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Parental Stress and Its Association with Demographic Characteristics among Mothers of Children Under Six Years.

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Abstract

Introduction: Children under the age of 6 require significant attention and care, which can lead mothers to parental stress if they struggle to balance caregiving demands with available resources. The demographic characteristics of mothers play a crucial role in the level of stress they face. **Aim:** To determine the level of parental stress among mothers of children under 6 years old and investigate potential differences in parental stress based on their demographic characteristics. **Methods:** A descriptive cross-sectional study was conducted in three primary healthcare centers in Tartous, Syria (Al-Hussein, Al-Qadmous, and Al-Tawahin) during March-April 2024. A convenience sample of 150 mothers of children under six participated. Data were collected using a sociodemographic questionnaire and the Parental Stress Scale (Berry & Jones, 1995). **Results:** The study revealed a low level of parental stress among mothers in the sample. Significant statistical differences ($P < 0.05$) were found in parental stress based on variables such as social status, number of children in the family, income, and health center, type of house, employment, husband age, and husband presence at home. **Recommendations:** providing social and psychological support for mothers, as well as offering child and family support services in healthcare centers. It also emphasized the importance of raising awareness among mothers about stress reduction techniques and promoting mental health, developing educational programs to better deal with daily challenges was also highlighted. And enhancing family communication and focusing on self-care for mothers. Furthermore, conducting future studies on a larger and more comprehensive sample.

Keywords: Parental stress, mothers, demographic, children, Healthcare.

1. Introduction

Family life is often exposed to numerous stressful events and circumstances that may threaten the health of its members, endanger family stability, and disrupt overall balance. Such stressors can exert negative effects on various aspects of individual well-being, leading to both psychological and physical health problems, and may result in or accompany a wide range of illnesses and social difficulties. Among family members, mothers are particularly vulnerable to stress, as they spend the most time with and provide the greatest care for their children. These pressures frequently manifest as parental stress [1].

What makes parental stress a major concern is not only the severity of its consequences but also its prevalence. Although lifetime prevalence rates are not well documented, estimates from European countries suggest that at least 5% of parents experience parental stress, with reported prevalence ranging between 1% and 30%. However, it remains unclear whether these rates vary globally and, if so, to what extent cultural factors may explain differences in parental stress across countries [2].

Several studies have described stress as a negative emotional experience that induces physiological, biochemical, and behavioral changes in individuals. Stress typically arises when environmental demands exceed perceived individual resources [3,4]. In the context of motherhood, parental stress refers to physical and emotional exhaustion resulting from excessive demands and challenges associated with childcare and household responsibilities.

It often leads to an imbalance between requirements and available capacities, leaving mothers feeling unable to cope with additional strain. This is expressed through psychological and physiological adaptive responses, manifesting as physical, emotional, and behavioral symptoms that impair their parental role [5,6].

Determinants of parental stress include parental characteristics, employment, environmental conditions, marital relationships, daily hassles, life events, child-related factors, and available social resources such as social support, parental cooperation, parenting skills, and material resources. Based on this, several demographic indicators have been identified as predictors of maternal parental stress, including income, educational level, marital status (widowed, divorced, or married), place of residence, maternal age, and the number of children under care [6–8].

Parental stress in mothers may manifest through physical symptoms such as tension headaches, unexplained pain, lower back pain, shortness of breath, tachycardia, and sleep disturbances. Chronic parental stress can contribute to serious health conditions such as hypertension, diabetes, and cardiovascular diseases, as well as hormonal and immune disorders. Psychological and behavioral symptoms may include persistent preoccupation, rushing tasks, frequent complaints about work, dissatisfaction, low performance, fatigue, and lack of energy. Emotional consequences such as depression, irritability, low self-esteem, sadness, and helplessness may develop, and in severe cases may progress to nervous breakdown [9,10].

