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Research paper

Parental Stress in Raising A Child with Special Needs Abroad: The Mediating Role of Financial Stress in The Relationship between Mental Well-Being and Parental Stress Among Indian Expatriate Parents in The UAE

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Abstract

Raising a child with special educational needs presents multifaceted challenges, which are further intensified in expatriate contexts due to cultural, economic, and systemic factors. This study explores the psychological well-being of Indian expatriate parents in the United Arab Emirates (UAE) who are raising children identified as Students of Determination (SOD). Specifically, it investigates the mediating role of financial stress in the relationship between parental stress and mental well-being. Drawing on the Family Stress Model (FSM) as the theoretical framework, the research surveyed 100 Indian expatriate parents using standardized tools to measure parental stress, financial strain, and mental well-being. Descriptive statistics indicated that most participants experienced medium levels of stress and well-being. Pear-son's correlation revealed significant associations between all three variables, with financial stress positively correlating with parental stress and negatively with well-being. Mediation analysis confirmed that financial stress fully mediates the relationship between psycho-logical well-being and parental stress. Furthermore, parents who hired personal Learning Support Assistants (LSAs) experienced signifi-cantly higher financial stress, while the presence of LSAs did not significantly impact parental stress alone. These findings underscore the critical influence of financial strain on expatriate caregivers' psychological health and parenting capacity. The study highlights the urgent need for integrated support systems-combining inclusive educational practices with financial relief measures better serve migrant families navigating the complex terrain of disability caregiving abroad. Implications are discussed for school leaders, policymakers, and community health stakeholders in designing culturally responsive, equitable, and sustainable interventions for Indian expatriate families in the UAE.

Keywords: *Financial Stress; Inclusive Education; Indian Expatriates; Mental Wellbeing; Parental Stress; Special Needs; UAE.*

1. Introduction

Parenting is often regarded as both a rewarding and demanding life responsibility. For parents of children with special needs, the caregiving journey involves heightened emotional, physical, and financial commitments that exceed those faced in typical parenting roles. These challenges become more complex when families live abroad, confronting the dual pressures of caregiving and adapting to a foreign environment. In the context of the United Arab Emirates (UAE), where a large Indian expatriate population resides, parents raising children with special educational needs and disabilities (SEND) frequently encounter distinctive psychosocial and economic difficulties.

The stress encountered by these parents stems not only from caregiving demands but also from navigating unfamiliar healthcare, educational, and social systems. Added to this are the cultural disconnects and limited access to supportive networks, all of which contribute to emotional strain and potentially compromise mental well-being. These multifaceted stressors can negatively influence parental resilience, family interactions, and the ability to make informed decisions regarding a child's developmental and educational needs. While extensive research has explored parental stress in Western nations, limited empirical attention has been paid to the experiences of expatriate families in the Gulf region, particularly those from the Indian diaspora.

Parental stress is not solely an emotional or social issue; it is increasingly recognized as a significant factor in physical health (Gallagher & Whiteley, 2013). Ongoing stress can influence the body's regulatory systems, such as the hypothalamic–pituitary–adrenal (HPA) axis, resulting in sustained cortisol production. Over time, this hormonal imbalance can contribute to higher blood pressure, impaired glucose regulation, and weakened immune defenses (McEwen, 1998). In practical terms, parents caring for children with disabilities often report recurring headaches, disrupted sleep patterns, and digestive discomfort, which are physical signs of stress. These connections demonstrate that examining parental stress is not only relevant to social sciences but also essential to the broader health sciences field, with implications for clinical care and disease prevention.

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In dual-income households, caregiving responsibilities are frequently shared with nannies or extended family members such as grandparents. Although this can provide practical support, it can also complicate early language development, particularly when multiple caregivers communicate in different languages. For example, a nanny may speak one language, while parents and grandparents use others. During early childhood, a critical period for language acquisition, this multilingual exposure may lead to confusion, delays in speech, and difficulty with language differentiation. In such cases, targeted early interventions may be necessary to support effective communication development. Furthermore, children are often exposed to diverse cultural and linguistic environments, especially within the UAE's multicultural school systems. These additional variables may compound the developmental challenges faced by children with special needs, placing even greater stress on their families.

1.1. Cultural context and Indian expatriate parents in the UAE

Cultural values significantly shape the way parents respond to raising a child with disabilities. Within Indian society, the emphasis on collectivism often ties personal identity and family reputation to the perceived abilities of its members. This can create heightened stress when a child has developmental or learning challenges, as parents may worry about judgment from relatives and the broader community. In a collectivist framework, disability can sometimes be associated with social shame, which may discourage families from seeking timely external support.

For Indian parents living in the UAE, these concerns are often intensified by the absence of extended family networks that, in India, might provide practical help and emotional reassurance. Navigating between Indian traditions and the multicultural environment of the UAE can also introduce unique pressures, such as differing expectations regarding education, therapy, and parenting roles. Parents may feel caught between preserving cultural identity and adapting to host-country practices, which can be confusing or stressful.

