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Determinants of Quality of Life in Omani Mothers Providing Care for Children with Chronic Conditions

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Abstract

Research indicates that providing care for children with chronic conditions affects mothers' quality of life across different contexts, yet there is limited research on this topic in Oman. To examine the factors linked to quality of life (QoL) in Omani mothers who care for children with chronic illnesses. This study employed a cross-sectional descriptive approach. Quality of life and related variables were measured using the World Health Organization Quality of Life questionnaire and the Zarit Burden Scale.

Average scores across QoL domains were as follows: physical health (42.36), psychological health (48.66), social relationships (45.18), environment (39.88), and overall quality of life (62.90). Key predictors of QoL included perceived caregiver burden, maternal age, and household income. Customized support programs are essential to assist mothers in managing caregiving duties while improving their quality of life.

Keywords: Quality of life, Mother, Oman, Chronic conditions

Introduction

The quality of life for mothers raising children with chronic illnesses is a critical issue, with significant effects on both maternal well-being and family dynamics. Childhood chronic illness is characterized as a health condition affecting individuals aged 0 to 18 years, identified through medical evidence, that is incurable (or, for mental health issues, highly treatment-resistant) and persists beyond three months or recurs multiple times within a year [26]. These conditions demand continuous medical management to mitigate their effects on daily functioning and overall quality of life [24]. Examples in children include congenital disorders present from birth, such as heart defects or genetic conditions (e.g., congenital heart disease, sickle cell disease, thalassemia), as well as those emerging later, including mental health issues, neurological conditions, diabetes, cancer, and asthma [7].

In Oman, childhood chronic conditions show notable prevalence rates, including asthma (10–20.7%), beta thalassemia carrier status (0.2–4%), alpha thalassemia (38.9–58.3%) [7], sickle cell disease (90 to 300 per 100,000 individuals) [36], autism (20.35 per 10,000 children, linked to enhanced detection and awareness) [9], and cystic fibrosis (10.3 per 100,000) [1]. Despite these figures, comprehensive national data on the overall prevalence of chronic diseases in Omani children and their effects on caregivers remain scarce. International studies report elevated rates of anxiety (57%) and depression (35%) among parents of children with chronic illnesses, compared to 38% and 19% in parents of healthy children [12]. Additionally, mothers of children with congenital anomalies face heightened risks of cardiovascular issues and premature mortality [12]. The

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demands of caregiving also contribute to reduced workforce participation, a 25% greater likelihood of early retirement, and greater reliance on mental health resources [11].

Worldwide, maternal QoL in the context of caring for children with chronic conditions is shaped by elements such as caregiver burden, mental health, social networks, and economic factors. Mothers frequently bear substantial strain from handling intricate treatment protocols, which adversely influences their QoL. For example, research on mothers of children with type 1 diabetes showed that burden related to the condition and the child's age accounted for 64.1% of QoL variation [39]. Heightened caregiving tasks, including medication administration and regular medical appointments, amplify burden and diminish maternal QoL [20].

Economic difficulties, particularly low income and limited healthcare access, further impair QoL, especially among mothers in lower socioeconomic groups [15]. In contrast, higher education and employment are associated with improved QoL through better access to resources and support [15]. Therefore, strengthening social assistance, psychological care, and economic support is vital for improving QoL among these mothers.

Although substantial research exists on QoL influencers for mothers of children with chronic diseases in various regions, studies specific to Oman—an Arab nation—are scarce, and results from elsewhere may not apply due to cultural and healthcare variations. In Omani society, traditional gender roles and extended family systems likely create distinct caregiving experiences. Extended families offer support but may also heighten maternal duties and strain. Arab cultural norms emphasize collectivistic support through family and community ties for emotional, financial, and practical aid. Caregiving for ill individuals is viewed as a moral and religious obligation [35]. Gender expectations in Arab societies position mothers as primary caregivers, reinforcing this as part of feminine identity [19, 25]. Moreover, Oman's advancing healthcare infrastructure still lacks structured formal support for caregivers of children with chronic conditions, highlighting the need for such systems to bolster maternal QoL [43].

Limited Omani research has explored this area. One study on mothers of children with metabolic disorders reported moderate QoL alongside low general health and vitality, with younger age, education, income, and social support linked to better outcomes [37]. Another investigation found poor QoL among parents of children with autism spectrum disorder, particularly in physical and environmental aspects, while social and psychological support aided coping [4]. These studies involved small samples and single conditions.

Evidence from the broader Gulf Cooperation Council region indicates markedly lower QoL for mothers of children with disabilities versus those with healthy children, stemming from emotional and physical caregiving strains [23]. Considering Oman's unique cultural framework, this research sought to identify factors influencing QoL among Omani mothers of children with chronic diseases. Such work, aligned with similar inquiries, informs the development of targeted, culturally sensitive interventions to support maternal health and QoL.

Materials and Methods

Research design

This study adopted a cross-sectional descriptive and correlational approach to explore the degree of perceived caregiving burden and quality of life (QoL) in Omani mothers raising children with chronic illnesses, while also examining factors that predict QoL.