Several studies have assessed parental stress among mothers and its relationship with demographic and personal factors. For example, a study in the United Kingdom (Parkes et al., 2015) found that mothers with lower educational levels reported higher levels of parental stress compared with those with higher education [11]. In Kenya, Okelo et al. (2023) reported higher parental stress among urban mothers than rural mothers [12]. In China, Qian et al. (2021) observed greater parental stress among mothers with two children compared to those with only one [13]. Similarly, Scheibner et al. (2024) in Germany found that single mothers experienced significantly higher parental stress than non-single mothers, and that mothers with higher educational qualifications also reported elevated stress levels [14].

Motherhood is a demanding role that requires considerable support due to the stresses it entails. In this context, nursing professionals play a vital role by providing mothers with health information, professional guidance, and psychosocial support through maternal and child health services, postnatal care, home visits, risk assessment for stress, and linkage to community resources [15].

Mothers of children under six years face significant challenges in childcare and managing the demands of motherhood, which may exceed their available resources. This can lead to psychological and physical stress, negatively impacting their health and daily functioning. As young children are highly dependent on maternal care, their well-being is closely tied to maternal resilience. Therefore, it is crucial to assess maternal parental stress and identify its demographic predictors. The present study aims to examine the relationship between parental stress and demographic characteristics among mothers of children under six years, with the goal of informing early intervention programs and guiding nursing care efforts for families at higher risk of maternal parental stress.

1.1 Significance of the Study

The significance of this study lies in its contribution to understanding parental stress among mothers of children under six, a vulnerable group facing increasing challenges due to demanding childcare responsibilities and difficult living conditions. By examining the relationship between parental stress and maternal demographic characteristics, the study enriches the scientific literature in psychosocial and nursing care, particularly within the under-researched Syrian context. Practically, the findings can guide the development of targeted support programs, early interventions, and nursing strategies to reduce maternal stress, enhance maternal and child healthcare services, and raise community awareness about the importance of supporting mothers to promote family well-being.

1.2 Research Objective

This study aims to assess the level of parental stress among mothers of children under six years of age and to investigate potential differences in parental stress in relation to their demographic characteristics.

2. Materials and Methods / Methodology

2.1 Study Design:

A descriptive cross-sectional design was employed to assess the level of parental stress among mothers and its association with selected sociodemographic variables.

2.2 Study Setting and Duration:

The study was conducted in three primary healthcare centers within Tartous Governorate, Syrian Arab Republic: Al-Hussein Health Center in Tartous city, and both Qadmous and Tawahin Health Centers in the city of Qadmous. These centers were chosen as they provide maternal and child healthcare services to a large and diverse population, which facilitated access to an adequate number of eligible participants. Data collection was carried out over a two-month period, specifically during March and April 2024.

2.3 Study Sample:

The study sample comprised 150 mothers who were attending the selected healthcare centers for routine maternal or child health services during the study period. A convenient sampling method was applied, whereby 50 mothers were recruited from each center. The purposive selection of this sample was justified by the feasibility of access to participants, time constraints, and the study's objective to capture a representative picture of mothers utilizing primary healthcare services in these settings.

2.4 Inclusion Criteria:

Mothers attending the selected primary healthcare centers during the study period, Mothers with children below five years of age, and mothers who agreed to participate and provided informed consent. Exclusion Criteria: Mothers with severe physical or mental health conditions that could interfere with their ability to complete the interview or questionnaire, mothers who declined to participate or withdrew their consent at any stage of data collection, and Visitors or caregivers other than the biological mothers of the children.

2.5 Research Instruments:

Data for the present study were collected using the following tools:

2.5.1 First Instrument:

A structured questionnaire developed by the researcher to collect demographic characteristics of the participants, including: mother's age, age at marriage, husband's age, husband's occupation, marital status, educational level, number of children in the family, number of children under six years of age, father's presence at home, household income, place of residence, type of housing, and mother's employment status.