Acculturation Theory provides a valuable lens for examining how Indian cultural values shape the stress and well-being of expatriate parents raising children with disabilities in the UAE. Berry's framework suggests that migrants adapt to a host culture through approaches such as assimilation, integration, separation, or marginalization (Berry, 1997). For some Indian parents, deeply rooted collectivist values and persistent stigma surrounding disability may encourage a "separation" approach-maintaining strong connections to their heritage culture while avoiding full participation in the host society's networks and services. Although this approach can protect cultural identity, it may also limit opportunities to access professional support and community resources in the UAE. In contrast, parents who lean toward "integration," balancing heritage traditions with active involvement in the host culture, may have more coping options and a wider range of support. Recognizing these adaptation patterns can guide the development of culturally attuned services that address both the emotional and practical needs of these families.

Social stigma around disability and mental health in the Indian community can further complicate matters, leading some parents to withhold information or internalize blame. In expatriate settings, where social networks tend to be smaller and tightly connected, the fear of community gossip or judgment can amplify isolation. These overlapping cultural and migration-related factors highlight the importance of support programs that respect Indian cultural values while promoting openness, awareness, and acceptance.

In the UAE, the term Student of Determination is officially used to describe children with long-term intellectual, physical, sensory, or mental impairments that hinder equal participation in educational environments (Ministry of Education UAE, 2017). This terminology, promoted through national policy, is designed to highlight the strengths, perseverance, and resilience of students rather than focus solely on their limitations. It reflects a broader movement within the UAE's education system, particularly through initiatives like the Dubai Inclusive Education Policy towards creating equitable learning opportunities for all students (KHDA 2017).

This study aims to examine the specific stressors experienced by Indian expatriate parents in the UAE raising children with special needs, with an emphasis on financial stress as a mediating variable between overall parental stress and psychological well-being. Through this analysis, the study seeks to identify underlying mechanisms that affect mental health outcomes and to propose culturally and contextually appropriate strategies for support.

1.2. Future-oriented perspectives

In recent years, global movements advocating inclusive education and mental health awareness have created new opportunities for research and policy development that recognize the complex realities of families raising children with special needs. However, in rapidly growing and culturally diverse nations such as the UAE, expatriate families, especially those from lower- and middle-income backgrounds, remain significantly underrepresented in scholarly research and institutional policy. Given that Indian expatriates constitute one of the largest ethnic groups in the UAE, it is essential to explore their unique stressors and design frameworks that move beyond generalized assumptions.

The UAE's commitment to inclusive development, exemplified by national strategies such as the National Policy for Empowering People of Determination, presents a critical opportunity to integrate psychosocial and financial dimensions of parenting into broader community planning. Effective support systems must be holistic, addressing both the developmental needs of the child and the psychological and financial well-being of the caregivers. Achieving this requires culturally grounded, evidence-based research that informs policy and practice.

This study not only addresses a major gap in the literature but also contributes to shaping proactive support systems for expatriate families. Exploring the mediating role of financial stress highlights a tangible factor that stakeholders such as policymakers, educators, healthcare providers, and insurance companies can address through structured interventions. Examples may include subsidized therapy services, affordable inclusive education packages, financial aid programs, or culturally relevant parent training initiatives.

Clinically and educationally, recognizing financial stress as a key influence on parental well-being could lead to the integration of financial counseling, peer support systems, and stress management resources into outreach services for families (Conger et al., 1994). Such a comprehensive approach aligns with international best practices like Multi-Tiered Systems of Support (MTSS), which emphasize not only academic inclusion but also family engagement, equitable access to services, and interagency collaboration.

Additionally, this research may serve as a starting point for comparative studies involving Indian parents in other diaspora regions or within India itself. Such cross-national studies could offer deeper insights into the effects of migration on caregiving, access to services, and psychological well-being, informing future bilateral agreements and policy frameworks between countries of origin and destination.

With growing emphasis on mental health and the expansion of digital services in the post-pandemic era, future research may also examine the role of digital interventions such as teletherapy, online parent support forums, and AI-driven financial planning tools. These emerging resources hold potential for reducing caregiver burden in socially and economically vulnerable expatriate communities.

Ultimately, this research seeks to inspire a more inclusive and forward-thinking approach to supporting families at the intersection of parenting, caregiving, migration, and economic vulnerability. By centering the voices and lived experiences of Indian expatriate parents in

the UAE, it advocates for institutional responses that are compassionate, evidence-driven, and culturally sensitive, contributing to a more equitable society for all families, regardless of nationality or circumstance.

Many Indian families migrate to the United Arab Emirates (UAE) with aspirations for financial growth, better employment opportunities, and enhanced living standards. However, when a child within the family has special needs, this transition often presents unexpected emotional, social, and financial complexities. In contrast to the extended familial and communal support systems often available in India, expatriate families in the UAE may face isolation and are typically left to manage the caregiving responsibilities independently. This lack of immediate social support can intensify emotional exhaustion and is frequently accompanied by the high cost of specialized services such as therapy, inclusive education, and medical interventions, which are predominantly offered through private institutions in the UAE and can be financially overwhelming. Generally, UAE Schools provide Institutional support with a specially assigned department - "Inclusion Department" with an Inclusion Champion/Head of Inclusion, Special Educators, School Counselors, and LSA (Learning Support Assistants). In contrast, according to the level of the child's need and sometimes the non-availability of Schools LSAs, parents may need to hire an ILSA (Individual Learning Support Assistant) at their own cost, which may also affect the financial well-being of the parents.