Study location

Data collection took place at XXXXX Hospital (XX), a major tertiary care center in Oman. The facility includes three pediatric inpatient wards and numerous specialized outpatient clinics across all pediatric subspecialties. Patients with complex chronic conditions are commonly transferred from primary health centers or polyclinics to tertiary institutions like XXXX for expert evaluation and ongoing management. Serving as a national referral hub, XXXX admits children from all parts of Oman, either through scheduled referrals or urgent presentations via the emergency department.

Participant recruitment

Constraints on time and budget precluded the use of probability sampling methods, leading to the adoption of convenience sampling. Eligible participants were Omani mothers of children with established chronic illnesses. Criteria for inclusion were Omani nationality, age ≥18 years, at least six months of caregiving experience for a child with a chronic condition, and literacy in Arabic. The definition of chronic disease followed that proposed by Mokkink and colleagues [26]. Restricting participation to Omani mothers helped achieve greater uniformity in cultural caregiving roles and limited potential bias from varying health-related attitudes or practices seen in expatriate families.

Sample size was calculated based on the rule of thumb proposed by VanVoorhis and Morgan [42], recommending 25 cases per independent variable in regression models. Predictors selected from prior research included maternal age, marital status, employment, household income, education, self-reported health, family structure, presence of domestic help, perceived burden, child age, annual admission rate, visit purpose, comorbid conditions, and degree of child disability. Using a conservative estimate of ten key predictors, the base sample size was set at 250. An additional 10% was added to offset possible withdrawals, yielding a target of at least 275 participants. Although 14 variables were initially screened, the calculation used ten to account for expected attrition during multivariate modeling.

Data collection tools

The survey consisted of three parts: a socio-demographic profile, the WHOQOL-26 instrument, and the Zarit Burden Scale. These assessed potential determinants of QoL (sociodemographic factors and burden) alongside the main outcome of QoL itself. All materials were presented in Arabic. The demographic section captured details about both mothers and children, including child age, disability level, comorbidities, and yearly hospitalization frequency, as well as maternal age, marital status, education, employment, income, family type, personal health, and access to regular household assistance.

Caregiving burden reflects the personal sense of strain, pressure, and hardship experienced by individuals responsible for someone with a long-term illness [44], spanning physical, psychological, social, and economic effects on caregiver welfare. Burden was measured with the Zarit Burden Scale [44], a 12-item instrument using a 5-point Likert scale (0 = never to 4 = nearly always). Aggregate scores range from 0 to 48, with higher values denoting increased burden; suggested cut-offs are 0–10 (none to mild), 10–20 (mild to moderate), and >20 (high). The Arabic adaptation has previously shown reliability >0.77 [10]. Internal consistency in this investigation reached Cronbach's alpha = 0.88.

Quality of life is defined by the World Health Organization as an individual's perception of their life circumstances in relation to cultural context, personal values, goals, expectations, and concerns [41]. Health-related QoL was quantified via the abbreviated WHOQOL-26, which includes 26 items scored from 1 (very dissatisfied) to 5 (very satisfied) on a Likert format. It covers five domains: Overall QoL and General Health (2 items), Physical Health (7 items), Psychological Health (6 items), Social Relationships (3 items), and Environmental factors (8 items). Specific items (Physical Health 1–2; Psychological Health 6) were reverse-scored. Domain scores were transformed to a 0–100 metric following WHO protocols to allow comparison with studies using the longer version [41]. All conversions strictly adhered to official WHO guidelines [41]. Prior work on the Arabic WHOQOL-26 has confirmed adequate validity and reliability, with Cronbach's alpha ≥0.70 [13]. Reliability in the present sample was Cronbach's alpha = 0.90.

Ethical considerations

Ethical clearance for the study was provided by the Research and Ethics Committee of the College of Nursing (Reference: NURS/ADPSR/132/2023). All participants gave written informed consent after being fully briefed. They were guaranteed complete confidentiality of their data and assured that participation was entirely voluntary, with the option to withdraw at any stage or decline to answer any questions without consequence. Questionnaires and all collected data were kept in secure storage, accessible solely to members of the research team.

Data collection procedure

After receiving ethical approval, official permission was obtained to initiate data collection, which took place between October 2023 and March 2024. An Arabic-language questionnaire was distributed either electronically via Google Forms or in paper format. Completion typically required 5–7 minutes. A trained research assistant (RA) received detailed instruction from the research team regarding participant rights, data confidentiality, and privacy protection. The RA first secured approval from the head nurses of each pediatric unit before starting recruitment. Eligible mothers were then approached, and the study purpose and procedures were thoroughly explained. Upon agreement, participants signed the consent form and either scanned a QR code to complete the online version or received a hard-copy questionnaire to fill out privately and return in a sealed envelope. Responses from paper questionnaires were subsequently entered into SPSS by the RA. To achieve balanced representation, similar numbers of participants were enrolled from inpatient and outpatient settings.