2.5.2 Second Instrument:

Table 1 shows the Parental Stress Scale developed by Berry and Jones (1995) [16]. This instrument has demonstrated good validity and reliability, with a Cronbach's alpha of 0.83. The instrument was translated into Arabic and adapted to the Syrian dialect. The accuracy of translation and cultural appropriateness were verified by three experts from the Faculty of Nursing, who confirmed its clarity and suitability for the study population. It assesses variations in parental stress levels, where higher scores are associated with reduced parental sensitivity to the child, poorer child behavior, and lower quality of the parent-child relationship. The scale consists of 18 items, each rated by the participating mothers using a 5-point Likert scale as follows: (5 = Strongly Agree, 4 = Agree, 3 = Unsure, 2 = Disagree, 1 = Strongly Disagree) for negatively worded items (items 3, 4, 9, 10, 11, 12, 13, 14, 15, 16), which indicate the presence of stress. For positively worded items (items 1, 2, 5, 6, 7, 8, 17, 18), the scoring is reversed (1 = Strongly Agree, 2 = Agree, 3 = Unsure, 4 = Disagree, 5 = Strongly Disagree). Accordingly, the total score ranges from 18 to 90, with higher scores reflecting higher levels of parental stress. Based on the arithmetic mean of participants' responses, three levels of parental stress were identified: low, moderate, and high.

Table 1. the parental scale and the score range

| parental stress level | Score Range | Interpretation | |
|-----------------------|-------------|----------------|---|
| Low | 2.32 – 1 | 41 - 18 | Indicates minimal parental stress; the mother experiences relatively low levels of stress in parenting. |
| Moderate | 3.66 – 2.33 | 65 - 42 | Indicates moderate parental stress; the mother experiences noticeable but manageable stress in parenting. |
| High | 5 - 3.67 | 90 - 66 | Indicates high parental stress; the mother experiences significant stress that may negatively affect parenting and parent-child interactions. |

2.6 Ethical Considerations:

Ethical approval was obtained from the relevant health authorities prior to the commencement of the study. Verbal informed consent was obtained from all participants after explaining the study objectives, significance, and voluntary nature of participation. Participants were assured of confidentiality, anonymity, and their right to withdraw at any stage without repercussions.

2.7 Pilot Study:

A pilot test was conducted on 15 mothers outside the main sample to ensure clarity, feasibility, and cultural relevance of the instrument. The results confirmed that the questionnaire was comprehensible and applicable without the need for modifications.

2.8 Data Collection Procedure:

Data were collected directly by the researcher through self-administered questionnaires distributed to mothers attending the healthcare centers. Each questionnaire required approximately 5–10 minutes to complete. The researcher was present at all times to provide clarification and support to participants when needed.

2.9 Data Analysis

Data were coded and entered into the Statistical Package for Social Sciences (SPSS) for analysis. Results were summarized using descriptive statistics, including frequencies (N), means (M), standard deviations (SD), and percentages (%). Inferential statistics were employed to test associations between parental stress and sociodemographic variables:

- Independent sample t-tests were used for dichotomous variables.
- One-way ANOVA was applied for variables with more than two categories.

A significance level of $p \leq 0.05$ was considered statistically significant (*), while $p \leq 0.01$ indicated a highly significant association (**).

3. Results and Discussion

Table 2. Distribution of Mothers by Demographic Characteristics (N = 150)

| Variable | Category | N | % |
|--------------------|----------------------|-----|------|
| Age of mother | 18–25 | 15 | 10.0 |
| | 26–35 | 52 | 34.7 |
| | 36–45 | 58 | 38.7 |
| | >45 | 25 | 16.6 |
| Age at marriage | <18 | 2 | 1.3 |
| | 18–25 | 100 | 66.7 |
| Marital status | 26–35 | 48 | 32.0 |
| | Married | 136 | 90.7 |
| | Widowed | 5 | 3.3 |
| Educational level | Divorced | 9 | 6.0 |
| | Primary | 8 | 5.3 |
| | Preparatory | 37 | 24.7 |
| | Secondary | 57 | 38.0 |
| Number of children | University and above | 48 | 32.0 |
| | 1 | 30 | 20.0 |
| | 2 | 44 | 29.3 |
| | 3 | 76 | 50.7 |
| Children <6 years | 1 | 101 | 67.3 |
| | 2 | 40 | 26.7 |
| | 3 | 9 | 6.0 |
| Household income | Adequate | 57 | 38.0 |
| | Barely adequate | 67 | 44.7 |
| | Inadequate | 26 | 17.3 |
| Housing type | Rented | 39 | 26.0 |
| | Owned | 111 | 74.0 |
| Occupation | Private job | 32 | 21.3 |
| | Housewife | 66 | 44.0 |
| | Employee | 46 | 30.7 |
| | Self-employed | 6 | 4.0 |