Findings from developmental and clinical psychology consistently demonstrate that parents of children with special educational needs experience greater levels of chronic stress, anxiety, and depressive symptoms compared to those raising typically developing children (Hayes & Watson, 2013). These heightened stress levels are often influenced by several factors, including the severity of the child's condition, access to supportive resources, and the family's financial situation. Among these, financial strain has been repeatedly identified as a major contributor not only limiting the family's ability to access necessary services but also exacerbating household tensions and adversely affecting parental mental health (Neece et al., 2012).

Although the UAE continues to make strides in inclusive education reform, including efforts to mainstream children of determination into regular schooling environments, there are concerns for parents regarding accessibility and the cost of psychological assessment and therapies. Indian expatriate parents, many of whom are employed in middle-income or low-wage sectors, often find it difficult to afford private therapies, specialist education programs, and mental health support, contributing to cumulative stress and reduced overall family wellbeing.

The Family Stress Model (FSM), first proposed by Conger and colleagues in 1992, explains how financial difficulties can set off a chain reaction of emotional strain, which in turn may adversely influence parenting practices, couple dynamics, and the overall psychological well-being of family members. This process becomes even more intricate when raising a child with disabilities, as the demands of caregiving intersect with financial pressures and additional psychosocial challenges. Over time, the FSM has been adapted to reflect diverse cultural and socioeconomic settings. For example, Masarik and Conger (2017) re-examined its applicability in more affluent societies, highlighting that financial strain can still disrupt family functioning despite broader economic prosperity. This makes the model particularly relevant in the UAE, where the country's strong economic profile contrasts with the personal financial constraints often faced by expatriate families.

However, a closer review of the literature reveals that findings are not entirely consistent. Some research indicates that factors such as community support, extended family involvement, or employer-provided benefits can buffer the impact of economic hardship, while other studies suggest that challenges like social stigma, visa insecurity, and limited disability services may exacerbate stress in ways the FSM does not fully explain. This raises the question of whether the FSM alone adequately reflects the realities of South Asian expatriate families in the UAE, whose experiences are often shaped by remittance responsibilities, migration-related uncertainty, and culturally specific coping strategies or whether alternative perspectives, such as Bronfenbrenner's ecological systems theory, might provide a more comprehensive understanding by situating family stress within interconnected layers of influence, from the individual to the societal level.

Recent research further substantiates the applicability of this framework. A study by Park et al. (2020) demonstrated that financial strain strongly predicted depressive symptoms in parents with neurodevelopmental conditions, with parental stress partially mediating this relationship. Likewise, Sallim et al. (2021) found that financial burden and caregiving responsibilities were key predictors of anxiety and depression in diverse caregiving populations, underscoring the need to consider socio-economic variables in mental health research.

In a UAE-specific study, Abdul Rahman and Halabi (2022) explored the connection between financial pressure and emotional well-being among parents of children enrolled in inclusive education. Their findings revealed that South Asian families, including Indian expatriates, experienced heightened stress due to the unaffordability of private therapies, inadequate insurance coverage, and minimal access to community-based supports. These structural challenges illustrate the urgent need to frame financial hardship as more than just an individual problem, but rather as a systemic issue with mental health consequences.

Additional evidence from Luthar and Eisenberg (2021) emphasized the importance of social support and adaptive coping in moderating the effects of financial stress. However, in migrant communities where extended family structures are often disrupted or distant, such protective factors are weakened or altogether absent. This places additional emotional pressure on expatriate parents raising children with special needs.

Furthermore, a 2023 review by Chen and colleagues confirmed that financial strain remains a consistent predictor of psychological distress among caregivers, particularly those supporting children with medical or educational needs. The review also emphasized the value of mediation-based research models to uncover the underlying mechanisms linking economic hardship, parenting stress, and caregiver well-being. Importantly, the authors called for more culturally and contextually grounded research that considers migration status, cultural norms, and dependency patterns unique to expatriate populations.

Building upon this growing body of evidence, the current study applies the link between Parental stress, financial stress, and overall well-being to Indian expatriate families living in the UAE. It hypothesizes that financial stress mediates the relationship between parental stress and mental well-being. This perspective acknowledges the layered challenges that arise from the intersection of disability caregiving, cultural expectations, and economic vulnerability. Ultimately, the findings are intended to inform the development of inclusive and sustainable psychosocial support systems that are sensitive to both cultural background and financial realities, ensuring that families are not left unsupported in their caregiving journey.

2. Review of literature

2.1. Empirical background

Abdat et al. (2023) conducted an intervention-based study to examine stress levels among mothers of children with disabilities residing in the UAE during the COVID-19 pandemic. The sample consisted of 635 mothers who were assessed using a standardized stress measurement tool both before and after a virtual stress-management program. Before the intervention, a substantial number of participants reported elevated stress, particularly within emotional and physical domains. Post-intervention findings demonstrated statistically significant

reductions in overall stress scores, including improvements across emotional, cognitive, and physical symptom categories. The results suggest that even remotely delivered interventions can significantly alleviate psychological distress among caregivers. The study emphasizes the value of accessible mental health support systems tailored for expatriate families, especially during times of crisis such as a global pandemic.

