interactions. Financial strain may further limit access to private tuition, technology, or extracurricular opportunities that support academic growth (Seth & Gupta, 2019). Consequently, some adolescents from single-parent families show lower academic motivation and reduced school engagement, particularly when emotional distress and role strain interfere with concentration. Academic challenges also have implications for adolescents’ achievement motivation. Research indicates that adolescents from single-parent households often report lower levels of aspiration, persistence, and goal-setting compared to peers from intact families, largely due to financial stress and reduced parental involvement (Ukkali & Hiremath, 2018; Kumar & Tankha, 2020). Motivation to achieve can be compromised when emotional distress interferes with concentration or when resources for academic support are limited. However, studies from Kerala indicate that strong collaboration between schools and single parents can mitigate these risks and enable adolescents to maintain satisfactory academic outcomes (Varghese & Mathew, 2021).

Social and Behavioural Challenges

Adolescents in single-parent families often encounter difficulties in social adjustment, particularly in communities where family stability is highly valued. Experiences of peer rejection, teasing, or discrimination related to family status can

result in social withdrawal, feelings of isolation, and strained peer relationships (Kumar & Thomas, 2020). Behavioural responses such as irritability, defiance, or risk-taking may develop as coping mechanisms to deal with stress or reduced parental supervision (Bhargava, 2022).

Discipline within single-parent households can also be more challenging to maintain, contributing to increased behavioural and psychosocial problems such as smoking, alcohol use, delinquency, and violence (Gupta & Kashyap, 2020). The absence of a father figure, in particular, has been associated with antisocial behaviours among boys, including substance abuse, aggression, and lower levels of social adjustment (Bornstein & Bradley, 2014). In extreme cases, adolescents may express unresolved emotional distress through aggression, rule violation, or even suicidal behaviours (Mugove, 2017).

Despite these risks, positive outcomes are also evident. Many adolescents develop maturity and coping skills by observing the persistence and hard work of their custodial parent. This experience can encourage constructive emotional expression, responsible behaviour, and independence, fostering resilience and adaptability (Guhasarkar, 2020).

Social opportunities may also be restricted in single-parent households due to limited time, reduced financial resources, or socially less accepting attitudes toward non-traditional families (Cavanagh & Fomby, 2012; Bhat & Patil, 2019). However, support from extended relatives, peers, neighbours, religious groups, and community-based child care services can strengthen adolescents' sense of belonging and stability (Snyder, 2020; Stephen & Udisi, 2016).

Importantly, these social and behavioural challenges are not limited to external outcomes but directly affect adolescents' adjustment and self-concept. Difficulties in peer acceptance or exposure to stigma may hinder social adjustment, while negative peer comparisons and internalized stigma can weaken self-concept, increasing vulnerability to self-doubt and identity confusion (Cavanagh & Fomby, 2012). Thus, social and behavioural difficulties often extend beyond immediate challenges, influencing how adolescents perceive themselves and adapt to their broader environment.

Role Changes and Responsibility Burden

In a single-parent home, adolescents often take on extra responsibilities because one parent is missing. They might look after their younger brothers and sisters, do household chores, manage money, or even work part-time to bring money into the family. Taking on these responsibilities can make them grow up faster, become independent, and learn how to solve problems. But it also puts extra pressure on them when they're already dealing with school and figuring out who they are (Rani & Devi, 2019).

When roles change in the family like this, it creates what's called "role strain", the teenager has to juggle schoolwork, their social life, and all these household duties, and it doesn't fit. This strain leaves them tired and stressed, and they end up doing less of the activities that are fun or help them relax. Their health suffers, both physically and emotionally. Some teenagers start to resent all this or feel like it's unfair, especially when they see other adolescents their age with two parents who don't have to do as much.

In Kerala, the situation is often made harder by gender expectations. Girls are usually given the caregiving work—looking after siblings, cooking, helping with the household. This extra load interferes with their studies, takes away their free time, and causes them emotional pain (Kerala State Planning Board, 2020). Boys usually don't get the caregiving duties as much, but they often feel pressure to earn money or to act like “head of the household”, and that brings its own stress and confusion about who they are.

Research shows that these role changes cut both ways. On one side, adolescents may develop resilience, leadership qualities, and understand responsibility earlier than their friends. On the other side, the added burden can compromise their academic achievement, limit peer interactions, and affect emotional adjustment (Joseph & Mathew, 2021). Whether they come out okay or struggle really depends on whether they have help from extended family, friends, and people in the community.

Given these diverse challenges, it becomes essential to examine how the realities of single-parent families shape adolescents' psychological functioning. This study focuses on four main things: how driven they are to achieve, how they see themselves, how well they adjust to their situation, and their mental health. These four areas show how adolescents set goals for themselves, what they think of themselves, how they handle their changing family situation, and whether they're doing okay overall (Steinberg, 2014; Santrock, 2019).

Psychological Variables of the Study

Adolescence is a transitional stage that brings rapid biological, emotional, cognitive, and social development. It is also a period of increased vulnerability, as young people strive for independence while still relying heavily on their families for guidance and support. For adolescents living in single-parent households, these changes occur within the context of altered family structures, financial pressures, and the emotional strain associated with the absence of one parent. To understand their experiences more comprehensively, the present study examines four psychological variables that are central to adolescent development: achievement motivation, self-concept, adjustment, and mental health. These domains were selected because they capture how adolescents set goals, perceive themselves, adapt to challenges, and maintain overall psychological well-being, all of which may be shaped by the presence or absence of parental support.

Achievement Motivation

Achievement motivation is generally defined as the internal drive that directs individuals to set, pursue, and attain goals (McClelland, 1958). It is not limited to academics but encompasses a broad spectrum of life tasks where effort, persistence, and determination are required. Individuals with strong achievement motivation generally favor moderately challenging tasks, persist despite setbacks, and actively pursue opportunities for self-improvement.

During adolescence, achievement motivation plays a crucial role because it is a stage when young people start to form career aspirations, make decisions about

higher education, and compare their abilities with peers. Motivational patterns developed during these years often carry forward into adulthood, influencing academic outcomes, career progression, and life satisfaction (Elliot & Dweck, 2005). Factors such as parenting style, school environment, peer encouragement, and socio-economic resources strongly shape motivation. Supportive parenting and positive school engagement foster higher achievement motivation, while parental neglect, inconsistent feedback, or lack of resources can weaken it.

In the context of single-parent families, adolescents often face barriers that may undermine their achievement motivation. A single parent, balancing both caregiving and economic responsibilities, may have less time to monitor homework, provide career guidance, or encourage extracurricular engagement (Sangeet & Singh, 2022). Financial constraints can reduce access to private tuition, internet facilities, or skill-building programmes, all of which enhance achievement. Furthermore, the stress associated with family disruption or parental absence can reduce concentration and persistence (Amato, Patterson, & Beattie, 2015).

At the same time, research indicates that achievement motivation in single-parent adolescents is not uniformly low. Many develop resilience and self-reliance, driven by the need to contribute to the household or live up to the expectations of the custodial parent. Kerala-based studies suggest that adolescents from single-parent households sometimes report lower aspirations for higher education, but those with strong parental or extended family support show equal, or in some cases higher, levels of self-driven motivation compared to peers from intact families (Varghese &

Mathew, 2021). Thus, achievement motivation among single-parent adolescents is shaped by a complex interplay of constraints and protective factors.

Self-Concept

Self-concept is what a person thinks about themselves, how they judge themselves, and what they believe about who they are. It covers things like how they see themselves in school, how they think they do socially, their emotions, and how they look (Marsh & Shavelson, 1985). Self-concept isn't just about who teenagers think they are, it's about how they feel about whether they're worth something and whether they're good at things. When someone has a positive self-concept, they tend to have higher self-esteem, develop a stronger sense of identity, and handle tough situations better. When someone has a negative self-concept, they may feel inferior, insecure, and more likely to fall apart under stress.

Adolescence is a particularly critical stage for self-concept development. As children enter their teenage years, they start to pay more attention to themselves, they care more about what other people think, and they start exploring who they are. How they see themselves is shaped by their friendships, what their parents say about them, how they do in school, and what society values. They start comparing themselves to others a lot, and whether their peers like them or reject them can affect how they feel about themselves for a long time.

For adolescents in single-parent households, self-concept may be affected in different ways. The absence of one parent reduces opportunities for balanced feedback and diverse role models. Exposure to parental conflict or divorce may

create confusion and self-blame, lowering confidence. In cultures where single parenthood carries stigma, adolescents may internalize negative societal attitudes, resulting in feelings of embarrassment or inadequacy (Bharathi & Rani, 2018). Kerala's closely-knit communities magnify this challenge because family structures are highly visible, and differences can become points of peer teasing or discrimination (Kumar & Thomas, 2020).

Nevertheless, single-parent households can also foster strong self-concepts, particularly when custodial parents adopt warm and supportive parenting practices. Adolescents who feel respected, encouraged to express themselves, and emotionally secure often develop positive self-perceptions regardless of family structure. Peer support, mentoring from teachers, and participation in youth groups further strengthen social identity and confidence. Evidence suggests that in Kerala, adolescents who receive consistent emotional support from their custodial parent are less affected by societal stigma and report healthier self-concept levels.

Adjustment

Adjustment is the ability to adapt to changing circumstances and maintain psychological balance across key life domains such as family, school, peers, and community (Hetherington & Kelly, 2002). Successful adjustment is not merely about avoiding stress but involves actively coping with challenges, solving problems, and maintaining positive relationships.

In adolescence, adjustment is particularly significant because young people face multiple transitions higher academic demands, shifting peer networks, and

evolving family roles. When an adolescent adjusts well, they can handle arguments and conflict, work toward the things they want for themselves, and keep their emotions stable. When an adolescent doesn't adjust well, you see them pull away from people, act aggressive, or stop trying in school.

In single-parent families, adjustment often becomes a pressing challenge. Adolescents may need to adapt to reduced parental supervision, new living arrangements, or the financial limitations of a single-income household. They may also take on added household responsibilities, leading to stress and reduced participation in recreational or social activities (Rani & Devi, 2019). Emotional strain caused by parental conflict, grief following the death of a parent, or the absence of consistent parental involvement can further complicate adjustment.

Kerala-based studies have reported that adolescents from single-parent households sometimes show lower levels of social and school adjustment than their peers from two-parent families (George & Varghese, 2022). However, Kerala's strong community support networks and extended kinship systems often act as protective buffers. Adolescents who receive practical help from relatives, guidance from teachers, and encouragement from community-based youth programmes are often able to adjust successfully despite family challenges.

Mental Health

According to the World Health Organization (2022), mental health is understood as a condition of well-being in which people are able to recognize their abilities, manage everyday stresses, engage productively in work, and make

meaningful contributions to their community. Good mental health is more than just being free from illness, it also includes resilience, emotional stability, and healthy relationship-building.

During adolescence, mental health is especially important because rapid hormonal, cognitive, and social changes intersect with identity formation and increasing academic pressure. Good mental health enables adolescents to engage meaningfully in school and community life, whereas poor mental health may manifest in depression, anxiety, behavioural problems, or substance abuse.

Single-parent families are often associated with elevated risks of mental health difficulties among adolescents. Factors such as financial stress, reduced parental availability, inter-parental conflict, or bereavement can increase vulnerability to emotional distress (Amato, 2005; Hetherington & Kelly, 2003; McLanahan, Tach, & Schneider, 2013).). Adolescents in such households may experience heightened anxiety, depressive symptoms, or behavioural problems if adequate support is lacking.

In Kerala, research has indicated that adolescents from single-parent households often report higher stress levels and symptoms of anxiety and depression (Joseph & Mathew, 2021). Economic insecurity, combined with emotional strain from parental absence, is commonly cited as a contributing factor. At the same time, protective influences such as strong emotional bonds with the custodial parent, support from extended family members, and access to school-based counselling services can significantly enhance resilience. Adolescents who are able to rely on

these supports often maintain psychological stability despite the challenges of single parenthood.

Review of Literature

Single Parenthood and Adolescents

Parenthood has traditionally been rooted in marriage, which is socially and legally recognized as the union of a man and a woman living together as husband and wife (Cherlin, 2010). Parenthood is not limited to biological reproduction but also involves fulfilling the physical, emotional, and social needs of children through care, education, guidance, and social development. Parents may be biological caregivers or non-biological guardians who assume these responsibilities.

Single parenthood arises when one of the two individuals responsible for child-rearing is absent, leaving the other to shoulder the dual role of caregiver and provider. This situation can occur due to divorce, separation, death, or desertion. The World Health Organization (2022) highlights that single-parent families are increasingly common worldwide and often face unique economic and psychosocial challenges. Coontz (2017) defines single-parent families as households where one parent resides with dependent children without a spouse or partner, noting their rapid increase worldwide in the latter half of the twentieth century. While some scholars interpret this rise as evidence of family breakdown, others regard it as an adaptive response to shifting social and economic conditions (Amato, 2005; McLanahan, Tach, & Schneider, 2013).

The challenges of single parenthood are considerable. With one parent taking on both caregiving and financial responsibilities, single parents often experience economic strain, reduced supervision, and greater parental stress (Adebola, 2013; Azuka-Obieke, 2016). In contexts where maternal roles are associated with child-rearing and paternal roles with financial provision and discipline, the absence of either parent creates role gaps that influence children's upbringing and socialization. (Tuktibayeva & Amitov, 2025; Amato, 2005). Children from such families are sometimes labelled “broken homes,” in contrast to “intact families” where both biological parents reside with their children (Amato, 2000; Sun & Li, 2002). Disruptions in family structure can affect intellectual stimulation, emotional bonding, and role modelling, with consequences for social competence and academic performance (Roehlkepartain et al., 2005; Amato, 2010).

Nevertheless, outcomes are not uniform. Many children and adolescents raised in single-parent households develop resilience, maturity, and independence, often by assuming additional household responsibilities or developing stronger coping skills. These variations highlight that the effects of single parenthood are shaped by a complex interplay of parental quality, social support, and cultural context rather than by family structure alone.

Single Parenthood in India and Kerala

Although single parenthood has long existed in India, it remains less common than in many Western countries. According to the Census of India (2011), about 4.5% of households, over 13 million were headed by single parents. The National Family Health Survey (NFHS-5, 2019–21) reports that this proportion has

now risen to nearly 6% (International Institute for Population Sciences [IIPS] & ICF, 2021). While these figures are lower than global averages, they reflect a notable change in a society where the two-parent household is traditionally considered the norm.

Single parenthood in India has diverse causes. Divorce and legal separation, though relatively rare, are steadily increasing in urban centres such as Kerala, Delhi, and Maharashtra (Tharakan, 2024). Widowhood remains a significant contributor, particularly in rural areas. Other pathways include spousal desertion and abandonment, as well as male migration to Gulf countries, which has resulted in many de facto female-headed households (Goode, 1993; Pradhan, 2011; Kerala State Planning Board, 2020). In recent years, single-parent adoption has also become more visible among educated, urban middle-class families, reflecting evolving social values (Ali & Soomar, 2019).

Despite these demographic shifts, strong cultural preferences for intact families persist. Women who become single parents, whether due to widowhood, divorce, or desertion, often face stigma, financial hardship, and reduced community support (Krishnakumar & Indumathi, 2014). Custodial fathers, although fewer, face different challenges, as caregiving is often viewed as a maternal role (Amato, 2010). These gendered expectations shape the everyday realities of single-parent households in India.

Research indicates that adolescents in single-parent households are at greater risk of financial strain, reduced parental supervision, and emotional stress, which may affect their academic motivation, adjustment, self-concept, and mental health

(Amato, 2010; Hetherington & Kelly, 2002). In socially cohesive communities, stigma linked to family structure can also heighten feelings of inadequacy and hinder peer acceptance (Ali & Soomar, 2019).

At the same time, studies show that adolescents from single-parent families often display maturity, resilience, and adaptability, especially when the custodial parent provides consistent emotional support or when extended family networks step in to assist (Gupta & Kashyap, 2020). Child outcomes, therefore, depend more on parenting quality, financial stability, and supportive networks than on family structure alone (Malik et al., 2022; Mabuza et al., 2014).

Kerala reflects these changing patterns more strongly than many other states. Historically organized around matrilineal joint families, the state has seen a rapid shift to nuclear households, with 68.45% recorded as nuclear in the 2011 Census (Zachariah & Rajan, 2012). It also reports some of the highest numbers of divorce petitions in India (Rajasenan, Tharakan, & Rajeev, 2022).

Another distinctive factor is Kerala's high level of male migration to Gulf countries, which has produced many female-headed households. While Kerala's high literacy rates, social development, and strong kinship ties provide some protection, adolescents in such families often face increased caregiving responsibilities, emotional strain, and reduced supervision (Kerala State Planning Board, 2020).

India lacks comprehensive welfare schemes specifically designed for single-parent households. Support is usually indirect through widow pensions,

scholarships, or subsidies for disadvantaged families (Ministry of Women and Child Development, 2021). In practice, single parents rely heavily on extended families, community networks, and schools to bridge caregiving gaps. The absence of targeted policy support highlights the importance of family and community systems in shaping adolescent outcomes.

Adolescents in Single-Parent Families: Psychosocial, Behavioural, and Developmental Outcomes

Adolescence is a critical stage of development characterized by heightened emotional sensitivity, identity exploration, and a growing need for autonomy. Family structure plays a decisive role in shaping adolescents' psychological well-being and social adjustment. Adolescents in single-parent families, unlike their peers from two-parent households, frequently face unique challenges, with their outcomes shaped by factors such as age, gender, cultural setting, and the reasons for parental absence. (Amato & Cheadle, 2005).

When a parent leaves because of divorce, death, prolonged separation, or abandonment can unsettle adolescents' sense of security and continuity. This kind of disruption can bring up anger, confusion, helplessness, and fears of abandonment (Alami et al., 2014; Ali & Soomar, 2019). Research has found that single parenthood to elevated risks of loneliness, anxiety, and depression, along with diminished optimism about the future (East, 2010). Some also have behavioural problems, they might be aggressive, restless, refuse to listen, or get into trouble. These issues often happen because the parent doesn't show warmth consistently, there aren't regular

routines in the house, and there's no clear discipline (Cavanagh & Fomby, 2012; Mello et al., 2016; Richer & Lemola, 2017).

In countries like India and other South Asian countries, these problems get worse because there's a social stigma attached to single-parent families. This makes adolescents feel even more alone and makes them feel like they're not worth much. Adolescent girls have it particularly hard because they are often expected to take care of their siblings and the household, which takes away from their studies and puts stress on their emotional health. Other countries in the region show how big this problem is, Pakistan alone had over 19,000 divorce cases reported in just one province. That means thousands of adolescents are growing up in non-traditional families and often don't have the mental health support they need (Ramzan et al., 2018).

Single parents themselves are struggling too. They have to do many jobs at once-work, raise the children, handle the household, all while dealing with a lot of stress. This means they don't have as much time or energy to guide their children consistently. When parental involvement and open communication are constrained, adolescents may be more vulnerable to risky behaviours such as substance use, unsafe sexual practices, delinquency, and suicidal tendencies (Shidhaye, 2021; Macalli et al., 2018; Wang et al., 2014). Given that adolescents often model behaviours and values after their parents, disruptions such as divorce or parental loss can significantly shape self-perception, peer relationships, and self-esteem (Trzesniewski et al., 2006; O'Dea, 2009).

In addition, the inability of single parents to fully support both academic and emotional needs can hinder adolescents' achievement motivation and psychosocial adjustment. Reduced participation in school activities, weaker academic monitoring, and financial strain may further affect educational outcomes and overall well-being (Simons-Morton, 2001; Fosco, 2012).

Despite the potential risks, it is essential to acknowledge that the experiences and outcomes of adolescents in single-parent families are not uniformly adverse. Many demonstrate resilience, maturity, and independence, often emerging with enhanced coping skills and responsibility, especially when supported by extended family, peers, or community networks.

These insights emphasize that family structure and parental involvement are closely tied to adolescents' adjustment, self-concept, achievement motivation, and mental health. Together, these four variables provide a comprehensive lens through which the developmental outcomes of adolescents in single-parent families can be examined, forming the focus of the present study.

Achievement motivation

Barajas (2011) reviewed multiple studies and reported that, even after accounting for socioeconomic status, adolescents from single-parent households often demonstrate lower academic attainment, poorer performance on standardized assessments, and complete fewer years of education than their counterparts in two-parent families. Father absence, in particular, was strongly associated with reduced motivation and an external locus of control, indicating less confidence in personal

academic ability and diminished persistence (Fry & Scher, 1984). Boys were reported to be more negatively impacted than girls, suggesting gender differences in coping and motivational responses to family disruption (Hetherington, Camara, & Featherman, 1983). Prolonged exposure to single-parent living arrangements correlated with lower educational attainment, especially among males, with differences ranging from 0.7 to 1.7 fewer years of schooling (Krein & Beller, 1988). However, the review also highlighted resilience factors, including strong parent–child communication, community support, and increased autonomy, which helped some adolescents maintain high achievement motivation despite family challenges (Hurtes & Allen, 2001). These findings emphasize that while family structure influences motivation, protective factors and individual strengths play a significant moderating role.

Chavda and Nisarga (2023) reviewed the impact of single parenting on child development with a particular focus on cognitive, social, emotional, and behavioural outcomes. Research has shown that kids who grow up in single-parent families often struggle. They tend to have less drive to do well in school and their grades suffer. They don't get as many chances to interact with friends. They deal with anxiety, depression, and don't feel good about themselves. A lot of the time, people say it's because one parent is missing and because society looks down on single-parent families. Adolescents are especially vulnerable, they struggle with figuring out who they are, they feel emotional pain, and they have trouble adjusting to the way their family roles have changed. Sometimes this leads to behavioral problems and they don't do well in school. But there's another side to this too. Some teenagers from

single-parent homes develop a stronger bond with their parent, they learn responsibility early, they get better at managing their emotions, and they develop resilience because they've had to face challenges early in life.

Hiko, Cakici, and Baysen (2023) conducted a study with 379 secondary school students in Nigeria to look at single parenting, how driven students are to achieve, and how they perform in school. What they found was interesting, having a single parent didn't directly make students do worse in school. Instead, what mattered was how much the student was driven to achieve. That was the key thing between family structure and school performance. Adolescents from single-parent homes who had high achievement motivation did just as well as adolescents with two parents. The ones who had low motivation were more likely to do poorly. The study also found something important: community support made a big difference. When the community supported the family, it made achievement motivation work even better for single-parent teenagers and helped them do better in school.

Sangma and Goswami (2025) done a study on self-concept and academic achievement between adolescents from single-parent and dual-parent households in Meghalaya, India. The study involved 100 students (50 from single-parent families and 50 from dual-parent families) selected using purposive sampling. Findings revealed that dual-parent adolescents had slightly higher self-concept scores ($M = 80.3$) than single-parent adolescents ($M = 78.22$), but variability was greater among single-parent adolescents, indicating mixed experiences in self-concept development. Academic performance was also lower among single-parent adolescents ($M = 40.0$) compared to their dual-parent peers ($M = 56.8$), highlighting

a performance gap. Interestingly, the relationship between self-concept and academic achievement was weaker in single-parent adolescents ($r = 0.21$) than in dual-parent adolescents ($r = 0.49$), suggesting that self-concept may have less influence on academic outcomes in single-parent contexts, possibly due to external stressors such as reduced parental involvement or economic challenges

Shabnam (2025) investigated the influence of family structure on achievement motivation among 492 public university students in Bangladesh, using the revised Achievement Motives Scale (AMS-R). Results revealed that students from single-parent families reported the highest mean achievement motivation score ($M = 42.00$, $SD = 5.30$) compared to those from nuclear families ($M = 32.42$, $SD = 5.55$) and extended families ($M = 31.39$, $SD = 4.72$). ANOVA results confirmed a significant effect of family structure on motivation ($F = 6.36$, $p = 0.012$), with post hoc tests showing that single-parent students had significantly higher achievement motivation than both nuclear and extended family peers. The study attributed this to the unique coping strategies and sense of independence often developed by students from single-parent families, which may foster stronger personal drive and focus on academic and career goals. The study concluded that family structure influences motivational orientation, but highlighted that parental involvement and emotional support remain critical for sustaining high achievement motivation across all family types

Tenriesa, Dewi, and Djalal (2023) conducted a qualitative case study to explore learning motivation among early adolescent female students raised by a single father following the death of the mother. Data were collected through semi-

structured interviews and documentation with one respondent and her father as the significant caregiver. Findings showed that despite the potential challenges of single-parent households, the adolescent displayed optimal learning motivation, setting academic goals (e.g., striving for first rank in class), demonstrating strong commitment (completing school and home tasks despite fatigue), and taking initiative (creating her own study schedule). The father's active involvement as a mentor, motivator, and facilitator such as helping with assignments, providing learning materials, and encouraging academic success, was a key influence on her motivation. Additionally, social support from the grandmother and peers further enhanced her learning motivation by providing informational and emotional assistance. The study concluded that even in single-parent contexts, strong parental involvement and supportive social networks can foster high motivation in adolescents, challenging stereotypes that single-parenting necessarily impairs educational motivation.

Freeman and Newland (2002) conducted a study to know, how transitions into single-parent households influence adolescent development, including aspects related to motivation and school engagement. They used information from about 7,000 teenagers in the U.S. over a period of time, comparing adolescents who had recently become part of single-parent families with adolescents in stable two-parent homes and adolescents who had always been in single-parent homes. Findings indicated that adolescents who experienced a transition to single-parent living reported a reduction in parental behavioural control but no significant decline in parental responsiveness, suggesting that emotional support from parents remained

relatively stable despite changes in family structure. This stability in responsiveness is important because parental emotional support has been linked to sustained achievement motivation during adolescence. They found that changes observed in adolescent behaviour such as decreasing compliance or seeking greater autonomy, were largely attributable to normative developmental processes rather than family structure alone. Their findings imply that while family transitions can temporarily alter parenting dynamics, single-parent adolescents may maintain strong achievement motivation when parental emotional support and positive family relationships are preserved.

Achilike (2017) examined the impact of broken homes, including single-parent households, on students' academic performance in secondary schools in Ohaukwu Local Government Area of Ebonyi State, Nigeria. The study employed a descriptive survey design, sampling 300 students from ten public schools using a structured questionnaire. Findings revealed that students from broken homes exhibited lower school attendance, reduced concentration in class, and poorer performance in continuous assessment compared to their peers from intact families. The study noted that the absence of one parent often resulted in emotional disturbances, inadequate supervision, and financial constraints, all of which negatively influenced students' academic engagement and motivation. Interestingly, it also highlighted that some effects were context-dependent, with urban students showing greater academic vulnerability than those in rural settings due to reduced extended family support. The study concluded that broken homes contribute to

social and psychological challenges such as truancy, low self-esteem, and emotional distress, which in turn hinder academic achievement.

Baer (1999) investigated how family structure and socioeconomic status influence parent–adolescent relationships, focusing on family conflict, cohesion, and communication across Euro-American, African-American, and Mexican-American early adolescents. The findings revealed that while a certain level of parent–adolescent conflict is normative during early adolescence due to autonomy-seeking behaviour, adolescents in single-parent households reported significantly higher conflict and less positive communication compared to those in two-parent families. These relational differences persisted across ethnic groups, suggesting that family structure itself contributes to variations in family dynamics. Furthermore, Single-parent families also tend to have less closeness in the family, there is less emotional bonding and weaker support systems. This matters because when there is fighting, people don't communicate well, and there is not much sense of togetherness, it affects how well teenagers adjust emotionally and how motivated they are in school. When families are supportive and parents communicate well, teenagers tend to be more driven to do things for their own reasons, they are more engaged in school, and they keep trying. Baer's work shows that it's not just about money. The way people relate to each other in single-parent households can put adolescents at risk of losing their drive and getting stressed about school.

Bhat and Patil (2019) studied the psychosocial and academic impact of single-parenthood on children in India, emphasizing the increasing prevalence of single-parent families due to rising divorce rates, separation, and widowhood. The

study found that children from single-parent homes often feel lonely, insecure, and they have behavioural problems. This affects how they interact with other people and how they do in school. In terms of schoolwork, these children often don't do as well because the family doesn't have enough money, the parent isn't there to supervise as much, and there's emotional stress in the home. The researchers noted that most single parents in India are mothers, and they're carrying a huge load like taking care of children and managing money. This leaves them with less time to help their children with schoolwork or to give them emotional support. Despite these challenges, the study recognized resilience factors, including strong parent–child bonding, extended family support, and effective coping strategies, which can buffer adverse effects and promote positive outcomes.

Parental separation or divorce often the precursor to single-parent households is associated with academic underachievement, emotional distress, and reduced school motivation among children and adolescents. D'Onofrio (2011) summarizes decades of research showing that adolescents who experience parental separation are at significantly increased risk for lower grades, early dropout, depressive symptoms, and decreased self-esteem outcomes linked to declines in intrinsic motivation and school engagement. Crucially, D'Onofrio identifies family-level processes including heightened interparental conflict, diminished parental support, financial strain, and decreased contact with the non-custodial parent as mediators of these negative effects. Although the magnitude of impact is generally moderate, the effects persist across developmental stages, underscoring that single-parenthood does not directly

cause motivational decline, but rather alters relational and contextual mechanisms that are foundational to academic motivation and psychological adjustment

Self-Concept

Sangma and Goswami (2025) carried out a comparative study on self-concept and academic achievement among 100 adolescents from single-parent and dual-parent families in Meghalaya's Garo Hills. Results showed that adolescents from dual-parent households reported slightly higher mean self-concept scores ($M = 80.3$) than their single-parent peers ($M = 78.22$), indicating a modest advantage in overall self-perception. Interestingly, the variability in scores was greater among single-parent adolescents ($SD = 8.71$) compared to those from dual-parent families ($SD = 6.94$), suggesting that while some single-parent adolescents display strong self-concepts, others struggle considerably with self-perception. Differences were more marked in academic achievement, with dual-parent adolescents averaging 56.8 compared to 40 among single-parent adolescents, reflecting a potential disadvantage linked to family structure. Moreover, the relationship between self-concept and academic achievement was weaker in single-parent adolescents ($r = 0.21$) compared to those from dual-parent households ($r = 0.49$), pointing to the influence of external stressors such as financial constraints, reduced parental involvement, and limited support systems. Nonetheless, the study also emphasized that not all outcomes were negative, as several adolescents from single-parent households reported high self-concept scores, highlighting resilience and the potential of protective factors in shaping positive self-beliefs.

Kohli and Ahad (2018) examined self-esteem and self-concept between adolescents living with single parents and those living with both parents. The sample consist 180 adolescents (90 from single-parent families and 90 from dual-parent families) in Jammu, India, with equal representation of boys and girls. They used the Rosenberg Self-Esteem Scale to measure self-esteem and Saraswat's Self-Concept Inventory to measure self-concept. What they found was interesting. When it came to self-esteem, adolescents from two-parent families scored higher (average of 110.44) compared to adolescents from single-parent families (average of 105.22). That difference was statistically significant. But when they looked at overall self-concept, there was no real difference, adolescents from single-parent families scored 72.81 on average and adolescents from two-parent families scored 74.26. That was too small a difference to be meaningful. The findings suggest that while single-parent adolescents may experience reduced self-esteem likely due to social stigma, economic strain, and family role changes their self-concept remains relatively stable, possibly due to protective factors such as supportive relationships and adaptive coping strategies.

Magano and Gouws (2012) studied academic self-concept in South African teenagers living in difficult environments, places with poverty, unemployment, and single-parent families. They used both surveys and interviews, talking to 461 teenagers and having in-depth conversations with 20 of them. What came out was clear: when teenagers had supportive home environments, they had a stronger belief in themselves when it came to schoolwork. But when the family was disrupted, whether it was a single-parent home or even a child-headed family, teenagers didn't

believe in themselves as much academically. They were also less hopeful about what education could do for them. Qualitative accounts highlighted how limited finances, low parental literacy, and reduced availability of parents hindered adolescents' confidence and motivation. Despite these risks, resilience was evident, as some adolescents showed ambition when supported by schools and community networks. The study also emphasized that emotional support and active involvement, even from a single parent, could buffer disadvantages and strengthen academic confidence. No significant differences were observed across gender or grade level, suggesting that structural and environmental challenges outweighed demographic variables in influencing academic self-concept. Importantly, the study concluded that adolescents are not inherently limited by single-parent family structure but rather by the associated socio-economic constraints and lack of academic reinforcement at home. This finding aligns with global literature emphasizing that parental involvement, encouragement, and school-community partnerships are critical to building a positive academic self-concept among adolescents in vulnerable family settings.

Esmaeili and Yaacob (2012) examined correlates of self-esteem among adolescents from divorced families in Mashhad, Iran. The study surveyed 800 adolescents aged 15–18 years, all living with their mothers' post-divorce. Results showed that post-divorce parental conflict, maternal distress, and economic hardship were strongly and negatively correlated with adolescent self-esteem ($r = -.826$, $-.793$, and $-.770$, respectively), while the quality of the parent–child relationship showed a strong positive correlation ($r = .892$). Adolescents exposed to high parental

conflict often blamed themselves, leading to guilt and diminished self-worth. Maternal psychological distress further reduced parental warmth and support, contributing to lower adolescent self-esteem. Economic hardship created additional stress, affecting parenting quality and adolescents' evaluations of themselves. Conversely, adolescents reporting warm and supportive relationships with their mothers demonstrated significantly higher self-esteem, underscoring the importance of positive parental bonding

Kinga, Kimani, and Muriithi (2014) conducted a comparative study to examine whether differences exist in the levels of self-esteem among students from single-parent and dual-parent families in Nakuru Municipality, Kenya. The study was prompted by societal perceptions that children from single-parent households often face stigmatization, which may adversely affect their self-esteem and contribute to behavioural and academic challenges. Using a causal-comparative research design, the researchers surveyed 360 students (180 from single-parent and 180 from dual-parent families) drawn from 18 public secondary schools. Data were collected using structured questionnaires incorporating a standardized self-esteem scale and analysed with independent t-tests. Contrary to widely held assumptions, findings revealed no statistically significant difference in the self-esteem levels between students from single-parent and dual-parent households ($p > 0.05$). While dual-parent students recorded marginally higher mean self-esteem scores (57.73) than their single-parent peers (57.29), the difference was too small to attribute self-esteem outcomes solely to family structure. The authors concluded that self-esteem development depends more on parenting quality, parent–child relationships, school

environment, and peer support than on whether the household is single- or dual-parent.

Pandey, Bansal, and Benny (2023) explored the relationship between parenting styles, self-efficacy, and self-esteem among adolescents aged 15–19 years in Kerala, India. The study sampled 140 adolescents (70 boys and 70 girls) and used standardized tools, including the Scale of Parenting Style, the General Self-Efficacy Scale, and Rosenberg's Self-Esteem Scale. Results indicated no significant gender differences in parenting style, self-efficacy, or self-esteem. Parenting style showed no significant direct correlation with self-esteem or self-efficacy, although self-efficacy and self-esteem were positively correlated ($r = .47, p < .01$). The authors suggested that while parental emotional warmth and responsiveness are theoretically linked to positive psychosocial outcomes, adolescents' self-esteem and self-efficacy may also depend on broader factors, including peer support, school environment, and individual resilience.

Lahiri and Verma (2023) conducted a systematic review analysing how family structure influences children's self-esteem, with a focus on single-parent families compared to two-parent households. Drawing from studies published between 1978 and 2022, the authors noted that adolescents from single-parent families often face unique stressors including financial constraints, lack of a dual emotional anchor, and the emotional vulnerability of custodial parents. These stressors were associated with lower self-esteem levels, increased loneliness, anxiety, and a higher risk of behavioural problems, especially among boys who were more prone to externalizing behaviours and girls who often exhibited internalizing

tendencies such as withdrawal and anxiety. However, the review emphasized that negative outcomes were not universal; many adolescents demonstrated resilience when supported by emotionally warm, optimistic, and engaged parents, even in single-parent contexts. Factors like parental conflict during and after separation, parenting style, perceived closeness to parents, and availability of extended family support were highlighted as key determinants of self-esteem. Notably, interventions such as art therapy and music-based programs were found effective in improving self-esteem among children from single-parent households, suggesting that self-esteem challenges are modifiable through targeted psychosocial programs.

Mwangi, Munyua, and Achieng (2020) examined the relationship between family structure and self-esteem among secondary school students in Moiben Sub County, Kenya, against the backdrop of changing family demographics and increasing cases of single-parent and step-parent households. Guided by family systems theory, which emphasizes the interdependence of family members and the influence of family roles and interactions on individual outcomes, the study sought to determine whether living in a single-parent or step-parent family impacted adolescents' self-esteem. Using a correlational research design, data were collected from a sample of 373 students drawn from 15 public secondary schools and from deputy principals through interviews. The study found that single-parent families significantly influenced students' self-esteem ($r = 0.590, p < 0.05$), indicating that family structure and parental availability play an essential role in shaping adolescents' self-perceptions and confidence. Literature reviewed in the study highlighted how parental absence, conflict, and stress often associated with divorce

or separation can create emotional vulnerabilities in adolescents, sometimes manifesting in low self-esteem, behavioural problems, and adjustment difficulties. However, it also emphasized that parenting quality, including emotional warmth, effective monitoring, and supportive guidance, can buffer the negative effects of family transitions.

Miller (1984) examined the effects of paternal absence on adolescent self-esteem, focusing on gender differences and the role of maternal support. The study included 203 eighth-grade children from father-absent homes representing diverse educational, social, and ethnic backgrounds. Using the Coopersmith Self-Esteem Inventory and the Relationship Inventory-B, the research assessed both the adolescents' self-esteem and the quality of maternal emotional support, referred to as "core-facilitative conditions" (empathy, genuineness, and positive regard). Results showed that male adolescents were more negatively affected by father absence than female adolescents, with significantly lower self-esteem scores in boys. However, when mothers displayed high levels of empathy, acceptance, and positive regard, the negative impact on self-esteem, particularly among boys, was reduced. The study highlighted that while the absence of a father can challenge male adolescents' self-concept and role identity, the quality of maternal relationships can serve as a protective factor, mitigating negative outcomes. Miller emphasized that adolescent self-esteem development is shaped more by the emotional quality of the parent-child relationship than by family structure alone, suggesting that supportive, nurturing parenting is critical in father-absent households.

Hadori, Hastuti, and Puspitawati (2020) investigated how family structure, parent–adolescent communication, and attachment shape adolescents’ self-esteem in Bekasi City, Indonesia, with a sample of 200 students aged 14–19 years. Using t-tests and regression analysis, the study found that adolescents from intact families reported higher self-esteem than those from single-parent households. Across both groups, communication quality and secure parent–child attachment emerged as strong positive predictors of self-esteem, underscoring the importance of supportive interactions for adolescents’ self-perceptions. Adolescents in single-parent families generally reported weaker communication and lower attachment, reflecting the pressures of reduced parental time and dual-role strain. Even so, the findings highlighted that effective communication and emotional bonding could offset structural disadvantages, protecting adolescents’ self-worth. These results suggest that self-esteem risks associated with single parenthood are less about the absence of one parent and more about the disruption of parent–child interactions, pointing to the potential of interventions that strengthen communication and attachment to promote resilience.

Yadav, Sanjay, Sahoo, and Kumari (2024) explored the link between perceived parenting and adolescent self-concept among 60 students from Delhi government schools, using Saraswat’s Self-Concept Questionnaire and the Perceived Parenting Scale. Results showed significant positive correlations between supportive parenting behaviors, such as acceptance, protection, realistic expectations, and moral guidance and adolescents’ overall self-concept ($r = .478, p < .01$ for mothers; $r = .491, p < .01$ for fathers). Specific dimensions were particularly shaped by parenting

qualities: temperament and moral self-concept were strengthened by acceptance and moralistic guidance, while intellectual self-concept benefited from realistic expectations and autonomy support. Gender comparisons revealed that boys scored higher than girls in overall and physical self-concept, though no significant differences were found in other dimensions. The findings point to the central role of parental warmth, involvement, and supportive control in fostering healthy self-concept, while negative practices such as criticism or inconsistent expectations were linked to weaker self-perceptions. Overall, the study highlights that parenting behaviors, more than family structure, shape how adolescents view themselves and suggests that interventions encouraging positive parenting can reinforce resilience and competence during adolescence.

Lee and Hankin (2009) investigated how insecure attachment (anxious and avoidant), dysfunctional attitudes, and self-esteem predict the development of depression and anxiety symptoms in adolescents. Using a four-wave prospective design with 350 adolescents aged 11–17 years, the study examined whether cognitive factors mediate the relationship between attachment insecurity and internalizing symptoms. Findings revealed that both anxious and avoidant attachment styles predicted increases in depression and anxiety symptoms over time, even after controlling for baseline symptom levels. Importantly, dysfunctional attitudes and low self-esteem mediated the link between anxious attachment and later emotional problems, indicating that attachment-related insecurities influence cognitive vulnerabilities, which then impact psychological well-being. Avoidant attachment, while directly linked to symptom increases, did not show a significant

cognitive mediation effect. These results highlight that adolescents with anxious attachment may develop maladaptive beliefs and lower self-esteem, making them more prone to depression and anxiety. The study supports integrating attachment theory with cognitive models of psychopathology and emphasizes targeting both relationship security and cognitive restructuring in interventions for adolescent mental health (Lee & Hankin, 2009).

Neeraj, Sandhu, and Varma (2021) studied the relationship between psychosocial adjustment, self-concept, and academic achievement among 400 adolescents aged 14–19 years in Bulandshahr District, India, comparing children of working and non-working mothers. Using standardized tools such as the AISS-SS and Saraswat's Self-Concept Questionnaire, along with academic records, the study found no significant differences in psychosocial adjustment or self-concept between the two groups, suggesting that maternal employment status does not negatively affect these domains. Interestingly, adolescents of working mothers recorded slightly higher academic achievement scores ($M = 59.43$) than those of non-working mothers ($M = 53.71$), pointing to possible academic benefits associated with maternal employment. Correlation analyses further revealed significant positive relationships between psychosocial adjustment and self-concept ($r = .534, p < .05$) and between psychosocial adjustment and academic achievement ($r = .473, p < .05$). A modest but significant link was also observed between self-concept and academic achievement ($r = .251, p < .05$). These results highlight the interconnectedness of adolescents' emotional adjustment, self-belief, and scholastic performance, emphasizing the need for school-based interventions that strengthen psychosocial

well-being and self-concept to support academic outcomes across diverse family backgrounds.

Malik, Javed, and Mahmood (2022) conducted a comparative study to examine how single parenting influences adolescents' self-efficacy relative to intact families, focusing on social development and demographic variables such as age, education, family size, and birth order. The study utilized a cross-sectional design and surveyed 320 adolescents, equally divided between single-parent and dual-parent households, using the General Self-Efficacy Scale (GSE) by Schwarzer and Jerusalem. Results indicated that adolescents living in intact family structures scored significantly higher on self-efficacy compared to those from single-parent families, confirming that the presence of both parents often provides stronger emotional, social, and role-model support that enhances confidence and problem-solving abilities. Age showed a weak positive but non-significant relationship with self-efficacy, suggesting that maturity alone does not fully compensate for parental absence, while educational level had a weak negative relationship, implying that single-parent adolescents may experience reduced confidence despite academic progression. Birth order differences were non-significant, indicating that sibling hierarchy does not substantially influence self-efficacy in these family contexts. However, family structure mattered, as adolescents from single-parent nuclear households showed lower self-efficacy than those in joint family settings, where extended kin support partially compensated for the missing parent.

Yousefi, Gholampour, Nabavi, and Chopani (2024) investigated how academic performance and academic self-concept influence social adjustment

among 200 children of single parents in Sanandaj, Iran. Using standardized questionnaires on social adjustment, academic performance, and self-concept, the study found significant negative correlations between social adjustment and academic performance ($r = -.389$), general self-concept ($r = -.449$), academic self-concept ($r = -.466$), and non-academic self-concept ($r = -.354$), suggesting that stronger self-beliefs and higher achievement were linked to better adjustment. Regression analysis showed that academic performance and self-concept together accounted for 37.1% of the variance in social adjustment ($F = 28.808, p < .001$), underscoring their predictive value. The findings highlight that while adolescents in single-parent families face emotional and social challenges, self-concept and academic success function as protective factors, supporting positive peer relations and school engagement. The study further emphasized the role of targeted supports such as tutoring, mentoring, and counselling in strengthening academic self-concept, thereby enhancing social adaptation and resilience in adolescents from single-parent households.

Adjustment

Family environment plays a crucial role in shaping adolescents' adjustment, regardless of family structure. Supportive home settings characterized by emotional warmth, open communication, and well-defined roles foster positive emotional and social development, whereas conflictual and unstructured family environments are linked to maladaptive behaviours. Sharma and Sangwan (2016) worked with 250 teenagers aged 13–15 years to understand how their family environment affects their aggression and behaviour. They looked at things like how close the family is,

whether people express their feelings, whether they accept each other, how much independence people have, how organized the family is, what they do for fun, and how much control there is. What they found was those adolescents from families with a lot of conflict and low closeness, acceptance, and independence were more likely to act aggressive. But adolescents from families that were supportive and well-organized were less aggressive and had better control over their behaviour. This shows that how well people get along in a family really matters for whether adolescents can manage their feelings and interact well with others. In single-parent homes, you might see the same patterns, when one parent is gone, there's often more strain on the remaining parent and less emotional support. This can create problems for how adolescents adjust. But here's the important part: when single parents create a home that's warm, communicative, and caring, adolescents can adjust really well even without two parents. So, it is about the quality of parenting and the nature of family interactions

Tripathy and Sahu (2019) examined the impact of family environment on socio-emotional adjustment among adolescent girls in rural areas of Western Odisha. They studied 100 girls aged 17–18 years using standardized measurement tools for family environment and adjustment. They looked at closeness, expressiveness, conflict, acceptance and caring, independence, fun activities, organization, and control. When they analysed the data, they found that all these family factors together had a real impact on how well the girls adjusted emotionally and socially. Specifically, feeling accepted and cared for, having fun activities, being able to express themselves, and having an organized household were strongly connected to

better adjustment. Adolescents who felt emotionally accepted and had positive interactions with their family adjusted better. Those from families with a lot of fighting or low closeness had more trouble emotionally and socially. The bottom line was that how family members treat each other, the emotional bonds between them, and how supportive the family structure is, these are what really determine whether adolescents do okay emotionally and socially.

Ntumi, Larbi, and Yirenkyi (2016) investigated the effects of single parenting on the academic performance of students at Amamoma Presbyterian Junior High School, Ghana. They take 47 teenagers from single-parent homes at a school in Ghana. Most of these adolescents reported they were depressed, emotionally disturbed, and unhappy with how they were living. This made it hard for them to focus on school and care about their studies. Many didn't have enough study materials, they missed paying school fees, and they didn't get much help from their parent, no help with homework, no one checking on their grades. A lot of these adolescents were also working to make money to pay for school, which meant they didn't have time to study. The study concluded that when one parent is missing, adolescents lose emotional support and academic support. This makes them struggle with adjusting to life and does poorly in school.

Family structure plays an important role in shaping adolescent development and adjustment, particularly regarding how parenting styles and decision-making patterns influence daily behaviours and overall well-being. Davids, Roman, and Leach (2015) studied 457 ninth graders in rural South Africa to understand how family structure, parenting style, and how adolescents make decisions affect their

overall well-being. They compared adolescents from single-parent and two-parent families, using standardized tools to measure how adolescents perceived their parents' style of parenting, how they made decisions, and whether they did things that were good for their health. What they found was those adolescents, whether they had one parent or two, mostly said their parents used an authoritative style of parenting, meaning the parent was warm, supportive, and set appropriate boundaries. This kind of parenting is known to help teenagers adjust well and develop healthily. Most adolescents also said they made decisions carefully and responsibly, and they reported exercising, eating well, and managing stress. And here is the key finding: there was no real difference between adolescents from single-parent homes and adolescents from two-parent homes in how they perceived their parents' parenting, how they made decisions, or how much they did things that were healthy. This challenges the stereotype that adolescents with one parent are automatically worse off emotionally or behaviourally. What matters is that parents are warm, supportive, and use good parenting practices, and that happens in both single-parent and two-parent families. So, family structure is not the most important thing. It is how good the parenting is and how well people interact in the family.

Teymori and Rezaei-Jamalouei (2022) explored how emotional adjustment and feeling connected to family predict social adjustment, with family resilience in the middle. They studied 299 teenagers aged 15–18 in Iran using measurement tools for emotional adjustment, feeling of connection, family resilience, and social adjustment. Their analysis showed that teenagers who could regulate their emotions well and who felt connected to their family had better social interactions and

friendships. Family resilience, meaning the family's ability to handle stress and keep supporting each other, made this relationship even stronger. This highlights that adolescents adjust socially better not just because they have good emotional skills themselves, but also because their family can bounce back from problems and stay supportive. For single-parent families, this is important because family resilience and feeling connected can protect adolescents from adjustment problems.

Singh and Sharma (2023) studied how family environment predicts adjustment among female adolescents. The study was conducted on 134 girls aged 15–17 years and employed the Bell Adjustment Inventory (Hindi adaptation) and the Family Environment Scale (Moos & Moos, 1981). Findings showed that adjustment was negatively associated with positive dimensions of the family environment such as cohesion, expressiveness, moral–religious emphasis, intellectual–cultural orientation, active recreational orientation, and organization, and positively associated with family conflict. Stepwise regression identified organization, expressiveness, active recreational orientation, and conflict as significant predictors of adjustment. Adolescents from organized and expressive families with low conflict exhibited higher levels of adjustment across home, health, social, and emotional domains. Conversely, families that were disorganized or had a lot of fighting predicted poor emotional stability and weak social relationships.

Ameh (2021) explored the perceived impact of single parenthood on the academic adjustment of secondary school students in Nigeria, focusing on areas such as study habits, class participation, extra-curricular activities, homework, and social interactions. Using a descriptive survey design and a sample of 385 students,

the study found that single parenthood significantly affects students' ability to adapt to academic demands. Students from single-parent families showed lower participation in classroom discussions, reduced engagement in extra-curricular activities, and difficulties maintaining effective study habits and completing homework on time. Social interaction skills were also negatively affected, with many students reporting feelings of isolation and withdrawal, which in turn hindered overall school adjustment. The study pointed out that not having a parent supervising enough, not getting emotional support, and money problems all common in single-parent homes make it hard for adolescents to adjust to school demands.

Oyetakin (2014) studied the effect of household structure on the academic performance of senior secondary school students in Lagos State, Nigeria, comparing students raised by single parents and those raised by grandparents. The study used a mixed-method design involving questionnaires, field observations, and interviews, covering 200 students (100 from single-parent homes and 100 from grandparent-headed households), 50 teachers, and 10 market women. Interestingly, there was no big difference in overall grades between students from single-parent homes and students from two-parent homes. This means that family structure alone doesn't necessarily decide whether students do well or not. But there were differences based on gender, boys and girls from single-parent homes performed differently than boys and girls from two-parent homes. One clear finding was that students raised by grandparents did worse than students from single-parent homes. This suggests that losing both parents might be even more difficult than having one parent.

Eccles and Barber (1992) conducted a meta-analytic and conceptual review examining the long-term impact of divorce and single parenting on adolescents' values, behaviours, and aspirations related to family and work. The review synthesized findings from multiple longitudinal and cross-sectional studies, highlighting that adolescents from single-parent families often display differences in family-related attitudes, such as altered expectations regarding marriage and parenting, and are more likely to hold flexible gender-role attitudes compared to peers from two-parent families. Behaviourally, adolescents from single-parent households exhibited higher rates of early work participation, partially driven by financial necessity and greater household responsibilities, while showing mixed patterns in academic motivation and career aspirations. Importantly, many of these differences were attributed not solely to family structure but also to mediating factors such as economic stress, parental involvement, and quality of parent–child relationships. The study concluded that single parenting influences adolescent adjustment indirectly through these mediating mechanisms rather than directly through family structure alone, underscoring the role of supportive parenting and resource access in promoting positive developmental outcomes.

Chujor and Bosa (2014) investigated single parenting and adjustment problems of adolescents in Anambra State, Nigeria. Using a descriptive survey design, the study sampled 1,000 adolescents from single-parent families in Awka and Idemili towns. Data were collected using an adapted version of the Reynolds Adolescent Adjustment Screening Inventory, focusing on antisocial behaviour, anger control, emotional distress, and self-concept. Results revealed no statistically

significant differences in adjustment problems based on gender, location (urban vs. rural), or socioeconomic status. However, descriptive data suggested that adolescents living with male single parents experienced slightly more adjustment problems compared to those living with female single parents, and adolescents in urban areas reported slightly higher adjustment problems compared to their rural counterparts. Interestingly, adolescents from high socioeconomic status single-parent homes reported more adjustment issues than those from low socioeconomic status households, possibly due to differences in coping mechanisms and life expectations. The study concluded that family structure alone does not necessarily predict adjustment problems among adolescents, as multiple factors including parenting quality, emotional support, and community environment play crucial roles in shaping outcomes.

Stritzel and Crosnoe (2023) examined how living with an unmarried mother (single or cohabiting) influences adolescent adjustment using data from the National Longitudinal Survey of Youth ($N = 5,597$). The study applied a life course perspective and inverse probability of treatment weighting to evaluate differences in adjustment based on timing and family background. Adolescents who lived with an unmarried mother during early childhood or early adolescence showed higher risks of alcohol use and reported more depressive symptoms by age 14 than those raised by married mothers. These associations were strongest when adolescents' sociodemographic backgrounds were similar to those typically associated with married-parent households, suggesting a social comparison effect and increased vulnerability in non-normative family contexts. The study also found that

externalizing behaviours such as drinking were more sensitive to family structure changes than internalizing symptoms like depression, indicating that lack of monitoring and social integration pressures may drive risk-taking behaviour in single-parent settings. Interestingly, adolescents who consistently lived with single mothers often showed reduced sensitivity to these risks compared to those who experienced sudden parental separation, highlighting how family stability and adaptation processes moderate outcomes.

Sohail and Shamama-tus-Sabah (2016) conducted a comparative study on behavioural adjustment among children from single-parent (mother-headed) and intact families in Lahore, Pakistan. The sample included 60 children aged 8–10 years (30 from intact families, 30 from single-parent families), and data were collected using the Strengths and Difficulties Questionnaire (SDQ) completed by both teachers and mothers. Results revealed that children from single-parent families had significantly higher behavioural problems, including conduct issues and hyperactivity, compared to peers from intact families. Gender differences were not statistically significant, and the interaction between gender and family structure was nonsignificant, indicating that both boys and girls experienced similar adjustment challenges in single-parent contexts. Importantly, even when differentiating between single-parent households due to death or divorce, no significant difference in behavioural issues emerged, suggesting that the absence of one parent, rather than the cause, influenced children's adjustment. These findings align with existing literature reporting increased vulnerability of single-parent children to internalizing and externalizing problems and reduced academic and social functioning. The study

highlighted the importance of parental monitoring, family cohesion, and economic stability as key protective factors to mitigate behavioural risks in single-parent families.