Table 2 presents the distribution of mothers in the study sample according to their demographic characteristics. The highest proportion of mothers (38.7%) were aged 36–45 years, and approximately two-thirds (66.7%) had married between 18–25 years of age. Most participants (90.7%) were married, and 38.0% had completed secondary education. Half of the mothers (50.7%) had three children, while 67.3% had at least one child under six years of age. Regarding household income, 44.7% reported that it barely met their needs. Mothers were equally distributed across the three health centers (33.3% each), and 74% lived in owned houses. The largest occupational group was housewives (44.0%).

Table 3. Distribution of Mothers by Husbands’ Demographic Characteristics (N = 150)

| Variable | Category | N | % |
|--------------------------|---------------|----|------|
| Husband’s age | 18–25 | 6 | 4.0 |
| | 26–35 | 31 | 20.7 |
| | 36–45 | 55 | 36.7 |
| | >45 | 58 | 38.6 |
| Husband presence at home | Not present | 20 | 13.3 |
| | Daily | 94 | 62.7 |
| | Weekly | 33 | 22.0 |
| | Monthly | 3 | 2.0 |
| Husband occupation | Private job | 47 | 31.3 |
| | Employee | 53 | 35.4 |
| | Self-employed | 50 | 33.3 |

Table 3 shows the distribution of mothers according to their husbands’ demographic characteristics. The highest proportion of husbands (38.6%) were aged over 45 years. Most husbands (62.7%) were present at home daily. The largest occupational group among husbands was employees (35.4%).

Table 4. Mean Scores and Levels of Responses on the Parental Stress Scale (N = 150)

| Item | Statement | M | SD | Rank | Level |
|-------|---|------|-------|------|----------|
| 1 | I am happy with my role as a mother. | 1.45 | 0.597 | 15 | Low |
| 2 | There is nothing I would not do for my child(ren) if necessary. | 1.69 | 0.743 | 12 | Low |
| 3 | Sometimes, caring for my child(ren) takes more time and energy than I have. | 3.27 | 1.061 | 2 | Moderate |
| 4 | I sometimes worry whether I am doing enough for my child(ren). | 3.49 | 0.809 | 1 | Moderate |
| 5 | I feel close to my child(ren). | 1.62 | 0.652 | 13 | Low |
| 6 | I enjoy spending time with my child(ren). | 1.58 | 0.678 | 14 | Low |
| 7 | My child(ren) is/are an important source of emotional support to me. | 1.35 | 0.613 | 18 | Low |
| 8 | Having children gives me a more positive outlook for the future. | 1.86 | 1.030 | 11 | Low |
| 9 | My child is the main source of stress in my life. | 2.28 | 0.928 | 9 | Low |
| 10 | Having children leaves little time and flexibility in my life. | 2.89 | 1.018 | 5 | Moderate |
| 11 | Having children has been a financial burden. | 2.91 | 1.223 | 4 | Moderate |
| 12 | Balancing different responsibilities due to my child(ren) is difficult. | 2.99 | 1.099 | 3 | Moderate |
| 13 | My child(ren)’s behavior is often embarrassing or stressful for me. | 2.23 | 1.136 | 10 | Low |
| 14 | If I had to do it again, I might decide not to have children. | 2.37 | 1.328 | 8 | Moderate |
| 15 | I feel exhausted by the responsibility of being a parent. | 2.53 | 1.219 | 7 | Moderate |
| 16 | Having children means few choices and less control over my life. | 2.76 | 1.157 | 6 | Moderate |
| 17 | I am satisfied as a mother. | 1.41 | 0.677 | 17 | Low |
| 18 | I find my child(ren) enjoyable. | 1.43 | 0.638 | 16 | Low |
| Total | | 2.23 | 0.598 | | Low |