Chen et al. (2023) conducted a comprehensive cross-cultural review exploring psychological outcomes among caregivers of children with special healthcare and educational needs. The review emphasized that financial hardship was a consistent predictor of poor mental health outcomes across diverse populations. Notably, the association between economic strain and psychological distress was more pronounced in families with children requiring ongoing care. The study also highlighted the utility of mediation models in understanding the pathways between financial hardship, caregiving demands, and caregiver mental health. Chen et al. recommended more localized research that considers migration status, cultural expectations, and financial dependency patterns. These findings lay a strong foundation for examining how structural and cultural factors influence caregiver well-being, especially in migrant communities.

Dukmak et al. (2022) examined parenting stress among 175 families of children with disabilities across four Emirates in the UAE, focusing on the relationship between child behavior problems, socioeconomic factors, and parental stress. The study found a significant positive link between the severity of behavioral challenges in children and increased stress levels in parents. Access to financial resources, such as hiring domestic helpers, was linked to lower stress, though this benefit was partial and did not fully remove the emotional burden. The findings highlight the combined effect of behavioral and financial pressures, suggesting that support services should address both.

Dukmak (2009) investigated parental adaptation and satisfaction in 63 families of children with intellectual disabilities in the UAE. Using a standardized scale, the study assessed emotional and behavioral coping strategies. Parents who relied on emotion-focused coping reported better psychological adaptation, while those using problem-focused coping expressed greater satisfaction in their caregiving role. Despite being over a decade old, the study offers important insights into coping and resilience in UAE families, which remain relevant for understanding current expatriate experiences.

Hayes and Watson (2013) reported that parents of children with special educational needs (SEN) experience significantly higher levels of chronic stress, anxiety, and depression compared to those raising typically developing children. They identified multiple contributing factors, including the severity of the child's needs, access to supportive resources, and the family's financial circumstances. Their work highlights the interconnected nature of economic and psychosocial stressors in influencing parental well-being.

Lamba et al. (2022) explored the experiences of expatriate mothers raising children with autism spectrum disorder (ASD) in the UAE through in-depth interviews with 17 participants. They identified emotional, financial, and systemic stressors such as delays in diagnosis, high therapy costs, and cultural stigma. Many mothers relied on private services due to limited public options, which created significant financial strain. The findings highlight the urgent need for culturally responsive policies and accessible disability services for non-citizen families.

Luthar and Eisenberg (2021) examined the role of social support and adaptive coping in moderating the effects of financial hardship on parental mental health. They found that robust social networks and effective coping strategies could buffer the negative impact of economic strain. However, the study also recognized that in migrant communities, where extended family networks are often disrupted or distant, such protective effects are diminished, leading to heightened vulnerability for caregivers.

Masarik and Conger (2017) revisited the Family Stress Model (FSM) in the context of affluent societies, arguing that financial strain can disrupt family functioning even when national economic indicators are strong. They stressed that the FSM remains relevant across socioeconomic settings, including contexts like the UAE, where high national wealth contrasts with the personal financial constraints of many expatriate families.

Neece et al. (2012) identified financial strain as a major factor exacerbating parental stress, noting that it not only restricts access to essential services but also intensifies household tensions. Their study linked economic hardship directly to poorer mental health outcomes, particularly among parents of children with developmental or behavioral challenges.

Park et al. (2020) demonstrated that financial strain significantly predicted depressive symptoms in parents of children with neurodevelopmental conditions, with parental stress serving as a partial mediator in this relationship. Their findings emphasize the importance of considering socioeconomic factors in mental health interventions for caregiving populations.

Opoku et al. (2024) conducted a qualitative study on working mothers in the UAE raising children with disabilities, including both Emirati and expatriate participants. The results showed that expatriate mothers faced unique challenges-limited workplace accommodations, expensive specialized services, and weak formal support systems. These challenges led to high burnout, emotional exhaustion, and financial pressure. The authors called for workplace reforms and more affordable disability services to protect caregiver well-being.

While these studies provide valuable evidence on financial, emotional, and systemic stressors for parents of children with disabilities, the review mostly presents their findings without deeper comparison or critique. It could be strengthened by discussing why some studies report stronger benefits of social support than others, or by assessing how well Western-based frameworks such as the Family Stress Model apply to South Asian expatriate families in the UAE. Including more research from the UAE and the Gulf region would also make the review more context-specific and relevant for understanding the unique challenges faced by expatriate parents in this setting.

2.2. Significance of the study

This study contributes to the growing body of research on expatriate mental health, special education, and family well-being in multicultural societies. By focusing specifically on Indian expatriate parents in the UAE it brings visibility to a population that is often underrepresented in mainstream psychological research.

Furthermore, by investigating the mediating role of financial stress, the study offers critical insights into how economic factors influence psychological outcomes. These findings can inform the development of more equitable and culturally responsive mental health services, educational support programs, and policy interventions aimed at reducing the burden on expatriate families raising children with special needs.

The study also holds practical relevance for school administrators, healthcare providers, and policymakers seeking to enhance inclusion and family support structures within the UAE's unique demographic landscape. Identifying financial stress as a pivotal factor opens up new avenues for intervention, such as financial counseling, affordable access to services, and community-based support programs.