Meeks (n.d.) provided a comprehensive review of how divorce influences children's mental health, physical health, finances, school life, and social development, noting that children often bear the greatest burden during parental separation. The paper highlighted that mental health concerns are common, with many children displaying anger, fear, depression, guilt, and insomnia. Younger children often internalize blame for their parents' separation, while older adolescents may experience persistent sadness and unrealistic expectations that their parents will reunite. Physically, children of divorce were reported to have increased health problems linked to stress and disruptions in family routines, often leading to unhealthy eating habits, irregular schedules, and reduced access to preventive healthcare. Financial instability was another recurring issue, as many single-parent households struggled to maintain pre-divorce living standards, creating additional stress for children. Academically, children of divorce were shown to have lower educational performance, higher dropout rates, increased behavioural problems, and a greater likelihood of associating with delinquent peers. Socially, these children were at greater risk for substance abuse, poor relationship skills, and even higher divorce rates in adulthood, indicating the long-term consequences of family disruption.

Eyo (2018) examined the causes of divorce and its effects on children, using sociological and psychoanalytical perspectives to explore how marital dissolution

impacts children's well-being. The study identified multiple causes of divorce, including religious differences, economic instability, early marriage, domestic violence, sexual incompatibility, extramarital affairs, health challenges, addiction, and unrealistic expectations. These factors often destabilize families, leading to emotional strain and eventual separation. The paper highlighted that children are among the most affected by divorce, as they frequently face emotional distress, adjustment difficulties, psychological withdrawal, reduced self-esteem, and disrupted parent-child relationships. Peer pressure, social stigma, and loyalty conflicts between parents further exacerbate these adjustment problems, leading to social issues such as delinquency, substance use, and academic underperformance. Financial instability in single-parent households was also noted as a critical challenge, often limiting children's educational opportunities and overall development. Despite these negative outcomes, the paper acknowledged that in highly conflictual marriages, divorce can sometimes have a positive effect, freeing children from hostile environments and allowing for emotional recovery. However, the overall conclusion emphasized that the negative effects far outweigh the positive, making it essential to strengthen family systems, provide post-divorce support, and ensure adequate welfare and emotional care for children.

MenBrajša-Žganec and Hanzec (2015) explored psychosocial adjustment in preschool children from single-mother and intact families, focusing on aggressive behaviour, prosocial behaviour, and somatic complaints. The study involved 73 single mothers and 72 married mothers with children averaging 4.9 years old, along with teacher evaluations. Findings revealed no significant difference in somatic

problems or aggressive behaviour based on family structure, indicating that living in a single-mother family does not necessarily increase psychosomatic or behavioural risks during early childhood. Gender differences were more pronounced than family structure differences, with boys showing more aggressive behaviours irrespective of family type, while prosocial behaviour was higher among older children and slightly higher among those from single-mother families. Importantly, single mothers did not differ significantly from married mothers in terms of family cohesion, satisfaction with family functioning, or emotional awareness and responses (meta-emotions), suggesting that relationship quality and parenting processes rather than family structure alone are critical for child adjustment. The results challenge the deficit-based view of single parenting by highlighting that supportive family relationships and consistent parental engagement can foster positive social and emotional development even in single-parent households.

Sundayani et al., (2017) studied self-adjustment among single-parent mothers in South Sulawesi, Indonesia, focusing on intellectual maturity, emotional control, social maturity, and responsibility management. The results showed that while these mothers demonstrated relatively high emotional maturity, their intellectual maturity, social adjustment, and responsibility fulfilment were low, often due to economic constraints, limited education, and inadequate social networks. These difficulties often leave mothers with little time or resources for self-development or effective household management, which can influence their children's well-being and adjustment. The authors noted that poor self-adjustment in parents could disrupt family relationships, reduce social support, and indirectly affect adolescents'

emotional and social development. To address these challenges, the study proposed a “Self Help Group” program aimed at improving mothers’ time management, socialization skills, and knowledge about parenting. This intervention framework highlights that supporting single parents’ adjustment abilities is crucial for enhancing adolescents’ adjustment and psychosocial well-being.

Kohli and Kaur (2021) investigated how the parent-child relationship impacts adolescents’ emotional competence and overall adjustment. The study included 200 IX-grade students from CBSE schools in Amritsar and used the Parent-Child Relationship Scale (Rao, 1971), the Emotional Competence Scale (Bhardwaj & Sharma, 1995), and the Adjustment Inventory (Sinha & Singh, 1984). Results revealed that parent-child relationships influence adolescent adjustment significantly, particularly when parents display loving and protective behaviours, which were positively associated with emotional competence and fewer adjustment issues. Conversely, rejecting or punitive parental attitudes were linked to higher adjustment problems. However, no significant differences were found in emotional competence or adjustment between adolescents from favourable and unfavourable parent-child relationship groups overall, except for the “loving” dimension, which showed a notable positive effect on emotional competence. The authors concluded that adolescents thrive emotionally and socially when parenting involves warmth, guidance, and supportive interactions, whereas harsh or neglectful parenting leads to maladjustment.

Mental health

Markowitz and Ryan (2016) examined how father absence affects adolescent depression and delinquency, drawing on data from the National Longitudinal Survey of Youth 1979–Young Adult Survey. Using a sibling-comparison design to control for shared genetic and environmental influences, the study offered a unique perspective on within-family differences. Findings revealed that father absence during late childhood (ages 6–14) was linked to significantly higher delinquent behavior compared to siblings whose fathers remained present. In contrast, father absence during early childhood (birth to age 5) did not show the same association, indicating that the timing of absence matters for adolescent outcomes. Interestingly, depressive symptoms were not significantly affected by father absence once sibling-related controls were introduced, suggesting that internalizing problems may be less directly tied to parental loss than externalizing behaviors. The results highlighted parental monitoring as a critical mechanism, as reduced supervision in late childhood strongly predicted delinquency. Overall, the study emphasized that the consequences of father absence are not uniform: behavioral outcomes are more sensitive to recent disruptions, while emotional symptoms may be shaped by other factors. These findings underscore the importance of consistent monitoring and emotional support in single-parent households to reduce delinquent tendencies and promote healthier adjustment.

Culpin, Heron, Araya, Melotti, and Joinson (2014) investigated how early childhood father absence influences adolescent mental health, focusing on depressive symptoms among girls. Using longitudinal data from the Avon

Longitudinal Study of Parents and Children, they examined 5,779 girls and found that father absence in early childhood (birth to age five) was associated with a higher risk of depressive symptoms at age 14. The study further revealed that earlier menarche partially mediated this relationship, suggesting that early biological maturation linked to father absence contributed to heightened vulnerability to emotional distress. Girls who experienced father absence tended to report lower levels of emotional support and increased exposure to stressful life events, which compounded their risk of depression. These findings highlight that disruptions in family structure during critical early developmental periods can create psychosocial and biological pathways that increase susceptibility to mental health challenges in adolescence.

Luo, Wang, and Gao (2011) studied the impact of father absence and the timing of separation on adolescents' mental health, focusing on anxiety and self-esteem. The study consists of 2,233 students aged 11–23 years from five Chinese provinces, with 1,024 experiencing father absence. Using standardized measurement tools, they found that teenagers without a father had much higher anxiety and felt worse about themselves compared to teenagers with both parents. The timing of when the father left mattered a lot. When fathers were absent between ages 7 and 12, the adolescents had particularly high anxiety. When girls lost their father before age 2, their self-esteem was notably lower than other girls their age. A lot of this was connected to money problems and less emotional support, which is common when there's no father or when a father has gone to work in another country. Interestingly, the study found that boys without fathers had higher anxiety, while girls were more

affected in terms of self-esteem. The researchers concluded that when a family loses the father, whether through separation, migration, or anything else, it hurts adolescents' mental health. And when this separation happens matters too.

The study by Flouri and Buchanan (2003) explored the long-term role of father involvement on children's mental health outcomes using data from the National Child Development Study (NCDS). They examined emotional and behavioural problems at age 16 and psychological distress at age 33 while accounting for variables such as socioeconomic status, academic ability, and parental mental health history. A key finding was that father involvement during childhood provided a protective effect for adolescents from non-intact families, reducing emotional and behavioural problems compared to peers with lower paternal engagement. Additionally, high father involvement during adolescence was linked to lower psychological distress in adulthood, particularly for women. While overall parental involvement (mother and father) did not strongly predict adolescent outcomes once other risk factors were considered, father involvement showed unique benefits in non-intact family settings, highlighting its importance as a protective factor

East, Jackson, and O'Brien (2006) conducted a critical review of literature on the effects of father absence on adolescent development and well-being. They observed that rising numbers of woman-headed families have increased the proportion of adolescents growing up without fathers. The review emphasized that paternal love and involvement are as essential as maternal care for fostering self-concept, emotional stability, cognitive growth, and social behavior. Evidence

showed that father absence, especially when linked to divorce or conflict, was associated with behavioral problems, emotional distress, early sexual activity, substance use, and delinquent tendencies. Adolescents in such households also reported lower self-esteem, greater life stress, and difficulty forming intimate relationships, though effects varied by timing and cause of absence. Importantly, father absence did not always yield negative outcomes. Many adolescents in stable single-parent homes developed coping skills, responsibility, and even stronger career motivation through observing independent mothers. Still, the lack of paternal guidance and monitoring heightened vulnerability to peer influence, risky behaviours, and lower academic performance. The review concluded that father absence significantly shapes adolescent adjustment, but its impact is mediated by socio-economic status, parental conflict, and maternal support. These findings highlight the complexity of outcomes in single-parent households, where risks are real but resilience remains possible.

Hui Ling, En Fu, and Jian-Ren Zhang (2015) examined how the age at separation and the duration of separation from parents influenced the emotional and behavioural outcomes of left-behind children (LBC) in rural China, a population comparable to adolescents from single-parent or disrupted households. The study included 268 LBC and 228 non-LBC, who completed standardized measures of loneliness, depression, and behaviour problems. Results showed that LBC scored significantly higher than non-LBC on indicators of loneliness, social problems, anxiety/depression, and aggressive behaviour, reflecting both internalizing and externalizing adjustment difficulties. While no overall main effects of separation age

or duration emerged, there was a significant interaction: children separated after age six and left behind for more than five years reported more somatic issues, thought problems, and depressive symptoms. In contrast, those separated before age six showed consistently elevated adjustment difficulties regardless of separation length, suggesting that early childhood separation disrupts secure attachment and emotional stability in ways that persist over time.

Liu et al. (2023) investigated how father absence influences hostility among Chinese adolescents diagnosed with major depressive disorder, emphasizing the mediating roles of self-esteem and frustration tolerance. The study involved 137 participants aged 12–25 years who completed validated measures assessing father absence, hostility, self-esteem, and frustration tolerance. Correlation and serial mediation analyses revealed that while father absence was initially linked to higher hostility, this relationship became non-significant when self-esteem and frustration tolerance were included as mediators. Specifically, father absence negatively impacted self-esteem, which in turn reduced frustration tolerance, ultimately leading to heightened hostility. The indirect effects through self-esteem alone (28%), frustration tolerance alone (24%), and their combined pathway (24%) were statistically significant, showing that low self-esteem and poor frustration tolerance fully mediated the relationship. These findings suggest that father absence not only affects emotional regulation but also undermines adolescents' coping capacities, thereby increasing hostile tendencies in depressed youth. Although the sample was clinical and region-specific, the results provide valuable insights into psychosocial mechanisms connecting parental absence and adverse emotional outcomes, which

are relevant for understanding adjustment difficulties among single-parent adolescents.

Daryanai et al. (2016) investigated how parenting behaviors mediate links between single-mother status and adolescent mental health in a sample of 385 adolescents (52% female) and their mothers. Comparisons showed that single mothers were more likely to use psychologically controlling and rejecting parenting practices than mothers in two-parent households. These behaviors were strongly associated with elevated depressive symptoms and externalizing disorders, while anxiety outcomes were less consistent. Girls in single-mother families appeared particularly vulnerable, showing higher depressive symptoms under conditions of psychological control. Adolescents in these households also displayed higher rates of externalizing disorders such as ADHD, conduct disorder, and oppositional defiant disorder, largely mediated by low parental involvement and high psychological control. Interestingly, some anxiety symptoms were lower at one follow-up point among adolescents of single mothers, possibly reflecting differences in how distress was expressed. The findings underscore that risks are not caused by single motherhood itself, but by parenting strain, economic hardship, and heightened stress that often accompany it. At the same time, resilience was evident, as many adolescents in single-mother households reported comparable levels of depression and anxiety to peers in two-parent families. Overall, the study highlights parenting practices as central mechanisms shaping adolescent psychopathology, while supportive environmental resources can buffer against negative outcomes in single-parent contexts.

Sia and Aneesh (2024) examined how resilience, social competence, and emotion regulation shape the psychological well-being of adolescents from single-parent families in Kerala, India. The study involved 385 adolescents (mean age 15 years), evenly distributed by gender, with half experiencing single parenthood due to death and the remainder due to divorce or separation. Results showed that resilience was positively linked to psychological well-being, indicating that more resilient adolescents reported greater emotional stability and life satisfaction. Social competence also played a central role: prosocial behavior correlated positively with well-being, while antisocial behavior was negatively related. Emotion regulation showed a similar pattern, with cognitive reappraisal supporting well-being and expressive suppression predicting poorer outcomes. Mediation analysis revealed that prosocial behavior and cognitive reappraisal partially explained the relationship between resilience and well-being, suggesting that adaptive social interactions and constructive emotional strategies strengthen positive adjustment. These findings highlight that adolescents in single-parent households are not uniformly disadvantaged; those with higher resilience and coping resources are better able to maintain psychological health.

Kareem et al. (2024) presented a narrative review on the relationship between single parenthood and depression, focusing on its prevalence, risk factors, and consequences. The review reported that single parents, particularly single mothers, face nearly double the risk of depression compared to partnered parents, with prevalence rates of 30-40% in some groups. Key contributors included financial hardship, social isolation, reduced support networks, and elevated

parenting stress, all of which increase psychological vulnerability. Single fathers, though fewer in number, were found to experience unique challenges such as limited social support and stigma around caregiving, often leading to unhealthy coping behaviors like smoking and alcohol use. For adolescents, parental depression was linked to adverse outcomes, including higher rates of depression, anxiety, antisocial behavior, and lower academic performance. These risks were compounded by exposure to stressors such as poverty, social exclusion, and inadequate parental monitoring. Long-term consequences were also noted, with chronic parental depression associated with intergenerational cycles of psychological distress and poor coping in children. While the review discussed possible clinical interventions, its central contribution was to show how the combined pressures of sole parenting, economic strain, and social stigma foster conditions for depression. Importantly, these parental vulnerabilities indirectly affect adolescent adjustment and resilience, underscoring the critical role of parental mental health in shaping adolescents' psychological well-being.

Yadav (2025) studied how single parenting affects many parts of how children develop, their emotions, how their mind works, school performance, and how they interact socially. The study found that children living with one parent often have more emotional and behavioural problems. They feel like they've been abandoned, they're sad, anxious, and don't feel good about themselves, especially right after the parents separate or divorce. How well they adjust depends on their age. Adolescents struggle the most, they have trouble talking about their feelings, expressing themselves, and getting used to their new family situation. In terms of

schoolwork, children from single-parent homes don't perform as well as children with both parents. This is usually because there's limited parental involvement in school activities and money is tight. Socially, without one parent around, they lose out on having a role model, their social skills don't develop as well, they're more easily influenced by friends to do the wrong thing, and sometimes they end up doing risky things. However, the study also emphasized positive outcomes, noting that many children from single-parent households developed resilience, maturity, and a strong sense of responsibility due to increased participation in household decision-making and responsibilities. Gender differences were observed: boys in single-mother households often struggled with masculine identity and impulse control, while girls from single-father households exhibited more behavioural problems.

Cen et al. (2025) examined depression risk among left-behind adolescents from single-parent families in China, focusing on multidimensional risk factors. Using cross-sectional data from 3,731 adolescents, the study applied Lasso regression and logistic regression to develop a nomogram-based predictive model. Findings revealed that gender, age, length of parental separation, family satisfaction, parental education, substance dependence, weekday sleep duration, weekend smartphone use, and chronic illness significantly predicted depression risk. Notably, higher family satisfaction, better parental education, and adequate weekday sleep served as protective factors, while prolonged parental separation, substance use, and excessive phone use heightened depression risk. Female and older adolescents were more susceptible to depression, consistent with prior research linking emotional vulnerability to both developmental stage and family instability. The study

highlights how cumulative stressors like emotional neglect, lifestyle disruption, and limited parental support compound depressive symptoms in this group. It also emphasizes the importance of family dynamics and healthy lifestyle habits as protective buffers.

Building upon the literature reviewed, the researcher also conducted a systematic literature review (SLR) in line with PRISMA guidelines. The review initially covered studies published between January 2010 and December 2020, and was subsequently updated to include research up to March 2024 to ensure comprehensiveness. This work, later published in a peer-reviewed journal in 2025 (see Appendix), synthesized findings from both global and Indian contexts on adolescents from single-parent households, with a specific focus on achievement motivation, self-concept, adjustment, and mental health. The SLR revealed that although these variables have each been examined individually, there is a marked scarcity of integrated investigations considering all four together, particularly within the Indian socio-cultural context. The insights derived from this review provided a strong theoretical and empirical foundation for the present study, guiding the selection of variables and shaping the overall research design.

Theoretical Framework

The present study examines achievement motivation, self-concept, adjustment, and mental health among adolescents, with particular emphasis on differences associated with family structure. The selection of these variables is grounded in existing literature highlighting the significant role of family

environment in adolescent psychological development. Adolescents from single-parent families may experience emotional, academic, and social challenges related to reduced parental supervision, financial strain, altered family roles, and limited social support. Such experiences may influence adolescents' self-perception, coping ability, emotional functioning, and psychological well-being (Amato, 2005; Demo & Acock, 1996; Hetherington & Elmore, 2003).

To understand the multidimensional influence of family structure on adolescent development, the study draws upon an integrated set of psychological and family-based theories. Attachment Theory (Bowlby, 1969) explains how disruptions in secure caregiver relationships may influence emotional stability, self-worth, adjustment, and mental health. Social Learning Theory (Bandura, 1977) emphasizes the importance of parental modelling in shaping adolescents' behaviour, motivation, and social functioning. In single-parent family contexts, variations in parental interaction and supervision may influence adolescents' achievement-oriented and adaptive behaviours.

Self-Determination Theory (Deci & Ryan, 2000) highlights the importance of autonomy, competence, and relatedness in psychological development. Variations in emotional support and family interaction within different family structures may affect adolescents' motivation, self-concept, and emotional well-being. Family Systems Theory (Bowen, 1978) views the family as an interconnected system in which changes such as parental separation, divorce, or death may influence family roles, emotional balance, and adolescent adjustment.

Stress and Coping Theory (Lazarus & Folkman, 1984) provides a framework for understanding how adolescents manage stressors associated with family transitions, emotional strain, and social challenges. The theory also highlights the importance of adjustment and coping processes in maintaining psychological well-being. Ecological Systems Theory (Bronfenbrenner, 1979) further explains that adolescent development is shaped by multiple interacting systems, including family, school, peers, and the broader social environment. This perspective helps in understanding how family structure interacts with wider environmental influences to shape adolescent psychological functioning.

Together, these theories provide a comprehensive foundation for understanding adolescent psychological functioning within different family structures. They explain how family environment, emotional support, social learning experiences, coping processes, and broader ecological influences may shape adolescents' achievement motivation, self-concept, adjustment, and mental health. Thus, the theoretical framework provides the conceptual basis for selecting the study variables and interpreting the psychological experiences of adolescents from single-parent and two-parent families.

Conceptual Framework

The conceptual framework of the present study explains the proposed relationships among family structure, demographic characteristics, achievement motivation, self-concept, adjustment, and mental health among adolescents. It

provides an analytical structure for understanding adolescent psychological functioning within varying family environments.

In the present framework, family structure serves as the primary contextual factor, with adolescents from single-parent and two-parent families forming the major comparison groups. Achievement motivation, self-concept, adjustment, and mental health are considered the central psychological variables of the study, as they represent important dimensions of adolescent development related to motivation, self-perception, coping, emotional functioning, and psychological well-being.

The framework further recognizes that adolescent psychological functioning may vary according to certain demographic and contextual characteristics within single-parent families. Therefore, variables such as gender, educational level, sibling status, custodial parent, reason for single parenthood, and family type are included to understand variations within the single-parent group.

The framework also proposes that the selected psychological variables are interconnected. Positive self-concept and achievement motivation are expected to be associated with healthier psychological functioning, whereas adjustment difficulties may be negatively associated with mental health. Self-concept may influence adolescents' ability to manage emotional, social, and family-related demands, thereby affecting their level of adjustment and overall mental health. In this context, adjustment is viewed as a possible mediating factor in the relationship between self-concept and mental health among adolescents from single-parent families.

Further, the framework incorporates comparative, correlational, predictive, and mediational perspectives. The comparative aspect focuses on differences between adolescents from single-parent and two-parent families across the selected psychological variables. The correlational aspect examines the relationships among achievement motivation, self-concept, adjustment, and mental health. The predictive aspect explores the contribution of self-concept and adjustment to mental health, while the mediational aspect examines whether adjustment functions as an intervening variable between self-concept and mental health.

As the study follows a quantitative, cross-sectional, and non-experimental design, the conceptual framework is intended to explain theoretical and analytical relationships among the variables rather than establish causal conclusions.

Research Gap

Although numerous studies have examined the influence of family structure on children and adolescents, most have focused on general academic outcomes, behavioural problems, or emotional well-being separately (Barajas, 2011; Chavda & Nisarga, 2023; Malik et al., 2022). Many of these investigations have been conducted in Western or African contexts (Freeman & Newland, 2002; Hiko et al., 2023), where social and cultural dynamics differ significantly from those in India. In the Indian context, where traditional family norms and social stigma surrounding single parenthood remain strong (Ali & Soomar, 2019; Gupta & Kashyap, 2020), there is limited empirical research addressing the combined psychological outcomes of adolescents from single-parent households.

Furthermore, existing research often considers psychological variables such as achievement motivation, self-concept, adjustment, and mental health in isolation. Very few studies have simultaneously examined these variables or explored their interrelationships among adolescents from single-parent families. There is also limited research examining potential mediating pathways, particularly the mediating role of adjustment in the relationship between self-concept and mental health.

Moreover, previous studies have rarely integrated comparative, correlational, predictive, and mediation approaches within a single framework while examining adolescents from single-parent and two-parent families. Existing literature largely reports isolated findings without adequately explaining the interaction among psychological variables within the Indian socio-cultural context.

Additionally, much of the available literature emphasizes younger children or general school populations rather than focusing specifically on adolescents, who experience distinct identity, emotional, social, and developmental challenges. Consequently, there remains a scarcity of comprehensive and context-specific studies in India examining differences between adolescents from single-parent and two-parent families while also investigating correlations, predictive relationships, and mediation effects among key psychological variables.

Therefore, the present study attempts to address these theoretical and empirical gaps through a multidimensional examination of achievement motivation, self-concept, adjustment, and mental health among adolescents from single-parent and two-parent families.

Significance of the Study

The present study is significant because it contributes to the understanding of adolescent psychological functioning within the context of changing family structures, particularly single-parent families. In recent years, the increasing prevalence of divorce, separation, migration, and parental death has led to a growing number of adolescents being raised in single-parent households. Despite these social changes, limited Indian research has comprehensively examined how family structure is associated with achievement motivation, self-concept, adjustment, and mental health together. Therefore, the present study attempts to provide a broader and more integrated understanding of adolescents' psychological experiences within the Indian socio-cultural context.

The study is theoretically significant because it integrates multiple psychological variables within a single framework rather than examining them separately. By exploring comparative, correlational, predictive, and mediational relationships among achievement motivation, self-concept, adjustment, and mental health, the study contributes to the existing literature on adolescent psychology, family studies, and mental health research. In particular, the examination of adjustment as a mediating factor between self-concept and mental health provides deeper insight into the psychological processes underlying adolescent well-being in single-parent families.

The findings of the study may also contribute to the field of developmental and educational psychology by improving understanding of how adolescents'

motivation, self-perception, coping ability, and mental health are influenced by family and social experiences. Since adolescence is a critical developmental period characterized by identity formation, emotional changes, academic pressure, and social adjustment, the study provides useful insights into the psychological needs and challenges experienced by adolescents from diverse family backgrounds.

The study is practically significant for parents, teachers, school counsellors, psychologists, and mental health professionals. The findings may help parents and caregivers understand the importance of emotional support, communication, supervision, and involvement in adolescents' academic and psychological development. Teachers and school counsellors may use the findings to identify adolescents who require additional emotional, academic, or psychological support, particularly in areas related to self-concept, adjustment, achievement motivation, and mental health.

Further, the study may support the development of school-based counselling programmes, emotional well-being initiatives, parent guidance programmes, and adolescent mental health interventions that are sensitive to diverse family structures. The findings may also assist educational institutions, community organizations, and mental health professionals in designing preventive and supportive strategies that strengthen adolescents' coping abilities, self-confidence, adjustment, and psychological well-being.

The study is also socially and policy-wise significant because it highlights the need for greater awareness and support for adolescents from single-parent

families within society. The findings may be useful for researchers, social workers, and policy makers in developing family-support services, adolescent mental health programmes, and inclusive educational policies that address the psychosocial needs of adolescents from different family environments. Moreover, the study may serve as a foundation for future research related to adolescent mental health, family environment, adjustment, and psychological development within the Indian context.

Statement of the problem

The structure of the family plays a pivotal role in shaping the emotional, psychological, and social development of adolescents. Traditionally, the two-parent family has been viewed as the ideal environment for child-rearing, offering balanced emotional support, consistent supervision, and stability. However, changing social dynamics such as divorce, separation, migration, and the death of a parent have contributed to a significant rise in single-parent families, a trend observed globally as well as within India, particularly in states like Kerala. While societal acceptance of non-traditional family structures is gradually increasing, adolescents from single-parent households often face unique developmental and psychological challenges stemming from altered family roles, diminished emotional support, and economic or social constraints.

Adolescence itself is a critical life stage marked by intense physical, cognitive, and emotional changes. Parental presence and involvement during this period are crucial for fostering a healthy self-concept, emotional adjustment, and motivation for achievement. The absence of one parent, regardless of the cause, may

influence adolescents' developmental experiences and may be associated with difficulties related to self-concept, achievement motivation, adjustment, and mental health

Although numerous studies have addressed adolescent psychological development, most are either generalized across family structures or based on Western socio-cultural contexts, where familial norms and support systems differ significantly from those in India. There is limited empirical evidence from Kerala or similar Indian settings examining multiple psychological variables together specifically achievement motivation, self-concept, adjustment, and mental health and exploring how these variables relate to each other among adolescents in single-parent families. Understanding these aspects is essential to capture the lived experiences and psychological vulnerabilities of adolescents raised in single-parent households within the unique cultural and social context of Kerala.

Hence, the present study was undertaken to examine whether family structure is associated with differences in achievement motivation, self-concept, adjustment, and mental health among adolescents. The study further investigates the interrelationships among these variables, identifies predictors of mental health, and explores the mediating role of adjustment in the relationship between self-concept and mental health among adolescents from single-parent families.

Definitions of Key terms and operational terms

Single parenthood: According to Noel and Cyr (2012), single parenthood refers to the daily presence of only one parent in a child's life, along with the absence of the other. This definition highlights not only the structural aspect of the family but also

its psychosocial implications, including emotional and financial strain on the custodial parent.

In the present study, single parenthood refers to a family structure in which an adolescent is raised by only one biological parent due to divorce, separation, or death of a parent. Adolescents from single-parent families are those who have lived exclusively with one parent for at least the past two years and do not receive consistent daily caregiving from the other parent.

Adolescents: The World Health Organization (WHO, 2014) defines adolescents as individuals aged 10–19 years, marking a period of physical, psychological, and social development.

In the present study, adolescents refer to individuals aged between 13 and 19 years studying in secondary school, higher secondary school, or graduate programmes, and living with either one parent or two parents.

Achievement motivation: Atkinson and Feather (1966) described achievement motivation as a personal trait that becomes evident when individuals view their performance as a means to achieve a sense of accomplishment.

In the present study, achievement motivation refers to the scores obtained by adolescents on the Achievement Motivation Scale (n-ACH) developed by Deo and Mohan (1985), which measures dimensions related to academic motivation, achievement needs, performance orientation, and educational aspirations.

Self-concept: According to Lawrence (1996), self-concept is an individual's awareness of their own identity, encompassing three key aspects: self-image (how the person perceives themselves), ideal self (what the person aspires to be), and self-esteem (how the person evaluates the gap between their current self and their desired self).

In the present study, self-concept refers to the scores obtained by adolescents on the Self-Concept Questionnaire developed by Dr. Raj Kumar Saraswat (1984), which assesses physical, social, temperamental, educational, moral, and intellectual dimensions of self-concept.

Adjustment: According to Good (1959), adjustment refers to the process through which individuals modify their behavior to meet the demands of environmental changes.

In the present study, adjustment refers to the scores obtained by adolescents on the Adjustment Inventory developed by Dr. R. K. Ojha (1995), which measures home, health, social, and emotional adjustment. Lower scores indicate better adjustment.

Mental health: According to the World Health Organization (2014), mental health is understood as a state of well-being that enables individuals to recognize their abilities, manage everyday stress, maintain productive work, and contribute to society.

In the present study, mental health refers to the scores obtained by adolescents on the Mental Health Scale developed by Dr. Sushma Talesara and Dr.

Akhtar Bano (2017), which assesses school-related, home-related, and peer-related aspects of psychological well-being.

Rationale of the study

Adolescence is a critical developmental stage characterized by rapid physical, emotional, social, and psychological changes. During this period, family environment plays an important role in shaping adolescents' emotional security, self-perception, coping behaviour, academic involvement, and psychological well-being. The quality of parental support, supervision, communication, and family interaction can significantly influence how adolescents manage developmental challenges and adjust to social and academic demands.

In recent years, social changes such as divorce, separation, migration, and parental death have contributed to an increase in single-parent families in India, including Kerala. Adolescents growing up in single-parent households may experience changes in family responsibilities, emotional support systems, and interpersonal relationships. These experiences may influence important psychological dimensions such as achievement motivation, self-concept, adjustment, and mental health. At the same time, adolescents from single-parent families may also develop adaptive coping abilities and resilience through supportive relationships and life experiences.

The present study was undertaken to understand how adolescents adapt psychologically within different family environments, particularly in the context of single-parent families. Achievement motivation, self-concept, adjustment, and

mental health were selected because they represent important dimensions of adolescent development associated with academic engagement, self-perception, emotional functioning, coping ability, and psychological well-being. Understanding the relationships among these variables may provide deeper insight into adolescents' emotional, social, and psychological functioning within different family environments.

The study also seeks to understand whether adjustment plays an important role in the relationship between self-concept and mental health among adolescents from single-parent families. Such an approach may provide deeper insight into the emotional and adaptive processes associated with adolescent well-being. Thus, the present study was considered important for developing a more comprehensive understanding of adolescents' psychological experiences within changing family contexts.

Research questions

1. Are there significant differences in achievement motivation, self-concept, adjustment, and mental health between adolescents from single-parent and two-parent families?
2. Do adolescents from single-parent families differ in achievement motivation, self-concept, adjustment, and mental health based on sociodemographic variables such as gender, education level, sibling status, custodial parent, reason for single parenthood, and family type?
3. What is the relationship among achievement motivation, self-concept,

adjustment, and mental health among adolescents from single-parent families?

4. Which psychological variables (achievement motivation, self-concept, adjustment) significantly predict mental health among adolescents from single-parent families?
5. Does adjustment mediate the relationship between self-concept and mental health among adolescents from single-parent families?

Objectives of the study

- ☐ To compare adolescents from single-parent and two-parent families with respect to achievement motivation, self-concept, adjustment, and mental health.
- ☐ To examine the differences in achievement motivation, self-concept, adjustment, and mental health among adolescents from single-parent families based on sociodemographic variables such as gender, education level, custodial parent (mother/father), presence of siblings, reason for single parenthood (Divorce, separate or death) and family type (nuclear/joint).
- ☐ To examine the relationships among achievement motivation, self-concept, adjustment, and mental health among adolescents from single-parent families.

- To identify the extent to which achievement motivation, self-concept, and adjustment predict mental health among adolescents from single-parent families.
- To explore whether adjustment acts as a mediating variable in the relationship between self-concept and mental health among adolescents from single-parent families.

Hypotheses

H₀₁: There is no significant difference in achievement motivation between adolescents from single-parent and two-parent families.

H₀₂: There is no significant difference in self-concept and its dimensions (physical, social, temperamental, educational, moral, intellectual) between adolescents from single-parent and two-parent families.

H₀₃: There is no significant difference in adjustment and its dimensions (home, health, social, emotional) between adolescents from single-parent and two-parent families.

H₀₄: There is no significant difference in mental health and its dimensions (school-related, home-related, peer-related) between adolescents from single-parent and two-parent families.

H₀₅: There is no significant difference in achievement motivation between male and female adolescents from single-parent families.

H₀₆: There is no significant difference in self-concept and its dimensions (physical, social, temperamental, educational, moral, intellectual) between male and female adolescents from single-parent families.

H₀₇: There is no significant difference in adjustment and its dimensions (home, health, social, emotional) between male and female adolescents from single-parent families.

H₀₈: There is no significant difference in mental health and its dimensions (school-related, home-related, peer-related) between male and female adolescents from single-parent families.

H₀₉: There are no significant differences in achievement motivation among single-parent adolescents based on their level of education (secondary, higher secondary, graduation).

H₀₁₀: There are no significant differences in self-concept and its dimensions (physical, social, temperamental, educational, moral, intellectual) among single-parent adolescents based on their level of education (secondary, higher secondary, graduation).

H₀₁₁: There are no significant differences in adjustment and its dimensions (home, health, social, emotional) among single-parent adolescents based on their level of education (secondary, higher secondary, graduation).

H₀₁₂: There are no significant differences in mental health and its dimensions (school-related, home-related, peer-related) among single-parent adolescents based on their level of education (secondary, higher secondary, graduation).

H₀₁₃: There is no significant difference in achievement motivation between single-parent adolescents with siblings and those without siblings.

H₀₁₄: There is no significant difference in self-concept and its dimensions (physical, social, temperamental, educational, moral, intellectual) between single-parent adolescents with siblings and those without siblings.

H₀₁₅: There is no significant difference in adjustment and its dimensions (home, health, social, emotional) between single-parent adolescents with siblings and those without siblings.

H₀₁₆: There is no significant difference in mental health and its dimensions (school-related, home-related, peer-related) between single-parent adolescents with siblings and those without siblings.

H₀₁₇: There is no significant difference in achievement motivation between adolescents living with single mothers and those living with single fathers.

H₀₁₈: There is no significant difference in self-concept and its dimensions (physical, social, temperamental, educational, moral, intellectual) between adolescents living with single mothers and those living with single fathers.

H₀₁₉: There is no significant difference in adjustment and its dimensions (home, health, social, emotional) between adolescents living with single mothers and those living with single fathers.

H₀₂₀: There is no significant difference in mental health and its dimensions (school-related, home-related, peer-related) between adolescents living with single mothers and those living with single fathers.

H₀₂₁: There is no significant difference in achievement motivation between adolescents from single-parent families due to parental death and those due to divorce/separation.

H₀₂₂: There is no significant difference in self-concept and its dimensions (physical, social, temperamental, educational, moral, intellectual) between adolescents from single-parent families due to parental death and those due to divorce/separation.

H₀₂₃: There is no significant difference in adjustment and its dimensions (home, health, social, emotional) between adolescents from single-parent families due to parental death and those due to divorce/separation.

H₀₂₄: There is no significant difference in mental health and its dimensions (school-related, home-related, peer-related) between adolescents from single-parent families due to parental death and those due to divorce/separation.

H₀₂₅: There is no significant difference in achievement motivation between adolescents from nuclear and joint single-parent families.

H₀₂₆: There is no significant difference in self-concept and its dimensions (physical, social, temperamental, educational, moral, intellectual) between adolescents from nuclear and joint single-parent families.

H₀₂₇: There is no significant difference in adjustment and its dimensions (home, health, social, emotional) between adolescents from nuclear and joint single-parent families.

H₀₂₈: There is no significant difference in mental health and its dimensions (school-related, home-related, peer-related) between adolescents from nuclear and joint single-parent families.

H₀₂₉: There are no significant relationships among achievement motivation; self-concept and its dimensions (physical, social, temperamental, educational, moral, intellectual); adjustment and its dimensions (home, health, social, emotional); and mental health and its dimensions (school-related, home-related, peer-related) among adolescents from single-parent families.

H₀₃₀: Self-concept (physical, temperamental, educational), adjustment (home, health, social, emotional), and achievement motivation do not significantly predict school-related mental health among adolescents from single-parent families.

H₀₃₁: Self-concept (physical, social, temperamental, educational, moral), adjustment (home, health, social, emotional), and achievement motivation do not significantly predict home-related mental health among adolescents from single-parent families.

H₀₃₂: Self-concept (physical, social, temperamental, educational, moral) and adjustment (home, health, social, emotional) do not significantly predict peer-related mental health among adolescents from single-parent families.

H₀₃₃: Adjustment (home, health, social, emotional) does not significantly mediate the relationship between self-concept (physical, social, temperamental, educational, moral, intellectual) and school-related mental health among adolescents from single-parent families.

H₀₃₄: Adjustment (home, health, social, emotional) does not significantly mediate the relationship between self-concept (physical, social, temperamental, educational, moral, intellectual) and home-related mental health among adolescents from single-parent families.

H₀₃₅: Adjustment (home, health, social, emotional) does not significantly mediate the relationship between self-concept (physical, social, temperamental, educational, moral, intellectual) and peer group–related mental health among adolescents from single-parent families.

Chapter summary

This chapter introduced the study by discussing how family structures are changing globally and in India, especially in Kerala where divorce and separation are rising. These shifts have led to an increase in single-parent households, creating new challenges for adolescents who are already navigating a critical stage of growth marked by physical, emotional, and social changes.

The review highlighted that adolescents in single-parent families often face difficulties in achievement motivation, self-concept, adjustment, and mental health, though many also show resilience when supported by caring parents, peers, or extended networks. By focusing on these four psychological variables, the chapter set the framework for understanding how family structure shapes adolescent development.

Finally, the research gap, problem statement, objectives, and hypotheses were presented, underlining the need to study adolescents from single-parent households in Kerala's unique socio-cultural context. In doing so, the chapter established the foundation for the methods and analyses described in the following sections of the thesis.

CHAPTER 2

METHOD

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- *Research Perspective*
 - *Research Design*
 - *Research Method*
 - *Phase I -Pilot study and expert suggestion*
 - *Phase II- Main study*
 - *Sample*
 - *Procedure*
 - *Tools*
 - *Statistical analysis*
-

This chapter outlines the methodological framework used to address the research questions and test the hypotheses related to the mental health, achievement motivation, self-concept, and adjustment of adolescents from single-parent and two-parent households. The chapter begins by describing the research perspective, followed by details of the research design, sample and sampling methods. The data collection procedures are explained in detail, including the recruitment process and the methods used to ensure ethical participation. Additionally, the chapter describes the instruments and scales used to measure the key variables, along with the statistical techniques employed to analyse the data.

The primary aim of the study is to first compare adolescents from single-parent and two-parent families in terms of achievement motivation, self-concept, adjustment, and mental health, thereby examining the role of family structure in shaping these psychological variables. Following this, additional analyses are carried out within the single-parent group to identify differences across demographic factors such as gender, education level, sibling status, custodial parent, cause of single parenthood and family type. The study then examines the interrelationships among the psychological variables, assesses the predictive value of achievement motivation, self-concept, and adjustment for mental health, and finally tests adjustment as a mediator in the relationship between self-concept and mental health. This sequential design ensures a comprehensive understanding of adolescent functioning, moving from broad family structure comparisons to detailed exploration within single-parent contexts.

Research Paradigm

Scientific research is a systematic pursuit of knowledge that is guided by philosophical assumptions and methodological principles collectively known as research paradigms. A research paradigm serves as a foundational worldview that shapes how researchers perceive reality (ontology), how they understand and acquire knowledge (epistemology), what values they uphold in the research process (axiology), how they approach inquiry (methodology), and how they determine the quality and rigor of their findings. As Kuhn (1962) emphasized, paradigms represent the shared belief systems within scientific communities that influence the kinds of questions posed, the methods used to explore them, and the interpretation of results. Understanding the nature and assumptions of research paradigms is therefore essential for selecting appropriate methodologies and aligning them with the objectives of a study.

The present study adopts the positivist research paradigm, which is commonly associated with quantitative research approaches. Positivism assumes that reality is objective, stable, and measurable, and that valid knowledge can be obtained through systematic observation and empirical investigation. This paradigm supports the use of structured methodologies and standardized instruments to quantify human behaviour and psychological traits. Accordingly, the study employs a quantitative design to measure and analyse psychological constructs such as achievement motivation, self-concept, adjustment, and mental health among adolescents from single-parent and two-parent families. By using standardized tools and statistical analyses, including group comparisons, correlation, regression, and

mediation models, this approach ensures objectivity, replicability, and generalizability of results.

Grounding the study in the positivist paradigm allows for a rigorous and unbiased examination of differences and relationships among the selected psychological variables. It also enables the researcher to derive evidence-based conclusions about how family structure influences adolescent development in the Indian context. The emphasis on quantifiable data and statistical interpretation is particularly relevant for identifying patterns and predictors of well-being among adolescents living in single-parent households, thus making the chosen paradigm both appropriate and effective for the present investigation.

Research Design

A well-formulated research design is foundational to the success and validity of any scientific investigation. It serves as a strategic framework for data collection, analysis, and interpretation, guiding the researcher in addressing the research objectives systematically (Farthing, 2016; Blaikie & Priest, 2022; Creswell & Creswell, 2018). The present study adopted a quantitative cross-sectional non-experimental research design. The study was descriptive, comparative, correlational, and predictive in nature. It aimed to examine achievement motivation, self-concept, adjustment, and mental health among adolescents from single-parent and two-parent families.

A cross-sectional design was chosen because the study involves collecting data from participants at a single point in time, without any follow-up or

intervention. This design is appropriate for examining differences between pre-existing groups and analysing associations among psychological variables at a single point in time. Cross-sectional research is commonly used in psychology and education to analyse group-based differences and patterns of association within a target population using standardized instruments (Lavrakas, 2008). In the present study, data were gathered using psychometrically validated self-report questionnaires administered once to a sample of adolescents, thus justifying its classification as cross-sectional.

The correlational and predictive components of the study reflect its aim to examine relationships among psychological variables and identify predictors of mental health among adolescents. No variables were manipulated, and no causal inference was intended; instead, associations were tested using correlational and regression analyses, including mediation analysis to evaluate the role of adjustment between self-concept and mental health. This corresponds to the aim of correlational research, which is to examine the direction and magnitude of relationships between variables within natural, observational settings (Shaughnessy, Zechmeister, & Zechmeister, 2015; Creswell & Creswell, 2018).

The use of a survey-based data collection method within this design further supports its cross-sectional and correlational nature. Standardized psychological scales allow for reliable quantification of the constructs, enabling generalizable and replicable findings. Moreover, this approach provides a cost-effective and time-efficient way to gather data from a diverse adolescent population, making it

especially suitable for educational and psychological research settings in the Indian context (Best & Kahn, 1993; Bryman, 2012).

In summary, the present study employed a quantitative cross-sectional non-experimental research design with descriptive, comparative, correlational, and predictive components. This design was considered appropriate for examining group differences, relationships among psychological variables, predictors of mental health, and mediation effects within the context of adolescents from single-parent and two-parent families.

Research method

Planning research is a complex task that requires careful alignment between the purpose of the study and the chosen methodology. There is no single fixed model for research design; it must be tailored to align with the specific goals and context of the study. A comprehensive research framework includes critical elements such as methodological approach, sampling strategy, instrumentation, piloting, and the timing and sequencing of data collection. These components ensure the study maintains internal consistency, addresses ethical concerns, and upholds standards of reliability and validity (Cohen, Manion, & Morrison, 2017).

Given the complexity of investigating multiple psychosocial variables namely achievement motivation, self-concept, adjustment, and mental health among adolescents from single-parent and two-parent families, a quantitative research approach was adopted. This method enables the use of standardized tools and statistical procedures to identify significant differences and associations, offering

empirical insights that can inform educational, psychological, and policy-related interventions.

To ensure systematic progression and manageability, the study was conducted in two distinct phases:

- Phase I-Pilot study & Expert suggestion
- Phase II- Main study
 - Section A – Analysis related with descriptive statistics and demographic details of the sample
 - Section B – Comparison between single and two parented Adolescents
 - Section C – Analysis conducted in Single parented Adolescents’ psychological variables based on demographic variables
 - Section D –Correlation among all psychological variables
 - Section E—Regression Analysis predicting Mental health in Single- parented Adolescents
 - Section F –Mediation analysis: Adjustment as Mediator between Self - concept and Mental health

The study was organized in these sequential phases to ensure clarity and coherence from the preparatory stage to advanced statistical analyses. An overview of these phases and their internal sections is presented in Figure 1.

Phase I-Pilot study & Expert suggestion

Before conducting the main study, a pilot study and expert consultation were carried out to refine the research tools and ensure the relevance of the study. The pilot study helped test the reliability, clarity, and feasibility of the instruments, ensuring that the tools were suitable for the target population. This process strengthened the methodological soundness of the research and confirmed that the study would effectively address its objectives.

Pilot study

Pilot study is a small-scale, preliminary investigation that happens before the main research. The idea is to test and refine the research design, methodology, instruments, and procedures. The main goal is to spot potential problems that could affect the validity and reliability of the full study. Unlike the main study, a pilot study doesn't focus on testing hypotheses. Instead, it focuses on whether things are feasible and whether the instruments are clear. The sample size is typically small and flexible. Some researchers say at least 12 participants per group works, while others recommend over 30 to make sure reliability is solid (Julious, 2005).

In this context, adolescents from single-parent households are often found to be more vulnerable to challenges related to mental health and achievement motivation compared to their peers from two-parent households (Cavanagh & Fomby, 2012; Mello et al., 2016; Richer & Lemola, 2017). However, these issues are frequently overlooked in educational settings, resulting in limited early intervention or support. To explore these concerns further and to validate the

relevance of the selected psychological variables particularly mental health and achievement motivation a pilot study was conducted. This preliminary phase aimed to determine whether noticeable disparities existed between the single and two parent families and to fine-tune the research instruments for the main study.

Sample in the pilot study

The literature reviewed showed significant differences between adolescents from single-parent and two-parent families across various developmental domains. However, for the pilot phase, the focus was limited to two psychological variables namely achievement motivation and mental health. This decision was taken because the research instruments contained a large number of items, and administering all questionnaires simultaneously through an online platform during the lockdown period could increase respondent fatigue, incomplete responses, and reduced response quality. Therefore, selected variables were included during the pilot phase to assess feasibility, clarity, participant engagement, and preliminary response patterns before conducting the full-scale main study.

For this pilot phase, 130 teenagers were selected: 58 from single-parent homes and 72 from two-parent homes. The participants included both boys and girls, aged between 13 and 19 years. This sample was chosen to give a balanced and representative comparison between the both family structures, specifically looking at differences in mental health and achievement motivation.

Table 1*Distribution of Pilot Study Sample by Parenthood and Gender*

Parenthood	Male	Female	Total
Single Parent	33	25	58
Two Parent	34	38	72
Total	67	63	130

Note. Values represent the number of adolescents in each category. The pilot study included a total sample of 130 participants (67 males and 63 females).

Variables Used in the Pilot Study

In the pilot study, two primary psychological variables; achievement motivation and mental health were selected to explore the influence of family structure, particularly single parenthood, on adolescent development. The aim was to investigate whether adolescents from single-parent families differ significantly from those in two-parent households with respect to these psychological constructs.

Achievement motivation

Achievement motivation refers to an individual's internal drive to accomplish goals and succeed academically. This motivation is often shaped by the emotional and environmental support available within the family. In single-parent households, adolescents may experience reduced parental involvement, inconsistent guidance, or increased responsibilities, which could hinder or sometimes enhance their drive for achievement depending on the level of parental encouragement and resilience within the family. Research by Gupta and Mili (2016) highlighted a positive link between academic motivation and performance, suggesting that motivated students, even in less supportive environments, tend to excel

academically. Achievement motivation is a strong predictor of academic success, but it is influenced by related factors such as self-concept and mental health (Miller et al., 1996; Tuominen-Soini & Salmela-Aro, 2014). Accordino et al. (2000) added that high achievement standards, common among adolescents seeking to compensate for the absence of one parent, can be both beneficial and stressful, potentially leading to anxiety if expectations are unmet. Thus, examining achievement motivation through the lens of family structure offers deeper insight into how single parenthood shapes adolescents' academic aspirations.

Mental health

Mental health, another crucial variable, plays a vital role in shaping adolescents' overall functioning and adjustment. Adolescents from single-parent families often face greater emotional and financial pressures due to the absence of one parent, which may lead to increased stress, anxiety, and difficulty coping with academic or social demands. Bhat and Patil (2019) found that psychological distress is more common among children from single-parent homes, mainly because there's less supervision and financial support. This distress can significantly hurt how well they do in school and how they integrate socially. Agnafors, Barmark, and Sydsjö (2020) demonstrated that early psychological difficulties often persist into adolescence, affecting educational outcomes over time. Furthermore, Bas (2021) indicated that adolescents with better mental health, often supported by stable parenting, are more focused, resilient, and academically motivated. In contrast, those exposed to emotional neglect or instability, which can occur in some single-parent households, may face greater challenges in maintaining psychological well-being.

By focusing on the role of parenthood, this pilot study provided preliminary insights into how family structure especially single parenthood may shape adolescents' psychological functioning. The findings from this initial phase helped validate the relevance of these two variables and guided the development of the main study, which aims to explore a broader range of psychological outcomes among adolescents from varying family backgrounds.

Objective of the Pilot Study

- To explore preliminary differences in mental health between adolescents from single-parent and two-parent households and assess whether adolescents from single-parent families experience unique psychological challenges.
- To examine the achievement motivation among adolescents from both family structures and evaluate whether family composition influences their academic drive and personal goal-setting.
- To test the clarity, relevance, and comprehension of the questionnaire items among the selected adolescent group.
- To assess the effectiveness and appropriateness of using questionnaires as the primary method for data collection in the main study.

Tools Used in the Pilot Study

In the pilot study, structured questionnaires were employed as the primary method for data collection. These instruments were carefully designed with age-

appropriate language and clear instructions to ensure comprehension among adolescent participants. The tools were selected to specifically assess the psychological variables under investigation: mental health and achievement motivation.

The tools used in the pilot study included:

- Personal Data Sheet – to collect demographic and background information.
- The Achievement Motivation Scale (n-Ach) developed by Prof. Pratibha Deo and Dr. Asha Mohan was used to assess adolescents' motivation levels toward academic and personal goals.
- The Mental Health Scale (MHS) developed by Dr. Sushma Talesara and Dr. Akhtar Bano was used to assess the mental health of adolescents.

Procedure of Data Collection and Analysis

The pilot study was conducted during the COVID-19 lockdown, which presented unique challenges due to the closure of schools and restricted in-person contact. This made it difficult to reach the target group, particularly adolescents from single-parent households. With educational activities shifting online, the researcher adopted a convenience sampling strategy.

Potential participants were identified with the help of teachers, friends, and relatives familiar with single-parent families. Contact numbers were collected, and participants were approached through phone calls and messages. Consent was obtained from both the adolescents and their parents over the phone before sending the online questionnaire link.

Participants were identified through teachers, friends, relatives, and institutional contacts familiar with adolescents from single-parent and two-parent families. This approach was adopted as a practical strategy during the lockdown period to access participants who met the inclusion criteria of the study. Although the use of convenience and network-based sampling may introduce certain limitations related to sampling bias, it was considered appropriate under the exceptional circumstances of restricted mobility and limited institutional access during the pandemic period.

Data was collected using Google Forms, allowing participants to respond remotely. However, the questionnaire's length comprising more than 50 items led to high dropout rates. Many adolescents reported mental fatigue and discontinued halfway. Since the form could only be submitted upon full completion, several participants abandoned it mid-way. Follow-up calls confirmed that the questionnaire's length was a primary deterrent.

Despite these limitations, a total of 130 valid responses were collected, including 58 from single-parent and 72 from two-parent households. While data collection was more time-consuming than expected, the final sample size met the general threshold for statistical analysis. According to Mascha and Vetter (2018), a sample size of 30 or more per group is adequate for applying the Central Limit Theorem, ensuring the normality of the sampling distribution.

Preliminary statistical analyses were conducted on the pilot data to examine response distribution patterns, identify procedural issues, and assess the suitability of the instruments and analytical procedures before conducting the main study. These

analyses were exploratory and preparatory in nature and were not intended for final generalization.

The results and statistical findings from this pilot study are presented and discussed in Chapter 3.

Expert Suggestions

Before beginning the main study, suggestions were collected from various experts including class teachers, psychologists, counsellors, and parents. The expert suggestions were collected informally from teachers, psychologists, counsellors, and parents who had experience interacting with adolescents from different family backgrounds. Due to the COVID-19 lockdown situation and restricted accessibility during the preliminary phase of the study, these inputs were gathered mainly through discussions and personal communication. The suggestions helped the researcher to better understand the psychological concerns of adolescents and supported the selection and refinement of the study variables and overall research focus.

These discussions helped in identifying the most important psychological aspects to focus on when studying adolescents. The experts agreed that adolescence is already a time of emotional changes, identity struggles, and confusion. When adolescents face additional challenges such as coming from single-parent families, they may experience stronger emotions which could affect their relationships at school and lead to feelings of isolation. Therefore, the experts recommended focusing on emotional and psychological factors such as self-concept, adjustment, mental health, and motivation.

They also emphasized the importance of understanding how adolescents cope with their emotions and social challenges. Based on their experiences, they observed that adolescents from disrupted family backgrounds often struggle with low self-confidence, frustration, or social withdrawal. Teachers and counsellors often find it difficult to address these challenges without a proper understanding of the child's emotional needs.

The experts further pointed out that early identification of psychological difficulties is key to helping adolescents manage their emotions and maintain better relationships with peers and teachers. They highlighted that if students understand themselves and are emotionally supported, they are more likely to succeed academically and socially. These insights shaped the research focus of this study, which aims to explore achievement motivation, self-concept, adjustment, and mental health among adolescents in different family structures.