Table 4 presents the mean scores, standard deviations, and levels of responses for each item of the Parental Stress Scale. The overall mean score was 2.23 (SD = 0.598), indicating a low level of parental stress among the mothers. The highest stress was reported for the item “I sometimes worry whether I am doing enough for my child(ren)” (M = 3.49, moderate), followed by “Sometimes, caring for my child(ren) takes more time and energy than I have” (M = 3.27, moderate). Conversely, the lowest stress levels were observed in “My child(ren) is/are an important source of emotional support to me” (M = 1.35) and “I am satisfied as a mother” (M = 1.41).

Table 5. Distribution of Mothers by Parental Stress Level (N = 150)

| Stress Level | N | % |
|--------------|----|------|
| High | 5 | 3.3 |
| Moderate | 53 | 35.3 |
| Low | 92 | 61.3 |

Table 5 shows the distribution of mothers according to parental stress levels. Most mothers (61.3%) exhibited low stress, 35.3% had moderate stress, and only 3.3% had high stress.

Table 6. Differences in Parental Stress Scores Among Mothers According to Their Demographic Characteristics (N = 150)

| Demographic Variable | Category | N | M | SD | Test Value (T/F) | P Value |
|----------------------|----------|----|-------|--------|------------------|---------|
| | 18–25 | 15 | 36.33 | 12.028 | F | 0.381 |

| | | | | | | | |
|--------------------|-----|--------------------|-----|-------|--------|-------|---------|
| Mother's (years) | Age | 26–35 | 52 | 41.50 | 11.442 | 1.030 | |
| | | 36–45 | 58 | 40.34 | 11.514 | | |
| | | >45 | 25 | 38.84 | 5.201 | | |
| Age at Marriage | | <18 | 7 | 42.00 | 0.000 | F | 0.950 |
| | | 18–25 | 95 | 40.19 | 11.960 | | |
| | | 26–35 | 48 | 39.81 | 8.113 | | |
| Marital Status | | Married | 136 | 38.91 | 9.696 | F | 0.000** |
| | | Widowed | 5 | 40.40 | 8.050 | | |
| | | Divorced | 9 | 57.78 | 12.804 | | |
| Educational Level | | Primary | 8 | 35.75 | 8.615 | F | 0.322 |
| | | Preparatory | 37 | 38.14 | 7.583 | | |
| | | Secondary | 57 | 40.93 | 10.730 | | |
| | | University & above | 48 | 41.33 | 12.901 | | |
| Number of Children | of | 1 | 30 | 34.90 | 9.470 | F | 0.006** |
| | | 2 | 44 | 42.84 | 12.544 | | |
| | | 3 | 76 | 40.55 | 9.482 | | |
| Children <6 years | | 1 | 101 | 39.40 | 11.154 | F | 0.508 |
| | | 2 | 40 | 41.73 | 9.969 | | |
| | | 3 | 9 | 40.67 | 9.937 | | |
| Household Income | | Adequate | 57 | 35.25 | 8.673 | F | 0.000** |
| | | Barely adequate | 67 | 39.94 | 7.580 | | |
| | | Inadequate | 26 | 51.12 | 13.802 | | |
| Health Center | | Al-Hussein center | 50 | 42.49 | 6.920 | F | **0.009 |
| | | Qadmous | 50 | 37.09 | 12.975 | | |
| | | Tawahin | 50 | 42.40 | 9.334 | | |
| Housing Type | | Rented | 39 | 44.77 | 12.038 | T | **0.001 |
| | | Owned | 111 | 38.45 | 9.820 | | |
| Occupation | | Private job | 32 | 37.72 | 10.869 | F | **0.000 |
| | | Housewife | 66 | 36.89 | 8.332 | | |
| | | Employee | 46 | 45.26 | 11.902 | | |
| | | Self-employed | 6 | 48.33 | 6.713 | | |

*Note: T = independent samples t-test; F = One-Way ANOVA; *P < 0.01

Table 6 presents differences in parental stress based on mothers' demographic characteristics. Statistically significant differences were observed for marital status (P = 0.000), number of children (P = 0.006), household income (P = 0.000), health center (P = 0.009), housing type (P = 0.001), and occupation (P = 0.000). Mothers who were divorced, had two children, had inadequate income, lived in rented houses, visited Al-Hussein Health Center, or were self-employed reported higher parental stress. No significant differences were found for mother's age, age at marriage, education level, or number of children under six years (P > 0.05).