In conclusion, raising a child with special needs is a profoundly challenging experience, one that becomes even more complex in an expatriate setting. For Indian parents living in the UAE, financial stress often serves as a hidden but powerful force that mediates their ability to manage caregiving demands and maintain psychological well-being. Through this study, we aim to bring clarity to these interconnections and contribute to the design of more supportive environments for families navigating these layered challenges abroad.

2.3. Research gaps

1) Lack of Context-Specific Research on Indian Expatriate Parents in the UAE, while research on parental stress in families of children with special needs is growing globally, there is limited scholarly work that examines the unique challenges faced by Indian expatriate parents in the UAE. Most existing studies focus on either Western populations or native Indian families, overlooking the cultural, legal, and logistical barriers expatriate families encounter in the Gulf region.
2) Limited Application of Mediation Models Involving Financial Stress, although financial stress is recognized as a key contributor to psychological distress in caregivers, very few studies have explored it as a mediating variable between parental stress and psychological well-being, especially in immigrant populations. The potential of financial stress to explain the pathway through which parenting stress affects mental health outcomes in this demographic remains underexplored.
3) Underrepresentation of South Asian Migrant Families in Special Needs Research, even though South Asians, particularly Indians, make up a large percentage of the UAE's expatriate population, research involving their caregiving experiences and mental health outcomes is sparse. There is a need to amplify their voices and experiences in academic literature, particularly within the context of raising children with disabilities.
4) Scarcity of Holistic, Multi-Dimensional Models in Caregiver Wellbeing Studies. Existing studies on caregiver stress often examine variables in isolation. There is a lack of comprehensive, multi-dimensional models that incorporate economic, emotional, and social dimensions together to assess psychological well-being among expatriate parents of children with special needs. This limits the development of well-rounded intervention strategies.

3. Methodology

3.1. Research objectives

1) To assess the levels of parental stress, financial stress, and Mental well-being among Indian Expatriate parents of SOD in the UAE
2) To examine the relationship between parental stress, financial stress, and Mental well-being of Indian Expatriate parents of SOD in the UAE
3) To explore the mediating role of financial stress between Mental well-being and parental stress of Indian Expatriate parents of SOD in the UAE
4) To investigate the impact of Learning Support Assistance (LSA) status on parental and financial stress among Indian Expatriate parents of SOD in the UAE
5) To determine whether having a personal LSA significantly increases financial stress for Indian Expatriate parents of SOD in the UAE

3.2. Hypotheses

H1: There is a significant positive correlation between parental stress and financial stress.
H2: There is a significant negative correlation between parental stress and Mental well-being.
H3: There is a significant negative correlation between financial stress and Mental well-being.
H4: Financial stress mediates the relationship between Mental well-being and parental stress.
H5: Parents of children with LSA report higher parental stress compared to those without LSA.
H6: Parents who employ their own LSA experience higher financial stress compared to those who do not.

3.3. Tools and techniques used

1) Parental Stress Scale: Developed by Berry and Jones (1995) as an alternative to the 101-item Parenting Stress Index, it is an 18-item self-report inventory. It is rated according to a 5-point Likert scale.
2) APR Financial Stress Scale: Developed by Wookjae Heo, Soo Hyun Cho, and Philseok Lee. (2020), It is 24 24-item self-report inventory. It is rated according to a 5-point Likert scale.
3) The Warwick-Edinburgh Mental Well-being Scale (WEMWBS) is a 14-item questionnaire designed to measure mental well-being in the general population n; it is rated according to a 5-point Likert scale.

3.4. Variables of the study

1) Parental Stress
2) Financial Stress
3) Mental Wellbeing
4) Demographic / Grouping Variables: LSA Status (With LSA, Without LSA, School LSA, Own paid LSA)

3.5. Administration

Self-completion or administered as an interview. The scale is relatively short and easy, and can be completed in less than 10 minutes. Assured them data will be confidential

3.6. Sample

100 Indian expatriate parents of children with Special Needs (SOD) in the UAE

3.7. Sampling technique

The data was collected through a survey method, and a purposive sampling technique was used to select the participants.

3.8. Statistical tools and analysis used

The present study employed a range of statistical tools to analyze the data using SPSS and Jamovi software. Descriptive statistics were used to summarize and explore the levels of parental stress, financial stress, and Mental well-being among Indian expatriate parents of children with special needs in the UAE. To examine the relationships among key variables, Pearson's correlation analysis was conducted. To explore the mediating role of financial stress in the relationship between parental stress and mental well-being, a mediation analysis was performed. Cross-tabulation analysis was used to examine the reciprocal relationships between variables and to identify potential interaction effects. Additionally, an independent samples t-test was employed to assess the effects of Learning Support Assistant (LSA) availability on parental stress levels and Financial Stress. These statistical methods provided a comprehensive understanding of the complex interactions between the variables under investigation

4. Results & discussions

The collected data were analyzed using descriptive statistics, correlation analysis, mediation analysis, and independent samples t-tests to examine relationships among parental stress, financial stress, and psychological well-being. Additional analyses were conducted to explore differences based on LSA status and the financial implications of employing a personal Learning Support Assistant.