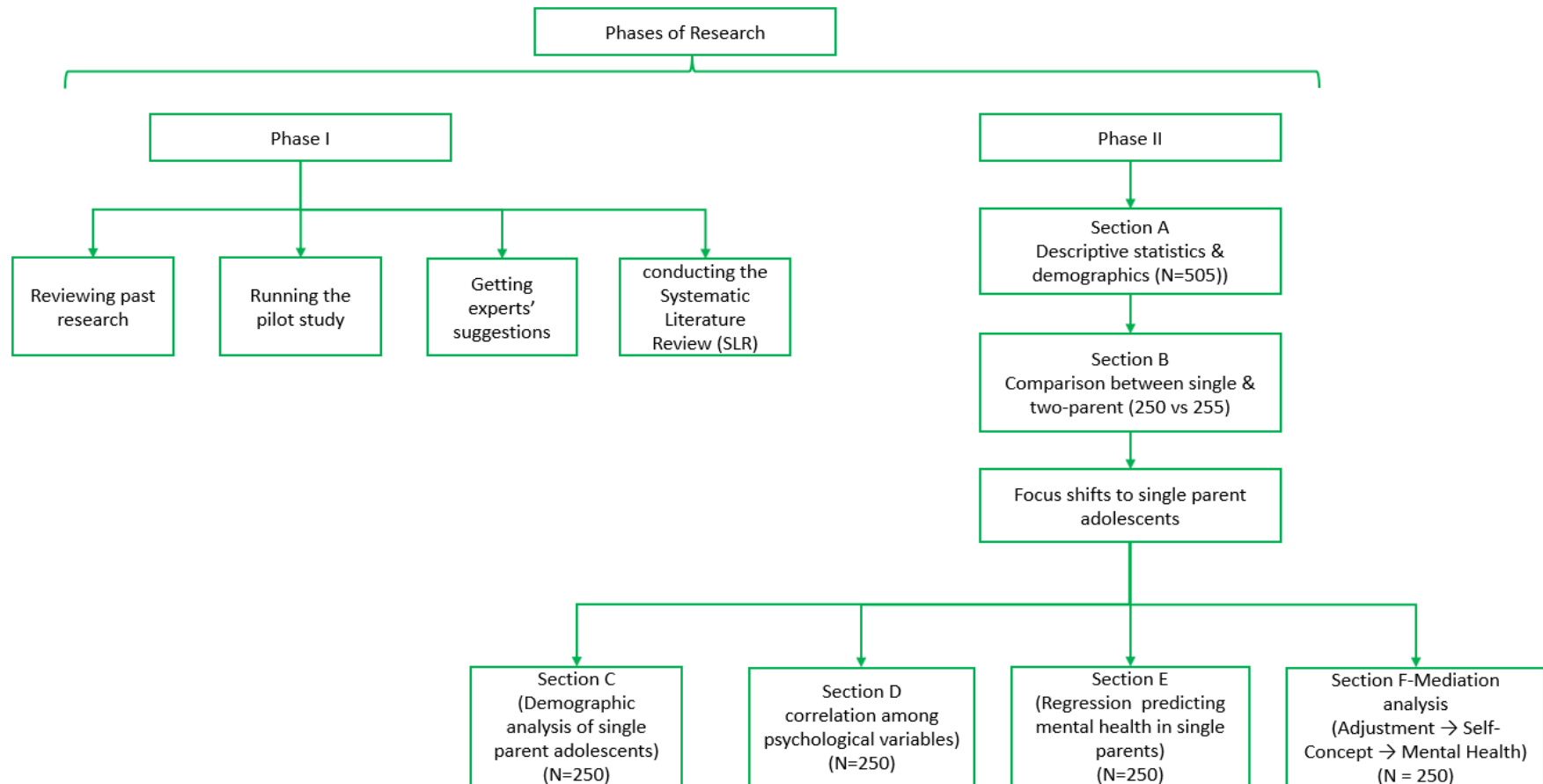
Phase II – Main Study

Building upon the findings of the pilot study, expert consultations, and the systematic literature review (SLR) initially conducted on studies published between January 2010 and December 2020, and later updated to include research up to March 2024 following PRISMA guidelines (subsequently published in a peer-reviewed journal in 2025), the main study was designed to comprehensively examine the psychological outcomes of adolescents from single-parent and two-parent households. The SLR revealed that, while achievement motivation, self-concept, adjustment, and mental health have each been studied individually, integrated investigations combining all four variables, particularly within the Indian socio-

cultural context, remain scarce. This evidence informed the inclusion of additional variables and shaped the methodological framework of the present research.

Whereas the pilot study primarily focused on achievement motivation and mental health, the literature review and expert recommendations underscored the importance of incorporating self-concept and adjustment as key constructs. Previous research has shown that these variables are interrelated and collectively influence adolescents' psychological well-being and academic success. Adjustment plays a central role in enabling adolescents to cope with challenges, while self-concept shapes their self-perception and resilience. Integrating these variables was therefore essential to developing a holistic understanding of the adolescent experience across family structures.

The main study adopted a quantitative, cross-sectional, and non-experimental research design. The study was descriptive, comparative, correlational, predictive, and mediational in nature. It sought to (a) compare adolescents from single-parent and two-parent families on the four selected psychological variables, (b) examine the influence of demographic factors including gender, education level, presence of siblings, custodial parent, reason for single parenthood, and family type on these variables within the single-parent group, (c) analyse the interrelationships among the variables through correlation analysis, (d) identify significant predictors of mental health using multiple regression analysis, and (e) test a mediation model with adjustment as the mediator between self-concept and mental health in single-parent adolescents.

Figure 1*Flow chart showing Phases of Research*

Note. *SLR* = Systematic Literature Review. Phase I involved reviewing prior studies, conducting the pilot study, obtaining expert suggestions, and carrying out the *SLR* to refine the main design. Phase II included the descriptive and inferential analyses of the main sample ($N = 505$), comparisons between single- and two-parent adolescents ($N = 250$ and $N = 255$), and subsequent focused analyses among single-parent adolescents across demographic and psychological variables ($N = 250$).

Sample in the Main Study

The main study included 505 adolescents, comprising 250 from single-parent households and 255 from two-parent households. The participants, both boys and girls, were aged between 13 and 19 years. They were selected from selected districts of Kerala, specifically Thrissur, Ernakulam, Kottayam, and Palakkad, representing varied educational and socio-cultural settings within the central region of the state. A purposive sampling method was employed to identify participants who met the study criteria, with the cooperation of schools, teachers, and community contacts. This inclusive sampling approach was intended to provide a comprehensive understanding of how family structure influences achievement motivation, self-concept, adjustment, and mental health.

In the present study, adolescents from different forms of single-parent families were grouped together based on the shared experience of being raised primarily by one parent. The study focused on understanding the broader psychological functioning associated with single-parent family structure rather than conducting separate comparisons based on the cause of single parenthood. However, the reason for single parenthood was included as a demographic variable in the analysis to examine whether significant differences existed across subgroups.

Separate subgroup analyses based on all causes of single parenthood were beyond the scope of the present study.

Selection Criteria

Inclusion Criteria – Single-Parent Adolescents

- Adolescents aged between 13 and 19 years.
- Living with only one parent for a minimum period of two years.
- Single-parent status resulting from parental separation, divorce, or the death of one parent.
- Willingness to participate, with informed consent obtained from both the adolescent and the parent/guardian.

Exclusion Criteria – Single-Parent Adolescents

- Adolescents under the primary care of grandparents, other relatives, guardians, or living in child-care facilities.
- Single-parent status due to adoption or foster care arrangements.
- Adolescents with physical or mental challenges that could affect participation.
- Unwillingness or inability to complete the questionnaire.

Inclusion Criteria – Two-Parent Adolescents

- Adolescents aged between 13 and 19 years.
- Living continuously with both biological parents.

- Willingness to participate, with informed consent obtained from both the adolescent and the parents.

Exclusion Criteria – Two-Parent Adolescents

- Adolescents living in boarding schools or institutional settings.
- Adolescents with one parent working abroad or absent for extended periods, resulting in lack of continuous interaction.
- Adolescents with physical or mental challenges that could affect participation.
- Unwillingness or inability to complete the questionnaire.

Table 2

Distribution of the Final Sample by Family Type and Gender

Parenthood	Male	Female	Total
Single Parent	134	116	250
Two Parent	112	143	255
Total	246	259	505

Note. Values represent the number of adolescents in each category. The final sample consisted of 505 participants, including 250 from single-parent families and 255 from two-parent families.

Procedure

In research, the sampling procedure involves the structured selection of participants from a target population, ensuring that the study outcomes remain relevant to the research questions and applicable to the larger population. The choice

of sampling technique directly influences the reliability, validity, and applicability of the research outcomes (Creswell & Creswell, 2023).

For the present study, a purposive sampling technique was employed to select participants. Purposive sampling was adopted because the study specifically required adolescents from single-parent and two-parent families who satisfied predefined inclusion criteria. Since the identification of adolescents from single-parent families within educational settings required targeted selection, probability sampling was not practically feasible. Therefore, purposive sampling was considered appropriate for obtaining participants relevant to the objectives of the study. However, since the study employed non-probability sampling, the findings should be interpreted within the limitations of purposive sampling and may not be generalized to all adolescents in Kerala. This method was chosen to address the practical challenges of accessing adolescents from specific family structures while ensuring that all participants met the predefined inclusion criteria.

The sample was drawn from various educational institutions in Kerala, specifically in Thrissur, Ernakulam, and Kottayam districts, including schools, higher secondary schools, colleges, and other comparable institutions. Initially, a consent letter and copies of the questionnaires were provided to the heads of the respective institutions for review and approval. These were accompanied by an official request letter from the researcher's college and a confidentiality agreement bearing the researcher's signature, assuring that the identities of both students and institutions would remain confidential.

The heads of the institutions were given a few days to distribute parental consent forms to the parents of both single-parent and two-parent adolescents. Only after receiving the signed consent forms were the lists of eligible students finalized. The institutions then provided specific dates for data collection.

On the assigned day, adolescents from both family structures were assembled together in a common classroom to prevent any perception of targeting a particular group. During data collection, participants were encouraged to seek clarification if they had any doubts about the questionnaire items, and their queries were addressed immediately by the researcher.

Although some of the instruments used in the present study were developed earlier, they continue to be widely used in psychological and educational research due to their established reliability, validity, and suitability for assessing adolescent psychological functioning. These instruments have been extensively applied in Indian research contexts and remain relevant because the core psychological constructs measured namely achievement motivation, self-concept, adjustment, and mental health continue to hold conceptual and practical significance across time. The standardized nature and psychometric adequacy of these tools supported their selection for the present study.

Tools used in main study

The following tools were used in the main study for the data collection

- ***Personal Data sheet***

The researcher developed a personal data sheet to collect basic demographic information from participants, including gender, educational level, family Type, economic status, sibling status, custodial parent, reason for single parent status

- ***Achievement Motivation Scale(n-Ach)***

Motivation is generally seen as a condition that energizes and guides behavior in particular directions. Achievement motivation, according to Newcomb (1964), is an acquired drive and one of the key social needs. McClelland et al. (1953) viewed it as the tendency to strive for success by competing with others against self-determined standards of excellence. Motive to achieve requires an act of some norms of excellence, long term involvement and unique accomplishment.

The Deo- Mohan Achievement Motivation (n-Ach) Scale developed by Prof. Pratibha Deo, (Retd. Professor& Head, Department of education, Mumbai University, Mumbai) and Dr. Asha Mohan (Retd. Professor, Department of education, Punjab University, Chandigarh) (1985). It is meant for both boys and girls in the age group of 13 to 20 years. This scale is available in Hindi and English language only. This scale consists total 50 items based on 15 factors. The instrument addresses areas such as motivation for learning, achievement needs, reactions to academic challenges, anxiety about performance, the value placed on grades, task meaningfulness, links between education and future goals, work habits, attitudes toward teachers, peer relationships, personal concerns, general interests, and involvement in activities like sports and dramatics. Out of the 50 items, 37 are positive and 13 are negative. The scale can be administered individually as well as

in a group of about 25-30 subjects. The directions in the test booklet must be spoken out and explained clearly to ensure understanding. Participants should be informed that there is no time constraint; however, they are anticipated to respond promptly and provide their candid, unfiltered initial reactions to each topic. Any inquiries, uncertainties, or questions should be thoroughly clarified and explained.

Scoring and interpretation: For scoring, a stencil key is used to differentiate between positive and negative items. Positive items are assigned weights of 4, 3, 2, 1, and 0 corresponding to the response categories *Always*, *Frequently*, *Sometimes*, *Rarely*, and *Never* respectively. In contrast, negative items are scored in reverse order, with weights of 0, 1, 2, 3, and 4 for the same response categories. The total score is obtained by summing the values of all positive and negative items, with possible scores ranging from a minimum of 0 to a maximum of 200. This raw score serves as the initial result, and for further interpretation, z-score norms are applied. These z-score norms have been developed and standardized based on age groups.

Reliability and Validity: The reliability of the achievement motivation scale was assessed using the test-retest method, which involved administering the scale to different sample sets on multiple occasions to examine consistency over time. A mixed-gender group of 51 participants was retested after a 4-week interval, yielding a reliability coefficient of .69 at a .01 level of significance. Male participants (N = 33) were retested after 5-6 weeks, resulting in a coefficient of .67, and female participants (N = 50) also retested after 5-6 weeks, showed a reliability coefficient of .78, both significant at the .01 level. These coefficients suggest a high level of reliability for the scale, making it suitable for use in this study.

The validity of the achievement motivation scale was established through several methods. First, item validity was assessed using the high-low discrimination method, which supported the overall validity of the scale. Additionally, the scale was validated against a projective test of achievement motivation, yielding a concurrent validity correlation of .54. Although correlations between self-report and projective measures are typically low, as noted by McClelland (1958) and Carney (1966), this result is still indicative of concurrent validity. Further validation was achieved by correlating the scale with the Aberdeen Academic Motivation Inventory (Entwistle, 1968), resulting in a correlation of .75, and .93 for a mixed sample, providing strong evidence of the scale's validity for assessing achievement motivation.

- **Self-Concept questionnaire**

Saraswat and Gaur (1981) defined self-concept as an individual's perception of oneself, encompassing their patterns of thinking, feeling, and behaving. Adolescence, being a distinct developmental stage with unique characteristics and challenges, requires a closer examination of how young people view themselves. For this purpose, their self-concept must be studied across multiple dimensions, including the physical, social, temperamental, educational, moral, and intellectual domains.

The *Self-Concept Questionnaire (SCQ)* was developed and standardized by Dr. Raj Kumar Saraswat (1984), Professor of Psychology in the Department of Educational Psychology, Counselling and Guidance at the National Council of Educational Research and Training (NCERT), New Delhi. This questionnaire

measures self-concept across six distinct dimensions: physical, social, intellectual, moral, educational, and temperamental. In addition to these domain-specific scores, it also yields an overall self-concept score. The questionnaire provides operational definitions for each of these six dimensions to facilitate systematic assessment.:

1. Physical- Individuals' view of their body, health, physical appearance and strength.
2. Social- Individual's sense of worth in social interaction.
3. Temperamental-Individuals view of their prevailing emotional state or predominance of a particular kind of emotional reaction.
4. Educational- Individual's view of themselves in relation to school, teachers and extracurricular activities.
5. Moral- Individual's estimation of their moral worth; right or wrong activities.
6. Intellectual- Individual's awareness of their intelligence and capacity of problem solving and judgement.

Scoring and interpretation: The *Self-Concept Questionnaire* consists of 48 items, with each of the six dimensions represented by eight items. Every item offers five alternative responses, from which the respondent is instructed to carefully select the one they consider most appropriate. Since the tool is self-report in nature, there are no right or wrong answers. The response options are arranged to maintain a uniform scoring pattern across all items, following the sequence 5, 4, 3, 2, and 1.

Accordingly, selecting the first alternative carries a score of 5, the second 4, the

third 3, the fourth 2, and the fifth 1. The total self-concept score is obtained by summing the responses to all 48 items. A higher total score reflects a higher level of self-concept, whereas a lower total score indicates a lower self-concept. The minimum and maximum range of score for each case is 48-240.

Reliability and validity: The reliability of the Self-Concept Questionnaire (SCQ) was established through the test-retest method, yielding a high reliability coefficient of .91 for the overall self-concept measure, indicating strong stability over time. Individual reliability coefficients for the SCQ dimensions ranged from .67 to .88, each demonstrating significant reliability at the .01 level. Specifically, the test-retest reliability for each dimension was as follows: physical self-concept (.77), social self-concept (.83), temperamental self-concept (.79), educational self-concept (.88), moral self-concept (.67), and intellectual self-concept (.79). These reliability scores suggest that the SCQ is a dependable tool for assessing different facets of self-concept, ensuring consistent measurement across its dimensions.

The validity of the Self-Concept Questionnaire (SCQ) was established through expert judgment to ensure both content and construct validity. Initially, 100 items were presented to 25 psychologists, who were asked to classify each item into the appropriate self-concept dimension. Items that achieved a consensus of 80% or higher among the experts were retained, ensuring that only the most relevant and accurately categorized items were included in the final measure. This rigorous selection process contributed to the SCQ's content validity by aligning items with their intended categories and construct validity by ensuring that the scale effectively measured the conceptual framework of self-concept.

- **Bell's Adjustment Inventory**

Adjustment, in the context of adolescent development, refers to the ability of individuals to effectively manage demands across home, health, social, and emotional domains, thereby maintaining psychological well-being and harmonious relationships with their environment. Since adolescents from single-parent families often face unique challenges that can influence their adjustment, it is essential to measure this construct systematically. For this purpose, the present study employed Bell's Adjustment Inventory, developed by Dr. R. K. Ojha (1995), Retd. Head, Department of Psychology, K.G.K. College, Moradabad (U.P). This inventory is designed for boys and girls studying at the high school, intermediate, degree, and postgraduate levels.

Scoring and interpretation: The *Adjustment Inventory* is divided into four sections, each containing 35 statements. For every statement, two response options—*Yes* and *No*—are provided on the right side. Respondents are instructed to mark *Yes* if they agree with the statement or the fact described, and *No* if they do not agree. Although there is no time limit, participants are encouraged to respond to all items as quickly as possible.

The scoring procedure is straightforward: only *Yes* responses are counted. Each *Yes* response carries a score of 1, while *No* responses are not scored. Thus, the total score for each section is the sum of *Yes* responses. Since the inventory is designed as a negative measure, a *Yes* response indicates the presence of adjustment difficulties, whereas a *No* response reflects the absence of such difficulties.

Therefore, the total adjustment difficulty score of an individual is obtained by summing all *Yes* responses across the inventory.

Reliability and Validity: The reliability of the Adjustment Inventory was established through the test-retest method, indicating high reliability across various dimensions. The inventory was administered to a sample of 200 students and then re-administered after a two-month interval. The test-retest reliability coefficients were as follows: 0.91 for Home Adjustment, 0.90 for Health Adjustment, 0.89 for Social Adjustment, and 0.92 for Emotional Adjustment. These consistently high coefficients demonstrate that the inventory is a reliable tool for assessing adjustment, as each dimension showed stability over time, ensuring its suitability for measuring adjustment in diverse contexts.

The validity of the Adjustment Inventory was established by correlating its scores with K. Kumar's Adjustment Inventory, which served as a standard for comparison. This validation study involved a sample of 400 individuals across four educational groups. Pearson's correlation analysis indicated strong positive correlations between corresponding areas of adjustment in both inventories, with coefficients of 0.72 for Home Adjustment, 0.79 for Health Adjustment, 0.82 for Social Adjustment, and 0.81 for Emotional Adjustment. These significant correlations confirm the inventory's validity, suggesting it effectively measures adjustment in alignment with established tools.

Mental Health Scale

Occasional ups and downs are normal in human life, but it persists for long time may be the sign of the mental sickness. Ill mental health makes a person hard to function and fails to enjoy life. The feeling of worthlessness is intense. Persons suffering with ill mental health losses interest in family, friends and have dominance of negative thoughts. Mental illness is a major health issue that nearly everyone will experience personally or through others during their life.

Mental health scale was developed by Dr.Sushma Talesara (Professor, Vidya Bhawan G.S. Teacher's college, Udaipur and Dr. Akhtar Bano (Lecturer, Vidya Bhawan G.S. Teacher's College, Udaipur (2017). This tool is meant for checking level of mental health in adolescent students. Adolescents often experience significant disruptions that can affect their mental health, leading to issues like maladjustment and impaired decision-making. The Mental Health Scale was developed by identifying specific areas influencing adolescent mental health: school-related factors, home environment, and peer group influences.

School-related factors include experiences such as teacher behaviour, overly strict school administration, intense competition, curriculum overload, examination stress, and lack of concentration, all of which can create a stressful environment that affects students' mental well-being.

Home environment factors play a crucial role from early childhood, as family serves as a foundational context where values, language, attitudes, and cultural understanding are first developed. Influential aspects of home life include

the degree of protectiveness, freedom, control, fairness in behaviour, and the presence of reward or punishment systems. Additionally, socio-economic status can impact the mental health of students due to varying levels of resources and support available within the family.

Peer group influences also significantly impact adolescents' mental health, as peer interactions are central to social development. Situations involving teasing, intimidation, or negative comments from peers can create emotional distress, influencing overall well-being.

To construct the scale, a variety of symptoms associated with mental health issues were compiled. Ten experienced psychologists specializing in counselling were consulted to review and discuss these symptoms, ensuring that the scale accurately reflects the factors impacting adolescents' mental health.

Scoring and interpretation: The mental health scale includes 54 items divided by the nature of the content (positive or negative) and by causes (school, home, and peer group related). In school-related causes, there are 7 positive items (30,31,32,41,42,50,51) and 11 negative items (3,4,5,6,7,13,14,16,17,19,26). In home-related causes, there are 13 positive items (33,35,36,37,38,43,44,45,46,47,52,53,54) and 9 negative items (1,2,8,9,15,18,22,27,29). In peer-related causes, there are 5 positive items (34,39,40,48,49) and 9 negative items. This means the scale include 25 positive and 29 negative items, totalling 54 items. The scoring scale uses a 5-point Likert scale, where each response option is assigned, a score based on whether the item is positive or negative. For positive items, always=4, Often=3, Sometimes=2, Rarely=1, Never=0. For negative items, always=0, Often=1,

Sometimes=2, Rarely=3, Never=4. Higher Scores on the scale indicate better mental health, as it suggests fewer negative responses and more positive ones across various causes. Lower Scores could indicate areas of concern, suggesting the presence of mental health challenges related to school, home, or peer influences. Specific score ranges could be set (e.g., low, medium, high) based on norms from existing research for a finer interpretation.

Reliability and Validity: The Mental Health Scale (MHS) demonstrates a high degree of reliability, measured using the split-half method. By dividing the items into odd and even sets and correlating the scores from each subset, a reliability coefficient of 0.72 was achieved. This value is significant at the 0.01 level, indicating that the scale provides consistent results and is reliable for measuring mental health.

The MHS shows strong validity on multiple fronts. Face validity was established prior to administration, ensuring that the items appeared to adequately measure mental health. For concurrent validity, the MHS was compared with an existing standardized test developed by Pramod Kumar, resulting in a correlation coefficient of 0.69, which is also significant at the 0.01 level. Additionally, intrinsic validity was confirmed by correlating scores from individual areas of the scale with the total MHS score, yielding correlation values ranging from 0.58 to 0.71. These significant correlations indicate that the MHS is a valid tool for assessing various dimensions of mental health.

Statistical analysis

Statistical analysis is important because it helps you draw meaningful conclusions from the data you've collected. In this study, Microsoft Word and Microsoft Excel were used to create tables, while the actual statistical analysis was done using SPSS 23. Both parametric and non-parametric tests were used for the quantitative analysis. Parametric tests were used when the data met certain conditions: the data was normally distributed, the variance was similar across groups, the sample was random, and observations within groups were independent of each other (Ali & Bhaskar, 2016).

To check whether the data was normally distributed, the Shapiro–Wilk test was used. To check whether variances were equal for t-tests and ANOVA, Levene's test was used. For MANOVA, Box's M test was used to check whether the covariance matrices were equal. Non-parametric tests, sometimes called distribution-free or assumption-free tests (Sheskin, 2011), were used when these assumptions weren't met. This happened particularly when the data wasn't normally distributed. These tests work well with nominal or ordinal data, and with interval or ratio data that doesn't follow a normal distribution (Walsh, 1962).

In this study, both types of tests were used depending on what the assumption checks showed. For variables that were normally distributed, parametric tests were used. For variables that violated normality, non-parametric tests were applied. Multiple statistical techniques were employed in the present study to address different research objectives and to obtain a comprehensive understanding of adolescent psychological functioning. Descriptive statistics were used to

summarize participant characteristics and variable distributions, while inferential statistics were applied to examine group differences, relationships among variables, predictive associations, and mediation effects. The selection of statistical procedures was based on the nature of the variables, distribution characteristics of the data, and the specific objectives and hypotheses of the study. The following statistical procedures were performed:

- Normality of the data (Shapiro–Wilk test)
- Descriptive statistics (mean, standard deviation, frequencies, percentages)
- Inferential statistics
- Independent sample t-test (with Levene’s test for equality of variances)
- Mann–Whitney U test
- MANOVA (with Box’s M test for equality of covariance matrices)
- ANOVA (with Levene’s test; Bonferroni post hoc test when significant)
- Kruskal–Wallis Test (with pairwise comparisons using adjusted significance levels when significant)
- Correlation analysis (Pearson correlation)
- Multiple regression analysis
- Mediation analysis

This approach ensured that the choice of statistical test was based on data characteristics, thereby maintaining the validity and reliability of the results.

Normality of the Data

Normality refers to how closely a dataset follows the normal distribution that symmetrical bell-shaped curve where most observations cluster around the middle (Wackerly et al., 2014). In this study, normality was checked statistically using the Shapiro–Wilk test, which is considered one of the most powerful tests for small to moderate sample sizes (Ghasemi & Zahediasl, 2012). The test checks whether the data are normally distributed. A ‘W’ value close to 1 indicates that the data are normal, while lower values suggest deviations from normality. The results of this test determined whether parametric or non-parametric analyses would be used for each variable.

Descriptive Statistics

Descriptive statistics were calculated to give a clear picture of the sample's demographics and the psychological variables being studied. The mean and median were calculated to show the central point of the data. Standard deviation, range, minimum, and maximum values were calculated to show how spread out the data was. Skewness and kurtosis were also assessed to evaluate whether the distribution was symmetrical and how peaked it was. Categorical variables like gender, educational level, and family type were summarized using frequencies and percentages. This analysis provided a detailed overview of the participant characteristics, helping the researcher see general patterns and how the data was

distributed before doing any hypothesis testing. These descriptive summaries provided the foundation for interpreting the statistical findings within the context of who the participants were.

Inferential Statistics

After checking normality, inferential statistical techniques were used to test the research hypotheses and analyze relationships among variables. For data that met normality assumptions, parametric methods such as the independent samples *t*-test, ANOVA, and MANOVA were applied. When normality was violated, the corresponding non-parametric alternatives, namely the Mann–Whitney U test and the Kruskal–Wallis test, were utilized. Assumptions underlying each statistical test were thoroughly checked prior to analysis. Specifically, homogeneity of variances was examined using Levene’s test before conducting *t*-tests and ANOVA, while Box’s M test was employed in MANOVA to verify the equality of covariance matrices. In cases where ANOVA indicated significant differences, Bonferroni post hoc tests were performed to identify specific group contrasts. For the Kruskal–Wallis test, pairwise comparisons with adjusted significance levels were carried out. All inferential analyses were conducted at the 0.05 level of significance.

Independent Samples *t*-Test

The independent samples *t*-test, originally introduced by William Sealy Gosset under the pseudonym “Student” (1908), is one of the most widely used statistical techniques in the social sciences. It is designed to compare the mean scores of two independent or unrelated groups to determine whether the observed

differences are statistically significant. This test assumes that the data follow a roughly normal distribution and that both groups have equal variances, though adjustments can be applied if these conditions are not satisfied (Field, 2013).

In the present study, the independent samples *t*-test was applied to compare mean scores between adolescents from single-parent families and those from two-parent families on the four primary psychological variables: achievement motivation, self-concept, adjustment, and mental health. Within the single-parent group, it was also used to examine subgroup differences based on demographic factors such as gender, custodial parent, sibling status, cause of single parenthood, and family type. Prior to each *t*-test, Levene's test was performed to assess the equality of variances assumption. When this assumption was violated, the test results with adjusted degrees of freedom (Welch's correction) were reported. In cases where the normality assumption was not met, equivalent non-parametric tests (such as the Mann–Whitney U test) were employed to ensure valid comparisons.

Mann–Whitney U Test

The Mann–Whitney U test, developed by Henry Mann and Donald Whitney (1947), is a widely used non-parametric statistical test for comparing two independent groups. Unlike the *t*-test, it does not assume normal distribution of the data and is suitable for ordinal or skewed variables. The test works by comparing the median ranks of the two groups to determine whether they differ significantly (Field, 2013).

In the present study, when the Shapiro–Wilk test indicated significant departures from normality, the Mann–Whitney U test was applied as the non-parametric alternative to the independent samples *t*-test. It was used to compare adolescents from single-parent and two-parent families, as well as to analyse subgroup differences within the single-parent sample based on demographic characteristics. This ensured that the analyses remained valid and reliable across variables with varying distributional properties.

MANOVA

Multivariate Analysis of Variance has been refined over time in psychology and education research. It's basically an extension of ANOVA that was designed to test for group differences across multiple related dependent variables at the same time. The key difference from running separate univariate tests is that MANOVA takes into account the correlations among the dependent variables. This gives a more complete picture of group differences while also reducing the risk of Type I error (Tabachnick & Fidell, 2019).

In this study, MANOVA was used to examine group differences across multiple psychological dimensions at once, for example, the six dimensions of self-concept and the four dimensions of adjustment. Before running MANOVA, Box's M test was performed to check the assumption that covariance matrices were equal across groups. When significant multivariate effects were found, follow-up univariate ANOVAs were done to identify which specific dimensions were responsible for the overall group effect. This layered approach made sure both the

general multivariate patterns and the specific univariate differences were properly interpreted.

ANOVA

Analysis of Variance, or ANOVA, was developed by Ronald A. Fisher in 1935. It's a statistical method used to test whether means are different among more than two independent groups. The advantage over running multiple t-tests is that ANOVA evaluates group differences in one overall test, which controls for Type I error inflation. One-way ANOVA is particularly good for examining the effect of a single independent variable with three or more levels on a continuous dependent variable (Gravetter & Wallnau, 2017).

In this study, one-way ANOVA was used to compare adolescents from single-parent families across different educational levels (secondary, higher secondary, and graduate) on key psychological variables. Levene's test was used to check the assumption of homogeneity of variances. When significant overall differences were found, Bonferroni post hoc tests were done to identify which specific groups were different from each other. This two-step approach gave both a broad view of group differences and a precise understanding of which educational categories contributed to those differences.

Kruskal–Wallis Test

The Kruskal–Wallis H test, developed by Kruskal and Wallis (1952), is the non-parametric alternative to one-way ANOVA. It is particularly useful when the assumptions of normality and homogeneity of variance are violated, as it evaluates

group differences based on median ranks rather than means. This makes it well-suited for ordinal data or skewed distributions, while still allowing for the comparison of three or more independent groups (Field, 2018).

In the present study, the Kruskal–Wallis test was employed to examine differences in self-concept and mental health among adolescents from single-parent families across educational levels (secondary, higher secondary, and graduate) when the normality assumption was not satisfied. Where significant results emerged, pairwise post hoc comparisons with adjusted *p*-values were carried out to identify specific group differences. This ensured that the analysis captured both the overall non-parametric differences and the precise patterns of variation among educational subgroups.

Correlation Analysis

Correlation is a statistical method used to describe both the strength and direction of the relationship between two variables. The concept was initially introduced by Sir Francis Galton in 1888 and later given mathematical form by Karl Pearson in 1895 through the development of the product–moment correlation coefficient, which continues to be the most widely applied measure. The primary objective of correlation analysis is to determine whether variables are related and, if so, the extent of that relationship, with coefficients ranging from -1 , indicating a perfect negative association, to $+1$, indicating a perfect positive association.

In the present study, Pearson’s product–moment correlation was employed to examine the relationships among the four major psychological variables,

achievement motivation, self-concept, adjustment, and mental health along with their subdimensions. This method was chosen because the variables were measured on continuous scales and met the assumptions for Pearson's r . Using this test allowed for a clear understanding of how these psychological constructs are interrelated, highlighting the strength and direction of associations across different dimensions of adolescent development.

Regression Analysis

Regression analysis is a method in statistics that studies how one dependent variable is related to one or more independent variables, aiming to make predictions and understand how strongly the predictors influence the outcome. The concept was first introduced by Sir Francis Galton (1886) in his study of heredity, and later mathematically formalized by Karl Pearson (1896), who developed the modern regression equation. Over time, regression has become one of the most widely applied tools in the social and behavioural sciences.

In the present study, multiple linear regression was employed to evaluate how self-concept, adjustment, and achievement motivation predict different domains of mental health among adolescents from single-parent families. Separate models were tested for school-related, home-related, and peer-related mental health. This approach was chosen because the independent variables are continuous and theoretically relevant to adolescent psychological outcomes. Prior to running the analysis, checks were carried out to ensure that the data met the assumptions of linearity, normally distributed residuals, constant variance (homoscedasticity), and

no multicollinearity. Standardized beta coefficients, t-values, and significance levels were then interpreted to determine the relative contribution of each predictor.

Mediation Analysis

Mediation analysis is a statistical technique used to examine whether the effect of an independent variable on a dependent variable is transmitted through a third variable, called the mediator. The modern framework for mediation was introduced by Baron and Kenny (1986), who outlined the causal steps approach, and later refined through statistical advances such as the bootstrapping method developed by Preacher and Hayes (2008), which provides more robust estimates of indirect effects.

In this study, mediation analysis was conducted to test whether adjustment served as a mediator in the relationship between self-concept and mental health among adolescents from single-parent families. Separate models were computed for school-related, home-related, and peer group-related mental health outcomes, with the four domains of adjustment (home, health, social, and emotional) entered as parallel mediators. Bootstrapping confidence intervals were used to assess the significance of indirect effects, ensuring reliable inference without relying on normality assumptions.

Adjustment was chosen as the mediator because it theoretically bridges the link between self-concept and mental health. Adolescents with a positive self-concept are more likely to adjust effectively to challenges in their home, school, and social environments, and this successful adjustment, in turn, enhances their

psychological well-being. By including adjustment as a mediator, the analysis provides a deeper understanding of the mechanisms through which adolescents' self-perceptions influence their mental health within single-parent households.

Ethical Consideration

The present study was conducted among adolescents from single-parent and two-parent families, comprising a total of 505 participants within the age range of 13 to 19 years. Ethical approval for the research was granted by the Institutional Ethics Committee of Prajyoti Niketan College, Pudukad (Approval No. 6/PNC/2024/REC, dated 31.12.2024). All procedures followed the recognised ethical guidelines for research involving human participants.

Before the study began, informed consent was obtained from both parents/guardians and the adolescents themselves. To recruit participants from schools and colleges, approval was first obtained from the heads of those institutions. Consent forms were given to parents that explained the study's objectives, what participants would be asked to do, potential benefits, and that participation was voluntary. The adolescents themselves were told that their participation was completely voluntary and that they could withdraw from the study at any time without any negative consequences. To ensure ethical integrity, confidentiality and anonymity were strictly maintained. This meant removing personal identifiers from the dataset and the final report. All responses were used only for research purposes. During online data collection, participants were instructed not to disclose unnecessary personal identifying information while responding to the questionnaires, thereby ensuring additional protection of privacy and confidentiality.

The study followed the ethical principles outlined in the American Psychological Association's Ethical Standards (APA, 2017), including respecting participants' dignity, privacy, and autonomy. This careful adherence to ethical protocols ensured that the rights and welfare of all participants were protected throughout the research.

Chapter Summary

This chapter outlined the methodology adopted to study achievement motivation, self-concept, adjustment, and mental health among adolescents from single-parent and two-parent families in Kerala. Grounded in a positivist, quantitative framework, the study followed a cross-sectional and correlational design to ensure systematic and objective investigation.

The research was carried out in two phases. Phase I consisted of expert consultation and a pilot study with 130 adolescents, which helped refine the tools and confirm the relevance of the chosen variables. Phase II formed the main study, involving 505 adolescents (250 single-parent and 255 two-parent), and examined group differences, demographic influences, and the interrelationships among psychological variables through descriptive statistics, comparative tests, correlation, regression, and mediation analyses.

Standardized instruments were used to measure each variable, and SPSS was employed for data analysis. Ethical approval, informed consent, and confidentiality protocols were strictly followed to safeguard participants. Altogether, the methodological choices ensured rigor, reliability, and validity, setting the stage for the results presented in the next chapter.

CHAPTER 3

RESULT AND DISCUSSION

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- *Phase I-Pilot study Analysis*
 - *Phase II- Main study Analysis*
 - *Section A – Analysis related with descriptive statistics and demographic details of the sample*
 - *Section B – Comparison between single and two parented Adolescents*
 - *Section C – Analysis conducted in single parented Adolescents’ psychological variables based on demographic variables*
 - *Section D –Correlation among all psychological variables*
 - *Section E—Regression Analysis predicting mental health in single parented adolescents*
 - *Section F –Mediation analysis: adjustment as mediator between self-concept*
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This chapter presents the results of the statistical analyses conducted in the study and discusses the findings in relation to the stated research objectives and hypotheses. The analyses are structured according to the major variables examined, achievement motivation, self-concept, adjustment, and mental health and their relationship to demographic and family structure factors. Both descriptive and inferential statistical results are presented, followed by a discussion integrating the findings with previous research and theoretical frameworks.

Pilot Study and Its Results

The pilot study, conducted in Phase I, served as a preliminary step to ensure the clarity, appropriateness, and feasibility of the research instruments, as well as to refine data collection procedures before the main study (Leon, Davis, & Kraemer, 2011; Lancaster, Dodd, & Williamson, 2004). A sample of 130 adolescents participated, comprising 72 from two-parent households and 58 from single-parent households. Feedback from participants indicated that the questionnaires were easy to follow, the instructions were clear, and the time required for completion was manageable. Minor wording adjustments were made to improve comprehension.

In addition to procedural checks, the pilot study examined preliminary differences in two key variables achievement motivation and mental health based on family structure. Normality of the data was assessed using the Shapiro–Wilk test, which is considered highly effective for small to moderate samples (Ghasemi & Zahediasl, 2012). The W values were 0.978 for achievement motivation and 0.964 for mental health, both close to 1, indicating approximate normality. As the p-values

for both variables exceeded 0.05, no significant deviations from normality were detected, allowing for the use of parametric tests.

The following null hypotheses were tested:

- H_{01} : There is no significant difference in achievement motivation between adolescents from single-parent and two-parent families.
- H_{02} : There is no significant difference in mental health between adolescents from single-parent and two-parent families.

Table 3

Descriptive Statistics and Independent t-Test Results for Achievement Motivation and Mental Health in the Pilot Study

Variable	Parenthood	<i>M</i>	<i>SD</i>	<i>W</i>	<i>t</i>	<i>df</i>	<i>p</i>
Achievement Motivation	Single-Parent	108.09	14.04	.98	14.4	128	< .001
	Two-Parent	146.53	15.95	.98			
Mental Health	Single-Parent	112.07	6.41	.96	70.13	128	< .001
	Two-Parent	184.65	5.39	.98			

Note. *M* = Mean; *SD* = Standard Deviation; *W* = Shapiro–Wilk test statistic; *df* = degrees of freedom.

Before performing the statistical analysis, the assumptions of normality and homogeneity of variances were examined. The Shapiro–Wilk test indicated that the distributions of both achievement motivation ($W = .98$ for both groups, $p > .05$) and mental health ($W = .96$ – $.98$, $p > .05$) were approximately normal, satisfying the assumption of normality for the independent samples *t*-test. The Levene’s test confirmed that the assumption of homogeneity of variances was met for both

variables—achievement motivation: $F(1, 128) = 0.647, p = .423$; and mental health: $F(1, 128) = 2.658, p = .105$.

Having met the necessary assumptions, independent samples t -tests were conducted to compare adolescents from single-parent and two-parent families. The results revealed statistically significant group differences in both variables. Adolescents from two-parent households scored significantly higher in achievement motivation ($M = 146.53, SD = 15.95$) compared to those from single-parent households ($M = 108.09, SD = 14.04$), $t(128) = 14.39, p < .001$. Similarly, mental health scores were substantially higher among adolescents from two-parent families ($M = 184.65, SD = 5.39$) than those from single-parent families ($M = 112.07, SD = 6.41$), $t(128) = 70.13, p < .001$.

These preliminary findings indicate that adolescents from single-parent and two-parent families differed in achievement motivation and mental health during the pilot phase. The observed differences may be associated with variations in emotional support, parental involvement, family stress, and environmental circumstances reported in previous literature (Hetherington & Elmore, 2003; Demo & Acock, 2011). However, these findings were primarily served to confirm the relevance of the selected variables and the suitability of the instruments and procedures for the main study.

Results of the Main Study

This section presents the results of the statistical analyses for the main study, which involved 505 adolescents from single-parent and two-parent families. The analyses are organized according to the major variables examined achievement motivation, self-concept, adjustment, and mental health and their association with demographic variables and family structure. Both descriptive and inferential statistics are reported, with results presented in tabular form followed by detailed interpretations. The findings are reported in the order of the research objectives, starting with group comparisons, then moving to correlation, regression, and mediation analyses.

The following section begins with the descriptive statistics for the main study variables, presented in Table 4, to provide an overview of the sample's scores before moving to inferential analyses.

Section A – Analysis related with descriptive statistics and demographic details of the sample

The following section begins with the descriptive statistics for the main study variables, presented in Table 4, to provide an overview of the sample's scores before moving to inferential analyses.

Table 4

Descriptive Statistics for Mental Health, Self-Concept, Adjustment, and Achievement Motivation among Adolescents from Single- and Two-Parent Families (N = 505)

Statistics	Variable	Mean	Median	Std. Deviation	Skewness	SE(Skewness)	Kurtosis	SE(Kurtosis)	Minimum	Maximum
	School Related MH	48.43	49	9.64	-0.23	0.11	0.07	0.22	19	72
	Home Related MH	63.22	64	11.53	-0.44	0.11	-0.09	0.22	28	86
	Peer Group MH	42.38	44	8.54	-0.75	0.11	-0.04	0.22	18	56
	Total MH	154.03	155	26.51	-0.38	0.11	-0.05	0.22	72	212
	Physical SC	29.16	29	4.78	0.06	0.11	-0.07	0.22	14	40
	Social SC	28.48	28	3.94	0.03	0.11	-0.12	0.22	16	39
	Temperamental SC	28.34	28	4.04	0.25	0.11	0.14	0.22	17	40
	Educational SC	27.75	28	4.80	-0.02	0.11	-0.30	0.22	14	40
	Moral SC	31.49	32	3.53	-0.21	0.11	-0.15	0.22	21	41
	Intellectual SC	24.41	25	4.23	0.05	0.11	0.04	0.22	13	38
	Total SC	169.63	168	16.67	0.26	0.11	0.04	0.22	120	221
	Home AD	14.93	14	5.63	0.29	0.11	-0.32	0.22	0	31
	Health AD	8.72	8	5.44	0.42	0.11	-0.54	0.22	0	23
	Social AD	15.8	16	4.69	-0.22	0.11	1.24	0.22	0	35
	Emotional AD	14.17	14	7.44	0.02	0.11	-0.80	0.22	0	31
	Total AD	53.63	53	18.66	0.00	0.11	-0.34	0.22	0	110
	Ach	126.44	127	23.27	-0.32	0.11	1.49	0.22	0	207

Note. MH = Mental Health; SC = Self-Concept; AD = Adjustment; Ach = Achievement Motivation

Table 4 presents the descriptive statistics for the main variables in the study, mental health, self-concept, adjustment, and achievement motivation, along with their respective dimensions. Measures reported include mean, median, standard deviation, skewness, kurtosis, and score range (minimum to maximum). Skewness values within the range of ± 1 suggest approximate normality, while kurtosis values near zero indicate that the distributions are neither excessively peaked nor overly flat. These characteristics support the appropriateness of parametric analyses in subsequent sections.

The total mental health score ($M = 154.03$, $SD = 26.51$) showed a skewness of -0.38 and kurtosis of -0.05 , indicating a near-normal distribution with a slight tendency toward higher scores. School-related mental health ($M = 48.43$, $SD = 9.64$) and home-related mental health ($M = 63.22$, $SD = 11.53$) both displayed slight negative skewness, suggesting that more participants scored above the average well-being level in these domains. Peer group-related mental health ($M = 42.38$, $SD = 8.54$) exhibited a moderate negative skew (-0.75), indicating that a greater proportion reported higher peer-related mental health. Overall, the distribution suggests that most participants reported moderately good to high levels of mental health across contexts, with some variability.

The total self-concept score averaged 169.63 ($SD = 16.67$), with minimal skewness (0.26) and kurtosis (0.04), reflecting a relatively symmetrical distribution. Across dimensions, physical ($M = 29.16$, $SD = 4.78$), social ($M = 28.48$, $SD = 3.94$), temperamental ($M = 28.34$, $SD = 4.04$), educational ($M = 27.75$, $SD = 4.80$), moral ($M = 31.49$, $SD = 3.53$), and intellectual self-concept ($M = 24.41$, $SD = 4.23$) all showed skewness values close to zero, indicating balanced perceptions. The highest

mean was observed in moral self-concept, while the lowest was in intellectual self-concept, suggesting some variation in self-evaluations across domains but no extreme departures from symmetry.

Adjustment scores were reverse-coded so that lower values indicate better adjustment. The total adjustment mean ($M = 53.63$, $SD = 18.66$) showed negligible skewness (0.002) and moderate variability, suggesting that the sample was fairly evenly divided between better and poorer adjustment levels. Home adjustment ($M = 14.93$, $SD = 5.63$) and health adjustment ($M = 8.72$, $SD = 5.44$) displayed slight positive skewness, indicating that while most adolescents reported relatively good adjustment, a smaller number experienced greater difficulties. Social adjustment ($M = 15.80$, $SD = 4.69$) had a slight negative skew, showing that more participants tended to score toward better social adjustment. Emotional adjustment ($M = 14.17$, $SD = 7.44$) showed the highest variability and a flatter distribution (kurtosis = -0.80), indicating considerable differences in how adolescents manage their emotions, with some coping effectively and others facing notable challenges.

The mean achievement motivation score was 126.44 ($SD = 23.27$), with a skewness of -0.32 , indicating a slight tendency toward higher motivation. The kurtosis value (1.49) suggests a more peaked distribution, where most scores are concentrated around the mean and fewer extreme scores occur. The range from 0 to 207 indicates substantial individual differences, from very low to exceptionally high levels of motivation.

Across all variables, skewness values generally fell within acceptable limits for normality (-1 to $+1$), supporting the suitability of parametric tests in further analyses. The data indicate that most participants reported moderately positive mental

health, balanced self-concept across domains, and generally good adjustment with some variability particularly in emotional aspects. Achievement motivation showed substantial variation but tended toward higher values. These results highlight individual differences while indicating that the sample as a whole exhibited relatively balanced psychological characteristics.

Table 5

Demographic Characteristics of Adolescents from Single-Parent and Two-Parent Families (Frequency & Percentage) (N=505)

Variable		Single Parent (N=250)	%	Two Parent (N=255)	%	Total (N=505)	%
Gender	Male	134	53.6	112	43.9	246	48.7
	Female	116	46.4	143	56.1	259	51.3
Education	SSLC	91	36.4	112	43.9	203	40.2
	HSS	73	29.2	76	29.8	149	29.5
	Graduation	86	34.4	67	26.3	153	30.3
Family Type	Nuclear	179	71.6	153	60.0	332	65.7
	Joint	71	28.4	102	40.0	173	34.3
Economic Status	Above 1 Lakh	16	6.4	38	14.9	54	10.7
	1Lakh - 50,000	36	14.4	63	24.7	99	19.6
	below 50,000	198	79.2	154	60.4	352	69.7
Residential Area	Rural	177	70.8	183	71.8	360	71.3
	Urban	73	29.2	72	28.2	145	28.7
Children Living with	Father	59	23.6	-	-	59	23.6
	Mother	191	76.4	-	-	191	76.4
Presence of Siblings	Yes	184	73.6	-	-	184	73.6
	No	66	26.4	-	-	66	26.4
Reason for Single Parent Status	Death	156	62.4	-	-	156	62.4
	Divorce / Separation	94	37.6	-	-	94	37.6

Note. Percentages are based on total group sizes and may not sum to 100 due to rounding.

Table 5 presents the demographic characteristics of the study sample, comprising 250 adolescents from single-parent families and 255 from both-parent families (total $N = 505$). The gender distribution was relatively balanced, with 48.7% males and 51.3% females overall. Among single-parent adolescents, males constituted 53.6%, whereas in the both-parent group, females were slightly more represented at 56.1%.

Regarding educational qualification, the participants were distributed across three categories: SSLC (40.2%), Higher Secondary (29.5%), and Graduation (30.3%). The proportions across the two groups (single-parent and two-parent adolescents) were generally comparable, with slightly higher representation of SSLC in two-parent families and a marginally higher representation of Graduation in single-parent families. These three educational levels were considered for subsequent group comparisons in the study.

In terms of family type, the majority of adolescents (65.7%) belonged to nuclear families, with a greater proportion in single-parent households (71.6%) compared to two-parent households (60%). Joint families comprised 34.3% of the total sample, with relatively higher representation in two-parent households (40%).

With respect to economic status, most adolescents (69.7%) reported a family income below ₹50,000 per month, followed by 19.6% in the ₹50,000 –1 lakh range, and only 10.7% above ₹1 lakh. As the sample distribution was highly skewed toward the lowest income category, no further comparative statistical analysis was performed for this variable, and the data are presented solely to describe the socioeconomic representation of the study population.

The residential distribution indicated that 71.3% of participants resided in rural areas, with similar proportions across single and two-parent families. Urban participants accounted for 28.7% of the total sample.

For single-parent adolescents, additional demographic details were collected. The majority (76.4%) were living with their mothers, while 23.6% were living with their fathers. Most had siblings (73.6%), while 26.4% were the only child. The primary reason for single-parent status was the death of a parent (62.4%), followed by divorce or separation (37.6%).

This demographic composition provides an overview of the sample's diversity in gender, educational background, family type, and socioeconomic conditions. While education level was used for further analysis in relation to study variables, the economic status and residential area data were retained to reflect the representativeness of the population but were not included in inferential comparisons due to unequal group sizes and lack of significant variation.

Section B – Comparison between Single- and Two-Parent Adolescents

Family structure plays an important role in shaping adolescents' psychological well-being and development. Whether raised in single-parent or two-parent households, adolescents may differ in their motivation to achieve, self-concept, adjustment, and mental health. While two-parent families often provide greater emotional, social, and financial support, single-parent families may face added challenges but can also encourage resilience and independence in adolescents.

In this section, four psychological variables are compared between adolescents from single-parent and two-parent families: achievement motivation, self-concept, adjustment, and mental health. The results of these comparisons are presented along with interpretations in light of existing literature

Comparison based on parenthood in achievement motivation among adolescents

Achievement motivation refers to an individual's internal drive to set, pursue, and accomplish personal or academic goals, and is a key determinant of success during adolescence (Schunk, 1991). Family structure can influence this motivation through the resources, guidance, and role modelling that parents provide. Two-parent households often have the combined availability and encouragement of both parents, while single-parent households may face certain constraints. At the same time, research shows that many adolescents in single-parent families develop resilience and self-reliance, which can also contribute to their motivation to succeed.

An independent samples t-test was used to compare achievement motivation between adolescents from single-parent and two-parent households. The Shapiro–Wilk test indicated that scores were approximately normally distributed for both groups ($W = 0.98$ for single-parent; $W = 0.93$ for two-parent), and Levene's test confirmed homogeneity of variances ($F(1, 503) = 0.677, p = .411$). These results satisfied the assumptions for conducting a parametric test.

Table 6

Comparison of Achievement Motivation Between Adolescents with Single Parent and Two Parents ($n = 250$ and $n = 255$)

Variable	Parenthood	<i>M</i>	<i>SD</i>	<i>W</i>	<i>t</i>	<i>df</i>	<i>p</i>
Achievement Motivation	Single	118.14	20.63	.98*	8.47	503	<.001
	Two	134.57	22.87	.93*			

Note. *M* = Mean; *SD* = Standard Deviation; *W* = Shapiro–Wilk value; *Indicates deviation from normality at $p < .05$

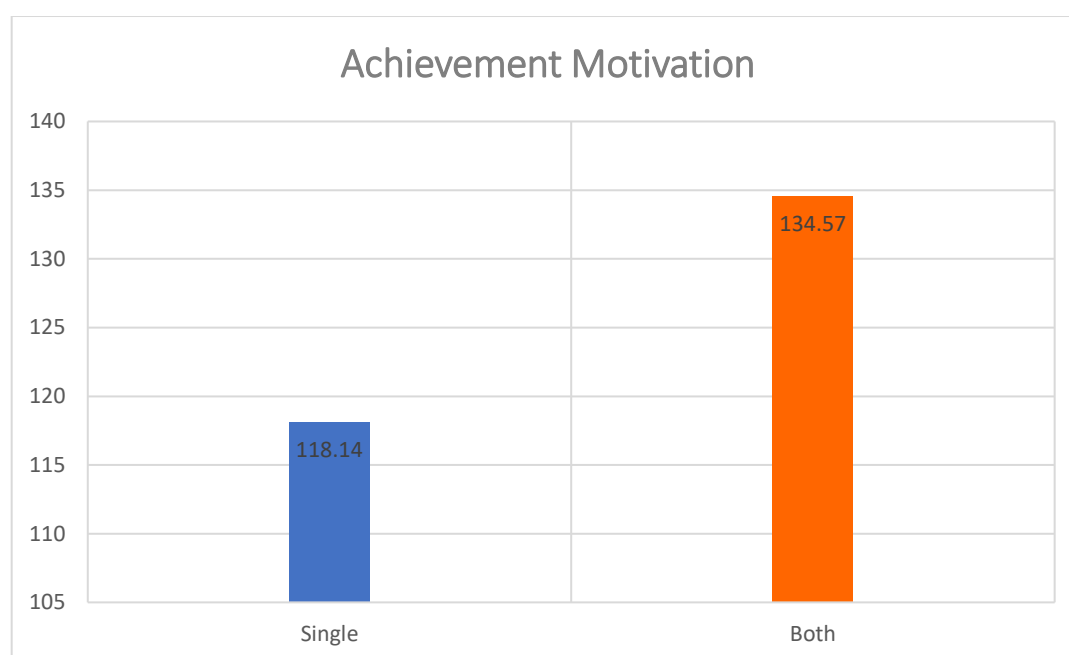
Results in the Table 6 indicate that adolescents from two-parent households ($M = 134.57$, $SD = 22.87$) reported significantly higher achievement motivation than those from single-parent households ($M = 118.14$, $SD = 20.63$), $t(503) = 8.47$, $p < .001$. This pattern is also illustrated in Figure 2, which depicts the mean achievement motivation scores of both groups. While this difference was statistically significant, the mean score of single-parent adolescents still fell within the higher range of possible scores and was close to the overall sample average. This indicates that many adolescents from single-parent households maintain strong motivation despite potential challenges.