Table 7. Differences in Parental Stress Scores Among Mothers According to Husbands' Demographic Characteristics (N = 150)

| Demographic Variable | Category | N | M | SD | Test Value (F) | P Value |
|--------------------------|---------------|----|-------|--------|----------------|---------|
| Husband's Age (years) | 18–25 | 6 | 32.33 | 9.973 | F | 0.038* |
| | 26–35 | 31 | 39.39 | 10.557 | | |
| | 36–45 | 55 | 42.96 | 13.279 | | |
| | >45 | 58 | 38.55 | 7.177 | | |
| Husband Home Presence at | Not present | 20 | 46.40 | 14.273 | F | 0.009** |
| | Daily | 94 | 38.06 | 8.281 | | |
| | Weekly | 33 | 42.12 | 13.249 | | |
| | Monthly | 3 | 39.33 | 6.351 | | |
| Husband Occupation | Private job | 47 | 42.57 | 12.144 | F | 0.161 |
| | Employee | 53 | 38.83 | 10.323 | | |
| | Self-employed | 50 | 39.10 | 9.603 | | |

*Note: F = One-Way ANOVA; *P < 0.05, **P < 0.01

Table 7 shows differences in parental stress based on husbands' demographic characteristics. Statistically significant differences were found for husband's age (P = 0.038) and husband's presence at home (P = 0.009). Higher parental stress was reported among mothers whose husbands were aged 36–45 years or were not present at home. No significant differences were observed for husband's occupation (P > 0.05).

4. Discussion

The findings of the present study revealed that the majority of mothers experienced low levels of parental stress. This result may be attributed to the demographic characteristics of the mothers, such as being predominantly housewives with secondary education and relatively stable family structures. In addition, the continuous presence of the husband provided support to the mothers and alleviated household burdens. The results also indicated that the primary sources of stress, as measured by the Parental Stress Scale, were mothers' feelings of uncertainty about whether they were doing enough for their child, and the perception that childcare consumed more time and energy than they possessed. This may be explained by the fact that child-rearing is a mother's foremost concern. Considering the rapid developmental changes of children, coupled with financial constraints that are barely sufficient for most participants, mothers reported heightened anxiety about their parenting adequacy, fears of making mistakes that could affect their child's development, and overall exhaustion of their time and energy.

These findings are consistent with the study by Venkatesh et al. (2014) in the United States, which reported that the majority of adolescent mothers experienced low parental stress, with one quarter reporting high stress levels [17]. However, they are inconsistent with Caley (2012), also in the United States, which found that more than one-third of participating mothers suffered from stress and tension [18].

The current study also revealed that parental stress was higher among mothers with two children compared to those with one or three children. In the case of an only child, mothers tend to be overly attentive and anxious, whereas raising three children places significant financial and caregiving demands, especially when household income is insufficient. Financial strain associated with childrearing may further induce guilt related to spending and leisure, thereby elevating parental stress, as reported by Chen (2016) [19]. Furthermore, boys are often associated with more disciplinary conflicts with mothers, adding to parental challenges. This finding aligns with Sodi et al. (2020) in South Africa, which confirmed a relationship between the number of children and parental stress [20].