Table 1: Descriptive Statistics for Parental Stress, Financial Stress, and Mental Well-being among Parents

Variables	N	Mean	Std. deviation
Parental Stress		41.80	18.50
Financial Stress	100	59.65	24.69
Mental wellbeing		37.73	9.92

Table 1 presents the mean and standard deviation scores for Parental Stress, Financial Stress, and Mental Well-being among a sample of 100 parents. The mean Parental Stress score was 41.80 with a standard deviation of 18.50, indicating variability in stress levels experienced by parents. The mean Financial Stress score was 59.65 (SD = 24.69), reflecting a wider range of financial stress across the sample. The mean score for Mental well-being was 37.73, with a standard deviation of 9.92, showing relatively less variation compared to the stress variables. These descriptive statistics provide a general overview of the sample's responses, with further analysis to categorize the levels of stress and well-being conducted separately using empirical classification methods

Table 2: Level of Parental Stress, Financial Stress, and Mental Well-being among Parents.

Variables	Low No/Percentage	Medium No/Percentage	High No/Percentage
Parental Stress	12	63	25
Financial Stress	14	69	17
Mental wellbeing	16	72	12

Table 2 shows the number and percentage of participants classified into Low, Medium, and High levels of Parental Stress, Financial Stress, and Mental Well-being. The classification was done using the empirical method, based on the Mean (M) and Standard Deviation (SD) of each variable. Specifically, scores were categorized as Low: scores below M - 1 SD, Medium: scores between M - 1 SD and M + 1 SD, and High: scores above M + 1 SD

This method allows for a data-driven classification that reflects the distribution of scores within the sample. Since the sample size was N = 100, the frequency and percentage values are identical. According to the results, most parents fell within the medium range for all three variables: 63% for Parental Stress, 69% for Financial Stress, and 72% for Mental Well-being. A smaller proportion of parents were classified as experiencing High Parental Stress (25%) and High Financial Stress (17%), while only 12% reported High levels of Mental Well-being. These distributions indicate variability in stress and well-being among the participants, with most falling within average ranges

Table 3: Correlation Matrix

Variables	Parental Stress	Financial Stress	Mental wellbeing
Parental Stress	1	0.623	-0.320
Financial Stress	0.623	1	-0.540
Mental wellbeing	-0.320	-0.540	1

As per Table 3, the correlation analysis revealed significant relationships among parental stress, financial stress, and Mental well-being. A moderate to strong positive correlation was found between parental stress and financial stress (r = 0.623), indicating that as financial stress increases, parental stress tends to increase as well. This suggests that financial challenges may be closely linked to stress experienced in the parenting role. Parental stress was also negatively correlated with Mental well-being (r = -0.320), implying that higher levels of stress in parenting are associated with lower levels of Mental well-being. Additionally, a moderate to strong negative correlation was observed between financial stress and Mental well-being (r = -0.540), indicating that greater financial stress is linked to reduced emotional and psychological health. These findings highlight the interconnected nature of financial and parental stress and their collective impact on Mental well-being.

Table 4: Asymmetrical Relationship between Financial Stress and Parental Stress

	Financial Stress Levels	Low	Medium	High	Total
Parental Stress	Low	6	5	1	12
	Medium	8	51	4	63
	High	0	13	12	25
	Total	14	69	17	100

According to Table 4, the table shows a notable connection between financial stress and parental stress, but the link is stronger in one direction. The data show that high levels of financial stress are closely linked with high parental stress, with 12 out of 17 individuals

(70.6%) experiencing high financial stress also reporting high parental stress, compared to 0 out of 14 (0%) among those with low financial stress. In the reverse direction, 12 out of 25 individuals (48.0%) with high parental stress also had high financial stress, compared to only 1 out of 12 (8.3%) among those with low parental stress and 4 out of 63 (6.3%) among those with medium parental stress. This difference in conditional percentages reflects an asymmetrical relationship, asymmetrical relationship means the strength or direction of the association is not the same when viewed from both variables, where financial stress appears to be a slightly stronger predictor of parental stress than the other way around. The strongest contributions to this pattern come from the over-representation of low-low cases (6 cases observed) and high-high cases (12 cases observed), alongside an under-representation of medium parental stress-high financial stress combinations (4 cases observed). Overall, the findings suggest that financial stress plays a more dominant role in the stress dynamic, with higher financial strain being strongly associated with elevated parental stress, while low financial stress appears to act as a protective factor.

Table 5: Asymmetrical Relationship between Parental Stress and Mental Well-being

	Mental wellbeing			
	Levels	Low	Medium	High	Total
Parental Stress	Low	2	7	3	12
	Medium	6	50	7	63
	High	8	15	2	25
	Total	16	72	12	100

The cross-tabulation in Table 5, the analysis of the relationship between mental well-being and parental stress shows a clear, asymmetrical association, where mental well-being appears to have a stronger link to parental stress than the reverse. Among those with low mental well-being, 8 out of 16 individuals (50.0%) reported high parental stress, compared to 15 out of 72 (20.8%) among those with medium mental well-being, and only 2 out of 12 (16.7%) among those with high mental well-being. Looking from the other perspective, among those with high parental stress, 8 out of 25 individuals (32.0%) had low mental well-being, compared to only 2 out of 25 (8.0%) with high mental well-being. The most notable contributors to this pattern are the higher-than-expected frequency of low mental well-being–high parental stress combinations (8 cases) and medium mental well-being–medium parental stress combinations (50 cases), along with the lower-than-expected frequency of low mental well-being–low parental stress cases (2 cases). Overall, the findings suggest that lower mental well-being is strongly associated with higher parental stress, while higher mental well-being appears to be linked with a reduced likelihood of experiencing elevated parental stress.