The comparatively higher achievement motivation among adolescents from two-parent families may be associated with greater consistency in academic monitoring, routine structure, and encouragement toward educational goals within the home environment. At the same time, many adolescents from single-parent families also demonstrated positive motivational tendencies, suggesting that achievement motivation is influenced by multiple personal and environmental factors beyond family structure alone. Prior studies (Amato, 2005; Schroeder & Mowen, 2014) also

indicate that when adequate support systems are in place, such as extended family, school mentoring, or peer encouragement, single-parent adolescents can achieve motivation levels comparable to their peers in two-parent households.

Figure 2

Achievement motivation scores between single-parent and two-parent adolescents



Note. Higher scores indicate greater achievement motivation. Single-parent (n = 250); two-parent (n = 255)

Comparison based on parenthood in self-concept and its dimensions among adolescents

Self-concept refers to an individual's perception of their abilities, values, and identity across various life domains. During adolescence, self-concept plays a crucial role in shaping confidence, decision-making, and social interactions. Family structure can be one of the influencing factors, as it may affect the consistency of emotional support, supervision, and role modelling. This section compares the self-concept of

adolescents from single-parent and two-parent households across six dimensions:

physical, social, temperamental, educational, moral, and intellectual.

Table 7

Comparison of Self-Concept and Its Dimensions between Adolescents from Single-Parent ($n = 250$) and Two-Parent ($n = 255$) Families

Self-concept dimension	Parenthood	<i>M</i>	<i>SD</i>	<i>W</i>	<i>F</i>	<i>p</i>
Physical SC	Single Parent	27.53	4.43	.98*	64.85	< .001
	Two Parent	30.75	4.57	.98		
Social SC	Single Parent	27.61	4.07	.99*	25.11	< .001
	Two Parent	29.33	3.62	.99*		
Temperamental SC	Single Parent	26.95	3.77	.98*	66.85	< .001
	Two Parent	29.71	3.82	.99*		
Educational SC	Single Parent	25.74	4.43	.99*	104.57	< .001
	Two Parent	29.72	4.31	.99		
Moral SC	Single Parent	30.27	3.38	.99	65.85	< .001
	Two Parent	32.67	3.27	.98*		
Intellectual	Single Parent	23.56	4.48	.99*	20.56	< .001
	Two Parent	25.24	3.80	.98*		

Note. *M* = Mean; *SD* = Standard Deviation; *W* = Shapiro–Wilk value; *Indicates deviation from normality at $p < .05$; Multivariate result: Wilks' $\Lambda = .748$, $F(6, 498) = 27.94$, $p < .001$.

The Shapiro–Wilk normality tests presented in Table 7 indicate that the scores for all six dimensions of self-concept fall within acceptable ranges of normality ($W = .98, .98, .99, .99, .98, .99, .99, .99, .99, .98, .99, .98, p < .05$). Although minor deviations were noted, the large sample size ($N = 505$) supports the robustness of MANOVA and ANOVA to such deviations (Fagerland, 2012).

The assumption of homogeneity of covariance matrices was met, as confirmed by a non-significant Box's M test (Box's M = 27.029, $F(21, 929799.188) = 1.271, p = .181$). Levene's test of equality of variances indicated equal variances for all self-concept dimensions ($p > .05$), except for intellectual self-concept ($F(1, 503) = 8.177, p = .004$), where results should be interpreted with caution.

A multivariate analysis of variance (MANOVA) revealed a statistically significant overall effect of parenthood status on self-concept dimensions, Wilks' Lambda (λ) = .748, $F(6, 498) = 27.94, p < .001$, partial $\eta^2 = .252$, indicating that parenthood status accounts for approximately 25.2% of the variance, a large effect size.

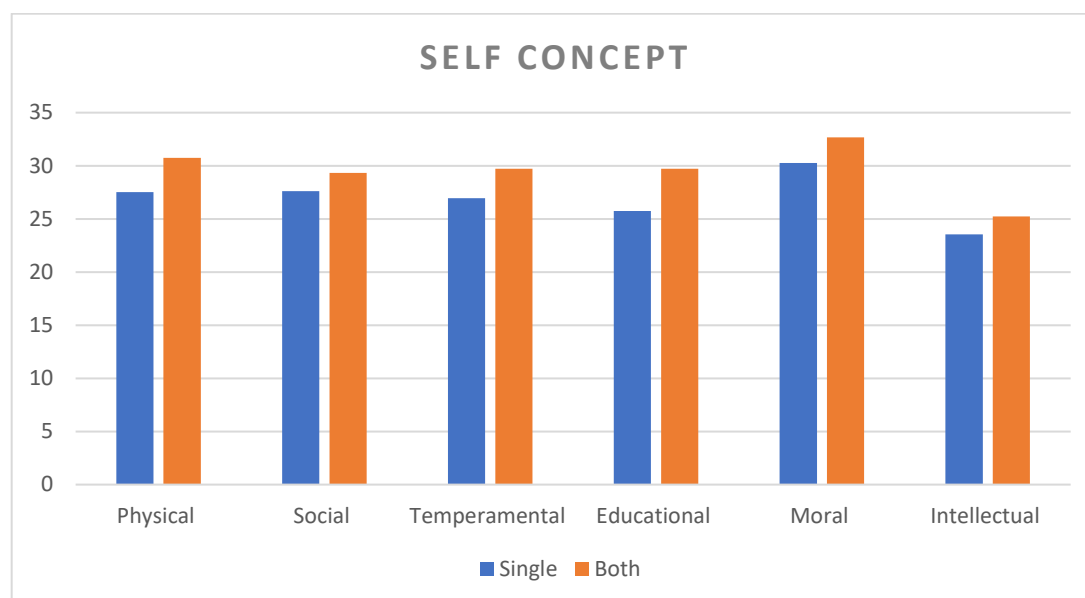
Univariate ANOVA results showed statistically significant mean differences across all six self-concept domains. In the physical dimension, adolescents from two-parent families had a mean score of 30.75 ($SD = 4.57$) compared to 27.53 ($SD = 4.43$) in single-parent families, $F(1, 503) = 64.85, p < .001$. For social self-concept, mean scores were 29.33 ($SD = 3.62$) and 27.61 ($SD = 4.07$) respectively, $F(1, 503) = 25.11, p < .001$. Temperamental self-concept showed means of 29.71 ($SD = 3.82$) for two-parent adolescents and 26.95 ($SD = 3.77$) for single-parent adolescents, $F(1, 503) = 66.85, p < .001$. In the educational domain, scores averaged 29.72 ($SD = 4.31$) for

two-parent adolescents and 25.74 ($SD = 4.43$) for single-parent adolescents, $F(1, 503) = 104.57, p < .001$. Moral self-concept had mean scores of 32.67 ($SD = 3.27$) and 30.27 ($SD = 3.38$), $F(1, 503) = 65.85, p < .001$, while intellectual self-concept showed means of 25.24 ($SD = 3.80$) and 23.56 ($SD = 4.48$), $F(1, 503) = 20.56, p < .001$, for two-parent and single-parent adolescents respectively. This overall pattern of higher mean scores among two-parent adolescents across all six dimensions is also illustrated in Figure 3, which presents a visual comparison of self-concept domains between the two groups.

Although statistically significant differences were observed in all domains, it is important to note that adolescents from both groups achieved mean scores that fall within or near the moderate-to-high range. This indicates that, while two-parent adolescents reported higher self-concept scores on average, single-parent adolescents also maintained generally positive self-perceptions. Such findings may reflect differences in available resources and support structures, but also highlight the potential for single-parent adolescents to sustain healthy self-concept through resilience, adaptive coping skills, and support from extended family or community networks. These differences may reflect variations in opportunities for identity development, self-expression, and interpersonal validation experienced across different family environments during adolescence. These patterns align with prior research suggesting that self-concept is shaped by multiple contextual factors, and positive outcomes are possible across varied family structures when adequate support systems are present (Amato, 2005; Hetherington & Elmore, 2003).

Figure 3

Self-concept scores and dimensions between single- and two-parent adolescents



Note. Higher scores indicate greater self-concept in each domain. Single-parent (n = 250); Two-parent (n = 255).

Comparison based on parenthood in adjustment and its dimensions among adolescents

Adjustment refers to an adolescent's ability to adapt effectively to different aspects of life, including the home environment, health and lifestyle habits, social interactions, and emotional stability. To understand how family structure influences various dimensions of adolescent adjustment, a Multivariate Analysis of Variance (MANOVA) was conducted. Home adjustment refers to how adolescents adapt to their home environment, including their relationships with family members and overall satisfaction with home life. Health adjustment focuses on their physical well-being, encompassing health behaviours and overall health status. Social adjustment reflects their ability to interact with others, build and maintain relationships, and

function effectively in social settings. Emotional adjustment pertains to their emotional stability, including their capacity to regulate emotions and cope with stress.

Table 8

Comparison of Adjustment *between Adolescents with Single Parent (n = 250) and two-parent families. (n = 255)*

Adjustment Dimension	Parenthood	<i>M</i>	<i>SD</i>	<i>W</i>	<i>F</i>	<i>p</i>
Home AD	Single-Parent	16.09	5.75	.98*	21.71	<.001
	Two-Parent	13.80	5.28	.99*		
Health AD	Single-Parent	9.88	5.61	.98*	23.48	<.001
	Two-Parent	7.58	5.02	.96*		
Social AD	Single-Parent	16.17	4.65	.98*	3.07	.081
	Two-Parent	15.44	4.71	.97*		
Emotional AD	Single-Parent	15.42	7.64	.98*	14.31	<.001
	Two-Parent	12.95	7.03	.98*		

Note. *M* = Mean; *SD* = Standard Deviation; *W* = Shapiro–Wilk test statistic for normality;

*Indicates deviation from normality at $p < .05$; Multivariate result: Wilks' $\Lambda = .943$, $F(4, 500) = 7.61$, $p < .001$.

In this study, adjustment scores were reverse-coded, meaning that lower scores represent better adjustment. Before performing MANOVA, key assumptions were checked. Shapiro–Wilk normality tests indicated that the adjustment dimension scores fell within acceptable ranges of normality ($W = .98, .99, .98, .96, .98, .97, .98, .98$, $p < .05$), with only minor deviations. Given the large sample size ($N = 505$), MANOVA is considered robust to such deviations (Tabachnick & Fidell, 2019). The assumption of homogeneity of covariance matrices was met (Box's $M = 10.866$, $F(10, 1208524) =$

1.08, $p > .05$), and Levene's tests confirmed equality of variances for all domains ($p > .05$). No outliers were detected.

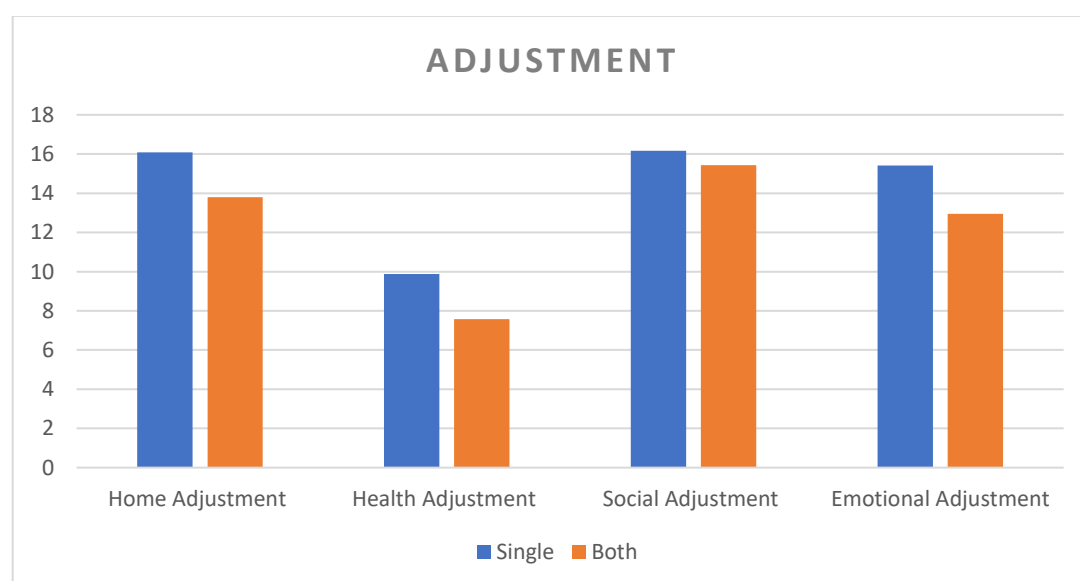
A statistically significant multivariate effect across domains was found for parenthood status on adjustment, Wilks' $\lambda = .943$, $F(4, 500) = 7.605$, $p < .001$, indicating that the pattern of adjustment scores differs between adolescents from single-parent and two-parent households.

Univariate ANOVA results revealed significant mean differences between groups in home, health, and emotional adjustment, while social adjustment did not differ significantly. Because the scores were reverse-coded, lower means indicate better adjustment. In home adjustment, adolescents from two-parent families had lower average scores ($M = 13.80$, $SD = 5.28$) compared to those from single-parent families ($M = 16.09$, $SD = 5.75$), $F(1, 503) = 21.71$, $p < .001$. For health adjustment, two-parent adolescents averaged 7.58 ($SD = 5.02$) versus 9.88 ($SD = 5.61$) for single-parent adolescents, $F(1, 503) = 23.48$, $p < .001$. Emotional adjustment also showed differences, with two-parent adolescents averaging 12.95 ($SD = 7.03$) and single-parent adolescents averaging 15.42 ($SD = 7.64$), $F(1, 503) = 14.31$, $p < .001$. Social adjustment scores were close between the two groups, with no significant difference: single-parent adolescents averaged 16.17 ($SD = 4.65$) and two-parent adolescents averaged 15.44 ($SD = 4.71$), $F(1, 503) = 3.07$, $p = .081$. This overall pattern of differences across home, health, social, and emotional domains is also illustrated in Figure 4, which visually compares the mean adjustment scores of adolescents from single- and two-parent families.

Although significant group differences emerged in some domains, both single-parent and two-parent adolescents' mean scores generally fell near the middle of the possible range, indicating that neither group performed at extreme levels of difficulty or ease. This suggests that, while adolescents from two-parent households showed somewhat better adjustment on average, many single-parent adolescents demonstrated comparable levels of adaptation. The observed adjustment patterns may be related to differences in adolescents' coping experiences, role responsibilities, and adaptation to changing family demands across home and emotional contexts. These results highlight that adjustment is shaped by multiple factors beyond family structure, and that positive adaptation is possible in varied family contexts when adolescents have access to emotional support, stability, and coping resources (Hetherington & Elmore, 2003; Amato, 2005).

Figure 4

Adjustment and its dimensions between single- and two-parent adolescents



Note. Adjustment scores were reverse-coded; therefore, lower mean scores represent better adjustment. Single-parent (n = 250); two-parent (n = 255).

Comparison based on parenthood in mental health and its dimensions among adolescents

Mental health in adolescence reflects overall emotional, cognitive, and social well-being, and in this study, it was examined across three dimensions. School-related mental health captures the adolescent's ability to cope with academic demands and sustain interest in learning. Home-related mental health reflects emotional stability, security, and satisfaction within the home environment. Peer group-related mental health represents the capacity to build and maintain friendships, feel accepted, and engage in positive peer interactions. Together, these domains contribute to the total mental health score, offering a comprehensive picture of adolescents' psychological functioning.

Table 9

Comparison of Mental Health and Its Dimensions between Adolescents from Single-Parent ($n = 250$) and Two-Parent ($n = 255$) Families

Mental Health Dimension	Parenthood	M	SD	W	t	df	p
School-related MH	Single Parent	44.76	9.03	.99	9.12	503	< .001
	Two Parent	52.02	8.84	.99*			
Home-related MH	Single Parent	58.24	11.20	.99*	10.62	503	< .001
	Two Parent	68.10	9.62	.98*			
Peer group MH	Single Parent	39.66	8.86	.96*	7.48	482.50	< .001
	Two Parent	45.06	7.29	.94*			
Total MH	Single Parent	142.66	25.72	.99*	10.53	503	< .001
	Two Parent	165.18	22.24	.99*			

Note. W = Shapiro–Wilk test statistic; M = Mean; SD = Standard Deviation; *Indicates deviation from normality at $p < .05$.

Before conducting the independent samples *t*-tests, the Shapiro–Wilk test results confirmed that all domains met acceptable ranges of normality ($W = .99, .99, .99, .98, .96, .94, .99, .99, p < .05$), with only minor deviations. Given the large sample size ($N = 505$), the *t*-test is considered robust to such deviations (Fagerland, 2012). Levene’s test of equality of variances was satisfied for school and home domains ($p > .05$), but not for the peer group domain, for which adjusted degrees of freedom were used.

Results indicated statistically significant differences between adolescents from single-parent and two-parent households across all domains and in the total score. In school mental health, two-parent adolescents reported higher average scores ($M = 52.02, SD = 8.84$) than single-parent adolescents ($M = 44.76, SD = 9.03$), $t(503) = 9.12, p < .001$. In the home domain, the two-parent group averaged 68.10 ($SD = 9.62$) compared to 58.24 ($SD = 11.20$) for the single-parent group, $t(503) = 10.62, p < .001$. For peer group mental health, two-parent adolescents scored a mean of 45.06 ($SD = 7.29$) versus 39.66 ($SD = 8.86$) in the single-parent group, $t(481.50) = 7.48, p < .001$. The total mental health score was also higher in the two-parent group ($M = 165.18, SD = 22.24$) compared to the single-parent group ($M = 142.66, SD = 25.72$), $t(503) = 10.53, p < .001$. This overall pattern of higher mean scores among two-parent adolescents across school, home, peer group, and total mental health domains is also presented in Figure 5, which provides a visual comparison of the groups.

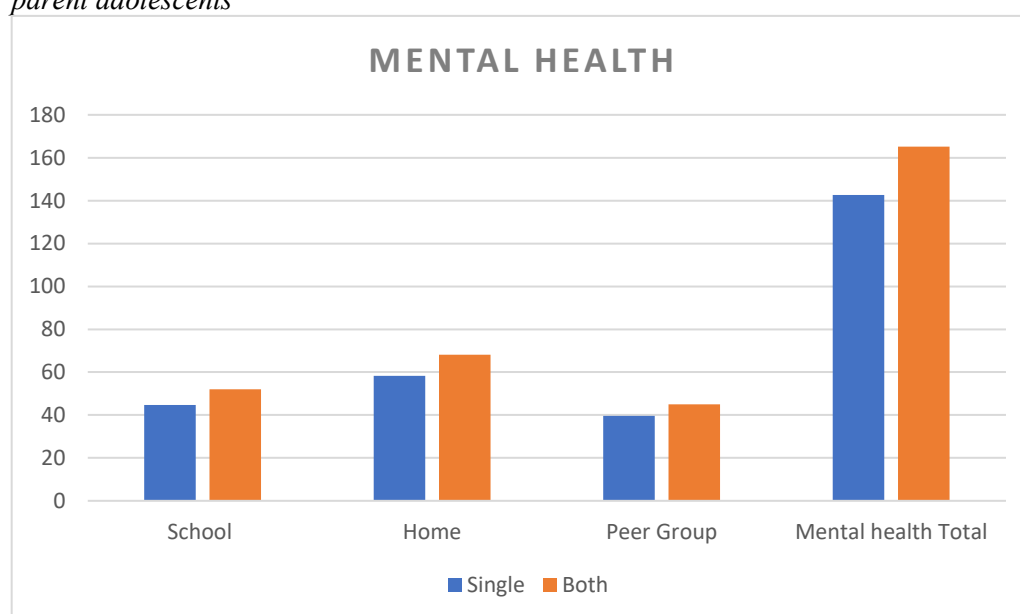
These findings may indicate that adolescents’ mental health is influenced by the quality of everyday interpersonal experiences, emotional regulation, and access to stable social environments. The results also suggest that mental health outcomes are

influenced by broader interpersonal and environmental support systems beyond family structure alone.

Although these mean differences were statistically significant, both groups' average scores generally fell within moderate-to-good ranges, indicating that adolescents from single-parent households also demonstrated substantial mental health strengths. These findings suggest that while two-parent adolescents reported higher scores on average, many single-parent adolescents exhibited comparable emotional resilience and positive functioning. This underscores that mental health outcomes are shaped by multiple protective and risk factors beyond family structure, including supportive relationships, coping strategies, and community resources (Resnick et al., 1997; WHO, 2020).

Figure 5

Comparison of mean scores for mental health and its dimensions between single- and two-parent adolescents



Note. Higher scores indicate better mental health. Single-parent ($n = 250$); two-parent ($n = 255$).

Section C -Comparison of main variables based on gender among single parent adolescents

Adolescence is a stage marked by rapid psychological, social, and emotional development, and gender often plays a crucial role in shaping these experiences. Within single-parent families, boys and girls may perceive and respond differently to challenges such as academic expectations, social relationships, and emotional well-being. Exploring gender differences in the main variables of the present study, namely achievement motivation, self-concept, adjustment, and mental health, provides a deeper understanding of how adolescents navigate developmental tasks in the context of single parenthood.

Achievement motivation among single parent adolescents based on gender

Achievement motivation is a crucial psychological construct during adolescence, reflecting the drive to set goals, persist in tasks, and attain success in academic and personal domains. Gender differences in achievement motivation are often shaped by social expectations, cultural norms, and family dynamics, including the specific challenges and supports present in single-parent households.

Table 10

Comparison of Achievement Motivation between Male and Female Adolescents from Single-Parent Households (N = 250)

Variable	Gender	N	Mean Rank	W	U	p
Achievement Motivation	Male	134	109.40	.98		
	Female	116	144.10	.97*	5614.5	< .001
	Total	250				

Note. U = Mann–Whitney U test statistic; W = Shapiro–Wilk test statistic; * Indicates deviation from normality at $p < .05$.

In the present study, the Mann–Whitney U test was employed to examine gender differences in achievement motivation among single-parent adolescents ($N = 250$). Results revealed a statistically significant difference, with female adolescents (Mean Rank = 144.10) reporting higher achievement motivation than their male counterparts (Mean Rank = 109.40), $U = 5614.5$, $p < .001$. The Shapiro–Wilk test confirmed the normality assumption was slightly violated ($W = .984$ for males; $W = .969$ for females, $p < .05$), but the Mann–Whitney U test is robust to such deviations, making it suitable for this comparison.

These findings suggest that, within single-parent households, girls demonstrated relatively stronger motivational tendencies toward achievement compared to boys. This pattern aligns with research indicating that female adolescents often exhibit higher academic persistence and self-regulatory behaviours, particularly in contexts where they perceive education as a means to upward mobility and independence (Steinmayr & Spinath, 2008; Chohan & Khan, 2010). Cultural expectations may also contribute, as girls in many societies, including India, are encouraged to perform well academically to secure future stability, especially in households where parental resources are limited (Deb, Strodl, & Sun, 2015).

At the same time, it is important to note that male adolescents in this study also demonstrated a meaningful level of achievement motivation. Their mean rank scores were close to the overall average of the group, indicating that boys, too, displayed a considerable drive toward achievement. The observed difference, therefore, reflects variation in motivational levels between genders rather than an absence of motivation

among boys. As suggested by Eccles and Wigfield (2002), gender differences in achievement-related beliefs and goals emerge not only from family structure but also from socialization experiences, peer expectations, and opportunities within schools.

In summary, while female adolescents from single-parent households reported higher achievement motivation than males, both groups demonstrated meaningful levels of drive toward success. These results emphasize the need to consider gender-sensitive educational supports and mentoring, ensuring that boys and girls alike receive encouragement to pursue their aspirations despite the contextual challenges of single-parent family structures.

Self-concept among single parent adolescents based on gender

Self-concept reflects how adolescents perceive their abilities, values, and identity across different domains, and gender can play a role in shaping these perceptions. In this study, dimensions of self-concept were compared between male and female adolescents from single-parent households.

Table 11

Comparison of Self-Concept Dimensions between Male and Female Adolescents from Single-Parent families (N=250)

Self-concept Dimensions	Gender	N	M	SD	W	t	df	p
Physical SC	Male	134	128.44 ^a	-	.98*	7378.5 ^b	-	.49
	Female	116	122.11 ^a	-	.98			
Social SC	Male	134	27.72	4.35	.99	0.44	247.99	.66
	Female	116	27.49	3.75	.98			
Temperamental SC	Male	134	128.75 ^a	-	.97*	7337.00 ^b	-	.44
	Female	116	121.75 ^a	-	.98			
Educational SC	Male	134	25.01	4.70	.99	-2.87	247.77	.004
	Female	116	26.59	3.95	.99			
Moral SC	Male	134	121.48 ^a	-	.98*	7233.00 ^b	-	.343
	Female	116	130.15 ^a	-	.98			
Intellectual SC	Male	134	23.75	4.35	.99	0.69	237.78	.492
	Female	116	23.35	4.63	.98			
Total SC	Male	134	124.43 ^a	-	.99	7628.00 ^b	-	.801
	Female	116	126.74 ^a	-	.96*			

Note. ^a = Mean Rank; ^b = Mann–Whitney *U* test statistic; SC = Self-Concept; M = Mean; SD = Standard Deviation; W = Shapiro–Wilk test statistic, *Indicates deviation from normality at $p < .05$.

Table 11 presents the comparison of self-concept dimensions among male ($n = 134$) and female ($n = 116$) adolescents from single-parent households. Before conducting inferential analysis, the Shapiro–Wilk normality test was examined for each domain. The results showed that several variables deviated from normality ($W = .98$ – $.99$, $p < .05$ in multiple cases). Accordingly, non-parametric Mann–Whitney *U* tests were applied where normality violations were observed, while *t*-tests were used in domains where normality was reasonably satisfied.

For physical self-concept, Mean rank scores were slightly higher among males (Mean rank = 128.44) compared to females (Mean rank = 122.11), though the

difference was not statistically significant ($U = 7378.5, p = .489$). In temperamental self-concept, females (Mean rank = 121.75) and males (Mean rank = 128.75) also showed no significant differences ($U = 7337, p = .444$). Similarly, for moral self-concept, female adolescents (Mean rank = 130.15) reported somewhat higher mean ranks than males (Mean rank = 121.48), but again, the difference was non-significant ($U = 7233, p = .343$). Finally, total self-concept scores were broadly comparable (male Mean rank = 124.43; female Mean rank = 126.74), with no significant difference ($U = 7628, p = .801$).

For domains tested using *t*-tests, educational self-concept showed a statistically significant difference between genders, $t(247.77) = -2.87, p = .004$, with female adolescents ($M = 26.59, SD = 3.95$) scoring higher than males ($M = 25.01, SD = 4.70$). In contrast, no significant gender differences emerged for social self-concept, $t(247.99) = 0.44, p = .66$ (males $M = 27.72, SD = 4.35$; females $M = 27.49, SD = 3.75$), or intellectual self-concept, $t(237.78) = 0.69, p = .492$ (males $M = 23.75, SD = 4.35$; females $M = 23.35, SD = 4.63$).

In summary, the results show that boys and girls from single-parent families had very similar self-concept scores across most areas. The only significant difference was in educational self-concept, where girls reported higher confidence in academic ability than boys. However, both groups scored within comparable and moderate ranges across all dimensions, indicating more similarities than differences. This suggests that gender plays only a limited role in shaping self-concept among

adolescents from single-parent families, with shared experiences within such households likely contributing to broadly similar perceptions.

These findings are consistent with earlier research showing that gender differences in adolescents' self-concept are generally small, with some studies reporting slightly higher academic self-concept among girls (Marsh et al., 2018; Kling et al., 1999). Studies from the Indian context also suggest that boys and girls often report comparable levels of self-concept, with differences usually confined to academic domains (Wang & Yu, 2023). Overall, the present results support the view that while minor gender variations may appear, self-concept development in single-parent families is shaped more by common developmental contexts than by gender-based divides.

Adjustment among single parent adolescents based on gender

Adjustment refers to how adolescents adapt across home, health, social, and emotional domains, and gender may shape how these adaptations are experienced. To explore this, the present study compared male and female adolescents from single-parent households on different dimensions of adjustment.

Table 12

Comparison of Adjustment Dimensions between Male and Female Adolescents from Single-Parent Families (N = 250)

Adjustment Dimension	Gender	N	M	SD	W	t	df	p
Home AD	Male	134	124.15 ^a	—	.98	7591.00 ^b	-	.75
	Female	116	127.06 ^a		.98*			
Health AD	Male	134	127.14 ^a	—	.97*	7552.50 ^b	-	.70
	Female	116	123.61 ^a		.97*			
Social AD	Male	134	121.99 ^a	—	.98	7301.00 ^b	-	.41
	Female	116	129.56 ^a		.98*			
Emotional AD	Male	134	115.8 ^a	—	.98*	6472.50 ^b	-	.02
	Female	116	136.7 ^a		.97*			
Total AD	Male	134	56.34	19.25	.98	1.10	245.07	.27
	Female	116	58.97	18.57	.99			

Note. ^a = Mean Rank; ^b = Mann–Whitney U; AD = Adjustment; M = Mean; SD = Standard Deviation; W = Shapiro–Wilk test statistic; *Indicates deviation from normality at $p < .05$.

Table 12 presents the gender-wise comparison of adjustment among adolescents from single-parent households (134 males and 116 females) across home, health, social, emotional, and total adjustment.

Prior to inferential testing, the Shapiro–Wilk normality test was examined for each adjustment domain. Several variables deviated from normality ($W = .97-.99$, $p < .05$ in some cases), and accordingly, Mann–Whitney U tests were used for domain-specific comparisons, while an independent-samples t -test was applied for total adjustment where normality assumptions were more acceptable.

For home adjustment, males (Mean rank = 124.15) and females (Mean rank = 127.06) reported nearly identical levels of adjustment, with no statistically significant difference ($U = 7591.0$, $p = .751$). Similarly, in health adjustment, females (Mean

rank = 123.61) and males (Mean rank = 127.14) showed very close mean ranks, and the difference was not significant ($U = 7552.5, p = .700$). For social adjustment, females (Mean rank = 129.56) had slightly higher ranks than males (Mean rank = 121.99), but this difference did not reach statistical significance ($U = 7301.0, p = .408$).

A significant gender difference was observed in emotional adjustment, with females (Mean rank = 136.70) reporting higher ranks than males (Mean rank = 115.80), $U = 6472.5, p = .023$. Since higher scores reflect poorer adjustment due to reverse coding, this suggests that female adolescents from single-parent households experienced relatively greater emotional challenges compared to their male counterparts.

For total adjustment, the independent-samples t-test indicated no significant difference between males ($M = 56.34, SD = 19.25$) and females ($M = 58.97, SD = 18.57$), $t(245.07) = 1.10, p = .273$. This shows that overall, boys and girls in single-parent households had broadly comparable adjustment levels when considering all domains together.

In summary, gender differences in adjustment among single-parent adolescents were small in most areas, with only emotional adjustment showing a significant difference, where girls reported slightly more challenges. Still, boys and girls showed broadly similar adjustment levels overall, without any extreme differences. These results are consistent with earlier studies that also found limited gender-based differences in adolescent adjustment, except in emotional areas where girls may sometimes experience more vulnerability (Leadbeater et al., 1999; Rose & Rudolph,

2006). Overall, the findings suggest that gender by itself does not strongly shape adjustment in single-parent families; instead, common family and social factors appear to have a greater influence.

Mental health among single parent adolescents based on gender

Mental health reflects how adolescents manage challenges related to school, home, peer relationships, and overall well-being. Since gender can sometimes influence how young people experience and report mental health, the present study compared male and female adolescents from single-parent households across these domains.

Table 13

Comparison of Gender Differences in Mental Health Dimensions among Adolescents from Single-Parent Households (N = 250)

Mental Health Dimension	Gender	N	M	SD	W	t	df	p
School MH	Male	134	43.97	9.44	.99	1.50	248	.14
	Female	116	45.68	8.48	.99			
Home MH	Male	134	58.40	11.58	.98	0.24	248	.81
	Female	116	58.06	10.8	.98			
Peer Group MH	Male	134	120.27 ^a	-	.96 [*]	7071.00 ^b	-	.22
	Female	116	131.54 ^a	-	.96 [*]			
Total MH	Male	134	141.28	27.15	.99	0.92	247.80	.36
	Female	116	144.25	23.98	.98			

Note. ^a = Mean Rank; ^b = Mann–Whitney *U* test statistic; *M* = Mean; *SD* = Standard Deviation; *W* = Shapiro–Wilk test statistic; *Indicates deviation from normality at $p < .05$.

Table 13 presents the comparison of mental health dimensions between male ($n = 134$) and female ($n = 116$) adolescents from single-parent households. The Shapiro–Wilk normality test indicated that while most variables were approximately

normal ($W = .98-.99$), the peer group domain showed notable deviation ($W = .96, p < .05$). Accordingly, independent-samples t -tests were used for school, home, and total mental health, while the Mann–Whitney U test was applied to peer group scores.

For school-related mental health, male adolescents ($M = 43.97, SD = 9.44$) and female adolescents ($M = 45.68, SD = 8.48$) did not differ significantly, $t(248) = 1.50, p = .136$. Similarly, in home mental health, males ($M = 58.40, SD = 11.58$) and females ($M = 58.06, SD = 10.80$) showed almost identical averages, with no significant difference, $t(248) = 0.24, p = .810$.

For peer group mental health, the Mann–Whitney U test revealed that females (Mean rank = 131.54) had slightly higher mean ranks compared to males (Mean rank = 120.27), but this difference was not statistically significant ($U = 7071.00, p = .218$). Finally, total mental health scores were broadly similar between boys ($M = 141.28, SD = 27.15$) and girls ($M = 144.25, SD = 23.98$), with no significant difference, $t(247.8) = 0.917, p = .360$.

In summary, boys and girls from single-parent households showed very similar levels of mental health across all areas. No significant gender differences were found in school, home, peer group, or overall mental health. This suggests that both male and female adolescents face and manage the challenges of single-parent family life in much the same way. These findings agree with earlier research showing that gender differences in adolescent mental health are usually small or depend on the situation (Nolen-Hoeksema & Girgus, 1994; Rescorla et al., 2007). Although some studies suggest that girls may be more prone to emotional difficulties in certain contexts, the

present results show that gender by itself does not strongly shape mental health outcomes in single-parent families.

Comparison of main variables based on education level among single parent adolescents

Educational level is an important factor in adolescent development, as it reflects not only academic progress but also exposure to different social, cognitive, and emotional experiences. In the context of single-parent families, adolescents at varying stages of education namely secondary, higher secondary, and graduate levels, may perceive and respond differently to challenges related to motivation, self-concept, adjustment, and mental health. Comparing these variables across education levels can provide insight into whether academic stage influences the psychological and social well-being of adolescents in single-parent households. This section therefore examines differences in the main study variables based on the education level of single-parent adolescents.

Achievement motivation among single parent adolescents based on education level

Achievement motivation is closely tied to educational experiences, as students at different academic stages often face varying expectations and opportunities. For adolescents from single-parent households, these differences may shape how motivated they feel to achieve academic goals. Comparing achievement motivation across education levels helps reveal whether progression through schooling influences their drive for success.

Table 14

Comparison of Achievement Motivation among Single-Parent Adolescents across Education Levels (N = 250)

Variable	Education Level	N	Mean Rank	W	χ^2	p
Achievement Motivation	SSLC	91	140.45	.96*	9.584	.008
	HSS	73	128.53	.98*		
	Graduation	86	107.11	.97*		

Note. W = Shapiro–Wilk test statistic; χ^2 = Kruskal–Wallis test statistic; *Indicates deviation from normality at $p < .05$.

Table 14 compares the levels of achievement motivation among adolescents from single-parent families based on their education level: SSLC, HSS, and Graduation. The Shapiro–Wilk test indicated that the distributions for the SSLC ($W = .956, p < .05$) and Graduation ($W = .970, p < .05$) groups deviated from normality, while the HSS group ($W = .982$) met the normality assumption. As normality was not satisfied across all groups, the Kruskal–Wallis H test was applied to examine differences.

The results revealed a statistically significant difference in achievement motivation across education levels, $\chi^2(2) = 9.584, p = .008$. Adolescents at the SSLC level had the highest motivation (Mean Rank = 140.45), followed by HSS students (Mean Rank = 128.53), while those in Graduation reported the lowest motivation (Mean Rank = 107.11).

To further examine the group-wise differences, Dunn’s post hoc test with Bonferroni adjustment was conducted (Table 15). The pairwise comparisons showed no significant difference between SSLC and HSS students ($Z = 1.050, p > .05$) or between HSS and Graduation students ($Z = 1.861, p > .05$). However, a significant

difference was found between SSLC and Graduation groups ($Z = 3.066, p = .006$), with SSLC adolescents scoring higher on achievement motivation.

Table 15

Pairwise Comparisons of Achievement Motivation Across Adolescent Education Levels Using Dunn's Post Hoc Test with Bonferroni Adjustment

Sample1 - Sample2	Test Statistic	SE	Z	p	Adj. p
Graduation - HSS	21.42	11.51	1.86	.063	.188
Graduation - SSLC	33.34	10.87	3.07	.002	.006
HSS - SSLC	11.92	11.36	1.05	.294	.882

Note. Post hoc comparisons were conducted using Dunn's procedure with Bonferroni adjustment. *SE* = Standard Error; *Adj. p* = Bonferroni-adjusted significance.

In summary, adolescents at the SSLC stage reported significantly higher achievement motivation compared to those at the Graduation stage, while no significant differences were observed between the other pairs. This pattern suggests that motivation may be strongest in early secondary education, possibly due to heightened external expectations, parental involvement, and examination-related pressures, but tends to decline as students' progress to higher education where, greater autonomy, academic fatigue, or shifting priorities may affect their drive.

These findings are consistent with earlier research indicating that achievement motivation often declines with educational progression, as adolescents' priorities diversify and academic pressures evolve (Corpus et al., 2009; Gniewosz & Watt, 2017). Indian studies also highlight stronger academic drive in secondary school stages compared to higher education, where external and internal demands may influence motivational orientations (Uddin & Bhattacharyya, 2024).

Self concept among single parent adolescents based on education level

Self-concept evolves as adolescents progress through different stages of education, since each level brings new academic demands, peer expectations, and social responsibilities. For those in single-parent families, these influences may also interact with family dynamics and the support available at home. Comparing self-concept across adolescents at SSLC, HSS, and Graduation levels helps to understand whether their perceptions of themselves vary according to educational stage.

Table 16

Comparison of Self-Concept Dimensions among Single-Parent Adolescents across Education Levels (N = 250)

Self concept Dimension	Education level	N	M	W	F	p
Physical SC	SSLC	91	-	.99	1.40	.25
	HSS	73	-	.98		
	Graduation	86	-	.98		
Social SC	SSLC	91	-	.99	2.33	.10
	HSS	73	-	.98		
	Graduation	86	-	.99		
Temperamental SC	SSLC	91	131.47 ^a	.95 [*]	3.90 ^b	.14
	HSS	73	132.68 ^a	.98		
	Graduation	86	113.09 ^a	.99		
Educational SC	SSLC	91	-	.99	8.90	<.001
	HSS	73	-	.98		
	Graduation	86	-	.98		
Moral SC	SSLC	91	-	.97	2.88	.06
	HSS	73	-	.98		
	Graduation	86	-	.98		
Intellectual SC	SSLC	91	-	.99	2.84	.06
	HSS	73	-	.98		
	Graduation	86	-	.98		
Total SC	SSLC	91	138.04 ^a	.98	10.00 ^b	.007
	HSS	73	133.18 ^a	.95 [*]		
	Graduation	86	105.72 ^a	.98		

Note. W = Shapiro–Wilk normality statistic; ^a = Mean rank; ^b = Kruskal–Wallis H test statistic; F = One-way ANOVA statistic; * Indicates deviation from normality at $p < .05$.

Table 16 presents a comparison of self-concept dimensions and total self-concept among adolescents from single-parent households across three educational levels: SSLC ($n = 91$), HSS ($n = 73$), and Graduation ($n = 86$).

Prior to inferential testing, the Shapiro–Wilk test was conducted to check normality. Most domains approximated normal distribution ($W = .97-.99$), though mild deviations were observed for temperamental self-concept in the SSLC group ($W = .950, p = .002$) and total self-concept in the HSS group ($W = .953, p = .008$).

Since only a few variables showed mild violations, and ANOVA is considered robust to minor deviations from normality (especially with fairly large and equal group sizes), both ANOVA and Kruskal-Wallis tests were applied accordingly to ensure result reliability (Blanca et al., 2017; Schmider et al., 2010).

The Levene’s test for homogeneity of variances confirmed that the assumption of equal variance was met for all variables ($p > .05$), supporting the validity of ANOVA results.

The result revealed statistically significant differences were in two domains like educational self-concept and Total self-concept. In educational self-concept, where the ANOVA yielded $F(2, 247) = 8.90, p < .001$ and in total self-concept where the Kruskal–Walli’s test yielded $\chi^2(2) = 10.00, p = .007$. No significant group differences were observed in the physical, social, temperamental, moral, or intellectual domains ($p > .05$).

Following the significant ANOVA result for educational self-concept and the Kruskal–Wallis result for total self-concept, post hoc pairwise comparisons using

Bonferroni-adjusted p -values were conducted to identify specific group differences among adolescents with SSLC, HSS, and Graduation-level education.

For educational self-concept, the post hoc test indicated a statistically significant difference between the SSLC and Graduation groups (adjusted $p = .000$), suggesting that adolescents with SSLC education reported significantly higher educational self-concept than those in the Graduation group. However, differences between the SSLC and HSS groups (adjusted $p = .078$), and between HSS and Graduation groups (adjusted $p = .335$), were not statistically significant.

Table 17

Post Hoc Pairwise Comparisons of Educational Self-Concept by Education Level ($N = 250$)

Sample1-Sample2	Test Statistic	<i>SE</i>	<i>Z</i>	<i>p</i>	<i>Adj. p</i>
Graduation - HSS	18.26	11.48	1.59	.11	.34
Graduation - SSLC	43.49	10.85	4.01	<.001	<.001
HSS - SSLC	25.23	11.33	2.23	.03	.08

Note. Post hoc comparisons were conducted using Dunn's procedure with Bonferroni adjustment. *SE* = Standard Error; *Z* = Standardized test statistic; *Adj. p* = Bonferroni-adjusted p -value.

In the case of total self-concept, post hoc comparisons revealed that the SSLC group had significantly higher total self-concept than the Graduation group (adjusted $p = .009$). The differences between the HSS and Graduation groups (adjusted $p = .051$) and between the SSLC and HSS groups (adjusted $p = 1.000$) did not reach statistical significance.

Table 18

Post hoc pairwise comparisons of total self-concept by education level (Kruskal–Wallis test, N = 250)

Sample1-Sample2	Test Statistic	SE	Z	p	Adj. p
Graduation - HSS	27.46	11.50	2.39	.017	.051
Graduation - SSLC	32.32	10.87	2.97	.003	.009
HSS - SSLC	4.86	11.36	0.43	.669	1.00

Note. Post hoc comparisons were conducted using Dunn’s procedure with Bonferroni adjustment; *SE* = Standard Error; *Z* = Standardized test statistic; *Adj. p* = Bonferroni-adjusted *p*-value.

These findings suggest that younger adolescents (particularly those in SSLC) tend to perceive themselves more positively in educational and overall self-concept compared to those in higher education. This may be due to stronger external encouragement, parental monitoring, and structured school environments at earlier stages, while adolescents in higher education face greater academic demands and responsibilities, which can challenge self-perceptions. Within single-parent families, these patterns are likely further influenced by the availability of parental support and expectations. The trend observed here aligns with broader research showing that adolescents in lower grades often report stronger self-beliefs, while older students may experience more academic and psychosocial pressures that affect self-concept (Marsh & Martin, 2011; Wigfield & Eccles, 2000; Arens & Marsh, 2016).

Adjustment among single parent adolescents based on education level

Adjustment refers to how well adolescents adapt to the demands of their environment, including home, school, peers, and personal life. As adolescents move through different stages of education, their adjustment can be influenced by changing

academic expectations, social responsibilities, and personal growth. For those in single-parent households, these challenges may be further shaped by family circumstances and available support. Examining adjustment across education levels such as SSLC, HSS, and Graduation helps to understand whether adolescents' ability to cope and adapt differs according to their stage of schooling.

Table 19

Comparison of Adjustment Dimensions among Single-Parent Adolescents across Education Levels (N = 250)

Adjustment Dimension	Education Level	N	M	SD	W	F	p
Home AD	SSLC	91	128.45 ^a	--	.96*	2.65 ^b	.27
	HSS	73	114.16 ^a	--	.98		
	Graduation	86	132.01 ^a	--	.98		
Health AD	SSLC	91	122.56 ^a	--	.96*	1.94 ^b	.38
	HSS	73	119.08 ^a	--	.96*		
	Graduation	86	134.06 ^a	--	.98		
Social AD	SSLC	91	16.74	5.31	.98	2.05	.13
	HSS	73	15.29	4.47	.98		
	Graduation	86	16.33	3.93	.98		
Emotional AD	SSLC	91	122.44 ^a	--	.98	2.66 ^b	.26
	HSS	73	117.60 ^a	--	.97		
	Graduation	86	135.44 ^a	--	.97*		
Total AD	SSLC	91	126.14 ^a	--	.97*	3.34 ^b	.19
	HSS	73	113.79 ^a	--	.99		
	Graduation/other	86	134.77 ^a	--	.97*		

Note. ^a = Mean Rank; ^b = Kruskal–Wallis *H* test statistic; *W* = Shapiro–Wilk test statistic; *M* = Mean; *F* = One-way ANOVA statistic. * Indicates deviation from normality at $p < .05$.

Table 19 presents the comparison of adjustment dimensions including home, health, social, emotional, and total adjustment among single-parent adolescents categorized by their education level (SSLC, HSS, and Graduation). Normality was assessed using the Shapiro–Wilk test, which indicated several deviations from normality. Specifically, significant deviations ($p < .05$) were observed in home adjustment for the SSLC group ($W = .96$), health adjustment in the SSLC ($W = .96$)

and HSS ($W = .96$) groups, emotional adjustment in the Graduation group ($W = .97$), and total adjustment in the SSLC ($W = .97$) and Graduation ($W = .97$) groups.

Levene's Test of Homogeneity of Variances confirmed that assumptions of equal variance were satisfied for most domains, except health adjustment ($p = .027$), which showed variance heterogeneity. Based on these results, Kruskal–Wallis H tests were applied to domains with normality violations or unequal variances, while one-way ANOVA was used for social adjustment, where assumptions were sufficiently met. Employing a combination of parametric and non-parametric tests in this way ensures robust results (Field, 2013; McDonald, 2014).

The analyses revealed no statistically significant differences in adjustment across education levels. For home adjustment, $H(2) = 2.65, p = .27$; health adjustment, $H(2) = 1.94, p = .38$; and emotional adjustment, $H(2) = 2.66, p = .26$. The ANOVA for social adjustment showed $F(2,247) = 2.05, p = .13$, while the Kruskal–Wallis test for total adjustment yielded $H(2) = 3.34, p = .19$. As no significant omnibus effects emerged, post hoc comparisons were not conducted.

These findings suggest that adolescents from single-parent families demonstrated comparable levels of adjustment across home, health, social, emotional, and total domains, irrespective of whether they were studying at SSLC, HSS, or Graduation levels. This indicates that the educational stage did not substantially influence adjustment patterns within this group. Such consistency aligns with earlier studies reporting that family structure and available support may have a greater impact on adjustment than academic stage alone (Amato, 2004; Santrock, 2019). Research has also shown that adolescents often adapt to family circumstances in ways that buffer against variations in school stage, resulting in broadly similar adjustment

outcomes across different age or grade levels (Acock & Demo, 1999; Hetherington & Stanley-Hagan, 1999).

Mental health among single parent adolescents based on education level

Adolescents' mental health is closely tied to their developmental stage and academic environment. As they progress from SSLC to HSS and Graduation, they encounter new pressures, responsibilities, and social influences that can shape their emotional and psychological well-being. For those in single-parent families, these experiences may be further affected by family support, stability, and coping resources. Examining mental health across different education levels helps to understand whether the stage of schooling contributes to variations in adolescents' overall well-being within the context of single-parent households.

Table 20

Comparison of Mental Health Dimensions among Single-Parent Adolescents across Education Levels (N = 250)

Mental Health	Education level	N	M	SD	W	F	p
School related MH	SSLC	91	45.56	9.55	.99		
	HSS	73	46.52	8.71	.99	4.75	.010
	Graduation	86	42.43	8.31	.97		
Home related MH	SSLC	91	59.6	11.00	.98		
	HSS	73	58.92	11.40	.97	2.21	.111
	Graduation	86	56.23	11.10	.98		
Peer group MH	SSLC	91	129.79 ^a	--	.94 [*]		
	HSS	73	134.16 ^a	--	.93 [*]	3.70 ^b	.160
	Graduation	86	113.61 ^a	--	.97		
Total	SSLC	91	145.37	26.04	.97		
	HSS	73	146.04	25.16	.98	3.34	.037
	Graduation	86	136.92	25.14	.98		

Note. ^a = Mean Rank; ^b = Kruskal–Wallis *H* test statistic (χ^2); *W* = Shapiro–Wilk test statistic; *M* = Mean; *SD* = Standard Deviation; * Indicates deviation from normality at $p < .05$.

Normality of the distribution for each mental health dimension was assessed using the Shapiro–Wilk test. Most groups showed approximate normality ($p > .05$), though some deviations appeared in the Graduation group for school-related mental health ($W = .97, p < .05$). Given the adequate sample size and balanced groups, and considering that ANOVA is robust to minor violations (Field, 2013), the analysis proceeded.

Levene's test of homogeneity of variances confirmed that variance equality was satisfied for school-related ($p = .108$), home-related ($p = .917$), peer-group-related ($p = .729$), and total mental health ($p = .553$). Based on these results, one-way ANOVA was applied for most dimensions, while the Kruskal–Wallis test was used for peer-group-related mental health due to stronger normality violations.

The ANOVA results revealed a statistically significant difference in school-related mental health among adolescents based on their education level, $F(2,247) = 4.75, p = .010$. For total mental health, the analysis also indicated a significant overall difference, $F(2,247) = 3.34, p = .037$. In contrast, home-related mental health did not differ significantly by education level, $F(2,247) = 2.21, p = .111$. For peer-group-related mental health, the Kruskal–Wallis H test was used due to marked deviations from normality ($W < .95$), yielding a non-significant result ($H = 3.70, p = .160$).

Table 21

Bonferroni Post Hoc Comparisons of School-Related Mental Health Scores Among Single-Parent Adolescents by Education Level

(I) Education	(J) Education	<i>MD (I-J)</i>	<i>SE</i>	<i>p</i>
SSLC	HSS	-0.96	1.40	1.000
	Graduation	3.13	1.34	.060
HSS	Graduation	4.09	1.42	.013

Note. *MD* = Mean Difference; *SE* = Standard Error. Adjustment for multiple comparisons: Bonferroni.

To further explore the significant findings in school-related and total mental health, Bonferroni-adjusted post hoc comparisons were conducted. For school-related mental health, the analysis revealed a significant difference between the HSS and Graduation groups (Mean Difference = 4.09, $p = .013$), indicating that adolescents in the Graduation group reported lower school-related mental health than their peers in the HSS group. The difference between SSLC and Graduation approached significance (Mean Difference = 3.13, $p = .060$), while no significant difference was observed between SSLC and HSS ($p = 1.000$).

Table 22

Post Hoc Pairwise Comparisons Across Education Levels (Bonferroni Adjustment)

(I) Education	(J) Education	<i>MD (I-J)</i>	<i>SE</i>	<i>p</i>
SSLC	HSS	-0.67	4.00	1.000
HSS	Graduation	8.46	3.83	.085
	Graduation	9.12	4.06	.076

Note. *MD* = Mean Difference; *SE* = Standard Error. Adjustment for multiple comparisons: Bonferroni.

Regarding total mental health, although the omnibus ANOVA indicated significance, none of the pairwise comparisons reached statistical significance after Bonferroni correction. The comparisons between SSLC and Graduation (Mean Difference = 8.46, $p = .085$) and between HSS and Graduation (Mean Difference = 9.12, $p = .076$) both approached significances, suggesting a trend toward lower total mental health among adolescents pursuing higher education. However, these differences did not meet the stringent threshold for significance and should be interpreted with caution.

Supportive studies reinforce these findings. Williams et al. (2021) found that nearly two-thirds of university students from single-parent households reported feeling overwhelmed by academic demands. Similarly, Rodriguez (2022) highlighted that single-parent college students showed heightened academic anxiety compared to peers from two-parent families. Lopez et al. (2022) further noted that financial strain and high academic expectations significantly predicted mental health decline in single-parent adolescents pursuing higher studies. Recent studies suggest that adolescents and young adults from single-parent families in higher education often face additional strains, particularly when combining part-time employment with academic responsibilities. This dual burden has been linked to increased stress levels and reduced well-being (Sánchez-García et al., 2018; Wladis, Conway, & Hachey, 2018).

Overall, the results indicate that adolescents from single-parent families reported similar levels of home-related and peer-related mental health across SSLC, HSS, and Graduation groups. However, differences emerged in school-related and

total mental health, where adolescents in higher educational stages tended to score lower. This suggests that while some aspects of mental health remain stable across education levels, academic pressures and psychosocial demands at advanced stages of education may contribute to increased strain on overall well-being. These findings highlight the need for targeted mental health support for single-parent adolescents as they progress into higher education.

Comparison of main variables based on sibling status among single parent adolescents

Sibling relationships often play an important role in shaping adolescents' psychological development, particularly in single-parent families where siblings may provide companionship, emotional support, and shared responsibilities within the household. The presence or absence of siblings can influence how adolescents perceive themselves, manage stress, and adapt to challenges in academic, social, and emotional domains. In this context, comparing key variables such as achievement motivation, self-concept, adjustment, and mental health across adolescents with and without siblings provides insight into whether sibling status contributes to differences in their overall well-being.

Achievement motivation among single parent adolescents based on Sibling Status

Achievement motivation reflects adolescents' drive to succeed in academic and personal tasks, often shaped by family dynamics and available support. In single-parent households, siblings may act as sources of encouragement, role models, or even competitors, which can influence motivational patterns. Conversely, adolescents

without siblings may rely more on parental involvement or external support systems to develop achievement motivation. Examining achievement motivation across sibling and non-sibling groups helps to understand whether the presence of siblings plays a significant role in shaping adolescents' aspirations and goal-directed behaviour.