The study also demonstrated that parental stress was higher among mothers with insufficient income compared to those with sufficient or barely sufficient income. Financial insecurity and the inability to meet basic needs contributed significantly to parenting stress. Hong and Liu (2020) similarly reported that mothers with multiple children experienced higher parental stress than those with one child [21]. Conversely, Qian et al. (2021) in China found that mothers in two-child families with preschoolers experienced higher parental stress than mothers of only children. Nonetheless, their findings converged with the present study in showing that families with lower income reported significantly greater maternal stress compared to higher-income families [13]. Raikes and Thompson (2005) also demonstrated that low-income mothers tend to experience higher levels of parental stress due to limited time and energy for their children compared to those with greater economic resources [13]. Similarly, Okelo et al. (2023) in Kenya confirmed the association between parental stress and household income [12]. Collectively, these results underscore the need for maternal and child health interventions aimed at improving household income and reducing childcare-related expenses, such as providing high-quality, affordable childcare services.

Parental stress was also higher among mothers attending Al-Hussein Health Center compared to those attending Qadmous and Tawaheen Health Centers. This may be attributed to the urban context of Al-Hussein, where financial obligations and social pressures are more demanding, creating challenges for mothers raising children under six years of age. By contrast, the rural communities served by Qadmous and Tawaheen benefit from extended family support (e.g., grandparents and relatives), who share in childcare responsibilities and mitigate mothers' stress. In rural areas, mothers can leave children in the care of relatives while attending to daily chores, whereas in urban areas, childcare responsibilities fall predominantly on the mother and father. Comparable findings were reported by Clark et al. (2019) in Africa [23], Nampijja et al. (2021) in Nairobi [24], and Okelo et al. (2023) in Kenya, who observed higher parental stress among urban mothers compared to their rural counterparts [12].

The study further highlighted that parental stress was greater among mothers living in rented housing compared to those living in owned homes, reflecting the role of housing insecurity and instability in exacerbating maternal anxiety. Stress was also higher among mothers whose husbands were aged 36–45 years, possibly due to increased responsibilities at this life stage, including career advancement and caring for elderly parents, which may reduce spousal support.

In addition, parental stress was higher among divorced mothers compared to married or widowed mothers, as the absence of partner support and the additional burdens of single parenting substantially contribute to stress. Stress was also higher among mothers engaged in self-employment compared to housewives, employees, and those in private occupations, likely due to instability and insecurity associated with freelance work, in addition to conflicts regarding time allocation for childcare. This finding is consistent with Scheibner et al. (2024) in Germany, who reported that single mothers experienced significantly higher parental stress than non-single mothers, and that stress levels were greater among part-time working mothers compared to housewives and full-time workers [14].

Furthermore, the study indicated that parental stress was higher among mothers whose husbands were absent compared to those whose husbands were present at home, even intermittently, underscoring the importance of spousal support in mitigating parenting-related stress. This is consistent with Staunton et al. (2020), who found that social and professional

support were inversely associated with parental stress [25]. On the other hand, the results contradict Fucà et al. (2022) in Italy, which reported no association between maternal demographic characteristics and parental stress [26].

The present study identified statistically significant differences in parental stress levels among mothers based on various demographic and social variables. These findings provide valuable insights into the factors contributing to parental stress and highlight the importance of tailored support interventions for mothers facing specific challenges. By ensuring the provision of adequate resources and support, maternal well-being can be enhanced, thereby fostering a more supportive environment for families.

5. Conclusions

The study found that mothers with low levels of parental stress constituted the majority of the sample. The most commonly reported source of stress was maternal concern about whether they were doing enough for their child. Furthermore, the findings revealed significant associations between parental stress and several demographic and social variables, including marital status, number of children in the family, household income, health center attended, type of housing, maternal employment status, husband's age, and husband's presence at home.

Recommendations

The application of this study's findings requires the collective efforts of all healthcare stakeholders. Therefore, the following recommendations are proposed:

- Training and educating nurses in healthcare centers to recognize early signs of parental stress among mothers.
- Developing educational programs for mothers on how to manage daily parenting challenges.
- Promoting awareness of the importance of self-care and maternal mental health.
- Providing comprehensive healthcare services for both mothers and children, including regular check-ups and vaccinations.
- Conducting further studies on the factors influencing parental stress.

Limitations

- Variations in mothers' attendance schedules at healthcare centers.
- The presence of multiple caregivers (e.g., female relatives of the child) among the attendees, which may have influenced participant recruitment.

Conflict of interest

There is no conflict of interest

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