Table 6: Asymmetrical Relationship between Financial Stress and Mental Well-being

	Mental wellbeing			
	Levels	Low	Medium	High	Total
Financial Stress	Low	1	9	4	14
	Medium	4	57	8	69
	High	11	6	0	17
	Total	16	72	12	100

In Table 6, the relationship between financial stress and mental well-being displays a clear, asymmetrical pattern, where financial stress appears to have a stronger association with mental well-being than the reverse. Among those with high financial stress, 11 out of 17 individuals (64.7%) had low mental well-being, while none (0 out of 17) had high mental well-being. In contrast, those with low financial stress showed a more favorable distribution, with only 1 out of 14 individuals (7.1%) having low mental well-being and 4 out of 14 (28.6%) having high mental well-being. From the opposite perspective, among individuals with low mental well-being, 11 out of 16 (68.8%) had high financial stress, compared to only 4 out of 16 (25.0%) with medium financial stress and 1 out of 16 (6.3%) with low financial stress. The most prominent contributions to this association come from the higher-than-expected frequency of high financial stress–low mental well-being combinations (11 cases) and medium financial stress–medium mental well-being combinations (57 cases), alongside the lower-than-expected frequency of high financial stress–high mental well-being combinations (0 cases). Overall, the findings indicate that high financial stress is strongly linked to poor mental well-being, while low financial stress is more often associated with better mental well-being.

Table 7: Mediation Analysis of the Effect of Mental Well-being on Parental Stress Via Financial Stress

Effect	Estimate	SE	Z	p
Indirect	−0.6744	0.172	−3.928	< .001
Direct	0.0893	0.22	0.406	0.685
Total	−0.5851	0.203	−2.878	0.004

In Table 7, the results of the mediation analysis revealed that the indirect effect of wellbeing on parental stress through financial stress was statistically significant ($\beta = -0.6744$, $p < .001$). This finding indicates that individuals with higher levels of well-being experience lower financial stress, which subsequently leads to lower levels of parental stress. In contrast, the direct effect of wellbeing on parental stress was not statistically significant ($\beta = 0.0893$, $p = 0.685$), suggesting that wellbeing does not directly influence parental stress once financial stress is considered. Importantly, the total effect of wellbeing on parental stress was significant ($\beta = -0.5851$, $p = 0.004$), demonstrating that overall, wellbeing is meaningfully related to parental stress. However, this relationship is entirely accounted for by its indirect effect through financial stress. Taken together, these findings support a full mediation model, in which financial stress fully mediates the relationship between well-being and parental stress. In practical terms, these results highlight that efforts to improve parental well-being may be most effective in reducing stress when they also target financial stressors. Enhancing well-being alone may not be sufficient to lower parental stress unless accompanied by interventions aimed at alleviating financial burdens. This is particularly relevant in populations experiencing economic hardship or caring for children with special needs, where financial concerns may significantly amplify parental stress.

Table 8: LSA Status and Parental Stress

Group	N	Mean	Mean Difference	t-value	p-value
Without LSA	81	41.11			
With LSA	19	44.74	-3.63	-0.78	0.44

An independent samples t-test was conducted to compare Parental stress scores between parents without children under Learning Support Assistance (LSA) and parents with children under LSA. Table 8 shows that parents without LSA (n = 81) had a mean score of 41.11, while parents with LSA (n = 19) had a slightly higher mean of 44.74. However, the mean difference of -3.63 was not statistically significant, t (22.03) = -0.61, p = .547. These findings suggest that there is no significant difference in Parental stress scores between parents based on LSA status.

Table 9: Financial Stress among Parents with Children under Own LSA and Without Own LSA.

Group	N	Mean	Mean Difference	t-value	p-value
Without Own LSA	93	56.54	22.46		
With Own LSA	7	101	13.32	-8.02	< .001

As per Table 9, an independent samples t-test was conducted to compare financial stress between two groups of parents: those without their own Learning Support Assistant (LSA) (n = 93) and those with their own LSA (n = 7). The mean financial stress score for parents without their own LSA was 56.54 (SD = 22.46), while parents with their own LSA had a significantly higher mean of 101.00 (SD = 13.32). The mean difference of -44.46 was found to be statistically significant, t (8.82) = -8.02, p < .001. This suggests that parents who employ their own LSA experience significantly greater financial stress than those who do not

4.1. Results summary

The study found that most parents experienced medium levels of parental stress (63%), financial stress (69%), and Mental well-being (72%). Financial stress was moderately correlated with parental stress (r = 0.623) and negatively correlated with Mental well-being (r = -0.540). Well-being also negatively correlated with parental stress (r = -0.320). Mediation analysis showed that financial stress fully mediated the relationship between well-being and parental stress. While LSA status did not significantly affect parental stress (p = .547), parents who hired their own LSA faced significantly higher financial stress (p < .001), emphasizing the financial burden of private support. A comprehensive summary of all hypothesis testing outcomes is presented in Table 10