Table 23

Comparison of Achievement Motivation between Single-Parent Adolescents with and without Siblings (N = 250)

Variable	Siblings	N	W	Mean rank	U	p
Achievement Motivation	Yes	184	.97*	134.06	4497.00	.002
	No	66	.98	101.64		

Note. W = Shapiro–Wilk test statistic; U = Mann–Whitney U test statistic; * indicates deviation from normality at $p < .05$.

Table 23 presents the comparison of achievement motivation between single-parent adolescents with siblings ($n = 184$) and those without siblings ($n = 66$). The Shapiro–Wilk test of normality indicated that the distribution of achievement motivation scores showed a slight deviation from normality among adolescents with siblings ($W = .97, p < .05$), while scores among those without siblings did not significantly deviate from normality ($W = .98, p > .05$). Hence, the non-parametric Mann–Whitney U test was applied to compare the groups, as this test does not require the assumption of homogeneity of variances and is appropriate when normality is violated (Field, 2013).

The analysis revealed a statistically significant difference in achievement motivation based on sibling status, $U = 4497.000, p = .002$. Adolescents with siblings reported higher levels of achievement motivation (Mean Rank = 134.06) compared to those without siblings (Mean Rank = 101.64). This suggests that the presence of

siblings may serve as an important factor influencing motivational drive in single-parent households.

The higher motivation among adolescents with siblings could be explained in several ways. Siblings often provide companionship, competition, and emotional support, which may foster a stronger desire to succeed academically and personally. They may act as role models or share responsibilities within the household, indirectly encouraging one another to pursue higher goals. In contrast, adolescents without siblings may rely more exclusively on parental support, which could be limited in single-parent families due to financial or time constraints, potentially leading to comparatively lower achievement motivation.

These findings are consistent with previous research highlighting the role of sibling dynamics in shaping adolescents' motivation and adjustment. For instance, Whiteman et al. (2011) noted that siblings can serve as both collaborators and competitors, promoting achievement-related behaviours. Similarly, Updegraff et al. (2018) emphasized that sibling interactions often provide unique social learning experiences that enhance responsibility and drive. In the context of single-parent families, such influences may be especially valuable, compensating for reduced parental availability.

Overall, the results indicate that sibling presence contributes positively to adolescents' achievement motivation within single-parent households. This underscores the importance of considering sibling dynamics when designing interventions or support systems aimed at fostering motivation and academic success in this population.

Self-concept among single parent adolescents based on Sibling Status

Self-concept plays a crucial role in shaping how adolescents perceive their abilities, values, and identity. Within single-parent families, the presence or absence of siblings can be an important factor influencing this development. Siblings often provide companionship, guidance, and opportunities for comparison, which may strengthen or challenge one's sense of self. In contrast, adolescents without siblings may rely more heavily on parental interaction or external social networks for shaping their self-concept. Examining self-concept across these two groups helps to understand whether sibling status contributes to differences in adolescents' self-perceptions in single-parent households.

Table 24

Comparison of Self-Concept Dimensions among Single-Parent Adolescents with and without Siblings (N = 250)

Self-concept Dimension	siblings	N	M	SD	W	t	p
Physical SC	Yes	184	128.26 ^a	--	.98*	5563.50 ^b	.31
	No	66	117.80 ^a	--	.97		
Social SC	Yes	184	130.70 ^a	--	.99*	5114.50 ^b	.06
	No	66	110.99 ^a	--	.96*		
Temperamental SC	Yes	184	129.71 ^a	--	.98*	5296.50 ^b	.12
	No	66	113.75 ^a	--	.97		
Educational SC	Yes	184	26.15	4.40	.99	2.47	.02
	No	66	24.61	4.35	.98		
Moral SC	Yes	184	30.42	3.39	.99	1.20	.24
	No	66	29.85	3.34	.99		
Intellectual SC	Yes	184	126.14 ^a	--	.98*	5955.00 ^b	.82
	No	66	123.73 ^a	--	.98		
Total SC	Yes	184	131.64 ^a	--	.97*	4942.50 ^b	.03
	No	66	108.39 ^a	--	.98		

Note^a = Mean Rank; ^b = Mann–Whitney *U* test statistic; *W* = Shapiro–Wilk test statistic; *M* = Mean; *SD* = Standard Deviation; * indicates deviation from normality at $p < .05$.

Table 24 presents the comparison of self-concept dimensions between single-parent adolescents with siblings ($n = 184$) and those without siblings ($n = 66$).

Normality was assessed with the Shapiro–Wilk test. Educational Self-Concept ($W = .99, p > .05$) and Moral Self-Concept ($W = .99, p > .05$) retained normality assumptions, while other dimensions showed slight deviations from normality: Physical ($W = .98$), Social ($W = .99$), Temperamental ($W = .98$), Intellectual ($W = .98$), and Total Self-Concept ($W = .97$), all with $p < .05$. Levene’s test confirmed homogeneity of variances across all dimensions ($p > .05$), supporting the appropriateness of t -tests where applicable.

Based on these assumptions, independent-samples t -tests were conducted for Educational and Moral Self-Concept, and Mann–Whitney U tests were used for the remaining dimensions.

The results indicated a statistically significant difference in Educational Self-Concept, $t(248) = 2.47, p = .02$, with adolescents who had siblings reporting higher scores ($M = 26.15, SD = 4.39$) compared to those without siblings ($M = 24.61, SD = 4.35$). Additionally, Total Self-Concept was significantly higher among adolescents with siblings (Mean Rank = 131.64) than those without (Mean Rank = 108.39), $U = 4942.5, p = .03$.

No significant differences were found for the other self-concept dimensions, including Physical Self-Concept ($U = 5563.5, p = .31$), Social Self-Concept ($U = 5114.5, p = .06$), Temperamental Self-Concept ($U = 5296.5, p = .12$), Moral Self-Concept ($t(248) = 1.20, p = .24$), and Intellectual Self-Concept ($U = 5955.0, p = .82$).

The observed pattern may be explained by the role siblings play in fostering identity and motivation. Siblings often provide emotional support, serve as role models, and encourage cooperative as well as competitive interactions, which can strengthen both educational confidence and overall self-concept. In contrast, adolescents without siblings may depend more heavily on parental support alone, which in single-parent households could be limited by economic or time-related constraints.

These findings align with earlier research. Whiteman et al. (2011) emphasized that sibling relationships contribute to adolescents' development of self-identity and self-perceptions through shared experiences and social learning. Similarly, Updegraff et al. (2018) highlighted the importance of sibling interactions in shaping confidence, responsibility, and personal growth. In the specific context of single-parent families, siblings may serve as a critical additional source of encouragement and affirmation, thereby enhancing overall self-concept.

In sum, the results indicate that sibling presence has a positive association with educational and total self-concept among adolescents in single-parent households. However, for other self-concept dimensions, sibling status did not play a decisive role, suggesting that factors beyond sibling influence such as parenting style, peer relationships, and school environment may also be central in shaping adolescents' self-views.

Adjustment among single parent adolescents based on Sibling Status

Adjustment is an important aspect of adolescent development, reflecting how individuals manage challenges in areas such as home, health, social, and emotional

life. For adolescents in single-parent families, the presence or absence of siblings may influence adjustment in unique ways. Siblings can offer companionship, shared responsibilities, and emotional support, while those without siblings may rely more directly on the parent or external social networks. Comparing adjustment patterns based on sibling status helps to understand whether sibling relationships contribute to differences in how adolescents adapt to their circumstances.

Table 25

Comparison of Adjustment Dimensions among Single-Parent Adolescents with and without Siblings (N = 250)

Adjustment Dimension	Siblings	N	M	SD	W	t	p
Home AD	YES	184	120.67 ^a	--	.98*	5182.50 ^b	.08
	NO	66	138.98 ^a	--	.97		
Health AD	YES	184	119.17 ^a	--	.97*	4907.00 ^b	.02
	NO	66	143.15 ^a	--	.97		
Social AD	YES	184	121.09 ^a	--	.98*	5260.50 ^b	.11
	NO	66	137.80 ^a	--	.98		
Emotional AD	YES	184	118.99 ^a	--	.98*	4874.50 ^b	.02
	NO	66	143.64 ^a	--	.97		
Total AD	YES	184	55.69	18.86	.99	2.63	.01
	NO	66	62.76	18.33	.99		

Note. ^a = Mean Rank; ^b = Mann–Whitney *U* test statistic; *M* = Mean; *SD* = Standard Deviation; *W* = Shapiro–Wilk test statistic; * indicates deviation from normality at $p < .05$.

Table 25 presents the comparison of adjustment domains including home, health, social, emotional, and total adjustment between adolescents from single-parent households with siblings ($n = 184$) and without siblings ($n = 66$). The Shapiro–Wilk test of normality showed that distributions were approximately normal overall ($W = .97$ – $.99$). However, several domains demonstrated deviations from normality in the

group with siblings, specifically home ($W = .98, p < .05$), health ($W = .97, p < .05$), social ($W = .98, p < .05$), and emotional adjustment ($W = .98, p < .05$). In contrast, total adjustment scores were normally distributed in both groups ($p > .05$). Given these results, non-parametric Mann–Whitney U tests were conducted for home, health, social, and emotional adjustment (Field, 2013). Levene’s test of homogeneity of variances for total adjustment was non-significant ($F = .239, p = .626$), confirming that the assumption of equal variances was satisfied. Therefore, an independent samples t-test was used to compare mean total adjustment scores across groups.

It is important to note that in this measure, higher adjustment scores indicate poorer adjustment, that is, greater difficulties in the respective areas.

The results indicated significant differences in several domains. Adolescents without siblings demonstrated significantly higher maladjustment in health adjustment ($U = 4907.00, p = .02$) and emotional adjustment ($U = 4874.50, p = .02$), reflecting more difficulties in managing health-related and emotional demands. For total adjustment, the t-test revealed a significant difference, $t = 2.63, p = .01$, indicating that adolescents without siblings reported higher overall maladjustment ($M = 62.76$) compared to those with siblings ($M = 55.69$).

Conversely, no statistically significant differences were observed in home adjustment ($U = 5182.50, p = .08$) or social adjustment ($U = 5260.50, p = .11$), suggesting that sibling presence may be less influential on these particular areas of adjustment.

This pattern may be explained by the supportive role siblings often play in single-parent households. Having siblings can provide companionship, shared responsibilities, and emotional reassurance, which may buffer stress and promote healthier adjustment. Conversely, adolescents without siblings may face greater responsibility and a stronger sense of isolation, which could place additional strain on their emotional and health-related adjustment.

These findings are supported by prior research. Jensen et al. (2019) emphasized that sibling bonds often function as protective factors in single-parent households, offering stability and social support. Similarly, Whiteman, McHale, and Soli (2011) highlighted how siblings serve as important sources of companionship and guidance, which can ease the challenges of adolescence. In the context of single-parent families, such sibling interactions may be particularly crucial in promoting adaptive coping and adjustment.

Overall, the results underscore that the presence of siblings contributes positively to adjustment among single-parent adolescents, particularly in emotional well-being, health-related coping, and overall adaptation.

Mental health among single parent adolescents based on Sibling Status

Adolescents' mental health is shaped by multiple family dynamics, and sibling presence often plays a meaningful role in this process. Within single-parent households, siblings may act as important sources of companionship, emotional reassurance, and shared responsibility, potentially buffering stress and enhancing coping abilities. Conversely, the absence of siblings may heighten feelings of isolation

and increase reliance on the single parent, which could influence overall psychological well-being. Examining mental health outcomes among single-parent adolescents with and without siblings provides valuable insights into whether sibling presence contributes to differences across domains such as school-related, home-related, peer-related, and total mental health.

Table 26

Comparison of Mental Health Dimensions among Single-Parent Adolescents with and without Siblings (N = 250)

Mental Health Dimension	Siblings	N	M	SD	W	t	df	p
School-related MH	Yes	184	46.18	8.85	.99	4.30	248	<.001
	No	66	40.8	8.37	.97			
Home-related MH	Yes	184	59.65	11.13	.98	3.39	248	.001
	No	66	54.32	10.53	.98			
Peer group MH	Yes	184	135.17 ^a	--	.95*	4293.50 ^b	--	<.001
	No	66	98.55 ^a	--	.96*			
Total MH	Yes	184	146.68	25.27	.98	4.27	248	<.001
	No	66	131.45	23.71	.97			

Note. ^a = Mean Rank; ^b = Mann–Whitney *U* test statistic; *W* = Shapiro–Wilk test statistic; *M* = Mean; *SD* = Standard Deviation; * indicates deviation from normality at $p < .05$.

Table 26 presents the comparison of mental health domains including school-related, home-related, peer group-related, and total mental health between adolescents from single-parent households with siblings ($n = 184$) and those without siblings ($n = 66$). The Shapiro–Wilk test of normality indicated that distributions were approximately normal overall, with *W* values ranging from .95 to .99. Specifically, school-related, home-related, and total mental health scores showed mild deviations from normality, while peer group-related mental health demonstrated more substantial deviations ($W = .95$ and $.96$, $p < .05$).

Levene's test of homogeneity of variances was also performed to assess whether the assumption of equal variances was met. The results showed that the assumption was satisfied for all variables: school-related mental health ($F = 1.122, p = .291$), home-related mental health ($F = .491, p = .484$), peer group-related mental health ($F = .584, p = .445$), and total mental health ($F = .490, p = .485$). Since these assumptions were broadly satisfied, independent samples t-tests were conducted for school-related, home-related, and total mental health. For peer group-related mental health, however, a non-parametric Mann–Whitney U test was conducted to account for the observed deviation from normality (Field, 2013).

The results indicated statistically significant differences across all mental health domains. Adolescents with siblings reported significantly higher school-related mental health ($M = 46.18, SD = 8.85$) compared to those without siblings ($M = 40.80, SD = 8.37$), $t(248) = 4.30, p < .001$. Home-related mental health was also significantly higher among adolescents with siblings ($M = 59.65$) than those without siblings ($M = 54.32$), $t(248) = 3.39, p = .001$. For peer group-related mental health, the Mann–Whitney U test revealed a significant difference ($U = 4293.50, p < .001$), with adolescents with siblings demonstrating higher mean ranks (135.17) than those without siblings (98.55). Finally, total mental health scores were significantly greater among adolescents with siblings ($M = 146.68$) relative to those without siblings ($M = 131.45$), $t(248) = 4.27, p < .001$.

These findings indicate that sibling presence is strongly associated with better mental health across school-related, home-related, peer-related, and overall domains among single-parent adolescents. Siblings may provide companionship, shared

responsibilities, and opportunities for social learning, which can mitigate feelings of loneliness and strengthen resilience. The consistent advantages observed across all domains highlight the protective function of sibling bonds. Without siblings, adolescents may experience increased isolation, greater responsibility burdens, and fewer opportunities for emotional sharing, which could explain the comparatively lower mental health scores in this group.

These results are in line with earlier research. Jensen et al. (2019) emphasized that sibling bonds act as protective factors against psychological distress in single-parent households. Whiteman et al. (2011) also noted that siblings provide companionship and guidance, helping adolescents navigate social and emotional challenges. More recently, Burton and Goodman (2020) found that sibling presence enhances coping strategies and contributes to stronger mental health outcomes, particularly in families experiencing structural or economic stress.

Overall, the findings underscore that the presence of siblings positively contributes to mental health in adolescents from single-parent families, with benefits extending across academic, home, peer, and general well-being domains.

Comparison of main variables based on custodial parent among single parent adolescents

In single-parent households, the custodial parent, whether the mother or father, plays a central role in shaping the adolescent's developmental outcomes. The custodial parent is the primary caregiver responsible for meeting the adolescent's emotional, social, and academic needs while simultaneously managing household

responsibilities. This dynamic can influence various psychological domains such as achievement motivation, self-concept, adjustment, and mental health. Prior research suggests that differences may emerge depending on whether the mother or father assumes custody, as parental roles, communication patterns, and support systems can vary (Guttmann, 1998; Chavda, 2023). Examining these differences provides important insights into how custodial arrangements contribute to adolescent well-being and helps identify areas where additional support may be needed.

Achievement motivation among single parent adolescents based on Custodial parent

Achievement motivation plays a vital role in adolescents' academic progress and future aspirations, and in single-parent families, this motivation may be shaped by the identity of the custodial parent. Whether the mother or father is the primary caregiver can influence the kind of support, expectations, and encouragement adolescents receive in their educational journey. Prior studies suggest that maternal and paternal custodians may differ in parenting approaches, availability, and involvement in school-related matters, which can in turn affect adolescents' motivational drive (Amato, 2010; Mandara & Murray, 2006). Examining achievement motivation in relation to custodial parent status provides insights into how caregiving arrangements shape academic orientation and goal-setting behaviours among single-parent adolescents.

Table 27*Comparison of Achievement Motivation Scores by Custodial Parent (N = 250)*

	Custodial parent	N	W	Mean Rank	U	p
Achievement Motivation	Father	59	.96*	86.79	3350.50	<.001
	Mother	191	.98*	137.46		

Note. *W* = Shapiro–Wilk test statistic; *U* = Mann–Whitney *U* test statistic; * indicates deviation from normality at $p < .05$.

Table 27 presents the comparison of achievement motivation scores for single-parent adolescents according to the custodial parent (father-led, $n = 59$; mother-led, $n = 191$).

The Shapiro–Wilk test of normality showed deviations from normality in both groups, with $W = .96$ ($p < .05$) for the father-custody group and $W = .98$ ($p < .05$) for the mother-custody group. Given these deviations, a non-parametric Mann–Whitney *U* test was conducted to assess group differences (Field, 2013).

The results revealed a statistically significant difference in achievement motivation between the two groups ($U = 3350.50$, $p < .001$). Adolescents living with their mothers exhibited substantially higher achievement motivation, as reflected by a higher mean rank (137.46), compared to those living with their fathers (mean rank = 86.79). Mothers often provide more consistent encouragement, emotional support, and monitoring of academic progress, which are strongly linked with higher achievement motivation and academic performance (Spera, 2005; McBride, Schoppe-Sullivan, & Ho, 2009). Evidence also suggests that family disruption and reduced paternal presence are associated with weaker academic and socioemotional outcomes (Amato & Anthony, 2014; McLanahan, Tach, & Schneider, 2013). These findings are in line

with broader research showing that maternal involvement tends to be a stronger predictor of persistence, goal orientation, and academic success, particularly in single-parent households where mothers are the primary custodians (Spera, 2005; McBride et al., 2009). Nevertheless, it is important to acknowledge that fathers can also foster achievement motivation when work responsibilities allow them to engage consistently in their adolescents' academic lives.

These results highlight the role of maternal caregiving in nurturing achievement motivation, though it is important to acknowledge that fathers can also support motivation when adequate time and resources are available.

Self-concept among single parent adolescents based on Custodial parent

Self-concept reflects how adolescents perceive themselves across different domains such as academics, social relationships, and emotional well-being. In single-parent families, the custodial parent often plays a central role in shaping these perceptions through daily interactions, parenting style, and the kind of emotional and practical support provided. The identity of the custodial parent, whether mother or father may influence how adolescents construct their sense of competence, belonging, and self-worth. Research suggests that mothers and fathers may emphasize different aspects of socialization, with mothers often providing emotional closeness and fathers contributing to autonomy and self-confidence (Amato, 2010; Hoeve et al., 2011). In the context of single-parent households, these differences could significantly impact the development of adolescents' self-concept. Exploring self-concept based on custodial parent status thus provides important insights into the ways caregiving patterns shape adolescents' self-perceptions and personal growth.

Table 28

Comparison of Self-Concept Dimensions Among Single-Parent Adolescents Based on Custodial Parent (Mother vs. Father)

Self-Concept Dimension	Custodial Parent	<i>N</i>	<i>M</i>	<i>SD</i>	<i>W</i>	<i>t</i>	<i>p</i>
Physical SC	Father	59	114.81 ^a	--	.95*	5004 ^b	.19
	Mother	191	128.80 ^a	--	.99		
Social SC	Father	59	112.08 ^a	--	.97	4843 ^b	.10
	Mother	191	129.64 ^a	--	.98*		
Temperamental SC	Father	59	103.44 ^a	--	.97	4333 ^b	.007
	Mother	191	132.31 ^a	--	.98*		
Educational SC	Father	59	23.81	4.31	.98	3.94	<.001
	Mother	191	26.34	4.30	.99		
Moral SC	Father	59	28.81	3.20	.98	3.90	<.001
	Mother	191	30.72	3.32	.99		
Intellectual SC	Father	59	23.08	4.63	.97	0.94	.35
	Mother	191	23.71	4.43	.99		
Total SC	Father	59	93.08 ^a	--	.95*	3722 ^b	<.001
	Mother	191	135.51 ^a	--	.98		

Note. *W* = Shapiro–Wilk test statistic; *U* = Mann–Whitney *U* test statistic; ^a = Mean Rank; ^b = Mann–Whitney *U* value; *M* = Mean; *SD* = Standard Deviation; * indicates deviation from normality at $p < .05$.

Table 28 presents the comparison of self-concept domains, including physical, social, temperamental, educational, moral, intellectual, and total self-concept, between adolescents living with their father ($n = 59$) and those living with their mother ($n = 191$).

The Shapiro–Wilk test of normality indicated that distributions were approximately normal overall, with *W* values ranging from .95 to .99. However, certain dimensions demonstrated deviations from normality: physical self-concept ($W = .95, p < .05$), temperamental self-concept ($W = .97, p < .05$), and total self-concept

($W = .95, p < .05$). In contrast, social self-concept ($W = .97, p > .05$), educational self-concept ($W = .98, p > .05$), moral self-concept ($W = .98, p > .05$), and intellectual self-concept ($W = .97, p > .05$) were normally distributed. Given this pattern, independent samples t -tests were used for dimensions demonstrating normality and homogeneity of variance, while Mann–Whitney U tests were applied to domains where deviations from normality were observed. This approach ensures the robustness of statistical conclusions by aligning the test selection with the data characteristics (Field, 2013).

Levene's test of homogeneity of variances confirmed that the assumption of equal variances was satisfied for all self-concept domains ($p > .05$). Specifically, the tests were non-significant across physical ($F = .100, p = .752$), social ($F = .011, p = .916$), temperamental ($F = 2.552, p = .111$), educational ($F = .009, p = .925$), moral ($F = .375, p = .541$), intellectual ($F = .090, p = .765$), and total self-concept ($F = 1.763, p = .185$). This supported the use of independent samples t -tests where appropriate.

Accordingly, t -tests were conducted for educational, moral, and intellectual self-concept, while Mann–Whitney U tests were applied to other domains.

The results revealed significant group differences in several domains. Adolescents living with mothers reported significantly higher educational self-concept ($M = 26.34, SD = 4.30$) compared to those living with fathers ($M = 23.81, SD = 4.31$), $t = 3.94, p < .001$. Similarly, moral self-concept scores were higher among those in maternal-led households ($M = 30.72$) than those in paternal-led households ($M = 28.81$), $t = 3.90, p < .001$. For total self-concept, the Mann–Whitney U test showed a significant difference ($U = 3722, p < .001$), with higher ranks favouring adolescents living with mothers. Additionally, temperamental self-concept was significantly greater in the mother-led group ($U = 4333, p = .007$).

In contrast, no statistically significant differences were observed for physical self-concept ($U = 5004, p = .19$), social self-concept ($U = 4843, p = .10$), or intellectual self-concept ($t = .94, p = .35$).

Prior studies provide support for these results. Deković and Meeus (1997) reported that maternal warmth and acceptance were strongly linked to adolescents' self-concept, especially in social and temperamental domains, while Pesu and Siljut (2018) found that mothers' beliefs about their children's competence directly shaped students' academic self-concept. Similarly, research on mother-headed households indicates that parenting practices and emotional closeness in such families foster resilience and stronger self-concept among children (Kaveh et al., 2022; Wood, 1999). Evidence also shows that family structure matters: children in mother-led single-parent families often display higher global and moral self-concept compared to those in father-led homes, likely due to greater maternal involvement in daily caregiving and educational monitoring (Demo & Acock, 1996).

Overall, while both father-led and mother-led families provide support, adolescents in mother-led households showed higher self-concept in temperamental, educational, moral, and overall domains. This highlights the value of maternal involvement, although social, physical, and intellectual self-concepts appeared less affected by custodial arrangements.

Adjustment among single parent adolescents based on Custodial parent

Adjustment refers to how effectively adolescents adapt to the demands of their environment across personal, social, emotional, and academic domains. In single-parent families, the custodial parent plays a central role in shaping these adjustment

patterns, as they provide both emotional support and practical guidance. Whether the adolescent resides with the mother or the father may influence the availability of resources, parenting approaches, and the kind of support offered, all of which can affect adjustment outcomes. Studies suggest that mothers often provide greater emotional closeness, while fathers may emphasize independence and discipline (Amato, 2010; Hetherington & Stanley-Hagan, 1999). These differences in caregiving styles may lead to variations in how adolescents cope with challenges related to health, school, and peer relationships. Examining adjustment based on custodial parent identity thus provides valuable insights into the ways family structures and parenting dynamics influence adolescent well-being.

Table 29

Comparison of Adjustment Dimensions among Single-Parent Adolescents across Custodial Parent (Father vs. Mother) (N = 250)

Adjustment Dimension	Custodial parent	N	Mean Rank	W	U	p
Home AD	Father	59	151.18	.97	4119.50	.002
	Mother	191	117.57	.98*		
Health AD	Father	59	145.25	.98	4469.50	.016
	Mother	191	119.4	.97*		
Social AD	Father	59	134.01	.97	5132.50	.300
	Mother	191	122.87	.98*		
Emotional AD	Father	59	153.83	.96*	3963.00	.001
	Mother	191	116.75	.98*		
Total AD	Father	59	154.25	.93*	3938.50	<.001
	Mother	191	116.62	.99		

Note. W = Shapiro–Wilk test statistic; U = Mann–Whitney U test statistic; * indicates deviation from normality at $p < .05$.

Table 29 compares adjustment across the home, health, social, emotional, and total domains for single-parent adolescents according to the custodial parent (father-led, $n = 59$; mother-led, $n = 191$). The Shapiro–Wilk test of normality indicated that some distributions deviated from normality, with W values ranging from .93 to .99. Specifically, notable deviations were observed in emotional adjustment ($W = .96, p < .05$) and total adjustment ($W = .93, p < .05$), suggesting a non-normal distribution of scores in these domains.

Given these distribution characteristics, non-parametric Mann–Whitney U tests were employed for all domains to ensure robust comparisons unaffected by normality assumptions (Field, 2013).

The results revealed significant differences across several adjustment areas. Adolescents living with their fathers reported significantly higher maladjustment in home adjustment ($U = 4119.5, p = .002$), health adjustment ($U = 4469.5, p = .016$), emotional adjustment ($U = 3963.0, p = .001$), and total adjustment ($U = 3938.5, p < .001$). In these domains, higher mean ranks indicate more adjustment difficulties, suggesting that adolescents in father-led households experienced greater challenges in managing home-related, health-related, and emotional demands overall.

Conversely, no statistically significant difference was observed in social adjustment between groups ($U = 5132.5, p = .300$), indicating that the custodial parent did not substantially impact adolescents perceived social adjustment in this sample

These results may be explained by the differential caregiving roles often observed in single-parent households. Mothers, as primary custodians in many cultural

contexts, are often more involved in adolescents' daily routines, emotional care, and health-related responsibilities, which may buffer against maladjustment. Fathers, while capable caregivers, may face challenges in balancing work, caregiving, and emotional support, particularly in contexts where male parents are less socialized into nurturing roles (Cheng & Li, 2014).

Supportive studies reinforce this interpretation. Amato and Anthony (2014) found that children in mother-led households often demonstrate better adjustment compared to those in father-led households, largely due to mothers' greater involvement in emotional and practical caregiving. Similarly, McLanahan and Schwartz (2002) emphasized that maternal custodianship tends to be associated with greater consistency in routines, which positively impacts adolescents' adjustment. More recent findings by Sarkadi et al. (2008) also suggest that while father custodianship can be protective in certain cases, it is often linked to greater adjustment difficulties when social support systems are limited.

Overall, the findings indicate that custodial parent type plays a significant role in shaping adjustment outcomes. Adolescents in father-led single-parent households reported greater maladjustment, particularly in home, health, emotional, and total adjustment, whereas adolescents in mother-led households exhibited comparatively better adjustment across these domains.

Mental health among single parent adolescents based on Custodial parent

Mental health reflects an adolescent's ability to manage emotional, social, and academic challenges, and it is shaped by the quality of parental support and

caregiving. In single-parent families, the custodial parent assumes the primary responsibility for nurturing and guiding the adolescent. Whether the custodial parent is the mother or the father may influence the adolescent's experiences of stress, coping, and well-being, as caregiving styles, emotional availability, and resources can differ (Amato, 2010; Demo & Acock, 1996). Understanding mental health outcomes in relation to the custodial parent thus provides important insights into how family dynamics affect adolescents' psychological well-being in single-parent households.

Table 30

Comparison of Mental Health Domains among Single-Parent Adolescents across Custodial Parent (Father vs. Mother) (N = 250)

Mental health	Custodial parent	<i>N</i>	<i>M</i>	<i>SD</i>	<i>W</i>	<i>t</i>	<i>df</i>	<i>p</i>
School-related MH	Father	59	41.17	8.85	.97	-3.58	248	<.001
	Mother	191	45.87	8.82	.99			
Home-related MH	Father	59	96.75 ^a	-	.97	3938.00 ^b	-	<.001
	Mother	191	134.38 ^a	-	.98*			
Peer Group MH	Father	59	96.97 ^a	-	.96	3951.00 ^b	-	<.001
	Mother	191	134.31 ^a	-	.96*			
Total MH	Father	59	91.42 ^a	-	.97	3623.5 ^b	-	<.001
	Mother	191	136.03 ^a	-	.98*			

Note. ^a = Mean Rank; ^b = Mann–Whitney *U* test statistic; *W* = Shapiro–Wilk test statistic; *U* = Mann–Whitney *U* test statistic; *M* = Mean; *SD* = Standard Deviation; * indicates deviation from normality at $p < .05$.

Table 30 presents the comparison of mental health domains, including school-related, home-related, peer group-related, and total mental health for single-parent adolescents according to the custodial parent (father-led, $n = 59$; mother-led, $n = 191$).

The Shapiro–Wilk test of normality indicated that distributions were approximately normal overall, with W values ranging from .96 to .99. Specifically, school-related mental health ($W = .97-.99, p > .05$) appeared normally distributed, while slight deviations were noted in home-related ($W = .97-.98, p < .05$), peer group-related ($W = .96$ in both groups, $p < .05$), and total mental health ($W = .97-.98, p < .05$).

Levene's test of homogeneity of variances was conducted to assess whether the assumption of equal variances was met across groups. For school-related mental health ($F = .725, p = .395$), home-related mental health ($F = .060, p = .807$), and total mental health ($F = .117, p = .732$), the assumption was satisfied, supporting the use of parametric tests where normality was acceptable. However, peer group-related mental health showed a significant Levene's test ($F = 5.938, p = .016$), indicating unequal variances.

Given these distributional characteristics, independent samples t -tests were used for school-related mental health, while Mann–Whitney U tests were applied to home-related, peer group-related, and total mental health to account for deviations from normality or variance heterogeneity (Field, 2013).

The results revealed statistically significant differences across all mental health domains. Adolescents living with their mothers reported significantly higher school-related mental health ($M = 45.87, SD = 8.82$) compared to those living with fathers ($M = 41.17, SD = 8.85$), $t(248) = 3.58, p < .001$.

In home-related mental health, the Mann–Whitney U test showed that adolescents living with mothers had significantly higher scores (mean rank = 134.38) than those living with fathers (mean rank = 96.75), $U = 3938.00$, $p < .001$. Similarly, peer group-related mental health was significantly higher among adolescents in mother-led households (mean rank = 134.31) compared to father-led households (mean rank = 96.97), $U = 3951.00$, $p < .001$.

Finally, total mental health scores were also significantly higher in adolescents living with mothers (mean rank = 136.03) relative to those with fathers (mean rank = 91.42), $U = 3623.50$, $p < .001$.

Adolescents living with their mothers reported better school adjustment, stronger home-related well-being, healthier peer relationships, and higher overall mental health than those living with their fathers. This pattern may be linked to the traditional caregiving roles and emotional availability typically associated with mothers in many cultural contexts. Mothers often provide consistent support in academics, household routines, and emotional regulation, which may buffer against stress and promote stronger coping skills. In contrast, fathers may face greater challenges in balancing work demands with intensive caregiving responsibilities, leading to comparatively lower mental health outcomes among their adolescents.

Supportive evidence aligns with these results. Amato and Anthony (2014) highlighted that the quality of custodial arrangements after family disruption has significant implications for children's emotional and academic adjustment, with maternal involvement often playing a protective role. McLanahan and Schwartz (2002) also highlighted that maternal custodianship is generally associated with

greater stability and stronger support networks. Similarly, Cheng and Li (2014) emphasized that adolescents with mothers as primary caregivers report fewer psychological difficulties compared to those in father-led households.

Overall, these findings suggest that adolescents residing in mother-led single-parent families experience higher perceived mental health across domains compared to those in father-led households, highlighting the potential supportive role of maternal caregiving on adolescent well-being

Comparison of main variables among single parent adolescents based on causes of single parenthood

The causes of single parenthood, such as parental separation, divorce, death of a parent, or abandonment, can shape the family environment in distinct ways and may influence adolescents' psychological and social development. Understanding how these underlying causes relate to key variables achievement motivation, self-concept, adjustment, and mental health provides deeper insight into the experiences of adolescents in single-parent households. Exploring these comparisons helps to highlight whether certain causes of single parenthood create unique challenges or protective influences for adolescent development.

Achievement motivation among single parent adolescents based on causes of single parenthood

Achievement motivation among adolescents can be shaped by the circumstances that led to single parenthood, such as divorce, separation, or the death of a parent. These different causes may influence the kind of support, stability, and

encouragement available to the adolescent, which in turn affects their drive to set and achieve goals. Examining achievement motivation in this context helps to understand whether certain causes of single parenthood place adolescents at an advantage or disadvantage in terms of academic and personal aspirations.

Table 31.

Comparison of Achievement Motivation among Single-Parent Adolescents across Cause of Single Parenthood (N = 250)

Variable	Cause of single parenthood	N	W	Mean Rank	U	p
Achievement	Death	156	.97*	132.47	6244	.049
Motivation	Divorce/Separated	94	.98	113.93		

Note. W = Shapiro–Wilk test statistic; U = Mann–Whitney U test statistic; * indicates deviation from normality at $p < .05$.

Table 31 compares the achievement motivation of adolescents from single-parent families based on the cause of single parenthood (death, $n = 156$; divorce/separation, $n = 94$). The Shapiro–Wilk test showed slight deviations from normality for both groups ($W = .97$ – $.98$, $p < .05$). Therefore, the Mann–Whitney U test was used to compare the groups.

The results indicated a statistically significant difference between the groups ($U = 6244.00$, $p = .049$). Adolescents who had lost a parent reported higher achievement motivation (Mean Rank = 132.47) compared to those from divorced or separated families (Mean Rank = 113.93).

These findings suggest that the cause of single parenthood influences adolescents' motivation to achieve. Adolescents who lost a parent demonstrated comparatively stronger achievement motivation, which may be linked to the sense of

responsibility, resilience, or a desire to meet family expectations that often develops in the aftermath of parental loss. The absence caused by death may foster maturity and self-reliance earlier, encouraging adolescents to pursue personal and academic goals more seriously.

In contrast, those from divorced or separated households may face ongoing stressors such as parental conflict, instability in living arrangements, and divided attention from parents. These circumstances can undermine focus, reduce emotional security, and negatively affect motivational drive.

Previous research supports these interpretations. Amato and Anthony (2014) observed that family disruption due to divorce often leads to lower educational and motivational outcomes compared to parental loss, which, while distressing, is less likely to involve prolonged conflict. McLanahan and Schwartz (2002) also noted that the stress of parental separation can affect adolescents' psychological adjustment, which may spill over into academic motivation. More recently, Schoenfelder et al. (2015) highlighted that resilience-building after parental death can sometimes strengthen adolescents' drive for achievement, especially when surviving family members provide emotional support and stability.

Overall, the results highlight that adolescents in single-parent families due to parental death tend to report higher achievement motivation than those from divorced or separated households.

Self-concept among single parent adolescents based on causes of single parenthood

The development of self-concept in adolescents may be influenced by the reasons behind single parenthood. Whether the situation arises from divorce, separation, or the loss of a parent, the nature of the experience can shape how adolescents view themselves in terms of abilities, values, and social roles. Exploring self-concept across these causes helps to understand the differences in adolescents' self-perceptions and identity formation.

Table 32

Comparison of Self-Concept Dimensions among Single-Parent Adolescents across Cause of Single Parenthood (Death vs. Divorce/Separation) (N = 250)

Self-concept Dimension	Cause of Single Parenthood	N	M	SD	W	t	p
Physical SC	Death	156	127.15 ^a	--	.98	7075 ^b	.642
	Divorce/Separated	94	122.77 ^a	--	.98*		
Social SC	Death	156	27.87	4.06	.99	1.30	.194
	Divorce/Separated	94	27.18	4.07	.98		
Temperamental SC	Death	156	129.37 ^a	--	.98	6728 ^b	.273
	Divorce/Separated	94	119.07 ^a	--	.98*		
Educational SC	Death	156	25.8	4.48	.99	0.27	.793
	Divorce/Separated	94	25.65	4.36	.99		
Moral SC	Death	156	127.51 ^a	--	.98	7019 ^b	.570
	Divorce/Separated	94	122.17 ^a	--	.99*		
Intellectual SC	Death	156	125.65 ^a	--	.98*	7308 ^b	.965
	Divorce/Separated	94	125.24 ^a	--	.98		
Total SC	Death	156	130.2 ^a	--	.98*	6599.5 ^b	.186
	Divorce/Separated	94	117.71 ^a	--	.98		

Note. ^a = Mean Rank; ^b = Mann–Whitney *U* test statistic; *W* = Shapiro–Wilk test statistic; *SC* = Self-Concept; * indicates deviation from normality at *p* < .05.

Table 32 presents the comparison of self-concept domains, physical, social, temperamental, educational, moral, intellectual, and total self-concept between adolescents who experienced single parenthood due to the death of a parent ($n = 156$) and those due to divorce or separation ($n = 94$).

The Shapiro–Wilk test of normality indicated that distributions were approximately normal overall, with W values ranging from .97 to .99. However, deviations from normality were observed in selected dimensions. In the death group, intellectual self-concept ($W = .98, p < .05$) and total self-concept ($W = .98, p < .05$) showed mild departures from normality. In the divorce/separated group, physical ($W = .98, p < .05$), temperamental ($W = .98, p < .05$), and moral ($W = .99, p < .05$) self-concept dimensions exhibited similar deviations. All other dimensions demonstrated approximately normal distributions ($p > .05$).

Given this pattern, Mann–Whitney U tests were applied to domains demonstrating deviations from normality, while independent-samples t -tests were used for dimensions where normality and homogeneity of variance were satisfied. This approach ensured robust statistical conclusions by aligning test selection with data characteristics and minimizing the impact of assumption violations (Field, 2013).

Levene's test of homogeneity of variances confirmed that the assumption of equal variances was satisfied for all self-concept domains ($p > .05$). Specifically, tests were nonsignificant across physical ($F = 0.14, p = .707$), social ($F = 0.01, p = .932$), temperamental ($F = 0.47, p = .494$), educational ($F = 0.29, p = .589$), moral ($F = 0.00, p = .947$), intellectual ($F = 0.72, p = .397$), and total self-concept ($F = 1.06, p =$

.304). This supported the appropriateness of using independent-samples *t*-tests where normality was confirmed.

Accordingly, independent-samples *t*-tests were conducted for social and educational self-concept, while Mann–Whitney *U* tests were applied to all other domains. The analysis revealed no statistically significant differences across physical self-concept ($U = 7075, p = .642$), social self-concept ($t = 1.30, p = .194$), temperamental self-concept ($U = 6728, p = .273$), educational self-concept ($t = 0.27, p = .793$), moral self-concept ($U = 7019, p = .570$), intellectual self-concept ($U = 7308, p = .965$), and total self-concept ($U = 6599.5, p = .186$).

While adolescents from parental-death households had slightly higher mean ranks across most self-concept domains, these differences were not statistically significant.

This suggests that adolescents' perceptions of themselves are relatively stable and resilient regardless of the pathway into single parenthood. Adolescents may adapt to either situation, loss through death or restructuring due to divorce by drawing on coping strategies and available support networks.

This finding aligns with prior research. Amato and Anthony (2014) noted that although divorce and parental death involve different emotional experiences, both situations may affect adolescents' adjustment and well-being, particularly when adequate emotional and social support systems are lacking. Hetherington and Stanley-Hagan (1999) also emphasized that the quality of parenting and the availability of socioeconomic resources are more influential on adolescents' adjustment and self-

concept than the specific cause of single parenthood. Likewise, studies of bereavement highlight that resilience and positive self-perceptions can be maintained when surviving caregivers provide emotional stability and consistent support (Worden, 1996; Luecken & Roubinov, 2012; Schoenfelder, Tein, Wolchik, & Sandler, 2015). Together, these findings suggest that adolescents' capacity to cope with parental absence, whether from divorce or death depends largely on the caregiving environment and the strength of family support systems.

Overall, the results show that adolescents' self-concept is not determined by the cause of single parenthood but is shaped more by parental support, family environment, and social context, reflecting resilience across both situations.

Adjustment among single parent adolescents based on causes of single parenthood

Adjustment refers to how adolescents cope with changes and challenges in their environment. The cause of single parenthood, whether divorce, separation, or death—may present unique stressors and coping demands, influencing adolescents' adjustment in areas such as home, health, emotional, and social life. Studying adjustment in this context highlights how different family transitions affect the ability of adolescents to adapt.

Table 33

Comparison of Adjustment dimensions among Single-Parent Adolescents across Cause of Single Parenthood (Death vs. Divorce/Separation) (N = 250)

Adjustment	Cause of Single Parenthood	N	M	SD	W	t	p
Home AD	Death	156	15.31	5.54	.98	2.80	.005
	Divorce/Separated	94	17.38	5.88	.98		
Health AD	Death	156	118.91 ^a	-	.98*	6304.50 ^b	.063
	Divorce/Separated	94	136.43 ^a	-	.97*		
Social AD	Death	156	115.13 ^a	-	.98*	5714.00 ^b	.003
	Divorce/Separated	94	142.71 ^a	-	.98		
Emotional AD	Death	156	113.85 ^a	-	.97*	5514.00 ^b	.001
	Divorce/Separated	94	144.84 ^a	-	.98		
Total AD	Death	156	54.26	18.49	.99	3.63	<.001
	Divorce/Separated	94	63.02	18.51	.99		

Note. ^a = Mean Rank; ^b = Mann–Whitney *U* test statistic; *W* = Shapiro–Wilk test statistic; *M* = Mean; *SD* = Standard Deviation; * indicates deviation from normality at $p < .05$.

Table 33 presents the comparison of adjustment domains, including home, health, social, emotional, and total adjustment between adolescents who experienced single parenthood due to the death of a parent ($n = 156$) and those due to divorce or separation ($n = 94$).

The Shapiro–Wilk test of normality indicated that distributions were approximately normal overall, with *W* values ranging from .97 to .99. Specifically, home adjustment ($W = .98$ in both groups, $p > .05$) and total adjustment ($W = .99$ in both groups, $p > .05$) were normally distributed. In contrast, slight deviations were observed in health ($W = .97$ –.98, $p < .05$), social ($W = .98$ in both groups, $p < .05$), and emotional adjustment ($W = .97$ –.98, $p < .05$).

Levene's test of homogeneity of variances was examined to determine whether equal variance assumptions were satisfied. The results confirmed homogeneity for home ($F = .745, p = .389$), social ($F = .086, p = .769$), emotional ($F = 2.640, p = .105$), and total adjustment ($F = .003, p = .956$). However, health adjustment showed a significant Levene's test result ($F = 4.479, p = .035$), indicating variance heterogeneity.

Given these distributional patterns, independent-samples *t*-tests were conducted for home and total adjustment, where normality and homogeneity assumptions were satisfied. For health, social, and emotional adjustment, the Mann–Whitney U test was employed due to deviations from normality and, in the case of health adjustment, heterogeneity of variance (Field, 2013).

The results revealed significant differences across several adjustment domains. Adolescents from divorce/separation households reported significantly higher home adjustment difficulties ($M = 17.38, SD = 5.88$) than those from parental-death households ($M = 15.31, SD = 5.54$), $t(248) = -2.80, p = .005$. For health adjustment, results approached significance, with higher difficulties in the divorce/separation group (Mean Rank = 136.43) compared to the death group (Mean Rank = 118.91), $U = 6304.50, p = .063$.

Social adjustment differed significantly, with adolescents from divorce/separation families reporting greater difficulties (Mean Rank = 142.71) than those from parental-death families (Mean Rank = 115.13), $U = 5714.00, p = .003$. Emotional adjustment also showed significant group differences, with higher difficulty scores among the divorce/separation group (Mean Rank = 144.84) relative

to the death group (Mean Rank = 113.85), $U = 5514.00$, $p = .001$. Finally, total adjustment was significantly higher in the divorce/separation group ($M = 63.02$, $SD = 18.51$) than in the death group ($M = 54.26$, $SD = 18.49$), $t(248) = -3.63$, $p < .001$.

Overall, these results suggest that adolescents from divorce/separation households experience more challenges across multiple adjustment domains compared to those from parental-death households. This may be linked to the ongoing conflict, instability, and divided loyalties often associated with divorce and separation, which can disrupt emotional security and social integration. In contrast, although parental death involves grief and loss, it may offer greater stability in the long term, with clearer family roles and less exposure to inter-parental conflict.

These findings are consistent with prior research. Amato and Anthony (2014) noted that conflictual parental separation often leads to greater adjustment difficulties than bereavement, which, though painful, may foster resilience when adequate support is provided. Hetherington and Stanley-Hagan (1999) similarly emphasized that post-divorce instability and inconsistent parenting practices can heighten social and emotional challenges in adolescents. Evidence from bereavement research also shows that while parental death requires coping with grief, the absence of ongoing conflict can allow adolescents to gradually restore stability, leading to better long-term adjustment outcomes compared to divorce-related disruptions (Schoenfelder, Tein, Wolchik, & Sandler, 2015).

In conclusion, adolescents from divorce/separation households demonstrated significantly greater adjustment difficulties across home, social, emotional, and overall domains, while those from parental-death households appeared to adapt with

relatively fewer difficulties, underscoring the greater challenges posed by separation-related family conflict and instability.

Mental health among single parent adolescents based on causes of single parenthood

Adolescents' mental health can vary depending on the cause of single parenthood, as each circumstance brings distinct emotional and psychosocial challenges. For example, divorce or separation may involve ongoing conflict, while loss of a parent may bring grief-related struggles. Understanding mental health differences across these causes is crucial to identify the kinds of support that adolescents need in maintaining psychological well-being.

Table 34

Comparison of Mental Health dimensions among Single-Parent Adolescents across Cause of Single Parenthood (Death vs. Divorce/Separation) (N = 250)

Mental Health	Cause of Single Parenthood	<i>N</i>	<i>M</i>	<i>SD</i>	<i>W</i>	<i>t</i>	<i>df</i>	<i>p</i>
School-related MH	Death	156	46.25	9.04	.99	3.42	248	.001
	Divorce/Separated	94	42.3	8.50	.99			
Home-related MH	Death	156	136.04 ^a	-	.98*	5688.50 ^b	-	.003
	Divorce/Separated	94	108.02 ^a	-	.98			
Peer group MH	Death	156	134.93 ^a	-	.94*	5860.50 ^b	-	.008
	Divorce/Separated	94	109.85 ^a	-	.97*			
Total MH	Death	156	136.85 ^a	-	.98*	5561.00 ^b	-	.001
	Divorce/Separated	94	106.66 ^a	-	.98			

Note. ^a = Mean Rank; ^b = Mann–Whitney *U* test statistic; *W* = Shapiro–Wilk test statistic; *M* = Mean; *SD* = Standard Deviation; * indicates deviation from normality at $p < .05$.

Table 34 presents the comparison of mental health domains including school-related, home-related, peer group-related, and total mental health between adolescents who experienced single parenthood due to the death of a parent (death group, $n = 156$) and those whose parents divorced or separated (divorce/separation group, $n = 94$).

The Shapiro–Wilk test of normality indicated that distributions were approximately normal overall, with W values ranging from .94 to .99. Specifically, school-related mental health ($W = .99, p > .05$) demonstrated acceptable normality in both groups. In contrast, home-related mental health ($W = .98, p < .05$), peer group-related mental health ($W = .94$ and $.97, p < .05$), and total mental health ($W = .98, p < .05$) demonstrated deviations from normality.

Levene's tests of homogeneity of variances showed that the assumption of equal variances was satisfied for school-related mental health ($F = .798, p = .373$), home-related mental health ($F = 3.310, p = .070$), peer group-related mental health ($F = .012, p = .913$), and total mental health ($F = 1.673, p = .197$).

Given this pattern, independent samples t -tests were used for school-related mental health, while Mann–Whitney U tests were applied for home-related, peer group-related, and total mental health to provide robust results (Field, 2013).

The results indicated significant differences across all mental health domains. Adolescents in the death group reported significantly higher school-related mental health ($M = 46.25, SD = 9.04$) compared to those in the divorce/separation group ($M = 42.30, SD = 8.50$), $t(248) = 3.42, p = .001$. Similarly, home-related mental health was significantly higher among adolescents in the death group ($U = 5688.50, p =$

.003), as was peer group-related mental health ($U = 5860.50, p = .008$). Total mental health also showed a significant difference favouring the death group ($U = 5561.00, p = .001$).

The findings indicate that the cause of single parenthood significantly influences adolescents' mental health. Adolescents who experienced the death of a parent reported better school adjustment, stronger home-related well-being, more positive peer relations, and higher overall mental health compared to those from divorce or separation contexts. This difference may be explained by the nature of the family disruption. Death, though associated with grief, often elicits greater family and community support, which can buffer its long-term impact. In contrast, divorce or separation may involve ongoing interparental conflict, custodial disputes, and disruptions in stability, all of which can negatively affect adolescents' mental health (Amato & Anthony, 2014). Supporting studies echo these patterns. Hetherington and Stanley-Hagan (1999) emphasized that parental separation often exposes adolescents to prolonged stressors such as conflict, economic strain, and reduced parental involvement, which undermine well-being. Research on bereavement likewise highlights that while parental death can be painful, supportive environments often enable resilience (Luecken & Roubinov, 2012). Similarly, intervention studies show that bereaved adolescents who receive consistent family support report stronger long-term adjustment compared to peers experiencing divorce-related disruptions (Schoenfelder, Tein, Wolchik, & Sandler, 2015). Adolescents in parental-death households had better mental health overall, whereas divorce/separation households faced more challenges.

Comparison of main variables among single parent adolescents based on family type

Family type is an important factor influencing adolescent development within single-parent households. The experiences of adolescents may vary depending on whether they live in a nuclear single-parent family or in an extended single-parent family where additional relatives provide support. While nuclear families often place greater caregiving responsibilities on the custodial parent alone, extended families may offer additional social, emotional, or financial resources that can affect adolescents' psychological outcomes. Comparing the main variables achievement motivation, self-concept, adjustment, and mental health across family types helps to understand how the presence or absence of extended family support shapes adolescents' overall well-being.

Achievement motivation among single parent adolescents based on Family type (Nuclear & Joint)

Achievement motivation is a key factor in shaping adolescents' academic progress and future aspirations, and its expression may vary depending on the family environment. Within single-parent households, the type of family structure, whether nuclear or joint, can play an important role in providing support and resources. In nuclear families, the custodial parent is often the primary source of guidance and encouragement, which may create both challenges and opportunities for fostering motivation. In contrast, joint families may offer additional involvement from extended family members, such as grandparents or relatives, who can contribute to academic support, emotional stability, and structured routines. Comparing achievement motivation across these family types helps to understand how differences in family support systems influence adolescents' drive to succeed.

Table 35

Comparison of Achievement Motivation among Single-Parent Adolescents across Family Type (Nuclear vs. Joint) (N = 250)

Variable	Family Type	N	Mean Rank	W	U	p
Achievement Motivation	Nuclear	179	129.8	.96*	5585.50	.136
	Joint	71	114.67	.98		
	Total	250				

Note. W = Shapiro–Wilk test statistic; U = Mann–Whitney U test statistic; * indicates deviation from normality at $p < .05$.

Table 35 presents the comparison of achievement motivation among single-parent adolescents based on family type (nuclear = 179; joint = 71). The Shapiro–Wilk test of normality indicated that the distributions were approximately normal for both groups, with $W = .96$ for nuclear families and $W = .98$ for joint families ($p < .05$). Since mild deviations from normality were observed, the non-parametric Mann–Whitney U test was used to examine group differences.

The results revealed no statistically significant difference in achievement motivation between the two groups ($U = 5585.50$, $p = .136$). Adolescents from nuclear families had a slightly higher mean rank (129.80) than those from joint families (114.67), but the difference was not large enough to be considered significant.

These findings indicate that family type (nuclear vs. joint) does not significantly influence achievement motivation among single-parent adolescents. While adolescents from nuclear families displayed marginally higher motivation, the overall similarity suggests that both family structures can foster comparable levels of academic persistence and goal orientation.

This outcome may be attributed to the fact that achievement motivation is more strongly influenced by parental encouragement, involvement, and the adolescent's individual drive than by the broader family composition. In nuclear families, the custodial parent may assume a more focused, directive role, whereas in joint families, extended family members often share caregiving responsibilities—thereby compensating for the absence of the second parent and maintaining motivational support.

These results are consistent with previous research emphasizing the role of parenting quality and emotional climate over structural factors. Spera (2005) found that parental involvement and consistent expectations predict higher motivation, while Steinmayr and Spinath (2009) highlighted that adolescents' intrinsic drive and perceived competence are stronger determinants of achievement motivation than family background. Similarly, Kumar and Anandalakshmi (1990) observed that supportive home environments, regardless of family form, promote greater academic striving and resilience.

In summary, the present findings demonstrate that the type of family structure (nuclear or joint) is not a decisive factor influencing adolescents' achievement motivation in single-parent households. Instead, quality of parenting and emotional support appear to be the primary drivers of motivational outcomes.