Table 10: Summary of Hypothesis Testing

Hypothesis	Result	Decision
H1: There is a significant positive correlation between parental stress and financial stress.	r = 0.623, p < .01	Accepted
H2: There is a significant negative correlation between parental stress and Mental well-being.	r = -0.320, p < .01	Accepted
H3: There is a significant negative correlation between financial stress and Mental well-being.	r = -0.540, p < .01	Accepted
H4: Financial stress mediates the relationship between Mental well-being and parental stress.	Indirect effect significant (β = -0.6744, p < .001); direct effect not significant	Accepted
H5: Parents of children with LSA report higher parental stress compared to those without LSA.	p = .547 (not significant)	Rejected
H6: Parents who employ their own LSA experience higher financial stress compared to those who do not.	p < .001 (significant)	Accepted

5. Conclusion and implications

This study, conducted among parents residing in the United Arab Emirates (UAE), provides important insights into the interplay between parental stress, financial stress, and Mental well-being, particularly in the context of raising children with Special Educational Needs and Disabilities (SEND). The findings reveal that financial stress plays a mediating role between psychological well-being and parental stress, highlighting how economic strain significantly amplifies the emotional burden of parenting, and most parents experienced medium levels of parental stress, financial stress, and Mental well-being.

The findings carry important implications for social and emotional health, as prolonged stress can erode interpersonal relationships, reduce social engagement, and impair overall life satisfaction. Parents experiencing ongoing strain may withdraw from friends and community networks, leading to isolation and diminished access to informal support systems. Emotionally, chronic stress can heighten irritability, lower resilience, and contribute to feelings of hopelessness or burnout. Addressing these challenges requires strengthening community-based resources, peer support groups, and culturally responsive counseling services to help parents of children with disabilities maintain strong social ties and emotional balance, especially in expatriate settings where extended family support may be limited.

The outcomes of this study also point to direct significance for health sciences because the effects of stress are not limited to emotional well-being. Extended exposure to high stress levels has been linked to changes in immune functioning and increased risk of chronic illnesses. For example, caregivers under continuous strain may face a higher likelihood of developing hypertension, cardiovascular problems, or metabolic disorders such as type 2 diabetes. Placing our findings within this biological and clinical framework highlights the need for multidisciplinary approaches that integrate mental health services with routine physical healthcare for parents of children with disabilities, particularly in expatriate contexts.

In the UAE, inclusive education policies require that all students of determination (SOD) be accommodated in mainstream schools. These schools follow a better support system and typically provide the Inclusion department with a Head of Inclusion, special educators, school counselors, and LSAs. Depending on the level of support required (level 1, 2, or 3), schools may assign a Learning Support Assistant (LSA) to the child. However, when school-provided LSAs are unavailable or insufficient, the responsibility of appointing a private LSA often falls on the parents. This leads to significant financial implications, especially for expatriate families already facing the high cost of living and limited access to subsidized support services.

The study found that parents who employ their own LSA experience substantially higher levels of financial stress, which in turn impacts their overall psychological well-being and parental functioning. While parental stress was not significantly different based solely on LSA status, the financial burden of privately funding support services emerged as a critical factor affecting family well-being.

The study highlights key implications for policy, schools, and family support. Schools should strengthen internal support systems to minimize reliance on privately hired Learning Support Assistants (LSAs), particularly for Level 2 and Level 3 Students of Determination (SOD). Adequate staffing of trained special educators, flexible LSA allocation, and clear guidelines for support services can help meet student needs without overburdening families financially. For expatriate parents facing additional challenges such as financial strain, cultural adjustment, and limited public welfare, schools should provide accessible counseling, psychological support, and orientation programs on inclusive education practices in the UAE. Furthermore, improving parental well-being requires integrating mental health initiatives with financial relief strategies, such as school-sponsored LSA funding and external subsidies.

Looking ahead, future research could use longitudinal studies to follow parents over time, helping to understand how stress, coping, and well-being change and how interventions work in the long run. This would also make it possible to measure the lasting impact of support programs such as teletherapy or financial counseling. New technologies could also be explored, including AI-based stress tracking tools, virtual reality programs for relaxation, or online peer support platforms that are adapted to different cultural needs. Comparative studies involving other expatriate communities, such as Filipino, Pakistani, or Western groups, could show whether cultural background changes the way financial pressure, social support, and mental health are linked. This wider approach would make the results more relevant across the UAE's diverse population and help in creating targeted and inclusive support services

5.1. Limitations and future directions

- The sample size (N = 100) provided a sufficient basis for initial mediation analysis, though a larger sample could further strengthen the robustness and applicability of the findings.
- Purposive sampling allowed for targeted participation of relevant respondents; however, including a more diverse and representative pool of Indian expatriate parents in future studies could enhance generalizability.
- The analysis of Learning Support Assistant (LSA) status offered valuable insights, although the small subgroup of parents employing their own LSA (n = 7) limits statistical comparisons. Expanding this subgroup in future research could yield more definitive conclusions.

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