Self-concept among single parent adolescents based on Family type (Nuclear & Joint)

Self-concept is shaped not only by individual experiences but also by the broader family environment in which adolescents are raised. In single-parent

households, the type of family structure, whether nuclear or joint can play an important role in influencing adolescents' self-perceptions. Nuclear families often provide a more private and individualized setting, while joint families, with the presence of extended relatives, may emphasize collective values, traditions, and shared responsibilities. These different family contexts can affect how adolescents view themselves in physical, social, moral, intellectual, and emotional domains. Exploring self-concept across nuclear and joint family settings helps to understand whether family type contributes to variations in adolescents' self-perceptions within single-parent households

Table 36

Comparison of Self-Concept Dimensions among Single-Parent Adolescents across Family Type (Nuclear vs. Joint) (N = 250)

Self-Concept Dimension	Family Type	N	M	SD	W	t	p
Physical SC	Nuclear	179	123.49 ^a	-	.98*	5995.50 ^b	.485
	Joint	71	130.56 ^a	-	.98		
Social SC	Nuclear	179	27.80	4.01	.99	1.15	.250
	Joint	71	27.14	4.22	.97		
Temporal SC	Nuclear	179	119.93 ^a	-	.98*	5358 ^b	.052
	Joint	71	139.54 ^a	-	.98		
Educational SC	Nuclear	179	26.01	4.29	.98	1.49	.138
	Joint	71	25.08	4.72	.98		
Moral SC	Nuclear	179	29.94	3.33	.99	2.50	.130
	Joint	71	31.11	3.40	.97		
Intellectual SC	Nuclear	179	23.64	4.59	.99	0.44	.661
	Joint	71	23.37	4.20	.99		
Total SC	Nuclear	179	124.97 ^a	-	.98*	6259 ^b	.853
	Joint	71	126.85 ^a	-	.98		

Note. SC = Self-Concept; M = Mean; SD = Standard Deviation; W = Shapiro–Wilk test statistic; ^a = Mean Rank (Mann–Whitney U used); ^b = Mann–Whitney U test statistic; * indicates deviation from normality at $p < .05$.

Table 36 compares the self-concept dimensions, physical, social, temporal, educational, moral, intellectual, and overall self-concept between single-parent adolescents from nuclear ($n = 179$) and joint ($n = 71$) families. The Shapiro–Wilk test of normality revealed that the distributions were generally normal across most self-concept dimensions, with W values ranging from .97 to .99. However, slight deviations from normality ($p < .05$) were observed in the physical self-concept ($W = .98, p < .05$), temporal self-concept ($W = .98, p < .05$), and total self-concept ($W = .98, p < .05$) dimensions, indicating mild non-normality in these variables. In contrast, the distributions for social, educational, moral, and intellectual self-concept were approximately normal ($W = .97-.99, p > .05$). Because of these results, Mann–Whitney U tests were employed for physical, temporal, and total self-concept where normality was not met, while independent-samples t-tests were used for the remaining dimensions that satisfied the assumption of normality.

The statistical analyses indicated no significant differences between the two groups in any of the self-concept dimensions. For physical self-concept, the Mann–Whitney U test showed no significant difference between nuclear and joint families ($U = 5995.5, p = .485$). Similarly, no significant difference was found in social self-concept, $t(248) = 1.15, p = .25$. Temporal self-concept showed a trend toward higher mean ranks among adolescents from joint families (139.54) compared to those from nuclear families (119.93), but the difference was only marginal and did not reach statistical significance ($U = 5358, p = .052$).

Educational self-concept did not differ significantly, $t(248) = 1.49, p = .138$, nor did moral self-concept, $t(248) = 2.50, p = .130$. Intellectual self-concept scores were nearly identical between groups ($M = 23.64$ vs. $M = 23.37$), with no significant

difference, $t(248) = 0.44$, $p = .661$. Finally, overall self-concept scores showed no meaningful difference between nuclear and joint families ($U = 6259$, $p = .853$).

The results suggest that the family type whether nuclear or joint, does not significantly influence the self-concept of adolescents from single-parent households. While some domains, such as temporal and moral self-concept, showed slight tendencies toward higher values among adolescents in joint families, these differences were not statistically significant. This indicates that the structural arrangement of the family may play a limited role in shaping self-concept, compared to more immediate factors such as the quality of parenting, emotional support, and adolescent coping strategies.

These findings align with prior studies suggesting that adolescents' self-concept is more strongly associated with supportive family relationships and resilience processes than with the type of household they belong to (Demo & Acock, 1996; Marsh & Craven, 2006). Indian studies also support this view, showing that adolescents' self-concept is closely linked to family environment and parental involvement rather than nuclear or joint family arrangements (Kumari & Chamundeswari, 2015; Rani & Kumar, 2016).

Overall, the analysis indicates that family type does not create significant differences in the self-concept of single-parent adolescents. Both nuclear and joint family environments provided conditions under which adolescents developed self-concept at comparable levels across physical, social, educational, moral, intellectual, and total domains.

Adjustment among single parent adolescents based on Family type (Nuclear & Joint)

Adjustment refers to how well adolescents manage and adapt to different life situations, including home responsibilities, social interactions, emotional regulation, and overall well-being. In single-parent households, the type of family structure—nuclear or joint—may shape these adjustment processes differently. Adolescents living in nuclear families often experience a smaller and more private household environment, where the parent shoulders most responsibilities directly. In contrast, joint families provide a larger support system with extended relatives, which may ease certain pressures but also introduce complexities such as shared authority, expectations, or intergenerational influences. Examining adjustment among single-parent adolescents in nuclear and joint families is therefore important to understand whether the presence of extended kin provides additional support or poses challenges in adapting to everyday life.

Table 37

Comparison of Adjustment and Its Dimensions among Single-Parent Adolescents across Family Type (Nuclear vs. Joint) (N = 250)

Adjustment Dimension	Family Type	N	M	SD	W	t	p
Home AD	Nuclear	179	125.81 ^a	-	.98*	6299.5 ^b	.915
	Joint	71	124.73 ^a	-	.99		
Health AD	Nuclear	179	124.16 ^a	-	.97*	6114 ^b	.640
	Joint	71	128.89 ^a	-	.97		
Social AD	Nuclear	179	124.9 ^a	-	.98*	6246.5 ^b	.834
	Joint	71	127.02 ^a	-	.98		
Emotional AD	Nuclear	179	129.4 ^a	-	.98*	5656 ^b	.175
	Joint	71	115.66 ^a	-	.96*		
Total AD	Nuclear	179	57.97	18.90	.99	0.55	.582
	Joint	71	56.51	19.16	.98		

Note. ^a = Mean Rank; ^b = Mann–Whitney *U* test statistic; *W* = Shapiro–Wilk test statistic; *M* = Mean; *SD* = Standard Deviation; * indicates deviation from normality at $p < .05$.

Table 37 presents a comparison of adjustment domains, home, health, social, emotional, and total among single-parent adolescents from nuclear ($n = 179$) and joint ($n = 71$) families. The Shapiro–Wilk test of normality indicated that home ($W = .98, p < .05$), health ($W = .97, p < .05$), social ($W = .98, p < .05$), and emotional ($W = .98 / .96, p < .05$) adjustment scores deviated slightly from normality, whereas total adjustment showed an approximately normal distribution ($W = .99$ for nuclear; $.98$ for joint; $p > .05$). Consequently, Mann–Whitney U tests were employed for the four adjustment sub-domains that did not meet normality assumptions, while an independent-samples t -test was used for the total adjustment score, which satisfied the assumptions of normality and homogeneity ($F = 0.004, p = .947$).

The analyses revealed no statistically significant differences between nuclear and joint family adolescents in any adjustment domain. Mann–Whitney U tests showed no differences for home adjustment ($U = 6299.50, p = .915$), health adjustment ($U = 6114, p = .640$), social adjustment ($U = 6246.50, p = .834$), or emotional adjustment ($U = 5656, p = .175$). Similarly, the t -test for total adjustment confirmed no significant difference, $t(248) = 0.55, p = .582$, with mean scores virtually identical between nuclear ($M = 57.97$) and joint ($M = 56.51$) families.

These findings suggest that family type (nuclear vs. joint) does not significantly affect the adjustment of adolescents from single-parent households. Both family structures appear equally capable of fostering adaptive functioning across home, social, health, and emotional contexts. This is consistent with prior research reporting that coping resources, resilience, and parent–child interaction quality plays a more decisive role than structural composition. Pujar and Gaonkar (2000) found that

coping skills and social support had stronger associations with adolescent adjustment than family type. Similarly, Singh (2015) and Sharma and Kaur (2019) reported that emotional climate and parental involvement were the key determinants of adolescent adjustment, irrespective of household structure. Kumari and Saini (2018) also emphasized that resilience and communication were more predictive of adjustment outcomes than whether the family was nuclear or joint.

In conclusion, the data indicate that family structure alone is not a determining factor in adolescents' adjustment within single-parent contexts. Instead, emotional support, parental consistency, and interpersonal stability remain the dominant influences shaping adolescents' ability to adapt across different life domains.

Table 38

Comparison of Mental Health Domains among Single-Parent Adolescents across Family Type (Nuclear vs. Joint) (N = 250)

Mental Health Dimension	Family Type	N	M	SD	W	t	df	p
School-related MH	Nuclear	179	45.15	9.32	.99	1.08	248	.283
	Joint	71	43.79	8.26	.98			
Home-related MH	Nuclear	179	58.63	11.84	.98	0.86	248	.394
	Joint	71	57.28	9.41	.98			
Peer group MH	Nuclear	179	125.99 ^a	-	.96 [*]	6266.50 ^b	-	.864
	Joint	71	124.26 ^a	-	.94 [*]			
Total MH	Nuclear	179	143.44	26.94	.99	0.83	248	.411
	Joint	71	140.69	22.41	.98			

Note. ^a = Mean Rank; ^b = Mann–Whitney U test statistic; W = Shapiro–Wilk test statistic; M = Mean; SD = Standard Deviation; MH= Mental Health; * indicates deviation from normality at $p < .05$.

Table 38 compares mental health domains, school-related, home-related, peer-group-related, and total mental health between single-parent adolescents from nuclear ($n = 179$) and joint ($n = 71$) families.

The Shapiro–Wilk test of normality indicated that most domains were approximately normally distributed, with W values ranging from .98 to .99 ($p > .05$). However, peer-group-related mental health displayed mild deviations from normality in both family types ($W = .96$ for nuclear, $W = .94$ for joint, $p < .05$). Consequently, the Mann–Whitney U test was applied to the peer-group domain, while independent-samples t -tests were used for school-related, home-related, and total mental health where normality was satisfied.

Levene’s tests confirmed homogeneity of variances across all domains, school-related ($F = .798$, $p = .373$), home-related ($F = 3.310$, $p = .070$), peer-related ($F = .012$, $p = .913$), and total ($F = 1.673$, $p = .197$), supporting the robustness of parametric testing where applicable.

The statistical analyses revealed no significant differences between adolescents from nuclear and joint families across all domains of mental health. For school-related mental health, the difference between the two groups was not significant ($t(248) = 1.08$, $p = .283$). Similarly, home-related mental health showed no meaningful difference ($t(248) = 0.86$, $p = .394$). The Mann–Whitney U test for peer-group-related mental health also indicated no significant difference ($U = 6266.50$, $p = .864$). Finally, total mental health scores were statistically comparable between the both family types ($t(248) = 0.83$, $p = .411$), with nuclear-family adolescents ($M = 143.44$, $SD = 26.94$) and joint-family adolescents ($M = 140.69$, $SD = 22.41$) showing similar mean levels.

These findings indicate that family type (nuclear vs. joint) does not significantly affect adolescents' mental health in single-parent households. Adolescents from both settings reported comparable levels of school-related, home-related, peer-related, and total mental health. This suggests that the presence of extended kin in joint families does not necessarily guarantee better psychological outcomes, nor does living with only a custodial parent in a nuclear family imply poorer well-being.

Consistent with earlier research, the quality of parent–child relationships, emotional support, and family stability appear to exert stronger influences on adolescent mental health than family type alone. Amato and Anthony (2014) and Hetherington and Stanley-Hagan (1999) noted that parental warmth and consistency play a protective role irrespective of household structure. McLanahan and Schwartz (2002) similarly found that psychological well-being among adolescents is determined more by family functioning than by structural composition. Indian studies by Deb, Strodl, and Sun (2015), Kumari and Saini (2018), and Rani and Singh (2016) further confirmed that emotional security, communication, and support systems predict adolescent mental health more effectively than whether the family is nuclear or joint.

In conclusion, mental health outcomes among single-parent adolescents were broadly similar across nuclear and joint family structures. These findings underscore adolescents' resilience and adaptability across different household settings, highlighting that the emotional environment within the home rather than its structural form plays the central role in sustaining mental well-being.

Section D- Correlation Analysis

Correlation analysis was carried out to examine the interrelationships among the major psychological variables considered in this study, namely achievement motivation, self-concept, adjustment, and mental health. This analysis is important because it provides insights into how these variables function together rather than in isolation. For example, a positive correlation between self-concept and mental health would indicate that adolescents with more favourable self-perceptions also experience better psychological well-being, whereas a negative correlation between adjustment difficulties and achievement motivation would suggest that challenges in adaptation may hinder goal-directed behaviour. Such findings are valuable in identifying patterns that reflect underlying psychological processes and in verifying theoretical assumptions regarding the interplay between motivation, perception of self, adaptation, and mental health. Prior research has demonstrated that self-concept and performance are reciprocally related (Marsh & Craven, 2006), and that negative self-perceptions often predict internalizing difficulties such as anxiety and depression (Cole & Martin, 2005). These insights reinforce the practical significance of correlation analysis in the present study, as improving one domain (e.g., adjustment) may indirectly enhance another (e.g., mental health). In the context of single-parent families, correlation analysis further helps to clarify how shared family experiences and resources influence adolescents' psychosocial development. Beyond statistical significance, the effect sizes of these relationships provide meaningful indicators of the strength of associations (Cohen, 1988), while broader developmental perspectives remind us that supportive parenting and resilience processes often play a larger role than family structure alone (Santrock, 2019).

Table 39

Correlation Matrix of Mental Health, Self-Concept, Adjustment, and Achievement Motivation among Adolescents (N = 505)

Variables	W	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
School Related MH (1)	.99																
Home Related MH (2)	.99*	.65**															
Peer Group Related MH (3)	.96*	.67**	.69**														
Mental Health - Total (4)	.99*	.86**	.90**	.88**													
Physical SC(5)	.98*	.17**	.14*	.19**	.19**												
Social SC(6)	.99*	.06	.20**	.22**	.18**	.20**											
Temperamental SC (7)	.98*	.36**	.44**	.40**	.46**	.39**	.25**										
Educational SC(8)	.99	.45**	.36**	.30**	.49**	.22**	.16**	.33**									
Moral SC(9)	.99*	.12	.26**	.14*	.20**	.11	.06	.27**	.27**								
Intellectual SC(10)	.99*	-.06	.01	-.07	-.0449	.30**	.32**	.24**	.25**	.03							
Self-Concept - Total (11)	.98*	.30**	.38**	.32**	.383**	.64**	.56**	.67**	.63**	.44**	.63**						
Home AD (12)	.98*	-.43**	-.49**	-.49**	-.53**	-.12	-.05	-.24**	-.16*	-.22**	.15*	-.16**					
Health AD(13)	.98*	-.53**	-.39**	-.43**	-.50**	-.12	.18**	-.16*	-.15*	-.12	.26**	-.02	.50**				
Social AD (14)	.98*	-.30**	-.17**	-.24**	-.26**	-.08	.18**	-.08	.04	.01	.14*	.06	.40**	.43**			
Emotional AD (15)	.98*	-.49**	-.43**	-.48**	-.52**	-.19**	.03	-.35**	-.12	-.15*	.17**	.15*	.55**	.60**	.54**		
Total AD (16)	.99	-.56**	-.47**	-.53**	-.58**	-.17**	.10	-.28**	-.13*	-.16*	.23**	-.10	.77**	.80**	.71**	.88**	
Achievement Motivation (17)	.98*	.22**	.20**	.12	.20**	.06	.14*	.10	.43**	.23**	.16*	.32**	-.08	-.10	.12	-.06	-.05

Note. W = Shapiro–Wilk test statistic for normality; * indicates non-normal distribution at $p < .05$.

AD = Adjustment; SC = Self-Concept; MH = Mental Health;

Values below the diagonal represent Pearson correlation coefficients.

$p < .05$. $p < .01$ (two-tailed).

Table 39 presents the intercorrelations among the major psychological variables, achievement motivation, self-concept, adjustment, and mental health, along with their respective subdimensions. Shapiro–Wilk statistics ranged from .95 to .99 ($p > .05$ for most variables), indicating that the distributions were approximately normal and appropriate for Pearson’s product–moment correlation analysis.

Mental health domains were strongly and positively interrelated. School-related, home-related, and peer-related mental health all showed high correlations with total mental health ($r = .86 - .90, p < .01$), and were also significantly associated with one another ($r = .65 - .69, p < .01$). This pattern underscores the multidimensional but cohesive nature of adolescent well-being, where strengths or difficulties in one domain are closely linked with others (Santrock, 2019). From a developmental viewpoint, adolescents’ psychological well-being is shaped through continuous interaction between personal characteristics, family experiences, and social environments. This interpretation is also supported by Ecological Systems Theory (Bronfenbrenner, 1979), which emphasizes that adolescent development is influenced through ongoing interaction between individual, family, school, and social environments.

Self-concept dimensions exhibited meaningful positive relationships with mental health. Educational self-concept correlated moderately with school-related ($r = .45, p < .01$) and total mental health ($r = .49, p < .01$), while temperamental self-concept also related positively to total mental health ($r = .46, p < .01$). These findings suggest that adolescents with a more positive academic and temperamental

self-view experience better psychological well-being. In contrast, intellectual self-concept showed weaker and less consistent associations, reflecting its limited contribution to mental-health variance in this group.

Adjustment demonstrated significant negative correlations with mental health, consistent with its reverse-scoring (higher adjustment scores = greater difficulty). Total adjustment correlated negatively with total mental health ($r = -.58$, $p < .01$), while emotional adjustment also showed a strong negative relationship ($r = -.52$, $p < .01$). Thus, adolescents reporting fewer adjustment difficulties in home, health, or emotional areas tended to exhibit better overall mental health.

The interplay between self-concept and adjustment was also notable. Total self-concept was negatively related to adjustment difficulties ($r = -.16$ to $-.28$, $p < .01$), suggesting that adolescents with stronger self-perceptions adapt more effectively across various life contexts. This observation is consistent with Self-Determination Theory (Deci & Ryan, 2000), which highlights the importance of positive self-perceptions and psychological competence in adaptive functioning and well-being. Educational self-concept, in particular, was linked to lower home and health adjustment difficulties, emphasizing the role of positive self-beliefs in adaptive functioning.

Achievement motivation showed positive correlations with both self-concept and mental health but not with adjustment. The strongest association emerged with educational self-concept ($r = .43$, $p < .01^*$), followed by total self-concept ($r = .32$, $p < .01$). These results highlight that confidence in one's academic abilities is central to fostering motivation. Modest correlations with mental health ($r = .20 - .22$, $p <$

.01) suggest that adolescents with better psychological well-being tend to be more motivated, even if adjustment challenges persist.

Collectively, these findings illustrate the interconnected nature of adolescents' psychological functioning in single-parent families. Strong internal consistency among mental-health domains affirms the multidimensional model of well-being, while positive associations between self-concept, mental health, and achievement motivation emphasize the protective role of positive self-perceptions. The inverse links between adjustment difficulties and mental health further underscore the impact of coping capacity and family stability on adolescent outcomes. Such findings may also be understood through Stress and Coping Theory (Lazarus & Folkman, 1984), which explains that adolescents' ability to manage emotional and environmental stressors plays an important role in psychological well-being.

These results are consistent with prior evidence. Marsh and Martin (2011) and Kling et al. (1999) reported that higher self-concept predicts better mental health, whereas Amato and Anthony (2014) found that adjustment difficulties mediate the relationship between family stress and adolescent well-being. Eccles and Wigfield (2002) highlighted the central role of academic self-beliefs in achievement motivation, a trend mirrored in the present sample.

In conclusion, adolescents' motivation and psychological well-being in single-parent households appear to depend less on family structure and more on the dynamic interplay of self-concept, adjustment, and mental health. Strengthening self-beliefs and promoting emotional stability may thus serve as key pathways for

enhancing motivation and adaptive functioning among single-parent adolescents. Although significant interrelations were found, correlation analysis does not imply causation; therefore, these relationships warrant further exploration through regression and mediation analyses presented in the subsequent sections.

Section E- Regression analysis

Correlation analysis provided insights into the associations among achievement motivation, self-concept, adjustment, and mental health. However, to understand how strongly these variables predict outcomes, regression analysis was conducted. Multiple regression is widely used in psychological research to examine the combined and unique contribution of independent variables in explaining variance in a dependent variable (Field, 2013). This method is particularly suitable for the present study because it moves beyond simple associations and identifies the extent to which achievement motivation and self-concept serve as predictors of adolescents' mental health.

In this analysis, achievement motivation and self-concept (total score and selected dimensions) were treated as the independent variables (IVs), while mental health (school-related, home-related, peer-related, and total) was considered the dependent variable (DV).

By including different dimensions of mental health as dependent variables, the analysis acknowledges that adolescents' well-being is multidimensional, spanning academic (school), familial (home), social (peer), and overall psychological domains. Examining these separately allows for the identification of

domain-specific predictors, while also clarifying the overall predictive strength of self-concept and achievement motivation in shaping mental health. This approach is especially relevant in the context of single-parent families, where adolescents' experiences of academic pressure, home responsibilities, and peer relationships may be uniquely influenced by family structure and parental availability (McLanahan & Schwartz, 2002; Hetherington & Stanley-Hagan, 1999). Overall, regression analysis in this study serves two purposes: first, to identify which psychological factors best predict mental health outcomes among adolescents from single-parent households; and second, to provide a foundation for mediation analysis, which will further explore the role of adjustment as a potential mechanism linking self-concept with mental health.

Predictors of School-Related Mental Health

School-related mental health reflects how adolescents cope with academic pressures, classroom interactions, teacher expectations, and the overall school environment. For adolescents in single-parent households, school can become both a source of stress and a potential support system, depending on the resources and encouragement they receive. Identifying the predictors of school-related mental health is therefore important, as it helps to clarify which psychological and motivational factors most strongly influence adolescents' ability to manage academic life.

In this study, multiple linear regression was applied to examine how achievement motivation, self-concept, and adjustment predicted school-related mental health. These variables were chosen because they represent key psychological resources: achievement motivation reflects drive and persistence in

academics, self-concept captures students' beliefs about their abilities and worth, and adjustment indicates their capacity to adapt emotionally and behaviourally to challenges. By analysing these predictors together, it becomes possible to understand the relative contribution of each factor while controlling for the others.

This analysis is especially relevant for adolescents in single-parent families, as they may face additional educational pressures due to reduced parental involvement, financial stress, or emotional strain. Understanding the predictors of school-related mental health helps to explain which psychological factors are most influential in shaping adolescents' experiences in the school context. The following section presents the regression results for school-related mental health, highlighting which predictors played a significant role in explaining variations among adolescents from single-parent households.

Table 40

Predicting School Related Mental Health from Self-concept, Adjustment and Achievement Motivation

Predictors	β	t	p
Physical Self-concept	-.031	-0.61	.545
Temperamental Self-concept	.137	2.47	.014
Educational Self-concept	.324	5.93	<.001
Home Adjustment	-.095	-1.64	.102
Health Adjustment	-.299	-4.91	<.001
Social Adjustment	-.058	-1.01	.313
Emotional Adjustment	-.146	-2.10	.036
Achievement Motivation	.029	0.57	.572
$R^2 = .467, F(8,241) = 28.254, p < .001$			

Note. *Dependent variable* = school-related mental health. Negative β values for adjustment indicate that fewer adjustment difficulties are associated with higher school-related mental health.

Table 40 shows the results of a multiple regression analysis examining how self-concept dimensions, adjustment domains, and achievement motivation predict school-related mental health among single-parent adolescents. The model was statistically significant, $F(8, 241) = 28.25, p < .001$, and explained 46.7% of the variance in school-related mental health ($R^2 = .467$).

Among the predictors, educational self-concept ($\beta = .324, t = 5.93, p < .001$) emerged as the strongest positive predictor, indicating that adolescents who perceive themselves more positively in academic contexts tend to experience better school-related mental health. Temperamental self-concept also made a significant positive contribution ($\beta = .137, t = 2.47, p = .014$), suggesting that emotionally balanced adolescents report greater school-based well-being.

Regarding adjustment domains, health adjustment ($\beta = -.299, t = -4.91, p < .001$) and emotional adjustment ($\beta = -.146, t = -2.10, p = .036$) were significant negative predictors. Because adjustment scores were reverse-coded (higher scores indicating more difficulty), these findings imply that adolescents with fewer health-related or emotional problems experience better school-related mental health. By contrast, home adjustment ($\beta = -.095, p = .102$) and social adjustment ($\beta = -.058, p = .313$) were not significant contributors.

Achievement motivation ($\beta = .029, p = .572$) did not significantly predict school-related mental health, indicating that motivation, while important for performance, may have a limited direct role in shaping perceived school well-being when self-concept and adjustment are considered simultaneously.

Overall, these results suggest that adolescents from single-parent households who hold positive academic and temperamental self-beliefs are more likely to demonstrate strong school-related mental health, and that reduced emotional and health-related adjustment difficulties further enhance this outcome. This pattern aligns with earlier research showing that academic self-concept is a key determinant of school well-being (Marsh & Martin, 2011; Eccles & Wigfield, 2002), whereas emotional or behavioural challenges often undermine adolescents' school functioning (Leadbeater et al., 1999; Cole & Martin, 2005).

Indian research corroborates these trends. Deb, Strodl, and Sun (2015) found that academic stress and parental pressure strongly shape students' mental health, emphasizing the importance of school-related self-beliefs. Kumari and Saini (2018) similarly reported that both self-concept and adjustment significantly predict well-being among Indian adolescents, while Rani and Singh (2016) observed that supportive family environments buffer stress and enhance mental health.

Taken together, the findings indicate that school-related mental health among single-parent adolescents is best understood through a combination of academic self-concept, emotional stability, and effective adjustment, rather than through achievement motivation alone.

Predictors of home-related Mental Health

Adolescents' mental health within the home environment reflects how well they experience stability, support, and positive interactions in their family setting. In single-parent households, this domain can be particularly sensitive, as it

encompasses the emotional climate, parental involvement, and the adolescent's ability to adapt to changes in family structure. Examining predictors such as self-concept, adjustment, and achievement motivation provides insight into how adolescents' personal perceptions and coping abilities shape their psychological well-being at home. By identifying which factors most strongly influence home-related mental health, the analysis highlights the interplay between individual strengths and family circumstances in determining overall well-being.

Table 41

Predicting Home Related Mental Health from Self-concept, Adjustment and Achievement Motivation

Predictors	β	t	p
Physical Self-concept	-.096	-1.78	.076
Social Self-concept	.133	2.48	.014
Temperamental Self-concept	.252	4.21	<.001
Educational Self-concept	.166	2.88	.004
Moral Self-concept	.045	0.85	.395
Home Adjustment	-.270	-4.33	<.001
Health Adjustment	-.153	-2.33	.021
Social Adjustment	.051	0.83	.407
Emotional Adjustment	-.121	-1.66	.098
Achievement Motivation	.032	0.57	.568

$R^2 = .411$, $F(10,239) = 18.378$, $p < .001$

Note. Dependent variable = home-related mental health. Negative β values for adjustment indicate that fewer adjustment difficulties are associated with higher mental health in the home context.

Table 41 shows the regression analysis examining the predictive role of self-concept, adjustment, and achievement motivation on home-related mental health among single-parent adolescents. The model was statistically significant, $F(10,239)$

= 18.378, $p < .001$, and accounted for 41.1% of the variance in home-related mental health ($R^2 = .411$).

Among the predictors, temperamental self-concept ($\beta = .252$, $t = 4.208$, $p < .001$), educational self-concept ($\beta = .166$, $t = 2.880$, $p = .004$), and social self-concept ($\beta = .133$, $t = 2.475$, $p = .014$) emerged as significant positive predictors. This indicates that adolescents with greater confidence in their emotional stability, academic competence, and social abilities reported better home-related mental health. In contrast, physical and moral self-concept were not significant predictors ($p > .05$).

For adjustment variables, home adjustment ($\beta = -.270$, $t = -4.331$, $p < .001$) and health adjustment ($\beta = -.153$, $t = -2.326$, $p = .021$) significantly predicted home-related mental health. Since higher adjustment scores reflect greater difficulties, the negative coefficients mean that adolescents with fewer home- and health-related adjustment problems experienced better mental health in the family setting. Emotional and social adjustment were not significant predictors ($p > .05$). Achievement motivation was not found to be a significant predictor ($\beta = .032$, $p = .572$).

The findings suggest that adolescents' perceptions of themselves and their ability to adapt in family and health contexts strongly influence home-related mental health in single-parent households. Temperamental self-concept was the strongest predictor, highlighting the importance of emotional regulation and self-control in maintaining stability within the family environment. Educational and social self-concept also played meaningful roles, suggesting that adolescents who believe in their academic and social competence extend these strengths into the home context,

contributing to overall well-being. Adjustment factors were equally important, as difficulties in home and health adjustment negatively impacted mental health, confirming that the ability to manage household responsibilities and maintain personal health are central to family well-being.

These results are consistent with prior research. Leadbeater et al. (1999) and Rose and Rudolph (2006) found that adolescents with stronger self-regulation and social skills were less vulnerable to stress in the family environment. Amato and Anthony (2014) emphasized that adjustment difficulties often mediate the relationship between family disruption and adolescent well-being, underlining the importance of adaptive coping in single-parent households. Marsh and Martin (2011) also noted that adolescents with stronger academic and social self-concepts report greater psychological well-being, reinforcing the findings here. Similarly, McLanahan and Schwartz (2002) highlighted that the challenges of single-parent families often stem from reduced stability and increased responsibilities, making coping skills essential for sustaining home-related mental health.

Indian studies further support these observations. Deb, Strodl, and Sun (2015) found that home stressors and parental pressure significantly impact adolescents' mental health, while Kumari and Saini (2018) emphasized that adjustment and self-concept predict well-being more strongly than structural family factors. These findings underscore that in the context of single-parent households, supporting adolescents' emotional regulation, academic confidence, and family adjustment capacities may be critical strategies for fostering home-related mental health.

Predictors of Peer-Related Mental Health

Peer relationships are a central part of adolescent development, influencing identity, emotional well-being, and social adjustment. For adolescents from single-parent families, the quality of peer interactions can either buffer stress or intensify challenges, depending on the support and acceptance they receive from friends. Investigating how self-concept, adjustment, and achievement motivation predict peer-related mental health provides valuable insight into the social dimension of well-being. This analysis highlights the extent to which adolescents' personal strengths and coping resources help them navigate friendships and social networks, which are vital for overall resilience during adolescence.

Table 42

Predicting Peer Group Related Mental Health from Self-concept, and Adjustment

Variable	β	t	p
Physical Self-concept	-.031	-0.57	.567
Social Self-concept	.183	3.41	.001
Temperamental Self-concept	.183	3.05	.003
Educational Self-concept	.150	2.77	.006
Moral Self-concept	-.063	-1.20	.233
Home Adjustment	-.233	-3.71	<.001
Health Adjustment	-.204	-3.10	.002
Social Adjustment	.004	0.06	.949
Emotional Adjustment	-.175	-2.39	.018
$R^2 = .405, F(9,240) = 19.866, p < .001$			

Note. Dependent variable = peer-group-related mental health. Negative β values for adjustment indicate that fewer adjustment difficulties are associated with higher peer-related mental health.

Table 42 presents the multiple-regression results examining how self-concept and adjustment dimensions predict peer-group-related mental health among single-

parent adolescents. The model was statistically significant, $F(9, 240) = 19.87, p < .001$, explaining 40.5 % of the variance in peer-related mental health ($R^2 = .405$).

Among self-concept variables, social self-concept ($\beta = .183, t = 3.41, p = .001$), temperamental self-concept ($\beta = .183, t = 3.05, p = .003$), and educational self-concept ($\beta = .150, t = 2.77, p = .006$) emerged as significant positive predictors. These findings indicate that adolescents who perceive themselves as socially capable, emotionally balanced, and academically competent reported stronger peer-related mental health. Physical and moral self-concepts were not significant ($p > .05$).

Regarding adjustment domains, home adjustment ($\beta = -.233, t = -3.71, p < .001$), health adjustment ($\beta = -.204, t = -3.10, p = .002$), and emotional adjustment ($\beta = -.175, t = -2.39, p = .018$) significantly predicted peer-related mental health in the negative direction. Because adjustment scores were reverse-coded (higher values indicating greater difficulties), these results mean that adolescents with fewer problems in home, health, and emotional functioning tend to experience better peer-related mental health. Social adjustment was not a significant predictor ($p = .949$).

Overall, these results emphasize that both self-concept and adjustment play vital roles in shaping adolescents' social well-being within single-parent households. Social self-concept emerged as a particularly strong predictor, reflecting the direct link between self-perceived social competence and the ability to maintain supportive peer relationships. Temperamental self-concept also contributed meaningfully, underscoring the importance of emotional regulation and self-control in sustaining positive peer interactions. Similarly, educational self-concept was significant,

suggesting that confidence in academic competence may extend into peer contexts, promoting a sense of respect and belonging among classmates.

Adjustment difficulties within home, health, and emotional domains negatively affected peer-related mental health. Adolescents struggling with family responsibilities, health concerns, or emotional instability may find it harder to build and maintain healthy peer networks. The non-significance of social adjustment likely reflects conceptual overlap with social self-concept, which captures adolescents' internal evaluations of their social functioning.

These findings align with previous research. Leadbeater et al. (1999) and Rose and Rudolph (2006) highlighted that positive social self-perceptions and emotional regulation are key for maintaining peer support. Marsh and Martin (2011) reported that strong academic and social self-concept predict favourable social outcomes, while Amato and Anthony (2014) and McLanahan and Schwartz (2002) observed that family stress and adjustment difficulties often spill over into peer contexts.

Indian research provides similar evidence. Deb, Strodl, and Sun (2015) found that academic and family stressors significantly influence peer relationships and adolescent mental health. Kumari and Chamundeswari (2015) also demonstrated that self-concept strongly predicts social adaptation, confirming that positive self-beliefs support healthy peer interactions.

Taken together, the results suggest that adolescents in single-parent households who possess strong social, temperamental, and academic self-concepts,

along with fewer home, health, and emotional difficulties, exhibit better peer-group mental health and greater overall social well-being.

Section F-Mediation analysis

Mediation analysis was carried out to explore the mechanisms linking self-concept, adjustment, and mental health among single-parent adolescents. While regression analysis identified the direct contributions of self-concept and achievement motivation to mental health outcomes, mediation analysis tests whether adjustment serves as the pathway through which self-concept influences mental health. In this model, self-concept dimensions (independent variables) were treated as predictors, adjustment across home, health, social, and emotional domains was modelled as the mediator, and mental health outcomes (school-related, home-related, peer-related, and total) were considered the dependent variables. This approach is especially relevant in the context of single-parent families, where adolescents often face heightened adjustment challenges due to reduced parental resources and increased responsibilities at home. Prior research has shown that adolescents' self-perceptions shape how they adapt to daily demands, and in turn, their adaptation strongly affects psychological well-being (Amato & Anthony, 2014; Cole & Martin, 2005; Marsh & Martin, 2011). By modelling adjustment as a mediator, the present study follows established approaches to mediation (Baron & Kenny, 1986), providing deeper insight into the processes through which self-concept contributes to mental health in single-parent households. These pathways help to explain not only whether self-concept influences mental health, but also how adolescents' adaptive capacities shape this relationship within the context of single-parent families.

Adjustment as a Mediator Between Self-Concept and School-Related Mental Health

This analysis examined whether adjustment serves as a mediating factor in the relationship between adolescents' self-concept and their school-related mental health. In this model, self-concept dimensions functioned as the independent variables, adjustment across home, health, social, and emotional domains was treated as the mediator, and school-related mental health was the dependent variable.

The rationale for this approach lies in the unique challenges faced by single-parent adolescents, who often juggle academic demands alongside family responsibilities. Prior research has shown that positive self-concept promotes adaptive coping and adjustment, which in turn enhances school-related well-being (Amato & Anthony, 2014; Cole & Martin, 2005; Marsh & Martin, 2011). By testing adjustment as an intervening mechanism, this analysis helps to clarify whether the effects of adolescents' self-perceptions on their school-related mental health operate directly or indirectly through their capacity to adapt to everyday challenges. This aligns with established frameworks for mediation analysis (Baron & Kenny, 1986), highlighting adjustment as a key pathway through which self-concept influences mental health outcomes in school contexts.

Table 43

Indirect Effects of Self-Concept Dimensions on school -Related Mental Health through Home, Health, Social, and Emotional Adjustment

<i>Effect</i>	β	<i>z</i>	<i>p</i>	<i>Lower</i>	<i>Upper</i>
Physical_SC $\Rightarrow$ Home_AD $\Rightarrow$ School_MH	0.008	1.02	0.309	-0.015	0.049
Physical_SC $\Rightarrow$ Health_AD $\Rightarrow$ School_MH	0.045	2.14	0.032	0.008	0.176
Physical_SC $\Rightarrow$ Social_AD $\Rightarrow$ School_MH	0.007	0.86	0.388	-0.017	0.044
Physical_SC $\Rightarrow$ Emotional_AD $\Rightarrow$ School_MH	0.019	1.48	0.139	-0.012	0.088
Social_SC $\Rightarrow$ Home_AD $\Rightarrow$ School_MH	0.005	0.69	0.488	-0.019	0.044
Social_SC $\Rightarrow$ Health_AD $\Rightarrow$ School_MH	-0.05	-2.38	0.018	-0.201	-0.019
Social_SC $\Rightarrow$ Social_AD $\Rightarrow$ School_MH	-0.011	-0.94	0.346	-0.073	0.025
Social_SC $\Rightarrow$ Emotional_AD $\Rightarrow$ School_MH	-0.009	-0.97	0.334	-0.062	0.021
Tempermental_SC $\Rightarrow$ Home_AD $\Rightarrow$ School_MH	0.018	1.44	0.149	-0.016	0.104
Tempermental_SC $\Rightarrow$ Health_AD $\Rightarrow$ School_MH	0.047	2.14	0.032	0.01	0.216
Tempermental_SC $\Rightarrow$ Social_AD $\Rightarrow$ School_MH	0.008	0.88	0.376	-0.022	0.059
Tempermental_SC $\Rightarrow$ Emotional_AD $\Rightarrow$ School_MH	0.05	1.93	0.053	-0.002	0.239
Educational_SC $\Rightarrow$ Home_AD $\Rightarrow$ School_MH	0.009	1.12	0.261	-0.014	0.053
Educational_SC $\Rightarrow$ Health_AD $\Rightarrow$ School_MH	0.051	2.36	0.018	0.018	0.189
Educational_SC $\Rightarrow$ Social_AD $\Rightarrow$ School_MH	-0.002	-0.39	0.694	-0.02	0.013
Educational_SC $\Rightarrow$ Emotional_AD $\Rightarrow$ School_MH	0.006	0.63	0.53	-0.025	0.048
Moral_SC $\Rightarrow$ Home_AD $\Rightarrow$ School_MH	0.014	1.37	0.171	-0.016	0.092
Mora_SC l $\Rightarrow$ Health_AD $\Rightarrow$ School_MH	0.011	0.59	0.556	-0.066	0.123
Moral_SC $\Rightarrow$ Social_AD $\Rightarrow$ School_MH	-0.002	-0.53	0.599	-0.028	0.016
Moral_SC $\Rightarrow$ Emotional_AD $\Rightarrow$ School_MH	0.006	0.67	0.505	-0.031	0.062
Intellectual_SC $\Rightarrow$ Home_AD $\Rightarrow$ School_MH	-0.026	-1.57	0.117	-0.118	0.013
Intellectual_SC $\Rightarrow$ Health_AD $\Rightarrow$ School_MH	-0.101	-3.59	<.001	-0.314	-0.092
Intellectual_SC $\Rightarrow$ Social_AD $\Rightarrow$ School_MH	-0.008	-0.9	0.367	-0.051	0.019
Intellectual_SC $\Rightarrow$ Emotional_AD $\Rightarrow$ School_MH	-0.039	-1.88	0.06	-0.162	0.003

Note. SC = Self-Concept; AD = Adjustment; MH School = Mental Health (School-related).

β = unstandardized indirect effect estimates; *z* = test statistic; *p* = significance level; CI = 95% confidence interval (Lower, Upper). Significant mediation effects are indicated when *p* < .05 and the 95% CI does not include zero.

Table 43 presents the mediation analysis testing whether adjustment across different domains (home, health, social, and emotional) explained the relationship between self-concept dimensions and school-related mental health among single-parent adolescents. The conceptual framework of this mediation model is illustrated in Figure 6. The model revealed several significant indirect pathways, emphasizing

the mediating role of adjustment in linking adolescents' self-perceptions to their school-related psychological well-being. Physical self-concept showed a significant indirect effect through health adjustment ($\beta = 0.045, z = 2.14, p = .032$), indicating that adolescents with stronger physical self-confidence were better able to cope with health-related challenges, thereby enhancing school-related mental health. Similarly, temperamental self-concept predicted better school-related mental health indirectly via health adjustment ($\beta = 0.047, z = 2.14, p = .032$), suggesting that emotionally stable adolescents reported fewer health-related difficulties that could otherwise compromise school functioning. Educational self-concept also demonstrated an indirect effect through health adjustment ($\beta = 0.051, z = 2.36, p = .018$), underscoring the role of positive academic self-beliefs in fostering healthier adaptation and improved psychological outcomes in school contexts.

Interestingly, not all pathways were positive. Social self-concept exhibited a small but significant negative indirect effect through health adjustment ($\beta = -0.050, z = -2.38, p = .018$), suggesting that adolescents with strong social self-perceptions may experience greater vulnerability in managing health demands, possibly due to social or peer-related pressures. Intellectual self-concept displayed a particularly strong negative indirect effect via health adjustment ($\beta = -0.101, z = -3.59, p < .001$). Intellectual self-concept displayed a particularly strong negative indirect effect via health adjustment ($\beta = -0.101, z = -3.59, p < .001$). This may suggest that adolescents with heightened intellectual self-views experience increased academic pressure or self-imposed expectations that undermine health adjustment and subsequently affect school-related mental health. Marginal indirect effects were also

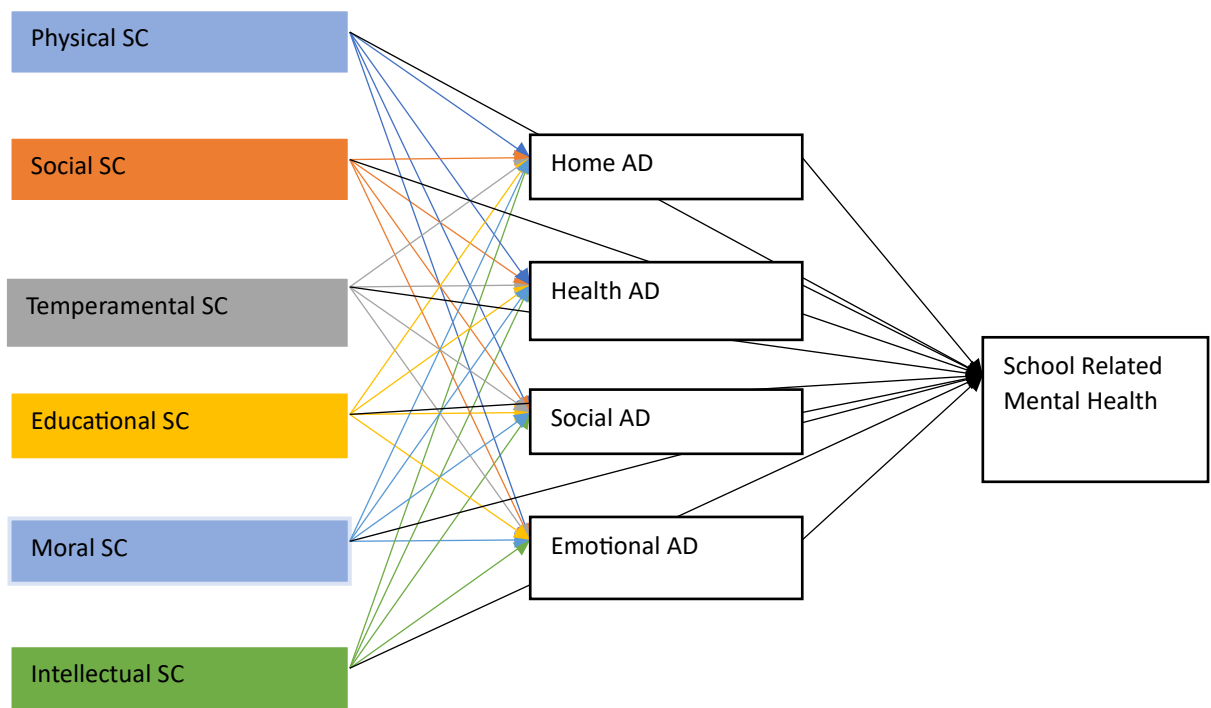
noted for temperamental and intellectual self-concept through emotional adjustment ($p \approx .05-.06$), implying that emotional regulation difficulties may partially account for their impact on school well-being.

Overall, the findings highlight that health-related adjustment functions as a primary pathway through which self-concept dimensions influence adolescents' school-related mental health in single-parent families. These findings support developmental and stress-adaptation perspectives which emphasize that adolescents' self-perceptions influence psychological well-being partly through their ability to manage emotional and environmental demands. Positive self-beliefs in educational, temperamental, and physical domains strengthen coping abilities and promote resilient functioning within school environments, whereas excessive intellectual or social self-expectations may increase stress and health-related strain. These outcomes are consistent with prior research emphasizing that self-concept exerts a broad influence on academic and psychological functioning (Marsh & Martin, 2011) and that adjustment difficulties often mediate the relationship between family stressors and adolescent well-being (Amato & Anthony, 2014). McLanahan and Schwartz (2002) similarly observed that adolescents in single-parent homes face heightened adaptation demands, while Cole and Martin (2005) noted that self-perceptions can operate as either protective or risk factors depending on the stress context. Supporting evidence from Indian research further reinforces these findings, as Deb, Strodl, and Sun (2015) reported that academic stress and parental expectations significantly predict health-related difficulties and mental health challenges among school-aged adolescents.

In summary, the mediation analysis demonstrates that adjustment, particularly within the health domain, serves as a crucial mechanism through which self-concept dimensions shape adolescents' school-related mental health. Strengthening health and emotional coping skills can therefore help adolescents from single-parent households translate positive self-beliefs into improved psychological well-being and greater resilience within the school context.

Figure. 6

Effect of self-concept dimensions on school-related mental health through adjustment.



Note. The figure illustrates the hypothesized mediating role of adjustment dimensions (home, health, social, and emotional) in the relationship between self-concept dimensions and school-related mental health.

Adjustment as a Mediator Between Self-Concept and home-Related Mental Health

Home-related mental health reflects how adolescents feel about their stability, support, and overall well-being in the family environment. For adolescents in single-parent households, this area can be particularly sensitive, as family dynamics and available resources may differ from those in two-parent homes. Self-concept, representing how adolescents view their abilities and worth, is likely to influence how they experience and interpret the home environment.

Adjustment was modelled as a mediator in this analysis to test whether the effect of self-concept on home-related mental health occurs directly, or indirectly through its role in reducing adjustment difficulties. In this model, self-concept dimensions served as independent variables (IVs), home-related mental health was the dependent variable (DV), and adjustment domains were the mediators. This framework allows for examining whether adolescents with stronger self-concept are better able to cope with family-related stressors through improved adjustment, which in turn supports better home-related mental health.

Table 44

*Indirect Effects of Self-Concept Dimensions on Home -Related Mental Health
through Home, Health, Social, and Emotional Adjustment*

Effect	β	z	p	Lower	Upper
Physical_SC $\Rightarrow$ Home_AD $\Rightarrow$ Home_MH	0.02219	1.22	0.222	-0.03401	0.14619
Physical_SC $\Rightarrow$ Health_AD $\Rightarrow$ Home_MH	0.02261	1.65	0.099	-0.01072	0.12506
Physical_SC $\Rightarrow$ Social_AD $\Rightarrow$ Home_MH	-0.0063	-0.798	0.425	-0.05531	0.02331
Physical_SC $\Rightarrow$ Emotional_AD $\Rightarrow$ Home_MH	0.01596	1.311	0.19	-0.01995	0.10064
Social_SC $\Rightarrow$ Home_AD $\Rightarrow$ Home_MH	0.01274	0.748	0.455	-0.05683	0.12695
Social_SC $\Rightarrow$ Health_AD $\Rightarrow$ Home_MH	-0.0249	-1.752	0.08	-0.14494	0.00812
Social_SC $\Rightarrow$ Social_AD $\Rightarrow$ Home_MH	0.01015	0.858	0.391	-0.03584	0.09168
Social_SC $\Rightarrow$ Emotional_AD $\Rightarrow$ Home_MH	-0.0079	-0.915	0.36	-0.06869	0.02497
Tempermental_SC $\Rightarrow$ Home_AD $\Rightarrow$ Home_MH	0.04992	2.321	0.02	0.02309	0.27357
Tempermental_SC $\Rightarrow$ Health_AD $\Rightarrow$ Home_MH	0.02363	1.653	0.098	-0.01306	0.15353
Tempermental_SC $\Rightarrow$ Social_AD $\Rightarrow$ Home_MH	-0.0073	-0.814	0.416	-0.07395	0.03056
Tempermental_SC $\Rightarrow$ Emotional_AD $\Rightarrow$ Home_MH	0.04249	1.599	0.11	-0.02855	0.28109
Educational_SC $\Rightarrow$ Home_AD $\Rightarrow$ Home_MH	0.02583	1.418	0.156	-0.02496	0.1556
Educational_SC $\Rightarrow$ Health_AD $\Rightarrow$ Home_MH	0.02534	1.747	0.081	-0.0078	0.13598
Educational_SC $\Rightarrow$ Social_AD $\Rightarrow$ Home_MH	0.00154	0.387	0.699	-0.0159	0.02371
Educational_SC $\Rightarrow$ Emotional_AD $\Rightarrow$ Home_MH	0.00492	0.613	0.54	-0.02731	0.05219
Moral_SC $\Rightarrow$ Home_AD $\Rightarrow$ Home_MH	0.03844	2.047	0.041	0.00542	0.24917
Moral_SC $\Rightarrow$ Health_AD $\Rightarrow$ Home_MH	0.00534	0.574	0.566	-0.04269	0.07806
Moral_SC $\Rightarrow$ Social_AD $\Rightarrow$ Home_MH	0.00215	0.51	0.61	-0.02025	0.0345
Moral_SC $\Rightarrow$ Emotional_AD $\Rightarrow$ Home_MH	0.00505	0.648	0.517	-0.03383	0.06728
Intellectual_SC $\Rightarrow$ Home_AD $\Rightarrow$ Home_MH	-0.0704	-2.97	0.003	-0.29255	-0.05994
Intellectual_SC $\Rightarrow$ Health_AD $\Rightarrow$ Home_MH	-0.0504	-2.103	0.036	-0.24365	-0.00855
Intellectual_SC $\Rightarrow$ Social_AD $\Rightarrow$ Home_MH	0.00769	0.827	0.408	-0.02634	0.06482
Intellectual_SC $\Rightarrow$ Emotional_AD $\Rightarrow$ Home_MH	-0.0338	-1.569	0.117	-0.19023	0.02109

Note. SC = Self-Concept; AD = Adjustment; MH = Mental Health (Home-related). β = unstandardized indirect effect estimate; z = test statistic; p = significance level; CI = 95% confidence interval (Lower, Upper). Significant mediation effects are indicated when $p < .05$ and the 95% CI does not include zero.

Table 44 presents the mediation analysis examining whether adjustment across home, health, social, and emotional domains explained the relationship

between self-concept dimensions and home-related mental health among single-parent adolescents. The conceptual framework of this model is illustrated in Figure 7. The results revealed several noteworthy indirect pathways, underscoring the role of adjustment as a mechanism linking adolescents' self-perceptions with their psychological well-being within the family context. Temperamental self-concept showed a significant indirect effect through home adjustment ($\beta = 0.050$, $z = 2.32$, $p = .020$, 95 % CI [0.023, 0.274]), indicating that adolescents with greater confidence in emotional regulation and stable personality traits reported fewer difficulties in home adjustment, which in turn contributed to stronger home-related mental health. Moral self-concept also demonstrated a positive indirect pathway via home adjustment ($\beta = 0.038$, $z = 2.05$, $p = .041$, 95 % CI [0.005, 0.249]), suggesting that adolescents with well-developed moral values and a clear sense of right and wrong were more capable of adapting effectively at home, resulting in better family well-being. These findings are consistent with Marsh and Martin (2011), who highlighted the protective role of positive self-beliefs in promoting resilience, and Hardy and Carlo (2005), who emphasized the contribution of moral identity to adjustment and psychological health.

In contrast, intellectual self-concept exhibited significant negative indirect effects through both home adjustment ($\beta = -0.070$, $z = -2.97$, $p = .003$, 95 % CI [-0.293, -0.060]) and health adjustment ($\beta = -0.050$, $z = -2.10$, $p = .036$, 95 % CI [-0.244, -0.009]). This indicates that adolescents who perceived themselves as highly capable intellectually sometimes faced greater adjustment difficulties at home and in managing health concerns, leading to poorer home-related mental health. A possible explanation is that high intellectual self-concept may coincide with elevated academic pressure or self-expectations, particularly in single-parent households

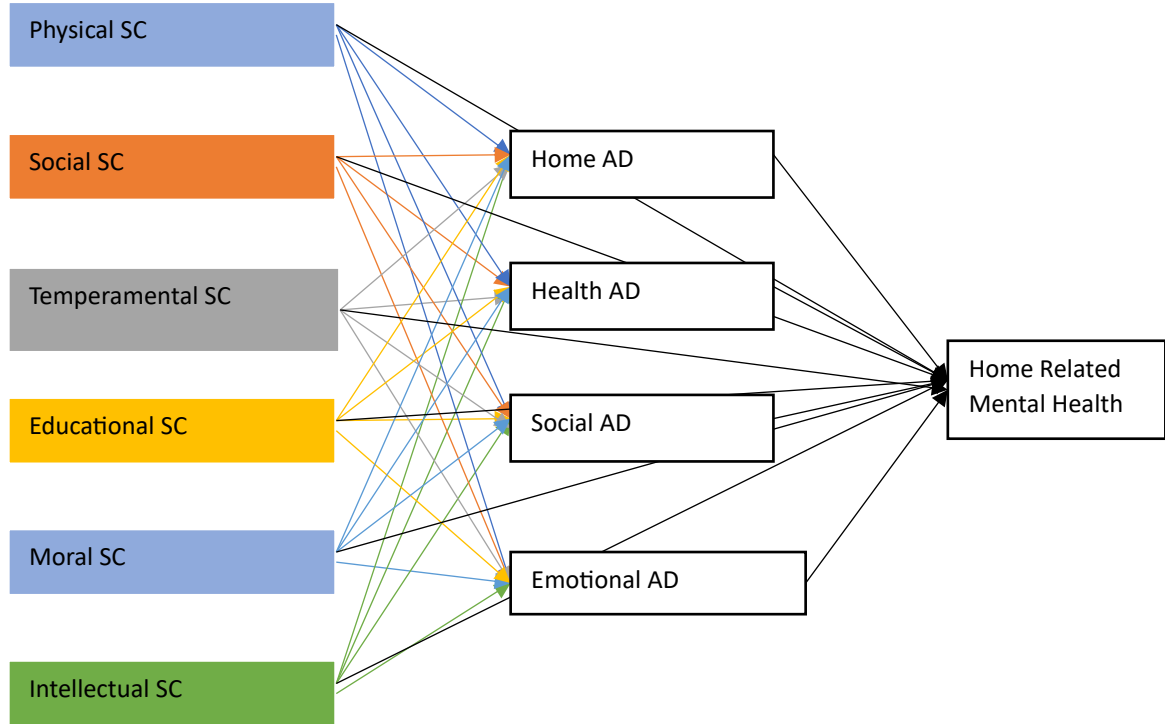
where emotional and practical support may be limited. Such pressures could strain adolescents' capacity to adapt within the home environment, thereby diminishing well-being. This interpretation aligns with Amato and Anthony (2014), who observed that the interaction between self-perceptions and family stress can exacerbate adjustment difficulties, and with Cole and Martin (2005), who found that strong self-beliefs may contribute to stress when coupled with high internal expectations.

Other self-concept dimensions, physical, social, and educational showed only marginal or nonsignificant indirect effects through adjustment ($p > .05$), suggesting that their influence on home-related mental health was less strongly mediated by adjustment processes.

Overall, the results demonstrate that adjustment serves as a key pathway linking self-concept to home-related mental health among adolescents in single-parent families. Temperamental and moral self-concept appear to operate as protective factors that foster resilience and healthy family adaptation, whereas heightened intellectual self-expectations may contribute to stress and adjustment difficulties under certain family circumstances. These patterns support McLanahan and Schwartz's (2002) argument that adolescents in single-parent households face distinctive stressors that increase the importance of adaptive coping mechanisms. Interventions that enhance adolescents' emotional regulation and moral confidence, while helping them balance intellectual ambition with realistic expectations and coping strategies, may therefore be particularly effective in promoting psychological well-being within the home environment.

Figure.7

Effect of self concept dimensions on home- related mental health through adjustment



Note. The figure illustrates the hypothesized mediating role of adjustment dimensions (home, health, social, and emotional) in the relationship between self-concept dimensions and home-related mental health.

Adjustment as a Mediator Between Self-Concept and Peer group -Related Mental Health

Peer-related mental health reflects how well adolescents interact with their friends, feel accepted by peers, and manage the social challenges of adolescence. For single-parent adolescents, peer connections often serve as an important source of support outside the family, helping to compensate for reduced parental time or resources. Self-concept, especially in social, temperamental, and educational domains, may influence how positively adolescents engage with their peer groups. However, this effect is likely to be indirect, operating through adjustment, which

captures how effectively adolescents cope with emotional demands, health routines, and household responsibilities. By modelling adjustment as a mediator, this analysis examines whether adolescents' self-perceptions strengthen or weaken their ability to adapt, which in turn shapes their peer-related mental health. This approach helps to clarify whether positive self-beliefs promote healthier peer relationships by enhancing adjustment capacities in the context of single-parent families.

Table 45

Indirect Effects of Self-Concept Dimensions on Peer group related Mental Health through Home, Health, Social, and Emotional Adjustment

Effect	β	z	p	Lower	Upper
Physical_SC $\Rightarrow$ Home_AD $\Rightarrow$ PeerGroup_MH	0.023370	0.097050	0.018440	1.199300	0.230000
Physical_SC $\Rightarrow$ Health_AD $\Rightarrow$ PeerGroup_MH	-0.00466	0.11382	0.02731	1.80590	0.07100
Physical_SC $\Rightarrow$ Social_AD $\Rightarrow$ PeerGroup_MH	-0.02674	0.02838	0.00041	0.05840	0.95300
Physical_SC $\Rightarrow$ Emotional_AD $\Rightarrow$ PeerGroup_MH	-0.01174	0.09715	0.02137	1.53720	0.12400
Social_SC $\Rightarrow$ Home_AD $\Rightarrow$ PeerGroup_MH	-0.03772	0.08378	0.01059	0.74300	0.45700
Social_SC $\Rightarrow$ Health_AD $\Rightarrow$ PeerGroup_MH	-0.13125	0.00062	-0.03003	-1.94150	0.05200
Social_SC $\Rightarrow$ Social_AD $\Rightarrow$ PeerGroup_MH	-0.04951	0.04664	-0.00066	-0.05840	0.95300
Social_SC $\Rightarrow$ Emotional_AD $\Rightarrow$ PeerGroup_MH	-0.06931	0.02303	-0.01064	-0.98210	0.32600
Tempermental_SC $\Rightarrow$ Home_AD $\Rightarrow$ PeerGroup_MH	0.01012	0.18475	0.04148	2.18720	0.02900
Tempermental_SC $\Rightarrow$ Health_AD $\Rightarrow$ PeerGroup_MH	-0.00561	0.13972	0.02855	1.80860	0.07100
Tempermental_SC $\Rightarrow$ Social_AD $\Rightarrow$ PeerGroup_MH	-0.03626	0.03848	0.00047	0.05840	0.95300
Tempermental_SC $\Rightarrow$ Emotional_AD $\Rightarrow$ PeerGroup_MH	0.00721	0.26011	0.05690	2.07180	0.03800
Educational_SC $\Rightarrow$ Home_AD $\Rightarrow$ PeerGroup_MH	-0.01778	0.10359	0.02146	1.38580	0.16600
Educational_SC $\Rightarrow$ Health_AD $\Rightarrow$ PeerGroup_MH	-0.00079	0.12317	0.03061	1.93510	0.05300
Educational_SC $\Rightarrow$ Social_AD $\Rightarrow$ PeerGroup_MH	-0.00699	0.00659	-0.00010	-0.05790	0.95400
Educational_SC $\Rightarrow$ Emotional_AD $\Rightarrow$ PeerGroup_MH	-0.02763	0.05397	0.00659	0.63250	0.52700
Moral_SC $\Rightarrow$ Home_AD $\Rightarrow$ PeerGroup_MH	-0.00028	0.16752	0.03195	1.95340	0.05100
Moral_SC $\Rightarrow$ Health_AD $\Rightarrow$ PeerGroup_MH	-0.04018	0.07395	0.00645	0.57990	0.56200
Moral_SC $\Rightarrow$ Social_AD $\Rightarrow$ PeerGroup_MH	-0.01269	0.01196	-0.00014	-0.05810	0.95400
Moral_SC $\Rightarrow$ Emotional_AD $\Rightarrow$ PeerGroup_MH	-0.03400	0.06940	0.00676	0.67100	0.50200
Intellectual_SC $\Rightarrow$ Home_AD $\Rightarrow$ PeerGroup_MH	-0.19970	-0.03185	-0.05854	-2.70370	0.00700
Intellectual_SC $\Rightarrow$ Health_AD $\Rightarrow$ PeerGroup_MH	-0.21645	-0.02432	-0.06087	-2.45620	0.01400
Intellectual_SC $\Rightarrow$ Social_AD $\Rightarrow$ PeerGroup_MH	-0.03412	0.03215	-0.00050	-0.05840	0.95300
Intellectual_SC $\Rightarrow$ Emotional_AD $\Rightarrow$ PeerGroup_MH	-0.17689	-0.00214	-0.04526	-2.00800	0.04500

Note. SC = Self-Concept; AD = Adjustment; MH = Mental Health (Peer Group-related). β = unstandardized indirect effect estimate; z = test statistic; p = significance level; CI = 95% confidence interval (Lower, Upper). Significant mediation effects are indicated when $p < .05$ and the 95% CI does not include zero.

Table 45 presents the mediation analysis testing whether adjustment across home, health, social, and emotional domains explained the relationship between self-concept dimensions and peer-related mental health among single-parent adolescents. The conceptual framework of this mediation model is illustrated in Figure 8. Several significant indirect pathways were observed, indicating that adolescents' self-beliefs influence peer well-being largely through their ability to adapt to personal and family demands. Temperamental self-concept demonstrated significant positive indirect effects through both home adjustment ($\beta = 0.010, z = 2.19, p = .029$) and emotional adjustment ($\beta = 0.007, z = 2.07, p = .038$). This finding suggests that adolescents who perceive themselves as emotionally stable and resilient are better able to regulate their emotions and adjust effectively at home, which in turn fosters stronger and more supportive peer relationships. Educational self-concept also showed an indirect pathway through health adjustment that approached significance ($\beta = -0.001, z = 1.94, p = .053$), implying that adolescents with positive academic self-beliefs may cope better with health-related challenges, indirectly supporting improved peer-related mental health. These results are consistent with the work of Marsh and Martin (2011), who emphasized that positive academic and temperamental self-concept promote resilience, and with Rose and Rudolph (2006), who noted that effective emotional regulation strengthens peer bonds and social well-being.

Conversely, intellectual self-concept displayed significant negative indirect effects through multiple adjustment domains. Indirect pathways through home adjustment ($\beta = -0.200, z = -2.70, p = .007$), health adjustment ($\beta = -0.216, z = -$

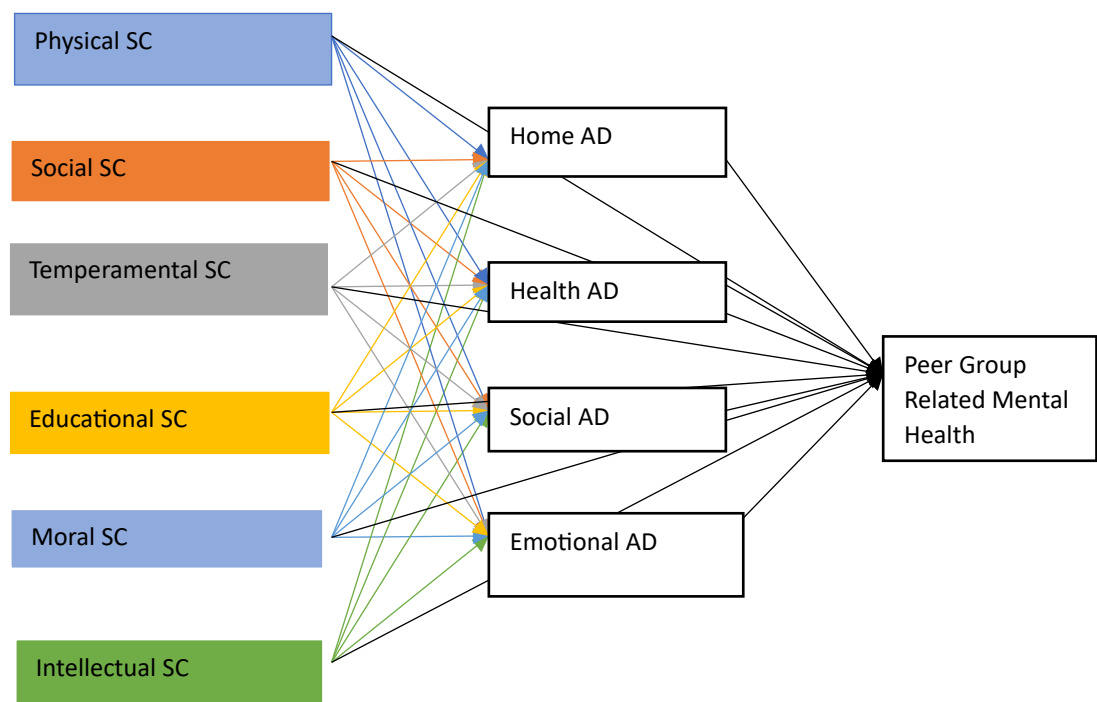
2.46, $p = .014$), and emotional adjustment ($\beta = -0.177$, $z = -2.01$, $p = .045$) were all significant, indicating that adolescents with stronger intellectual self-perceptions may experience increased academic strain or self-imposed expectations, which in turn contribute to maladjustment and reduced peer-related mental health. These findings suggest that while intellectual confidence can foster competence, excessive academic pressure may undermine adolescents' capacity to manage stress and sustain healthy peer connections, particularly in single-parent households where emotional and instrumental support may be limited. This pattern aligns with the observations of Cole and Martin (2005), who found that strong self-perceptions can sometimes contribute to internalizing stress, and Deb, Strodl, and Sun (2015), who reported that academic stress and parental pressure among Indian adolescents negatively affect health and peer relationships.

Overall, the mediation results emphasize that adjustment processes are central to understanding how self-concept influences peer-related mental health. Positive pathways were evident for temperamental and educational self-concept, which promote peer well-being through improved emotional and adaptive regulation, whereas intellectual self-concept functioned as a risk factor when it heightened stress and maladjustment. These outcomes correspond with Amato and Anthony (2014), who observed that adjustment difficulties amplify the effects of family stress on adolescent mental health, and McLanahan and Schwartz (2002), who highlighted that adolescents in single-parent families face unique adaptation pressures affecting their social and emotional functioning. Collectively, these findings indicate that interventions designed to strengthen emotional regulation,

realistic academic expectations, and coping strategies may help adolescents from single-parent households sustain healthy peer relationships and positive mental health.

Figure. 8

Effect of self-concept dimensions on peer group–related mental health through adjustment.



Note. The figure depicts the hypothesized mediating role of adjustment dimensions (home, health, social, and emotional) in the relationship between self-concept dimensions and peer group–related mental health among single-parent adolescents.

Chapter Summary

This chapter presented the results of the pilot and main phases of the study. The pilot study with 130 adolescents confirmed the clarity and feasibility of the tools, while also revealing initial differences in achievement motivation and mental health between single- and two-parent adolescents, which justified the variables

chosen for the main study. The main study with 505 adolescents found significant differences between single-parent and two-parent adolescents across all four variables, achievement motivation, self-concept, adjustment, and mental health, though both groups generally reported moderate to high levels, indicating resilience alongside challenges.

Further analyses within the single-parent group examined the role of demographic factors, including gender, education level, sibling status, custodial parent, reason for single parenthood, and family type. Significant effects were observed for gender, education level, and sibling status: girls reported higher achievement motivation and educational self-concept, SSLC-level adolescents showed stronger motivation and self-concept than those at the graduation level, and those with siblings demonstrated higher achievement motivation. In contrast, custodial parent, reason for single parenthood, and family type had little or no significant influence on psychological outcomes.

Regression analysis identified adjustment as a significant predictor of mental health, while mediation analysis showed that adjustment mediated the relationship between self-concept and mental health. Taken together, the findings highlight adjustment as a central factor in adolescent well-being and underscore that, although single-parent adolescents face unique challenges, they also possess strong adaptive resources.

CHAPTER 4

SUMMARY AND CONCLUSION

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- *Resume of the Research*
 - *Tenability of Hypotheses*
 - *Major Findings of the Research*
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Resume of the research

In Kerala, as in many parts of India, the traditional joint family system has long been the cornerstone of social structure, providing a strong support network for families and children alike. However, over the years, significant shifts have occurred, particularly with urbanization, socio-economic changes, and evolving cultural norms. These transformations have led to a gradual but notable rise in nuclear and single-parent families, which is reshaping the way children grow up, particularly adolescents.

This study emerged from the need to understand the impact of these changing family structures on adolescent development, specifically in Kerala. Known for its high literacy rates and progressive social outlook, Kerala provides a unique context for exploring the psychological effects of single-parenthood. While the state's emphasis on education and family values remains strong, the rise in single-parent households—driven by factors such as divorce, widowhood, and migration—raises growing concerns about the well-being of its younger generation. The increasing prevalence of single-parent families in this socio-cultural setting presents an important issue that needs to be addressed to understand its impact on adolescents' emotional, social, and psychological development.

Given the cultural stigma surrounding single-parenthood, particularly in a society where traditional family ideals are highly valued, this study aimed to explore how single-parent family structures affect adolescents' emotional well-being, academic achievement, self-esteem, and overall mental health. The findings from this study offer valuable insights that not only shed light on the challenges faced by

adolescents in single-parent households but also suggest ways to better support them, both through policy and social frameworks, and through a broader societal understanding of their unique experiences

Statement of the problem

The family structure plays a key role in shaping adolescents' emotional, psychological, and social development. Traditionally, two-parent families have been seen as ideal for providing the emotional support, supervision, and stability needed for healthy growth. However, due to factors like divorce, separation, migration, and the loss of a parent, single-parent families have been on the rise, both globally and in India, especially in Kerala. While there is a growing acceptance of non-traditional family structures, adolescents from single-parent families often face unique challenges, such as reduced emotional support and economic difficulties.

Adolescence is a crucial time for personal growth, where parental involvement is essential for building self-esteem, emotional stability, and motivation. The absence of one parent can disrupt this process and lead to issues like low self-concept, poor academic performance, trouble adjusting socially or academically, and mental health problems.

While many studies have explored adolescent development, few focus specifically on the experiences of adolescents in single-parent families in India. In Kerala, where traditional family values and high literacy rates coexist, the effects of single parenthood on adolescents may be different due to unique cultural and social

factors. Therefore, this study explores *the impact of single parenthood on adolescents' achievement motivation, self-concept, adjustment, and mental health.*

Variables of the study

The present study examined both psychological and demographic variables to understand the impact of single parenthood on adolescents. The psychological variables included in the study were Achievement Motivation, Self-Concept, Adjustment, and Mental Health. In the initial phase, a comparison was made between adolescents from single-parent and two-parent families. Here, family structure (single and two-parent) functioned as the independent variable, while the psychological variables acted as dependent variables. Then, the focus shifted to adolescents from single-parent families only, with the aim of identifying factors that influence their mental health. During this phase, Self-Concept, Adjustment, and Achievement Motivation were treated as independent variables, and Mental Health as the dependent variable. A mediation analysis was also conducted to assess whether Adjustment mediated the relationship between Self-Concept and Mental Health. In addition to psychological factors, demographic information was collected through a personal data sheet, which included variables such as Gender, Education Level of adolescents, Sibling Status, Parental Custodial Status, Cause of Single Parenthood (e.g., death, divorce, separation), and Family Type (Nuclear and Joint). These demographic variables were considered independent variables in relevant statistical analyses, with the psychological variables serving as dependent outcomes.

Objectives

- To examine the difference in achievement motivation, self-concept, adjustment, and mental health among adolescents from single-parent and two-parent families.
- To examine the influence of demographic variables (gender, education level, sibling status, custodial parent, cause of single parenthood, residential area, and family type) on achievement motivation, self-concept, adjustment, and mental health in single-parent adolescents.
- To examine the relationship among achievement motivation, self-concept, adjustment, and mental health in adolescents from single-parent families.
- To examine the predictive influence of achievement motivation, and different dimensions of self-concept and adjustment on different dimensions of mental health among adolescents from single-parent families.
- To explore the mediation effect of adjustment on the relationship between self-concept and mental health in adolescents from single-parent families.

Hypotheses

H₀₁: There is no significant difference in achievement motivation between adolescents from single-parent and two-parent families.

H₀₂: There is no significant difference in self-concept and its dimensions (physical, social, temperamental, educational, moral, intellectual) between adolescents from single-parent and two-parent families.

H₀₃: There is no significant difference in adjustment and its dimensions (home, health, social, emotional) between adolescents from single-parent and two-parent families.

H₀₄: There is no significant difference in mental health and its dimensions (school-related, home-related, peer-related) between adolescents from single-parent and two-parent families.

H₀₅: There is no significant difference in achievement motivation between male and female adolescents from single-parent families.

H₀₆: There is no significant difference in self-concept and its dimensions (physical, social, temperamental, educational, moral, intellectual) between male and female adolescents from single-parent families.

H₀₇: There is no significant difference in adjustment and its dimensions (home, health, social, emotional) between male and female adolescents from single-parent families.

H₀₈: There is no significant difference in mental health and its dimensions (school-related, home-related, peer-related) between male and female adolescents from single-parent families.

H₀₉: There are no significant differences in achievement motivation among single-parent adolescents based on their level of education (secondary, higher secondary, graduation).

H₀₁₀: There are no significant differences in self-concept and its dimensions (physical, social, temperamental, educational, moral, intellectual) among single-parent adolescents based on their level of education (secondary, higher secondary, graduation).

H₀₁₁: There are no significant differences in adjustment and its dimensions (home, health, social, emotional) among single-parent adolescents based on their level of education (secondary, higher secondary, graduation).

H₀₁₂: There are no significant differences in mental health and its dimensions (school-related, home-related, peer-related) among single-parent adolescents based on their level of education (secondary, higher secondary, graduation).

H₀₁₃: There is no significant difference in achievement motivation between single-parent adolescents with siblings and those without siblings.

H₀₁₄: There is no significant difference in self-concept and its dimensions (physical, social, temperamental, educational, moral, intellectual) between single-parent adolescents with siblings and those without siblings.

H₀₁₅: There is no significant difference in adjustment and its dimensions (home, health, social, emotional) between single-parent adolescents with siblings and those without siblings.

H₀₁₆: There is no significant difference in mental health and its dimensions (school-related, home-related, peer-related) between single-parent adolescents with siblings and those without siblings.

H₀₁₇: There is no significant difference in achievement motivation between adolescents living with single mothers and those living with single fathers.

H₀₁₈: There is no significant difference in self-concept and its dimensions (physical, social, temperamental, educational, moral, intellectual) between adolescents living with single mothers and those living with single fathers.

H₀₁₉: There is no significant difference in adjustment and its dimensions (home, health, social, emotional) between adolescents living with single mothers and those living with single fathers.

H₀₂₀: There is no significant difference in mental health and its dimensions (school-related, home-related, peer-related) between adolescents living with single mothers and those living with single fathers.

H₀₂₁: There is no significant difference in achievement motivation between adolescents from single-parent families due to parental death and those due to divorce/separation.

H₀₂₂: There is no significant difference in self-concept and its dimensions (physical, social, temperamental, educational, moral, intellectual) between adolescents from single-parent families due to parental death and those due to divorce/separation.

H₀₂₃: There is no significant difference in adjustment and its dimensions (home, health, social, emotional) between adolescents from single-parent families due to parental death and those due to divorce/separation.

H₀₂₄: There is no significant difference in mental health and its dimensions (school-related, home-related, peer-related) between adolescents from single-parent families due to parental death and those due to divorce/separation.

H₀₂₅: There is no significant difference in achievement motivation between adolescents from nuclear and joint single-parent families.

H₀₂₆: There is no significant difference in self-concept and its dimensions (physical, social, temperamental, educational, moral, intellectual) between adolescents from nuclear and joint single-parent families.

H₀₂₇: There is no significant difference in adjustment and its dimensions (home, health, social, emotional) between adolescents from nuclear and joint single-parent families.

H₀₂₈: There is no significant difference in mental health and its dimensions (school-related, home-related, peer-related) between adolescents from nuclear and joint single-parent families.

H₀₂₉: There are no significant relationships among achievement motivation; self-concept and its dimensions (physical, social, temperamental, educational, moral, intellectual); adjustment and its dimensions (home, health, social, emotional); and mental health and its dimensions (school-related, home-related, peer-related) among adolescents from single-parent families.

H₀₃₀: Self-concept (physical, temperamental, educational), adjustment (home, health, social, emotional), and achievement motivation do not significantly predict school-related mental health among adolescents from single-parent families.

H₀₃₁: Self-concept (physical, social, temperamental, educational, moral), adjustment (home, health, social, emotional), and achievement motivation do not significantly predict home-related mental health among adolescents from single-parent families.

H₀₃₂: Self-concept (physical, social, temperamental, educational, moral) and adjustment (home, health, social, emotional) do not significantly predict peer-related mental health among adolescents from single-parent families.

H₀₃₃: Adjustment (home, health, social, emotional) does not significantly mediate the relationship between self-concept (physical, social, temperamental, educational, moral, intellectual) and school-related mental health among adolescents from single-parent families.

H₀₃₄: Adjustment (home, health, social, emotional) does not significantly mediate the relationship between self-concept (physical, social, temperamental, educational, moral, intellectual) and home-related mental health among adolescents from single-parent families.

H₀₃₅: Adjustment (home, health, social, emotional) does not significantly mediate the relationship between self-concept (physical, social, temperamental, educational, moral, intellectual) and peer group–related mental health among adolescents from single-parent families.

Method

The method used in this study is briefly described as follows;

The present study adopted a quantitative, cross-sectional, and non-experimental research design. The study was descriptive, comparative, correlational, predictive, and mediational in nature. The study was conducted among 505 adolescents aged between 13 and 19 years selected from Thrissur, Ernakulam, Kottayam, and Palakkad districts of Kerala using purposive sampling. The sample consisted of 250 adolescents from single-parent families and 255 adolescents from two-parent families. Standardized instruments were used to assess achievement motivation, self-concept, adjustment, and mental health. Data were collected from schools, higher secondary schools, and colleges after obtaining institutional permission and informed consent from participants and parents/guardians. Statistical analyses included descriptive statistics, independent samples *t*-test, Mann–Whitney *U* test, MANOVA, ANOVA, Kruskal–Wallis test, correlation, regression, and mediation analysis.

Major findings of the study

Family Structure and Psychological Variables

- The study found significant differences between adolescents from single-parent and two-parent families across major psychological variables. Adolescents from two-parent families reported significantly higher achievement motivation, self-concept, and mental health compared to adolescents from single-parent families. In the case of adjustment,

adolescents from two-parent families demonstrated better home, health, and emotional adjustment, while no significant difference was observed in social adjustment. Although statistically significant differences were observed, both groups generally scored within average or above-average ranges, suggesting that adolescent psychological functioning is influenced by multiple personal, familial, and social factors.

Influence of Demographic Variables Among Single-Parent Adolescents

Gender

Female adolescents from single-parent families showed significantly higher achievement motivation and educational self-concept than male adolescents. Female adolescents also demonstrated better emotional adjustment, while no significant gender differences were found in most other dimensions of self-concept, adjustment, or mental health.

Education level

Educational level showed significant differences in achievement motivation, educational self-concept, total self-concept, school-related mental health, and total mental health. Adolescents at the higher secondary level generally reported more positive outcomes compared to SSLC and graduation-level students. However, no significant differences were found in adjustment dimensions.

Sibling Status

- Adolescents with siblings demonstrated significantly higher achievement motivation, educational self-concept, mental health, and better emotional adjustment than adolescents without siblings. These findings suggest that sibling support may function as a protective factor in single-parent households.

Custodial Parent

Adolescents living with single mothers reported significantly higher achievement motivation, better self-concept, healthier adjustment, and better mental health than adolescents living with single fathers. These findings may reflect differences in emotional support, caregiving patterns, and parent–adolescent interaction.

Cause of Single-Parenthood

Adolescents who experienced parental death showed better achievement motivation, adjustment, and mental health compared to adolescents from divorced or separated families. However, no significant differences were found in self-concept dimensions.

Family Type (Nuclear and Joint)

No significant differences were found between adolescents from nuclear and joint single-parent families in achievement motivation, self-concept, adjustment, or

mental health. This suggests that family type alone may not strongly influence adolescent psychological functioning.

Correlation

Correlation analysis revealed significant relationships among achievement motivation, self-concept, adjustment, and mental health. Positive self-concept and achievement motivation were positively associated with mental health, whereas adjustment difficulties were negatively associated with self-concept, motivation, and mental health. These findings indicate that adolescent psychological functioning is multidimensional and interconnected.

Predictors of Mental Health

Regression analysis demonstrated that self-concept dimensions and adjustment significantly predicted different domains of mental health among adolescents from single-parent families. Educational and temperamental self-concept, along with health and emotional adjustment, significantly predicted school-related mental health. Home-related mental health was significantly predicted by temperamental, educational, and social self-concept, as well as home and health adjustment. Peer-related mental health was significantly influenced by social, temperamental, and educational self-concept together with home, health, and emotional adjustment.

Mediating Role of Adjustment

Mediation analysis showed that adjustment served as an important mechanism linking self-concept and mental health among adolescents from single-

parent families. Health adjustment significantly mediated the relationship between self-concept dimensions and school-related mental health. Home and health adjustment mediated the relationship between self-concept and home-related mental health, while home, health, and emotional adjustment mediated peer-related mental health. These findings suggest that adolescents' ability to adapt to emotional, social, and environmental demands plays an important role in shaping psychological well-being.

Tenability of Hypotheses

H₀₁: There is no significant difference in achievement motivation between adolescents from single-parent and two-parent families.

The results (Table 6) showed a significant difference in achievement motivation between adolescents from single-parent and two-parent families ($p < .001$). Hence, the hypothesis H₀₁ is rejected.

H₀₂: There is no significant difference in self-concept and its dimensions (physical, social, temperamental, educational, moral, intellectual) between adolescents from single-parent and two-parent families.

The results (Table 7) showed significant differences in all six dimensions of self-concept (physical, social, temperamental, educational, moral, and intellectual) between adolescents from single-parent and two-parent families (all $p < .001$). Hence, the hypothesis H₀₂ is rejected.

H₀₃: There is no significant difference in adjustment and its dimensions (home, health, social, emotional) between adolescents from single-parent and two-parent families.

The results (Table 8) showed significant differences in home, health, and emotional adjustment, but not in social adjustment, between adolescents from single-parent and two-parent families. Hence, the hypothesis H₀₃ is rejected for home, health, and emotional adjustment, and accepted for social adjustment.

H₀₄: There is no significant difference in mental health and its dimensions (school-related, home-related, peer-related) between adolescents from single-parent and two-parent families.

The results (Table 9) showed significant differences in school-related, home-related, peer-related, and overall mental health between adolescents from single-parent and two-parent families (all $p < .001$). Hence, the hypothesis H₀₄ is rejected.

H₀₅: There is no significant difference in achievement motivation between male and female adolescents from single-parent families.

The results (Table 10) showed a significant difference between male and female adolescents from single-parent families in achievement motivation ($p < .001$). Hence, the hypothesis H₀₅ is rejected.

H₀₆: There is no significant difference in self-concept and its dimensions (physical, social, temperamental, educational, moral, intellectual) between male and female adolescents from single-parent families.

The results (Table 11) showed no significant differences between male and female adolescents from single-parent families in physical, social, temperamental, moral, intellectual, and total self-concept (all $p > .05$). However, a significant difference was found in educational self-concept ($p = .004$), with female adolescents scoring higher. Hence, the hypothesis H_{06} is rejected for educational self-concept and accepted for the other self-concept dimensions.

H₀₇: There is no significant difference in adjustment and its dimensions (home, health, social, emotional) between male and female adolescents from single-parent families.

The results (Table 12) showed no significant gender differences in home, health, social, or total adjustment among single-parent adolescents (all $p > .05$). However, a significant difference was found in emotional adjustment ($p = .023$), with female adolescents reporting greater emotional difficulties. Hence, the hypothesis H_{07} is rejected for emotional adjustment and accepted for the other adjustment dimensions.

H₀₈: There is no significant difference in mental health and its dimensions (school-related, home-related, peer-related) between male and female adolescents from single-parent families.

The results (Table 13) showed no significant gender differences in school-related ($p = .136$), home-related ($p = .810$), peer-related ($p = .218$), or total mental health ($p = .360$) among single-parent adolescents. Hence, the hypothesis H_{08} is accepted for all mental health dimensions and total mental health.

H₀₉: There are no significant differences in achievement motivation among single-parent adolescents based on their level of education (secondary, higher secondary, graduation).

The results (Table 14) showed a significant difference in achievement motivation among single-parent adolescents across education levels. Post hoc analysis (Table 15) indicated that a significant difference was found only between SSLC and Graduation, while no significant differences were observed between SSLC–HSS and HSS–Graduation. Hence, the hypothesis H₀₉ is rejected for the SSLC–Graduation comparison but accepted for SSLC–HSS and HSS–Graduation.

H₀₁₀: There are no significant differences in self-concept and its dimensions (physical, social, temperamental, educational, moral, intellectual) among single-parent adolescents based on their level of education (secondary, higher secondary, graduation).

The results (Table 16) showed significant differences in educational self-concept and total self-concept among single-parent adolescents across education levels. Post hoc analysis indicated that SSLC–Graduation showed a significant difference, while no significant differences were observed between SSLC–HSS and HSS–Graduation. Hence, the hypothesis H₀₁₀ is rejected for the SSLC–Graduation comparison in educational and total self-concept, but accepted for SSLC–HSS and HSS–Graduation, as well as for physical, social, temperamental, moral, and intellectual self-concept.

H₀₁₁: There are no significant differences in adjustment and its dimensions (home, health, social, emotional) among single-parent adolescents based on their level of education (secondary, higher secondary, graduation).

The results (Table 19) showed no significant differences in adjustment or its dimensions (home, health, social, and emotional) among single-parent adolescents across education levels (all $p > .05$). Hence, the hypothesis H₀₁₁ is accepted for home, health, social, emotional, and total adjustment.

H₀₁₂: There are no significant differences in mental health and its dimensions (school-related, home-related, peer-related) among single-parent adolescents based on their level of education (secondary, higher secondary, graduation).

The results (Table 20) showed significant differences in school-related mental health and total mental health among single-parent adolescents across education levels, while no significant differences were found in home-related and peer-related mental health. Post hoc analysis indicated that Graduation–HSS for school-related mental health showed a significant difference, while no significant differences were observed between SSLC–HSS and SSLC–Graduation. Hence, the hypothesis H₀₁₂ is rejected for the Graduation–HSS comparison in school-related and total mental health, but accepted for SSLC–HSS, SSLC–Graduation, and for home-related and peer-related mental health.

H₀₁₃: There is no significant difference in achievement motivation between single-parent adolescents with siblings and those without siblings.

The results (Table 23) showed a significant difference in achievement motivation between single-parent adolescents with siblings and those without siblings ($p = .002$). Adolescents with siblings reported higher achievement motivation. Hence, the hypothesis H_{013} is rejected.

H₀₁₄: There is no significant difference in self-concept and its dimensions between single-parent adolescents with siblings and those without siblings.

The results (Table 24) showed significant differences in educational self-concept ($p = .015$) and total self-concept ($p = .030$) between single-parent adolescents with siblings and those without siblings, with adolescents who had siblings scoring higher. No significant differences were found in physical, social, temperamental, moral, or intellectual self-concept (all $p > .05$). Hence, the hypothesis H_{014} is rejected for educational and total self-concept, but accepted for physical, social, temperamental, moral, and intellectual self-concept.

H₀₁₅: There is no significant difference in adjustment and its dimensions (home, health, social, emotional) between single-parent adolescents with siblings and those without siblings

The results (Table 25) showed significant differences in health adjustment ($p = .021$), emotional adjustment ($p = .017$), and total adjustment ($p = .009$) between single-parent adolescents with siblings and those without siblings, with adolescents without siblings showing greater difficulties. No significant differences were found in home adjustment ($p = .077$) or social adjustment ($p = .106$). Hence, the hypothesis

H_{015} is rejected for health, emotional, and total adjustment, but accepted for home and social adjustment.

H₀₁₆: There is no significant difference in mental health and its dimensions (school-related, home-related, peer-related) between single-parent adolescents with siblings and those without siblings.

The results (Table 26) showed significant differences in school-related mental health ($p < .001$), home-related mental health ($p = .001$), peer-related mental health ($p < .001$), and total mental health ($p < .001$) between single-parent adolescents with siblings and those without siblings, with adolescents having siblings reporting better outcomes in all domains. Hence, the hypothesis H_{016} is rejected for school-related, home-related, peer-related, and total mental health.

H₀₁₇: There is no significant difference in achievement motivation between adolescents living with single mothers and those living with single fathers.

The results (Table 27) showed a significant difference in achievement motivation between adolescents living with single mothers and those living with single fathers ($p < .001$), with adolescents living with mothers reporting higher achievement motivation. Hence, the hypothesis H_{017} is rejected.

H₀₁₈: There is no significant difference in self-concept and its dimensions (physical, social, temperamental, educational, moral, intellectual) between adolescents living with single mothers and those living with single fathers.

The results (Table 28) showed significant differences in temperamental, educational, moral, and total self-concept between adolescents living with single mothers and those living with single fathers (all $p < .01$), with adolescents living with mothers reporting higher scores. No significant differences were found in physical, social, or intellectual self-concept (all $p > .05$). Hence, the hypothesis H_{018} is rejected for temperamental, educational, moral, and total self-concept, but accepted for physical, social, and intellectual self-concept.

H₀₁₉: There is no significant difference in adjustment and its dimensions (home, health, social, emotional) between adolescents living with single mothers and those living with single fathers.

The results (Table 29) showed significant differences in home, health, emotional, and total adjustment between adolescents living with single mothers and those living with single fathers (all $p < .05$), with adolescents in father-led households reporting higher maladjustment. No significant difference was found in social adjustment ($p > .05$). Hence, the hypothesis H_{019} is rejected for home, health, emotional, and total adjustment, but accepted for social adjustment.

H₀₂₀: There is no significant difference in mental health and its dimensions (school-related, home-related, peer-related) between adolescents living with single mothers and those living with single fathers.

The results (Table 30) showed significant differences in school-related, home-related, peer-related, and total mental health between adolescents living with single mothers and those living with single fathers (all $p < .001$), with adolescents

living with mothers reporting higher scores in all domains. Hence, the hypothesis H_{020} is rejected for school-related, home-related, peer-related, and total mental health.

H₀₂₁: There is no significant difference in achievement motivation between adolescents from single-parent families due to parental death and those due to divorce/separation.

The results (Table 31) showed a significant difference in achievement motivation between adolescents from single-parent families due to parental death and those due to divorce/separation ($p < .05$), with adolescents who had lost a parent reporting higher achievement motivation. Hence, the hypothesis H_{021} is rejected.

H₀₂₂: There is no significant difference in self-concept and its dimensions (physical, social, temperamental, educational, moral, intellectual) between adolescents from single-parent families due to parental death and those due to divorce/separation.

The results (Table 32) showed no significant differences in physical, social, temperamental, educational, moral, intellectual, or total self-concept between adolescents from single-parent families due to parental death and those due to divorce/separation (all $p > .05$). Hence, the hypothesis H_{022} is accepted for all dimensions and total self-concept.

H₀₂₃: There is no significant difference in adjustment and its dimensions (home, health, social, emotional) between adolescents from single-parent families due to parental death and those due to divorce/separation.

The results (Table 33) showed significant differences in home, social, emotional, and total adjustment between adolescents from single-parent families due to parental death and those due to divorce/separation (all $p < .05$), with the latter reporting greater difficulties. No significant difference was found in health adjustment ($p > .05$). Hence, the hypothesis H_{023} is rejected for home, social, emotional, and total adjustment, and accepted for health adjustment.

The results (Table 34) showed significant differences in school-related, home-related, peer-related, and total mental health between adolescents from single-parent families due to parental death and those due to divorce/separation (all $p < .05$), with the latter reporting lower mental health outcomes. Hence, the hypothesis H_{024} is rejected for school-related, home-related, peer-related, and total mental health.

H_{025} : There is no significant difference in achievement motivation between nuclear and joint single-parent families.

The results (Table 35) showed no significant difference in achievement motivation between adolescents from nuclear and joint single-parent families ($p > .05$). Hence, the hypothesis H_{025} is accepted.

H_{026} : There is no significant difference in self-concept and its dimensions (physical, social, temperamental, educational, moral, intellectual) between nuclear and joint single-parent families

The results (Table 36) showed no significant differences in physical, social, temperamental, educational, moral, intellectual, or total self-concept between

adolescents from nuclear and joint single-parent families (all $p > .05$). Hence, the hypothesis H_{026} is accepted for all dimensions and for total self-concept.

.H₀₂₇: There is no significant difference in adjustment and its dimensions (home, health, social, emotional) between nuclear and joint single-parent families.

The results (Table 37) showed no significant differences in home, health, social, emotional, or total adjustment between adolescents from nuclear and joint single-parent families (all $p > .05$). Hence, the hypothesis H_{027} is accepted for all dimensions and for total adjustment.

H₀₂₈: There is no significant difference in mental health and its dimensions (school-related, home-related, peer-related) between nuclear and joint single-parent families.

The results (Table 38) showed no significant differences in school-related, home-related, peer-related, or total mental health between adolescents from nuclear and joint single-parent families (all $p > .05$). Hence, the hypothesis H_{028} is accepted for all dimensions and for total mental health.

H₀₂₉: There are no significant relationships among achievement motivation; self-concept and its dimensions (physical, social, temperamental, educational, moral, intellectual); adjustment and its dimensions (home, health, social, emotional); and mental health and its dimensions (school-related, home-related, peer-related) among adolescents from single-parent families.

The results (Table 39) revealed several significant relationships among achievement motivation, self-concept, adjustment, and mental health, including their

respective dimensions ($p < .05$, $p < .01$). For instance, educational and temperamental self-concept were positively associated with mental health, total self-concept was negatively related to adjustment difficulties, and achievement motivation showed positive correlations with both self-concept and mental health. Hence, the hypothesis H_{029} is rejected.

H₀₃₀: Self-concept (physical, temperamental, educational), adjustment (home, health, social, emotional), and achievement motivation do not significantly predict school-related mental health among adolescents from single-parent families.

The results (Table 40) showed that educational self-concept, temperamental self-concept, health adjustment, and emotional adjustment significantly predicted school-related mental health among adolescents from single-parent families. Physical self-concept, home adjustment, social adjustment, and achievement motivation were not significant predictors. Hence, the hypothesis H_{030} is rejected for educational self-concept, temperamental self-concept, health adjustment, and emotional adjustment, and accepted for physical self-concept, home adjustment, social adjustment, and achievement motivation.

H₀₃₁: Self-concept (physical, social, temperamental, educational, moral), adjustment (home, health, social, emotional), and achievement motivation do not significantly predict home-related mental health among adolescents from single-parent families.

The results (Table 41) showed that temperamental self-concept, educational self-concept, social self-concept, home adjustment, and health adjustment significantly predicted home-related mental health among adolescents from single-

parent families. Physical self-concept, moral self-concept, social adjustment, emotional adjustment, and achievement motivation were not significant predictors. Hence, the hypothesis H_{031} is rejected for temperamental self-concept, educational self-concept, social self-concept, home adjustment, and health adjustment, and accepted for physical self-concept, moral self-concept, social adjustment, emotional adjustment, and achievement motivation.

H₀₃₂: Self-concept (physical, social, temperamental, educational, moral) and adjustment (home, health, social, emotional) do not significantly predict peer-related mental health among adolescents from single-parent families.

The results (Table 42) showed that social self-concept, temperamental self-concept, educational self-concept, home adjustment, health adjustment, and emotional adjustment significantly predicted peer-related mental health among adolescents from single-parent families, while physical self-concept, moral self-concept, and social adjustment were not significant predictors. Hence, the hypothesis H_{032} is rejected for social self-concept, temperamental self-concept, educational self-concept, home adjustment, health adjustment, and emotional adjustment, and accepted for physical self-concept, moral self-concept, and social adjustment.

H₀₃₃: Adjustment (home, health, social, emotional) does not significantly mediate the relationship between self-concept (physical, social, temperamental, educational, moral, intellectual) and school-related mental health among adolescents from single-parent families.

The results (Table 43) showed that health adjustment significantly mediated the relationship of physical, temperamental, and educational self-concept (positive), as well as social and intellectual self-concept (negative), with school-related mental health. No significant mediation effects were found through home, social, or emotional adjustment. Hence, the hypothesis H_{033} is rejected for physical, temperamental, educational, social (negative), and intellectual (negative) self-concept via health adjustment, and accepted for all other pathways.

H₀₃₄: Adjustment (home, health, social, emotional) does not significantly mediate the relationship between self-concept (physical, social, temperamental, educational, moral, intellectual) and home-related mental health among adolescents from single-parent families.

The results (Table 44) showed that temperamental and moral self-concept significantly predicted home-related mental health through home adjustment, while intellectual self-concept showed significant negative mediation effects through both home adjustment and health adjustment. No significant mediation pathways were found for physical, social, or educational self-concept. Hence, the hypothesis H_{034} is rejected for temperamental self-concept via home adjustment, moral self-concept via home adjustment, and intellectual self-concept via home and health adjustment, and accepted for all other pathways.

H₀₃₅: Adjustment (home, health, social, emotional) does not significantly mediate the relationship between self-concept (physical, social, temperamental, educational, moral, intellectual) and peer group-related mental health among adolescents from single-parent families.

The results (Table 45) showed significant indirect effects for temperamental self-concept through home adjustment and emotional adjustment, as well as significant negative mediation effects for intellectual self-concept through home, health, and emotional adjustment. The pathway for educational self-concept via health adjustment approached significance, while physical, social, and moral self-concept did not show mediation effects. Hence, the hypothesis H_{035} is rejected for temperamental self-concept via home and emotional adjustment, and for intellectual self-concept via home, health, and emotional adjustment, while it is accepted for physical, social, moral, and educational self-concept (with educational self-concept via health adjustment approaching significance).

Conclusion

The present study explored the psychological functioning of adolescents from single-parent and two-parent families with reference to achievement motivation, self-concept, adjustment, and mental health. The findings revealed that family structure and associated psychosocial experiences may influence adolescents' psychological well-being, self-concept, adjustment, and achievement motivation. Adolescents from two-parent families generally demonstrated comparatively more positive psychological outcomes, although many adolescents from single-parent families also showed healthy adjustment, resilience, and positive functioning.

The study further demonstrated that self-concept, adjustment, and achievement motivation are closely interrelated and play an important role in shaping adolescent mental health. Adjustment emerged as an important mediating

factor linking self-concept and mental health, highlighting the significance of adolescents' adaptive capacities in psychological well-being.

The findings contribute to the growing literature on adolescent development and family structure within the Indian context, particularly Kerala, and emphasize the importance of emotional support, adaptive coping, and supportive interpersonal relationships in promoting adolescent mental health.

Limitations of the study

- The present study has certain limitations that should be considered while interpreting the findings. The study employed purposive sampling for the selection of participants, which may limit the generalizability of the findings to broader adolescent populations beyond the selected sample.
- The sample was collected only from selected districts of Kerala. Therefore, the findings may reflect region-specific social and cultural characteristics and may not fully represent adolescents from other geographical or socio-cultural contexts.
- Since the study followed a quantitative cross-sectional design, the findings represent relationships observed at a single point in time. Consequently, causal conclusions regarding the relationships among the variables cannot be established.
- Although the study examined important psychological variables such as achievement motivation, self-concept, adjustment, and mental health, certain contextual factors including socio-economic status, parenting style, parental

mental health, and quality of parent–child relationships were not included in the investigation. These factors may also influence adolescent psychological functioning.

- Some portions of the data collection process were carried out during or shortly after the COVID-19 period, which may have independently influenced adolescents’ emotional well-being, adjustment, and mental health responses.
- Further, the study relied primarily on self-report measures. Therefore, the responses may have been influenced by response bias, social desirability, or differences in participants’ understanding and interpretation of questionnaire items.

.Chapter summary

This chapter presented the overall findings and conclusions of the study, which explored the impact of family structure on adolescents’ achievement motivation, self-concept, adjustment, and mental health. Results showed that adolescents from two-parent families scored significantly higher across all four variables, while single-parent adolescents faced more challenges but also displayed resilience in certain areas.

Within the single-parent group, demographic factors such as gender, education level, sibling status, custodial parent, and cause of single parenthood were found to influence some psychological outcomes, whereas family type had little impact. Correlation analyses confirmed that achievement motivation and self-

concept were positively related to mental health, while adjustment difficulties were negatively related. Regression analyses identified dimensions of self-concept and adjustment as key predictors of mental health, and mediation analyses revealed adjustment as an important mechanism linking self-concept with mental health.

The study concluded that single-parent adolescents may experience greater psychological vulnerability, yet supportive factors such as positive self-concept, strong adjustment, and sibling presence can buffer these challenges. Despite limitations related to sampling, geographical scope, and design, the study adds to the understanding of adolescent development in Kerala and underscores the importance of interventions aimed at strengthening adjustment and self-concept to promote better mental health.

CHAPTER 5

RECOMMENDATION AND IMPLICATION

-
- *Implications*
 - *Suggestions*
 - *Recommendations*
-

Implications of the study

The findings of this study have several important implications for understanding the psychological well-being of adolescents in single-parent families. The findings indicated that adolescents from two-parent families reported comparatively higher achievement motivation, self-concept, adjustment, and mental health than adolescents from single-parent families. At the same time, single-parent adolescents demonstrated resilience in certain areas, suggesting that while they may face additional challenges, they also possess strengths that can be nurtured.

Within the single-parent group, demographic factors such as gender, education level, sibling status, custodial parent, and cause of single parenthood were found to influence specific psychological outcomes, whereas family type (nuclear vs. joint) had little impact. These findings imply that interventions should not treat all single-parent adolescents as a homogeneous group but rather recognize the diversity of their experiences. For example, adolescents living with single mothers reported stronger self-concept and mental health than those living with fathers, while the presence of siblings emerged as a protective factor across multiple domains.

Correlation and regression analyses further highlighted the importance of self-concept and adjustment in shaping mental health outcomes. Achievement motivation and self-concept were positively related to mental health, while adjustment difficulties were negatively associated. Mediation analysis revealed that adjustment served as a key mechanism through which self-concept influenced mental health, underscoring its central role in adolescent well-being. These findings suggest that strengthening adolescents' adjustment skills, particularly in health and

emotional domains, may be an effective pathway to improving mental health outcomes in single-parent households.

Taken together, these results indicate that adolescents in single-parent families face heightened psychological vulnerability but also benefit from protective factors such as achievement motivation, positive self-concept, sibling support, and adaptive adjustment capacities. The study therefore emphasizes the need for targeted interventions at the school, family, and policy levels to support adolescents from single-parent households, with particular attention to fostering achievement motivation, strengthening self-concept, reducing adjustment difficulties, and enhancing mental health.

Educational Implications

The findings highlight the importance of creating emotionally supportive school environments for adolescents from diverse family structures. Schools may strengthen counselling support systems, mentorship programmes, life-skill education, and academic guidance initiatives to promote achievement motivation, positive self-concept, adjustment, and mental health among adolescents.

Counselling and Psychological Implications

Since adjustment emerged as an important mediator between self-concept and mental health, counselling interventions may focus on strengthening adolescents' coping skills, emotional regulation, stress management, and adaptive problem-solving abilities. School counsellors and mental health professionals may

design targeted programmes that support adolescents experiencing adjustment difficulties within family and school contexts.

Family and Parenting Implications

The study highlights the importance of emotional availability, supportive communication, and consistent parental involvement in adolescent psychological well-being. Parent guidance programmes may help single parents develop supportive parenting practices and strengthen emotional bonding with adolescents despite social and economic challenges.

Social and Policy Implications

The findings suggest the need for policy-level support systems for adolescents from single-parent families. Government agencies, educational institutions, and community organizations may collaborate to provide scholarships, counselling services, awareness programmes, and family-support initiatives that reduce stigma and promote adolescent mental health.

Suggestions for further study

➤ Inclusion of Other Psychological Variables:

Future studies can explore additional psychological variables such as resilience, coping strategies, emotional intelligence, or perceived social support to gain a deeper understanding of adolescents' well-being in single-parent families.

➤ Longitudinal Research Design:

A longitudinal approach could be adopted to observe the long-term psychological and academic outcomes of adolescents from single-parent families, and how their adjustment, self-concept, and mental health change over time.

➤ Qualitative Exploration:

Future research could include qualitative methods such as interviews or focus groups to explore the lived experiences and personal narratives of adolescents from single-parent households, which would provide richer and more nuanced insights.

➤ Comparative Studies Across Cultures or States:

A comparative study across different states in India or different cultural contexts could help examine how cultural norms and societal support systems influence the psychological impact of single-parenting on adolescents.

➤ Role of Parental Mental Health:

Future research could focus on how the mental health of the single parent, especially the mother or father as custodial parent, affects the psychological outcomes of the adolescent.

➤ Intervention-Based Studies:

Future research could focus on evaluating the effectiveness of school-based or community-based psychological intervention programs aimed at improving adjustment and mental health in adolescents from single-parent homes.

Recommendations

Based on the findings of this study, several recommendations are proposed to support the psychological development of adolescents in single-parent families:

➤ School-Based Interventions

Schools may design inclusive programs that actively monitor and promote students' achievement motivation, self-concept, adjustment, and mental health. Regular check-ins by teachers, counsellors, and mentors can help identify at-risk adolescents early and provide both academic and emotional support.

➤ Strengthening Counselling Services

Each school should have access to trained counsellors who can provide individual and group counselling. These services should address achievement-related stress, adjustment challenges, and mental health concerns, while also helping adolescents develop positive self-beliefs and coping strategies.

➤ Parental Guidance and Support Programs

Community centres and schools can jointly organize workshops for single parents, focusing on fostering achievement motivation in children, building self-concept, managing stress, and improving parent–child communication. These programs should equip parents with practical tools to support adolescents despite resource constraints.

➤ Governmental Support Schemes

Policy-level interventions are needed to reduce the economic and psychological burden of single-parent households. Scholarships, financial aid, and free mental health services should be prioritized for these adolescents, ensuring that educational aspirations and mental well-being are not compromised by family circumstances.

➤ Awareness Campaigns to Reduce Stigma

Public awareness campaigns should be conducted in schools, communities, and media to reduce the stigma attached to single-parent families. Promoting inclusivity will enhance adolescents' self-concept and adjustment, while also creating a more supportive social environment.

➤ Teacher Sensitization and Training

Teachers should be sensitized to the unique challenges faced by adolescents from single-parent families. Training should emphasize strategies to foster achievement motivation, strengthen self-concept, reduce adjustment difficulties, and promote mental health in the classroom context.

➤ Peer Support Networks

Schools should establish peer support groups or clubs where adolescents from similar family backgrounds can share experiences, encourage one another, and build resilience. These groups can play a vital role in improving social adjustment and self-concept, while also buffering against stress.

Chapter Summary

This chapter discussed the implications, recommendations, and future directions of the study. The findings showed that adolescents from single-parent families face challenges in achievement motivation, self-concept, adjustment, and mental health, but also benefit from protective factors such as positive self-concept, sibling support, and better adjustment skills. In Kerala, these issues are intensified by social stigma and limited institutional support, highlighting the need for targeted interventions.

The recommendations emphasized strengthening school-based counselling, teacher sensitization, and peer support systems, alongside community programs that guide single parents and provide stress management resources. Policy measures such as financial aid, scholarships, and free mental health services were also suggested to reduce the burden on single-parent households.

For future research, the chapter proposed studying additional psychological variables, using longitudinal and qualitative approaches, exploring parental mental health and digital media influence, and extending comparisons to other family structures. These directions aim to develop more comprehensive strategies to support the well-being of adolescents from single-parent families.

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APPENDICES

APPENDIX 1

Achievement Motivation Scale (n-Ach) (1985)

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Professor & Head
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MUMBAI

Dr. Asha Mohan (Retd.)

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Instructions: For every statement, the possible responses are divided into five categories which are: **Always – Frequently – Sometimes – Rarely – Never**

Read each statement of an item very carefully and put a tick under the category which, in your opinion, best expresses your feelings about the statement. If you feel the statement is true for you always, put a tick mark ☒. Do not leave any item blank. A response must be made to each statement. This is not an ability test and there are no right or wrong responses. This is only an effort to measure your feelings. Do not spend too much time on one statement. There is no time-limit for completing this work, but try to work quickly and carefully and try to give the first and the best response that comes to your mind on reading each statement. The results will be kept confidential and will be used only to your advantage and for research purposes only. They will never be used for any disadvantage to you. So, please do not worry and try to be honest and frank in giving your responses. The results, if you so desire, can be used for giving you useful guidance, and we hope the results of this study should prove valuable in improving your achievement, academic or otherwise. Be sure to answer every item. If you have any doubts or queries, please seek clarification before you start responding to item no. 1. Once you start giving responses, there should be no questions or queries. Please do not change your response once you have marked it.

Sl. No.	Statements	Always	Frequently	Sometimes	Rarely	Never
1	I shall be very much pleased if I have to miss the classes for some days.					
2	I pay full attention to the work in the class.					
3	I mind much if I reach late in the class.					
4	I love to read more and more to find unknown regions of knowledge.					
5	I love to have a personal library, not counting text-books.					
6	I set standards for myself and then strive to achieve them.					
7	I wish to specialize and become top most in the field of my liking.					
8	I like to experiment and create new things and surprise people.					
9	I work hard for hours together to be successful in whatever I undertake.					
10	I have a tendency to find solutions of problems and puzzles other people fail at.					
11	I aspire to get excellent results in all academic competitions.					
12	I am ready to leave the job half done and try a new one.					
13	I get nervous in the examination if one or two questions are not from the syllabus.					
14	I prefer to go to a party rather than prepare for an examination next week.					
15	On getting low marks, I feel disappointed and determine to work hard to do better next time.					
16	I think, I find my lessons meaningful and interesting.					
17	While studying, my mind wanders off the lesson and I get lost in imagination.					
18	I think, it is better to gossip away in the canteen than to attend the classes.					
19	When the teacher is teaching, I like to read stories / novels / comics or make cartoons in the class.					

20	The school / college haunts me and I want to leave it at the very first opportunity.					
21	It irritates me a lot if I have to stay late in the school / college for some lectures.					
22	I want to go to college / university because there is a plenty of opportunity to enjoy life.					
23	I think studies, sports and other activities can go together.					
24	I agree that the present course of my study will help making my future life a success.					
25	I feel very much frustrated if I do not get a chance to complete in the field of my choice.					
26	I regularly take down notes in the class and complete my assignments.					
27	I plan to study carefully all the year round in an effort to get good marks in all the subjects in all the tests.					
28	I believe in work first and play later.					
29	I do a lot of preparation at home for the next day's work in the class.					
30	I like to ask questions regarding every information given in tables and charts in the books rather than leave them as such and read further.					
31	I think my teachers are competent in their work.					
32	I like to create nuisance in the class and annoy the teacher.					
33	I try my utmost to please my teacher through work and not through flattery.					
34	My friends consider me dull and shirker.					
35	It is true that my teachers think of me as a sincere and hard working student.					
36	I feel hurt if others (parents, teachers and friends) criticise me and I try to improve upon my weaknesses.					
37	My parents advise me to take life easy and never bother too much for studies or for future life.					
38	I wish to carry my mission forward inspite of facing a lot of criticism.					
39	I think of life to be an intellectual challenge.					
40	I am interested in organizing the activities of a group team / class / committee.					
41	I try to get associated with top most person in the field of					

	my choice.					
42	I love to have some adventure in my leisure hour.					
43	I would like to watch a surgical operation being performed.					
44	I like to compete in dramatics.					
45	I think of dancing and music to be good hobbies for students.					
46	I have a strong desire to be a champion in games / sports / athletics.					
47	I have tried to get in the sports team of my school / college, to represent my team in other states or countries.					
48	I believe sports develop initiative, leadership and discipline.					
49	Hill climbing and mountaineering are a welcome challenge; I would like to take.					
50	On a holiday, I prefer going for cycling, swimming or boating to sitting at home without much work.					

Appendix 2

Self – Concept Questionnaire (SCQ)

Dr. Raj Kumar Saraswat (Retd.) (1984).

Professor in Psychology Department of Education Psychology, Counselling & Guidance National Council for Educational Research & Training (NCERT), New Delhi

Instructions: On the following pages there are some questions and their probable answers given against them. You read them carefully and whichever suits you, put a tick in the blank space given against it. You have to mark only one answer. An illustration is given below. There is no time limit for it but you should answer it as soon as possible.

Sl. No.	Questions	I	II	III	IV	V	Score (Obtained)
1	Do your friends come to you for advice?	Always	Usually	Sometimes	Usually Not	Never	
2	What do you think about your appearance?	Very Beautiful	Beautiful	Satisfactory	Not Satisfactory	Ugly	
3	How do you find yourself in doing physical work?	Very Strong	Strong	Average	Delicate	Very Delicate	
4	How do you find your temperament?	Always Cheerful	Cheerful	Normal	Sometimes Unhappy	Always Unhappy	
5	How do you like school studies?	Very Good	Good	Average	Not Good	Not Good at All	
6	Do you believe in religious customs and traditions?	Very Much	Usually	Normally	Sometimes	Never	
7	Do you participate in criticizing others?	Always	Mostly	Generally	Not Usually	Never	
8	Do you express your ideas frankly in the presence of others?	Always	Mostly	Normally	Sometimes	Never	
9	How do you like your complexion?	Very Beautiful	Beautiful	Normal	Not So Beautiful	Ugly	
10	Do you think yourself one of the cheerful persons?	Always	Mostly	Normally	No	Never	
11	Do you behave abnormally also?	Always	Mostly	Sometimes	Seldom	Never	

12	Do you think yourself an experienced person?	Highly	Usually	Average	Less Experienced	Without any Experience	
13	Do you think about your teachers?	Always	Mostly	Normally	Usually Not	Never	
14	Do you think yourself to be a cool-tempered man?	Very Much	Usually	Average	Some Disturbed	Much Disturbed	
15	Are you regular in doing your homework assignments?	Always	Mostly	Normally	Sometimes	Never	
16	Do you insult others?	Never	Not Often	Usually	Mostly	Always	
17	Do you have difficulty in understanding something when the teacher explains in the class?	Never	Usually	Generally	Often Feel Difficulty	Usually Feel Difficulty	
18	Do you think if you get an opportunity, you can discover something new?	Definitely	Most Probably	Probably	Doubtful	Not at All	
19	Do you feel irritated if somebody finds fault with your work?	Never	Usually Not	Sometimes	Usually	Always	
20	How do you find your personality?	Most Attractive	Attractive	Normal	Unattractive	Totally Unattractive	
21	How do you like the company of others?	Always Good	Mostly Good	Usually Good	Sometimes Dislike	Never Like	
22	How much are you satisfied with your weight?	Fully Satisfied	Satisfied	Usually Satisfied	Not So Satisfied	Unsatisfied	
23	Do you feel irritated while you face petty difficulties?	Not at All	Mostly Not	Generally Not	Sometimes	Always	
24	Are you coward by nature?	Not at All	Not Much	Normal	Usually	Very Much	
25	How much are you satisfied with the present position of your studies in class?	Completely Satisfied	Somewhat Satisfied	Always Satisfied	Somewhat Dissatisfied	Totally Dissatisfied	
26	How do you like school examination?	Like Very Much	Mostly Like	Generally Like	Seldom Like	Never Like	
27	How is your voice?	Very Good	Good	Normal	Not Good	Unsatisfactory	
28	Are you curious to know the end while reading a novel or seeing a movie?	Always	Usually	Normally	No	Not at All	
29	How do you find your health?	Very Good	Good	Average	Weak	Feeble	
30	How is your attendance in the class?	Always Present	Usually Present	Average	Generally Absent	Usually Absent	

31	How much are you satisfied with your height?	Fully Satisfied	Satisfied	Normal	Somewhat Dissatisfied	Fully Dissatisfied	
32	Do you try to get first position in the tests given in the class?	Always	Usually	Generally	Often Not	Never	
33	Do you take care of the merits and demerits of a work before doing it?	Always	Usually	Generally	Usually Not	Never	
34	Where do you place yourself while speaking truth?	Always Speak Truth	Usually Speak Truth	Generally Speak Truth	Usually Hesitate in Speaking Truth	Always have to Resort to Falsehood	
35	Where do you place yourself in obeying public rules (e.g., road, park, railway station, etc.)?	Always Obey Rules	Usually Obey Rules	Generally Obey Rules	Usually Do Not Obey Rules	Never Care for Rules	
36	Are you more intelligent than your colleagues?	Certainly More	Usually	Generally	Less	Not at All	
37	Do you take part in organizing it when your classmates go to picnic etc.?	Always	Usually	Generally	Usually Not	Never	
38	Do you solve yourself the difficulties and problems of your studies?	Always Solve	Usually Solve	Generally Solve	Usually Can't Solve	Always Help to Others	
39	How much do you attend to artistic aspect of the photograph while seeing or making it?	Give Very Much Attention	Give Much Attention	Give Average Attention	Give Some Attention	Do Not Give Any Attention	
40	What will you do if you are doing some important work and your friends ask you to accompany them for a walk? 1. Will start immediately 2. Will go after thinking for some time 3. Will keep silent 4. Will not go after thinking for some time 5. Will refuse at once						
41	While taking the examination you are not able to answer some question and a book of the same subject is lying near you, will you take help of the book? 1. Will never do such thing 2. Do not have the courage to do in spite of will 3. Generally, do not do this 4. Will use the book if get an opportunity 5. Will immediately use the book						
42	If you get an opportunity to drink water in the house of so-called low caste persons, what will you do? 1. Shall take water 2. Will take water after some consideration 3. Will care for cleanliness 4. Will take water but would tell nobody						

	5. Will not take water	
43	Do you hesitate in mixing with persons of opposite sex? 1. Do not hesitate at all 2. Sometimes hesitate 3. Generally, do not hesitate 4. Usually hesitate 5. Always hesitate	
44	You are standing in the bus queue for a long time when bus comes, the conductor takes some passengers and stops at your turn because there is no space in the bus, what will you do in these circumstances? 1. Will wait for the next bus 2. Will request the conductor 3. Will run and try to board the bus 4. Will push the other passengers and try to board the bus 5. Will make a noise	
45	What will you do if you come to know of immoral character of your friend? 1. Will completely break the friendship 2. Will lessen the friendship 3. Will continue friendship but will try to make him understand 4. Will continue friendship as it was 5. Will strengthen the friendship	
46	You have to do four tasks – (a) you have to call the doctor to show your sick brother (b) you have to do the preparation for going out the next day (c) you have to read novel (d) the friend is going away, you have to go to see him. What will you do in the first place? 1. Will call the doctor to show the sick brother 2. Will prepare for going out 3. Will read novel 4. Will go to see the friend 5. Will not do any of the above mentioned work	
47	Your friend gives you one thousand rupees to keep; when you count they are eleven hundred. What will you do? 1. Will return one hundred rupees to the friend at once 2. Will tell the friend at once 3. Will return 1100 rupees while returning them 4. If the friend does not come to know, will take out one hundred rupees if possible 5. Shall take out one hundred rupees	
48	Do you like to do the work keeping in mind the desire of others? 1. Always do the work keeping in mind the desire of others 2. Usually do the work keeping in mind the desires of others 3. Generally, do the work keeping in mind the desires of others 4. Sometimes do not care for the liking of other 5. Always do according to one's will	

Appendix 3

Bell's Adjustment Inventory (BAI-o)

Dr. R. K. Ojha (Retd.)

Head, Department of Psychology, K. G. K. College, MORADABAD (U.P.) (1995)

Instructions: On the following pages 140 statements, distributed 35 each in four adjustment areas, viz., Family, Health, Social and Emotional have been given. Read each statement carefully and decide your response in two alternatives, viz., YES & NO. If your situation is same as given in statement, then put a ☒ tick in the box of Yes, otherwise in the box of No. Please do answer to all the statements. Be rest assured, your responses will be kept confidential.

Part I

Sl. No.	Statements	Yes	No	Score
1	Have you ever had a firm idea of runaway from the home?	☐	☐	
2	Do you ever feel that your parents are not satisfied with you?	☐	☐	
3	Are you sad with the works done by your father to run your family?	☐	☐	
4	Do your mother have supremacy in your family?	☐	☐	
5	Has anyone among your mother–father ever condemn you in vain?	☐	☐	
6	Do you think that there is no true affection in the family?	☐	☐	
7	Do you always have good relations with your father?	☐	☐	
8	Do your parents force you to obey them instead of paying attention to your matters?	☐	☐	
9	Being your family life sorrowful, has any close relatives in your family been ill or has died?	☐	☐	

10	Does your home appear to you sorrowful because of shortage of money?	☐	☐	
11	Have your parents ever suspected upon your character?	☐	☐	
12	Do your parents forbid you to be with friends you remain with?	☐	☐	
13	Does your mother or father irritate soon?	☐	☐	
14	Do you mostly remain disagree with your parents regarding the process of work at home?	☐	☐	
15	Do family quarrels usually occur between your relations?	☐	☐	
16	Do you mostly keep on quarrelling with your brothers and sisters?	☐	☐	
17	Do your parents continue to take you to be a child and do not think that you have grown up?	☐	☐	
18	Do you feel that your parents are unnecessarily strict with you?	☐	☐	
19	Does any of your parents have any peculiar habit which you hate?	☐	☐	
20	Do you love your mother more than your father?	☐	☐	
21	Have you to leave your house or keep quiet for maintaining peace in the family?	☐	☐	
22	Have your parents created great fear in your mind for any specific work?	☐	☐	
23	Do you sometime feel angry and sometime happy upon your family members according to the time?	☐	☐	
24	Does your mother love you very much?	☐	☐	
25	Does your mother or father soon gets angry?	☐	☐	
26	Do all the essential things are available in your house?	☐	☐	
27	Do the ideals of life of your father match with your ideals?	☐	☐	
28	Have your parents ever commented your figure or colour?	☐	☐	

29	Do the ideas of your mother-father not match with each other?	☐	☐	
30	Did your parents often beat you between the age of 10 and 15 years?	☐	☐	
31	Are you not in agreement with the ideas of your parents regarding your aims of life?	☐	☐	
32	Is any of your mother/father have irritating habit?	☐	☐	
33	Does your mother or father keep you under strict control?	☐	☐	
34	Do you ever think that your parents are unable to understand you?	☐	☐	
35	Do you feel that the family life of your friends is more pleasant than yours?	☐	☐	

Part II

Sr. No.	Statements	Yes	No	Score
1	Do you soon get afraid with others?	☐	☐	
2	Do your eyes feel difficulty in facing very bright light?	☐	☐	
3	Are you a patient of asthma or malaria etc.?	☐	☐	
4	Did you ever have Diphtheria or high fever in childhood?	☐	☐	
5	Do you always have migraine?	☐	☐	
6	Do you feel difficulty in sleeping when there is any kind of noise in house?	☐	☐	
7	Do you usually feel more tired at the end of the day?	☐	☐	
8	Have you reduced some of your body weight these days?	☐	☐	
9	Have you ever had serious injury in any accident?	☐	☐	
10	Have you ever had any surgical operation?	☐	☐	
11	Do you feel much cold?	☐	☐	
12	Do you usually suffer from influenza?	☐	☐	
13	Did you ever become seriously ill during last ten years?	☐	☐	

14	Are you suffering from the problems of gas?	☐	☐	
15	Do you feel giddiness?	☐	☐	
16	Do your eyes pain usually?	☐	☐	
17	Do you feel tiredness when you wake up in the morning?	☐	☐	
18	Do you usually take medicines?	☐	☐	
19	Do you usually feel tired?	☐	☐	
20	Do you usually get indigestion problem?	☐	☐	
21	Do you usually get sore throat?	☐	☐	
22	Do you usually have disease of vomiting or diarrhea?	☐	☐	
23	Do you have much problem of constipation?	☐	☐	
24	Have you been too much ill during your childhood?	☐	☐	
25	Do you feel difficulty in breathing with nose?	☐	☐	
26	Do you ever have sharp headache?	☐	☐	
27	Is your body weight less than an average?	☐	☐	
28	Do you usually take your food before feeling hungry?	☐	☐	
29	Do you use spectacles?	☐	☐	
30	Do you think unnecessary to take care of your health?	☐	☐	
31	Are you usually absent because of illness?	☐	☐	
32	Are your teeth such that you feel necessary for medication?	☐	☐	
33	Do you have any trouble in heart, lungs or kidney?	☐	☐	
34	Have you ever had skin disease?	☐	☐	
35	Do you have trouble in getting rid of cold?	☐	☐	

Part III

Sl. No.	Statements	Yes	No	Score
1	Do you enjoy social gatherings just to meet the persons?	☐	☐	
2	Do you like to meet the chief guest while attending any reception function?	☐	☐	
3	Do you take responsibility of introducing persons while attending such functions?	☐	☐	

4	Do you feel difficulty in giving proper answer while taking part in group discussion?	☐	☐	
5	Have you been leader of any party?	☐	☐	
6	Do you hesitate in entering any meeting when all the persons have seated?	☐	☐	
7	Can you deliver speech in the presence of all in the class?	☐	☐	
8	Do you keep on talking with your fellow travellers while travelling by rail or bus?	☐	☐	
9	Do you feel at ease in asking help from others?	☐	☐	
10	Do you get harassed with your shyness?	☐	☐	
11	Do you enjoy starting conversation in public?	☐	☐	
12	Do you have experience of planning and directing the works of public?	☐	☐	
13	Do you feel difficulty in talking with any newly known persons?	☐	☐	
14	Do you find yourself unable in answering in the class even when you know the answer?	☐	☐	
15	Do you feel at ease in having friendship with opposite sex persons?	☐	☐	
16	Would you like to do work for others instead of asking others to do work for you in a dinner party?	☐	☐	
17	Do you have experience in delivering speech in any meeting?	☐	☐	
18	Do you have difficulty in delivering speech in presence of persons?	☐	☐	
19	Do you enjoy social dances?	☐	☐	
20	Will you prefer to go personally and take something you want from an unknown person instead of writing a letter or asking any other person to bring it?	☐	☐	
21	Do you feel self-respect in living with the persons you admire most and not known fully?	☐	☐	
22	Have you ever been a leader of any social programme?	☐	☐	
23	Do you move sideways on road to hide from the sight of any specific person?	☐	☐	
24	Will you prefer to stand or come back on reaching late in any meeting instead of sitting on front seats?	☐	☐	
25	Do you make friends with ease?	☐	☐	

26	Are you leader in any party?	☐	☐	
27	Do you prefer to have close friendship with some particular persons instead of having acquaintance with more persons?	☐	☐	
28	Do you feel in seeking permission for leaving any specific party of persons if you wish to leave it?	☐	☐	
29	Do you lag behind in social functions?	☐	☐	
30	Do you get perplex all together, if any teacher calls you all of a sudden?	☐	☐	
31	Do you feel difficult to talk with a stranger?	☐	☐	
32	Are you delighted in taking part in fairs and gatherings?	☐	☐	
33	Do you feel honored in speaking on any topic in the class?	☐	☐	
34	Do you hesitate in speaking in the class?	☐	☐	
35	Do you hesitate in entering the room if some persons are talking with each other there?	☐	☐	

Part IV

Sl. No.	Statements	Yes	No	Score
1	Do you mostly day-dream?	☐	☐	
2	Does testing by doctor for any disease frightens you?	☐	☐	
3	Do you sometimes get sad for unknown reasons?	☐	☐	
4	Have you ever felt that someone may hypnotise you and make you work against your will?	☐	☐	
5	Do you feel lonely while staying in a crowd?	☐	☐	
6	Do you feel tired at the end of the day?	☐	☐	
7	Do you get frightened with the idea of earthquake or fire?	☐	☐	
8	Do tears in your eyes come soon?	☐	☐	
9	Do you get frightened on seeing a snake?	☐	☐	
10	Are you held guilty even if you are not guilty?	☐	☐	
11	Do lightning frightens you?	☐	☐	
12	Do you get discouraged repeatedly on securing less marks in examinations?	☐	☐	
13	Do you feel jealous of others' happiness?	☐	☐	
14	Do you get desperate very easily?	☐	☐	

15	Do you usually feel sad upon your acts?	☐	☐	
16	Have you ever got frightened of falling down after climbing a high mountain?	☐	☐	
17	Do you get angry very soon?	☐	☐	
18	Do you usually remain sad?	☐	☐	
19	Do you get perplexed with the feelings of inferiority?	☐	☐	
20	Do you think yourself strong?	☐	☐	
21	Do you easily get shy?	☐	☐	
22	Do you emotionally hurt by any hearsay?	☐	☐	
23	Do your feelings get hurt with any hearsay?	☐	☐	
24	Do you become troubled with probable problems?	☐	☐	
25	Do you ever get worried that other persons may not read your thoughts?	☐	☐	
26	Do you ever have an idea that persons are spying you on the road?	☐	☐	
27	Do you get much troubled on hearing your complaints?	☐	☐	
28	Do you usually get excited?	☐	☐	
29	Do you sometimes have useless ideas in your brain and feel distressed with them?	☐	☐	
30	Do you easily get agitated?	☐	☐	
31	Do you get too much distressed with your experiences of poverty?	☐	☐	
32	Do you get too much frightened with a person even knowing that will not cannot harm you?	☐	☐	
33	Do you get happy and sad on and off without any specific reason?	☐	☐	
34	Do you ever have such ideas that you are unable to sleep?	☐	☐	
35	Do you fear living alone in dark?	☐	☐	

Appendix 4

Mental Health Scale (MHS-TSBA)

Dr. Sushma Talesara (Professor) and Dr. Akhtar Bano (Lecturer)

Vidya Bhawan, G. S. Teacher's College (CTE), Udaipur (Raj.) (2017)

Instructions: On the following pages have 54 statements which are related to your life. Each individual has his/her unique life therefore no answer is wrong. Every statement has five options, viz., Always, Frequently, Occasionally, Rarely and Never and put a tick mark ☒ at the option which match to your nature. You are requested to answer all the questions. There is no time limit. Your answers will be kept confidential.

Sl. No.	Statements	Alw ays	Freq uentl y	Occa sion ally	Rare ly	Neve r	Scor e
1	I am nagged for my studies again & again.	☐	☐	☐	☐	☐	
2	My parents give more love and affection to my brother/sister.	☐	☐	☐	☐	☐	
3	I get frightened even without a reason.	☐	☐	☐	☐	☐	
4	I get less sleep at night.	☐	☐	☐	☐	☐	
5	My sleep often gets interrupted in night.	☐	☐	☐	☐	☐	
6	I feel stressed when my sleep breaks at nights.	☐	☐	☐	☐	☐	
7	I get headache when I continuously think of something.	☐	☐	☐	☐	☐	
8	I feel suffocated.	☐	☐	☐	☐	☐	
9	My relatives keep questioning me when I go out of home.	☐	☐	☐	☐	☐	
10	Everyone criticizes me.	☐	☐	☐	☐	☐	

11	I like being silent.	☐	☐	☐	☐	☐	
12	When my friends are laughing, I feel they are making fun of me.	☐	☐	☐	☐	☐	
13	I am not able to concentrate while studying.	☐	☐	☐	☐	☐	
14	I forget fast what I learn.	☐	☐	☐	☐	☐	
15	I often feel tensed and worried.	☐	☐	☐	☐	☐	
16	I get scary dreams.	☐	☐	☐	☐	☐	
17	I get dreams of performing badly in examination.	☐	☐	☐	☐	☐	
18	I faced many difficulties in childhood.	☐	☐	☐	☐	☐	
19	I forget what is studied during examination.	☐	☐	☐	☐	☐	
20	Some children tease me.	☐	☐	☐	☐	☐	
21	My friends talk about disappointing things.	☐	☐	☐	☐	☐	
22	I feel that I am sick.	☐	☐	☐	☐	☐	
23	I am lost in myself.	☐	☐	☐	☐	☐	
24	People want to harm me.	☐	☐	☐	☐	☐	
25	Life is dull/boring.	☐	☐	☐	☐	☐	
26	My capacity to work is reducing.	☐	☐	☐	☐	☐	
27	My family accuses me for the wrong even when it is not my mistake.	☐	☐	☐	☐	☐	
28	I like to stay alone.	☐	☐	☐	☐	☐	
29	I face hindrances in all my work.	☐	☐	☐	☐	☐	
30	I am curious to know all things.	☐	☐	☐	☐	☐	
31	I am fully confident.	☐	☐	☐	☐	☐	

32	I answer questions asked by teacher with enthusiasm.	☐	☐	☐	☐	☐	
33	I wish to talk to my relatives.	☐	☐	☐	☐	☐	
34	I like watching films.	☐	☐	☐	☐	☐	
35	I freely communicate with my family members.	☐	☐	☐	☐	☐	
36	I like to go out for excursions.	☐	☐	☐	☐	☐	
37	I like to take part in any activity at my home.	☐	☐	☐	☐	☐	
38	I get sufficient love and affection from my family.	☐	☐	☐	☐	☐	
39	I like humour and have fun.	☐	☐	☐	☐	☐	
40	I have many friends.	☐	☐	☐	☐	☐	
41	I like to read books.	☐	☐	☐	☐	☐	
42	I finish my work on time which is given to me in school.	☐	☐	☐	☐	☐	
43	I am well organized.	☐	☐	☐	☐	☐	
44	I like to look smart.	☐	☐	☐	☐	☐	
45	I feel excited to do new things.	☐	☐	☐	☐	☐	
46	I wish to celebrate my birthday with lot of fun.	☐	☐	☐	☐	☐	
47	Festivals make me happy.	☐	☐	☐	☐	☐	
48	If something hurts me, I immediately clarify it with that person.	☐	☐	☐	☐	☐	
49	My friends love me a lot.	☐	☐	☐	☐	☐	
50	I like to go to school.	☐	☐	☐	☐	☐	
51	I like to participate in co-curricular activities.	☐	☐	☐	☐	☐	

Appendices

52	I work wholeheartedly.	☐	☐	☐	☐	☐	
53	My parents respect my thoughts & feelings.	☐	☐	☐	☐	☐	
54	I think I am fortunate / lucky.	☐	☐	☐	☐	☐	

സമ്മതപത്രം

ഞാൻ ഷൈനി പി. കെ., എന്റെ ഗവേഷണ പ്രബന്ധത്തിന്റെ പഠനത്തിൽ പങ്കെടുത്തുകൊൾവാൻ നിങ്ങളെ ക്ഷണിക്കുന്നു. കൗമാരക്കാരുടെ നേട്ടങ്ങൾ നേടുവാനുള്ള പ്രചോദനവും, സ്വയം തിരിച്ചറിവും, സാഹചര്യങ്ങളുമായുള്ള പൊരുത്തപ്പെടലും, മാനസികാരോഗ്യവും കുടുംബപശ്ചാത്തലമനുസരിച്ചു എങ്ങനെ വ്യത്യാസപ്പെടും എന്നതിനെ കുറിച്ചുള്ള ഗവേഷണമാണ് നടത്തുന്നത്. ഇതിനായി കൗമാരക്കാരിൽനിന്നും വിവരങ്ങൾ ശേകരിക്കേണ്ടതുണ്ട്. തങ്ങൾ ഈ ഗവേഷണത്തിന്റെ ഭാഗമാകുന്ന പക്ഷം തങ്ങളുടെ രക്ഷിതാക്കളുടെ സമ്മതപ്രകാരം വിവരങ്ങൾ ശേകരിക്കുന്നതാണ്.

ഗവേഷണത്തിന്റെ ഭാഗമായി നിങ്ങൾ പറയുന്ന വിവരങ്ങൾ പഠനവിശുദ്ധിയിന്മേലേ ഉപയോഗിക്കും. നിങ്ങളെ കുറിച്ചുള്ള വിവരങ്ങൾ വിശ്വസ്തമായി സൂക്ഷിക്കുന്നതായിരിക്കും. നിങ്ങളുടെ അനുമതി കൂടാതെ നിങ്ങളെ സംബന്ധിക്കുന്ന ഒരു വിവരവും പുറത്തു വിടുന്നതല്ല. ഗവേഷണത്തിൽ നിന്നും ഏതു ഘട്ടത്തിൽ വേണമെങ്കിലും നിങ്ങൾക്കു പിന്മാറുകയും ചെയ്യാം. ഗവേഷണത്തെക്കുറിച്ചു എന്തെങ്കിലും ചോദ്യങ്ങളോ ആശങ്കകളോ ഉണ്ടെങ്കിൽ ദയവായി ബന്ധപ്പെടാൻ മടിക്കേണ്ടതില്ല.

മുകളിൽ പറഞ്ഞ കാര്യങ്ങൾ ഞാൻ വായിച്ചും മനസ്സിലാക്കിയുമാണ് പഠനത്തിൽ പങ്കെടുക്കാൻ സമ്മതിക്കുന്നത്.

തിയതി

കുട്ടി (ഒപ്പ്)

മാതാപിതാക്കൾ (ഒപ്പ്)

ഗവേഷക (ഒപ്പ്)

Personal Data

***About these questions.** Some items ask about your well-being so we can understand whether this study is a good fit and offer support if needed. Your answers are confidential and you may choose “Prefer not to say” for any question.*

Name :
 Age :
 Gender :
 Education : SSLC/HSS / Graduation
 Family Type : Nuclear / Joint
 Economic Status : Above 1 Lakh / 1Lakh - 50,000 / below 50,000
 Residential Area : Rural / Urban
 Siblings : Yes / No

- Who do you currently live with at home?
 Both parents / Only mother / Only father / Other guardian (please specify-----
 -----)
- If you are living with only one parent, what is the reason?
 Parent deceased/ Parents divorced/ Parents separated/ Other (please specify:
 -----)
- How long have you been living with only one parent?
 Less than 6 months / 6–11 months / 12–23 months / 2 years or more

- Are you currently living in a boarding school/hostel or child-care institution?
No /Yes
- Were you adopted or in foster care? No /Yes / Prefer not to say
- Are you currently taking any regular medication for your health (physical or emotional)?

No /Yes / Prefer not to say
- Do you have any difficulty that might make completing questionnaires hard (e.g., serious vision/hearing issues, diagnosed learning difficulty)?
No /Yes (optional details: -----) / Prefer not to say

A Study of Achievement Motivation in Relation to Anxiety, Depression, and Stress among Adolescents During Covid 19 Pandemic in Kerala

Shiny P. K.^{1*}, Dr. Soumya Startlet C. T.²

ABSTRACT

Achievement motivation is the driving force of life. This motivation helps each individual to attain his or her goals in life. In this study an attempt was made to study the achievement motivation among adolescents during covid 19 pandemic and found any relation with other variables like anxiety, depression and stress. During the outbreak of covid 19 pandemic each individual went through uncertainly situations. All these conditions not only affect the adolescence and their family members but also the entire world. For this purpose, a sample of 133 adolescents was selected from Kerala state. Achievement motivation scale by Prof. Pratibha Deo and Dr. Asha Mohan and anxiety depression, stress (ADSS-BSPSA) scale by Prof. Pallavi Bhatnagar and her colleagues were used. Mean, standard deviation, t-test, ANOVA and Carl Pearson correlation were applied to analyse the data. The major finding was adolescents' achievement motivation found to be greatly reduced during the covid 19 pandemic and there was no significant gender difference in achievement motivation, anxiety, depression and stress of adolescent. There was a positive relation between achievement motivation and anxiety.

Keywords: Achievement motivation, Adolescent, anxiety, depression, stress, pandemic

Motivation is the reason to do things or behave in a particular way in life. It is generally regarded as the drive to achieve targets and the process to maintain the drive. Motivation provides an important foundation to complete cognitive behaviour, such as planning, organization, decision making, learning, and assessment (Sigh, K 2011). In our life we might be motivated to achieve something or avoid something based on our biological or sociopsychological needs. It is the basic activating force behind particular act. In this competitive society the desire for surpassing others or achieving more than others is commonly seen in society today. It reflects a pattern of actions and feelings concerned with striving to achieve internalised standard of excellence (Robert. S &

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Kathiravan. S, 2020). In general, children usually learn the achievement motive from their parent's life style and family life studies shown that children who get independent training started at early age and get more autonomy within a cooperative, encouraging and less authoritarian family environment, usually develops achievement oriented children (Mangal, S.K, 2000). Motivation is major cause of our behaviour like learning, perception, attention, memory, thought, creativity, performance, passion etc. One of the most important types of the motivation is the achievement motivation. Achievement motivation as a psychological construct is seen among all individuals in different degrees. Achievement motivation is not confined to academic achievement alone rather it may be manifested in personal, social or occupational field of life. The individuals having high achievement motivation tend to show their extraordinary talent in the above-mentioned field and may like to take risks.

There are important changes in children's motivation as they grow up. The prevailing pattern of change with respect to achievement motivation for many children around the world is a decline with increasing age in children and adolescents' motivational beliefs and values. Adolescents are most vulnerable group among the population because this stage of life is already beset by changes and challenges, even under normal circumstances. Pandemic will have a lot of repercussions for a group that is undergoing so many changes. Covid 19 was a global challenging situation in 21st century. Social distancing, quarantine, closing schools and colleges, switching to online classes, work from home, connecting loved ones through electronic gadgets, cancelling meeting and post ponding programmes, financial crisis, loss of job etc.; all these have undesirable effects on human relationships (Chukwu, 2020).

According to Hall (1904), adolescence is the period from 12 to 23 years of age and it is characterised by considerable upheaval. He acknowledges that environment accounts for more developmental change in adolescence than in earlier periods (Sandrock, 2007). Hence the social and family environment has great impact on the adolescence characteristic modification. From the family children learn all elementary education regarding life. Parents are the first teachers for each child. When the family environment is good it reflects in the behaviour of their children. Family environment includes the quality and quantity of emotions, cognition, and support. Extent of participation social and recreational activities also depicts the home environment and support. Many study reports support the positive and significant relationships between family environment and mental health of adolescents (Kumar & Varma, 2019; Mimrot, 2016; Amna & Yasnidawati 2021)

The effort to maintain achievement motivation to stay strong is critical in pandemic situation. Because of the increased screen time, learn to adapt the new system, boredom, lack of social interaction and peer group communication, post ponding exams, admission delay, home setting, availability of internet connection, and uncertainty were stressors that produced stress in many adolescents during the pandemic period.

Stress is experienced in reaction to a threat to psychological, intellectual or somatic wellbeing (Holland, 2016). Stress is a pressure that an individual experience when exposing to situation that required much effort than the capabilities, he /she has. Both chronic and acute stressors are significant predictors of anxiety disorders and depression. Many studies showed exaggerated levels of stress related psychological problems, physical health consequences in students and its impact on the academic achievement (Taha et al.2017; Pariat et al.2014). The lockdown made teenagers feel like cages and this shattered their

social life. Depression and anxiety began to be experienced by almost all adolescents. Anxiety can be defined as a feeling expressed by stressed considerations, strain and physical changes (Bashir et al., 2020). Depression can be defined as a mental disorder characterized by low self-esteem, feelings of blame, loss of intrigue, sleep disturbance, hunger, sluggishness and poor concentration (Bashir et al., 2020). Adolescence is an age group, strongly related to anxiety and depression disorders, more than any other time of life. When adolescents are anxious and depressed, it meant that they are undergoing most stressful life events, which in turn lead to low performance in every aspect of life especially in their academic area (Sreeram & Mundada, 2021).

All these are stressors affect their mental health and achievement motivation. There exists a significant correlation between mental health and achievement (Mahdavi et al. 2021). Even though most of the adolescents were staying with their family members, this life-threatening challenging situation has shaken the entire age group by physically and psychologically. The family environment that enhances the mental health includes parental involvement, interaction between parents and children, emotional support, how much quality time spent with them, the extent of participation in social and recreational activities. From the family children learn all elementary education regarding life. Parents are the first teachers for each child. When the family environment is good it reflects in the behaviour of their children, development, their level of confidence and self-esteem, their sense of security, their emotional wellbeing, the way relates to others. Hence the social and family environment has great impact on the adolescence characteristic modification. Many study reports support the positive and significant relationships between family environment and mental health of adolescents (Kumar. R & Varma B, 2019; Mimrot, 2016; Amna & Yasnidawati 2021).

METHODOLOGY

Objectives

- To find out the level of achievement motivation of the boys and the girls.
- To compare anxiety, depression and stress based on gender.
- To compare achievement motivation, anxiety, depression and stress based on income.
- To find out relationship among achievement motivation anxiety, depression and stress.

Sample

The study was carried out in fifteen to twenty years old adolescents from different schools and colleges in Kerala state. Out of 133 Students 35 were boys and 98 were girls.

Tools

Personal data sheet was prepared to collect the demographic details of participants like age, gender, socio economic status and family income.

Achievements Motivation (n-Ach) Scale: Deo- Mohan achievement motivation scale was used to measure the Achievement Motivation of the participants. The scale has two versions (Hindi & English). English version was used for the present study. The scale consists of 50 items representing the distribution as Academic motivation, need for achievement, attitude towards education, interpersonal relations, general interests, sports etc. **Anxiety, Depression and Stress Scale (ADSS- BSPSA):** Prof. Pallavi Bhatnagar and her colleagues developed The Anxiety, Depression and Stress Scale. It is the test that measures the anxiety, depression and stress of an individual. The scale comprises of 48 items divided

**A Study of Achievement Motivation in Relation to Anxiety, Depression, and Stress among
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into 3 subscales which are 1) anxiety subscale (19items);2) depression sub scale (15 items);3) Stress subscale (14 items).

Procedure

The data were collected through the online mode (Google form). All the instructions given by the authors of tools were correctly followed. Confidentiality of the responses was ethically maintained.

RESULTS AND DISCUSSION

The data were coded and analysed using SPSS, version-16. Student t test, ANOVA and correlation are used to find out significant difference in achievement motivation of boys and girls. Group percentage were analysed and discussed.

The goal of this study was to examine the achievement motivation of the students during the pandemic period and how much the distress like anxiety, stress, depression effect motivation for achievement.

Table 1. Frequency distribution of data at different level of achievement motivation based on gender.

	Levels of Achievement motivation	Boys (N=35)	Girls (N=98)
1	Highly (2.01 and above)	0 (0)	0 (0)
2	High (1.26 to 2)	0 (0)	0 (0)
3	Above Average (0.51 to 1.25)	0 (0)	0 (0)
4	Average (-0.50 to +0.50)	1 (2.85)	3 (3.06)
5	Below Average (-0.51 to -1.25)	10 (28.57)	30 (30.61)
6	Low (-2 to -1.26)	12 (34.28)	36 (36.73)
7	Lowest (-2.01 and below)	12 (34.28)	29 (29.59)

(Percentage of score given in bracket)

Table 1 shows both boys and girls are lying in low achievement motivation level. It also shows that the gender has no influence on the level of achievement motivation. The result is alarming sign concerning adolescents. Decrease in achievement motivation irrespective gender indicates that this pandemic effect them very badly. Many things like, social distancing, lack of social interaction and communication, financial crisis, online education, procrastination tendency have affected their lives and directly or indirectly affected their achievement motivation also.

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Table 2. The frequency data at different levels of anxiety, depression, stress based on gender.

Levels		Anxiety		Depression		Stress	
		Boys (N=35)	Girls (N=98)	Boys (N=35)	Girls (N=98)	Boys (N=35)	Girls (N=98)
1	Extremely High (2.01 & above)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
2	High (1.26 to 2)	1 (2.85)	2 (2.04)	1 (2.85)	9 (9.18)	0 (0)	8 (8.16)
3	Above Average (0.51 to 1.25)	1 (2.85)	1 (1.02)	7 (20)	11 (11.22)	8 (17.14)	13 (13.26)
4	Average (-0.50 to 0.50)	13 (37.14)	34 (34.69)	13 (37.14)	41 (41.83)	15 (42.85)	37 (37.75)
5	Below Average (-1.25 to -0.51)	20 (57.14)	53 (54.08)	14 (40)	37 (37.75)	4 (11.42)	13 (13.26)
6	Low (-2 to -1.26)	0 (0)	8 (8.16)	0 (0)	0 (0)	10 (28.57)	27 (27.55)
7	Extremely Low (-2.01 & below)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)

(Percentage of score given in bracket)

Table 2 shows that in the case anxiety, most of the boys and girls are belong to below average. In the case of depression, most of the boys are in below average and most of the girls are in average category. In the case of stress, most of the boys and girls are belong to average level. From the above table, it is understood that no one is falling into both highest and lowest category of anxiety, depression and stress. This is a matter of hope and pleasure because this pandemic has ruined the lives of many people, including many youngsters. Proper support on right time from family members and teachers help many students recovered from this state some extent. It is reflected in these results. Psychological disturbances are common during the pandemic situation. Building strength to overcome the crises is paramount.

Table 3. Mean, standard deviation and “t” value between male and female in achievement motivation (N = 133)

Variable	Boys (N=35)		Girls (N=98)		t-value
	Mean	SD	Mean	SD	
Achievement Motivation	111.83	12.54	112.27	14.19	0.17
Anxiety	4.51	2.97	3.94	3.07	0.97
Depression	4.83	3.95	4.66	4.14	0.21
Stress	5.11	3.23	5.43	3.7	0.47

Table 3 shows that mean, standard deviation and t-value between boys and girls in achievement motivation, anxiety, depression and stress. The result indicates that there is no significance difference between boys and girls in these variables. Many Studies showed that girls are more motivated group than boys (Baloria 2018; Pany, 2014; Khan et al., 2011). A study by Gurgova (2016) reported that females are less motivated than males. The result

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from this study showed the variable like gender has no influence on achievement motivation. That may be both genders are getting equal exposure and treated in same manner without taking the gender difference in consideration.

Based on income we compare achievement motivation, anxiety, depression and stress among sample. For this purpose, sample is divided into three groups; below average, average and above average (Economic Review 2020, Government of Kerala)

Table 4 Result of one-way ANOVA obtained in anxiety depression stress for achievement motivation based on income.

		Sum of square	df	Mean Square	F
Achievement	Between	62.78	2	31.39	0.164
	Within	24848.2	130	191.14	
	Total	24910.99	132		
Anxiety	Between	64.98	2	32.492	3.629*
	Within	1163.93	130	8.953	
	Total	1228.917	132		
Depression	Between	9.027	2	4.514	0.268
	Within	2190.53	130	16.85	
	Total	2199.564	132		
Stress	Between	26.89	2	13.445	1.051
	Within	1663.201	130	12.794	
	Total	1690.09	132		

*Significant at 0.01 level

The table 4 shows the result of one-way ANOVA obtained in achievement motivation, anxiety, depression and stress based on income. This result indicates that there is no significant difference in achievement motivation, depression and stress based on income. In the case of anxiety, there is significant difference are find out. Anxiety is helpful to some extend for good performance. If the anxiety increased beyond a certain limit, it adversely affects the performance and prevents us from reaching our goal. The students' anxiety may have been caused by gradually increasing physical distances between people due to lockdown. Anxiety disorders are more likely to occur and worsen due to lack of interpersonal communication (xiao C., 2020).

The result indicates the significant difference based on income is for anxiety. Duncan Analysis is used to find out which income group differ more significantly.

Table 5. Duncan Analysis on Anxiety based on income.

Duncan			
Subset for alpha = 0.05			
Income	N	1	2
3	21	2.48	
1	68		4.38
2	44		4.41
Sig.		1	0.97

The table 5 shows Duncan analysis result. High-income group differ significantly in anxiety than low and average income groups. Mean value indicates that high-income group have low

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anxiety when comparing with average and below average group. Generally, people from high economic background are less anxious.

Table 6: Correlation among achievement motivation, anxiety, depression and stress.

	Anxiety	Depression	Stress
Achievement	-0.194	-0.158	-0.103

The result indicates that there is no significant correlation between variables. But there is very low negative correlation. Hence, increase in Anxiety, depression and stress leads to reduction of achievement motivation. Mainly in the pandemic situation there are huge chance of increase in stress, anxiety and depression because of family economic issues, inconsistency in job, online education, staying away from their friends and relatives and through online examinations students can't showcase their depth of knowledge. There is a huge reduction in achievement motivation that leads to imbalance in life style and social behaviour.

Anxiety and depression are the results of an intense or a continuous stress that has not been managed, mainly due to the individual's difficulty to cope with stressful life events (Cummins et al., 2015; Drapeau et al., 2011; Marchand, 2004). The current pandemic is a source of intense stress for the whole world population.

The students who belong to strong financial status have a better performance than those who have problems in finance (Azhar et.al 2014, Pan,Y et al 2021, Pinto et al2001; Ross et al.1999; St. John et al.,2011). The outbreak of a pandemic causes the closure of schools and workplaces (Ferguson et al., 2006), as well as the shortening of working hours (Tyko, 2020) as measures to mitigate the severity and spread of the disease. As businesses cannot operate at their previous capacity, most of them close, which will lead to a wide spread of staff lay-offs and redundancies that will substantially decrease the level of employment (Page et al., 2006). This situation will have a negative impact on the individuals' financial capacity due to the loss of income (Zhou et al., 2020). Financial loss can also be an issue for individuals who are quarantined, since they are not able to work or to maintain their professional activities, often without the prior ability to plan for this eventuality long-term, with potential long-lasting effects (Brooks et al., 2020).

Family functioning forms the basis for the realization of the healthy development of family members' body and mind and their relationship with society, which is closely related to the mental health of adolescents. Many studies showed that poor functioning is associated with emotional problems such as anxiety and depression; conversely a more positive family environment can support adolescents' healthy adjustment (Pan. Y et al 2021).

CONCLUSION

The current study demonstrates the distress state and its reflection on achievement motivation of students. The major findings of this study is that most of the adolescents in the pandemic situation comes in the range of average to lowest level. Pandemic situation reduces the social connections that created loneliness, which further developed to stress, depression and anxiety among students. Adolescents are a period of finding out the new vision and move around freely. Unfortunately, they are like caged and their capacity of exploring the new world and adjusting to the situations is limited. All these things adversely effect on mental health and psychosocial health of the individuals.

Implication of the study

Difficult life situations make the individual strong even though there is individual difference in tolerating capacities. We have to prepare the adolescents to face any crisis situation by providing them timely crisis oriented psychological services at regular interval and free of cost. Today's adolescents should lead the nation of tomorrow and therefore they should have good mental health. We must be able to mould adolescents with good energy and motivation. By providing timely family support and educational rewards can enhance their motivational level.

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Single Parenthood and Adolescent Well-being: A Systematic Review

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ABSTRACT

Background: Single parenthood represents nearly one-fifth of households with children worldwide and is frequently linked to poorer adolescent outcomes. **Objective:** This systematic review synthesises evidence on the psychological, academic, and social consequences of single parenthood for adolescents. **Methods:** We searched Scopus and Web of Science (January 2010–March 2024) using predefined family-structure, population, and mental-health terms, screening 1,135 records in accordance with PRISMA 2020. Nine studies met all criteria. **Results:** Seven of nine studies reported significantly higher depressive or anxiety symptoms among adolescents in single-parent households; two longitudinal studies indicated these effects persist over time. Lower self-esteem, poorer academic performance, and increased behavioural problems were also observed, with financial strain and reduced parental monitoring acting as key mediators. Maternal warmth, resilience, and social-support networks emerged as protective factors. **Conclusions:** Adolescents in single-parent families face elevated mental-health and academic risks, but supportive parenting and community resources can mitigate harm. Policy should integrate financial assistance, parenting programmes, and school-based counselling to address multifaceted needs.

Keywords: *Single Parenthood, Adolescent Well-Being, Systematic Review, Psychological Effects*

Single parenthood now accounts for nearly one in five households with children worldwide, a trend that carries wide-ranging implications for adolescent development. Although a substantial body of international research links single parenthood to outcomes such as psychological distress, academic underachievement and social adjustment difficulties, most evidence comes from high-income Western settings. Comparative, region-specific syntheses are sparse, making it difficult for policymakers in diverse cultural contexts to craft targeted interventions. This systematic review therefore aggregates and appraises the global literature to clarify the challenges faced by adolescents living in single-parent households and to highlight geographic and methodological gaps that future studies should address.

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METHODS

Objectives

1. Synthesize the psychological, academic, and social outcomes reported for adolescents in single-parent households.
2. Assess the methodological quality of these studies and outline key research gaps.

Search strategy

We searched Scopus and Web of Science on 31 March 2024 for peer-reviewed articles published between 1 January 2010 and 31 March 2024. The asterisk (*) acts as a truncation symbol to detect various results composed of a single string of text. Boolean operators (AND, OR) were used to refine searches and ensure a broad yet precise retrieval of relevant literature. Only peer-reviewed journal articles published between 2010 and 2024 were included in the final selection.

Screening process

The study-selection workflow followed the PRISMA 2020 guidelines. After automatic duplicate removal in EndNote X9, two reviewers (Initials A & B) independently screened titles and abstracts in Covidence. Records judged potentially relevant were retrieved in full text and screened against the inclusion criteria; disagreements were resolved by consensus or, if needed, a third reviewer (Initial C). Inter-rater agreement for full-text decisions was $\kappa = 0.82$, indicating substantial concordance. All articles that passed full-text eligibility were then forwarded to the data-extraction.

Study selection (PRISMA flow)

A total of 1,135 records were identified (Scopus = 571; WoS = 564). After removing 259 duplicates, 876 unique records were screened. 777 were excluded by title/abstract. Of 99 full-text reports sought, 55 were not retrievable and 35 were excluded for methodological reasons, leaving 9 studies for analysis (see Figure 1, PRISMA diagram).

Data extraction

A standardised form captured: author/year, country, sample size and demographics, study design, psychological measures, key findings (shown in table 1). Extraction was performed independently by two reviewers.

Data synthesis

- **Psychological distress** Adolescents from single-parent families consistently reported higher depressive and anxiety symptoms (Björkenstam et al., 2017; Daryanani et al., 2016; Perales et al., 2016). Longitudinal evidence (Björkenstam et al., 2017; Lu, 2019) suggests these differences persist over time.
- **Self-esteem and resilience** Lower self-esteem was linked to greater maternal psychological control (Sterrett-Hong et al., 2019), whereas high parental responsiveness buffered distress (Leung & Shek, 2016). Resilience moderated the association between family structure and mental health in two studies.
- **Academic and behavioural outcomes** O'Malley et al. (2015) reported lower Grade Point Averages among single-parent adolescents; Ilabaca Baeza & Gaete Fiscella (2018) highlighted elevated aggression and parent-child conflict.
- **Socio-economic context** Five studies identified financial hardship as a mediating factor between single parenthood and adolescent mental-health outcomes (Kachi et al., 2016; Lu, 2019).

DISCUSSION

This review synthesised nine recent studies spanning five countries and confirms a robust association between single parenthood and poorer adolescent mental-health indicators, particularly depression and anxiety. The pattern aligns with Bronfenbrenner's Ecological Systems Theory: economic strain and reduced parental resources in the microsystem cascade into elevated psychological risk at the individual level.

Yet the evidence is nuanced. Protective factors maternal warmth, parental monitoring, social-support networks consistently attenuated adverse outcomes (Leung & Shek, 2016; Sterrett-Hong et al., 2019). These findings echo resilience frameworks that emphasise relational buffers in stressful contexts.

Methodologically, the dominance of cross-sectional designs limits causal inference; nevertheless, the three longitudinal studies strengthen confidence that psychological gaps do not simply reflect transient adjustment periods after family change.

Culturally, the evidence base is heavily Western or East-Asian. No eligible studies originated from South Asia, Africa, or the Middle East settings where kinship structures and social safety nets differ markedly. Addressing this gap is critical for tailoring interventions in low- and middle-income countries, including India.

CONCLUSION

Adolescents growing up in single-parent households are at heightened risk of psychological distress, with depression, anxiety, and low self-esteem most frequently reported. Economic hardship and reduced parental involvement amplify these risks, whereas responsive parenting and strong social support confer resilience. Policymakers should target multi-layered supports financial relief, parenting programmes, school-based counselling to offset structural disadvantages faced by single-parent families.

Limitations And Future Directions

1. Heterogeneity in study designs, measures, and cultural contexts restricted quantitative synthesis.
2. Cross-sectional dominance (six of nine studies) limits causal claims.
3. Geographic bias towards Western settings reduces global generalisability.
4. Publication bias could not be assessed due to the small study pool.

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TABLE & FIGURE

Table 1. Characteristics of the nine studies included in the systematic review

Study	Time Frame	Study Population	Psychosocial Variables	Comparison Group	Study Design	Measures of Mental Health
Björkenstam et al. (2017)	2017	Adolescents (2,223, U.S.)	Depression, Psychological Distress	Single-parent vs. two-parent households	Longitudinal	Depressive symptoms
Perales et al. (2016)	2016	Children & adolescents (Australia)	Depression, Anxiety, ADHD, Conduct Disorders	Single-parent vs. blended, step, and two-parent families	Cross-sectional (survey)	Mental disorders
Daryanani et al. (2016)	2016	Adolescents (368, U.S.)	Depression, Stress, Rumination	Single-mother vs. two-parent families	Longitudinal	Depressive symptoms, rumination scale

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Sterrett-Hong et al. (2019)	2019	African American adolescents (193, U.S.)	Depression, Self-esteem, Hopelessness	Single-mother families	Cross-sectional	Self-esteem, depressive symptoms
Leung & Shek (2016)	2016	Adolescents from single-mother families (372, Hong Kong)	Resilience, Self-esteem	Single-mother families only	Cross-sectional	Psychological well-being, resilience scale
Lu (2019)	2019	Adolescents (U.S.)	Depression, Mental Health Disparities	Single-mother vs. two-parent families	National survey data	Depression prevalence
Kachi et al. (2016)	2016	Adolescents (9,491, Japan)	Psychological Distress	Single-parent vs. two-parent families	National survey	Psychological distress scale
Ilabaca Baeza & Gaete Fiscella (2018)	2018	Adolescents (1,861, Chile)	Aggression (psychological & financial)	Single-parent vs. two-parent families	Cross-sectional	Aggression self-report
O'Malley et al. (2015)	2015	High school students (490,000, U.S.)	Academic Achievement, Mental Well-being	Single-parent, homeless, and foster-care vs. two-parent families	Cross-sectional	GPA, school bonding

Figure 1, PRISMA diagram