Data analysis

Analyses were performed using SPSS version 23. Descriptive statistics—frequencies, percentages, means, and standard deviations—were first computed to summarize participant characteristics, caregiving burden, and quality of life scores. Relationships between sociodemographic factors, burden, and QoL were then explored through bivariate tests, including Pearson's correlation, independent t-tests, and one-way ANOVA. Variables demonstrating statistical significance in these preliminary analyses were entered into multiple linear regression models. Separate regression analyses were conducted for each of the five WHOQOL-26 domains: physical health, psychological health, social relationships, environmental health, and overall quality of life and general health. A p-value of less than 0.05 was considered statistically significant for all tests.

Results and Discussion

Characteristics of the sample

The study included 277 mothers with a mean age of 36.14 years (SD = 6.81). As detailed in **Table 1**, the majority (263, 95 percent) were married, and 104 (37.6 percent) held employment. Around 35.4% of participants experienced moderate caregiving burden, while 27.1% reported high burden. The overall mean burden score was 15.21 (SD = 4.11), indicating a moderate burden level on average. Mean domain scores on the WHOQOL-26 were: physical health 42.36 (SD = 14.28), psychological health 48.66 (SD = 10.99), social relationships 45.18 (SD = 19.69), environmental health 39.88 (SD = 16.82), and overall quality of life and general health 62.90 (SD = 17.52) **(Table 1)**. Child characteristics are summarized in **Table 2**. The children had a mean age of 6.56 years (SD = 4.11), and 20.2 percent presented with a disability.

Table 1. Maternal sociodemographic and health profile

Indicator	Mean (SD)	n (%)
Age of mothers (years)	36.14 (6.8)	—
Current marital situation		
Married	—	263 (94.9)
Divorced or widowed	—	14 (5.1)
Educational attainment		
Up to high school	—	149 (54)
College education or above	—	127 (46)
Employment status		
Employed	—	104 (37.5)
Not employed	—	173 (62.5)
Household monthly income range		
Less than 1300 $	—	61 (22)
1300–2600 $	—	128 (46.2)
More than 2600 $	—	88 (31.8)
Household composition		
Nuclear family	—	194 (70)
Extended family	—	83 (30)
Access to supportive assistance		
Available	—	157 (56.7)
Not available	—	120 (43.3)
Presence of chronic illness in mothers		
Yes	—	48 (17.3)

No	—	229 (82.7)
Physical health score	42.28 (14.54)	—
Psychological health score	48.66 (16.99)	—
Social health score	45.18 (19.69)	—
Environmental health score	39.88 (16.82)	—
Overall quality of life score	62.90 (17.52)	—
Level of perceived burden		
None to mild	15.21 (13.59)	104 (37.5)
Moderate	—	98 (35.4)
High	—	75 (27.1)

Table 2. Sociodemographic and clinical profile of children

Variable	**Mean (SD)**	**n (%)**
Age of child (years)	6.56 (4.11)	—
Presence of disability		
Present	—	56 (20.2)
Absent	—	221 (79.8)
Purpose of hospital visit		
Scheduled appointment	—	134 (48.6)
Hospital admission	—	142 (51.4)
History of hospital admissions		
None	—	106 (38.3)
One to two times	—	71 (25.6)
Three times or more	—	100 (36.1)
Coexisting medical conditions		
Yes	—	53 (19.1)
No	—	224 (80.24)
Type of diagnosed condition		
Hematological disorders	—	90 (32.49)
Neurological disorders	—	43 (15.52)
Genetic disorders	—	40 (14.44)
Respiratory disorders	—	37 (13.36)
Immunological disorders	—	25 (9.03)
Endocrine disorders	—	25 (9.03)
Gastrointestinal disorders	—	13 (6.69)
Cardiovascular disorders	—	4 (1.44)

Associations between quality of life, perceived caregiver burden, and the ages of mothers and children in maternal caregivers

Findings from **Table 3** indicate that perceived burden among mother caregivers was significantly inversely associated with several quality of life domains, including physical health ($r = -0.37$, $p < 0.001$), psychological health ($r = -0.24$, $p < 0.001$), social relationships ($r = -0.40$, $p < 0.001$), environmental domain ($r = -0.42$, $p < 0.001$), and overall quality of life ($r = -0.52$, $p < 0.001$). In addition, maternal age demonstrated a substantial positive association with the environmental domain of quality of life (r = 0.49, p < 0.001), while the child's age was modestly and positively linked to overall quality of life (r = 0.14, p = 0.02).

Table 3. Correlations among perceived caregiving burden, QoL dimensions, mother's age, and child's age (N = 277)

Variable	Perceived Burden	Environmental Health	Social Health	Psychological Health	Physical Health	Overall QoL
Environmental Health	−0.42**	—				
Social Health	−0.40**	0.59**	—			
Physiological Health	−0.24**	0.35**	0.35**	—		
Physical Health	−0.37**	0.71**	0.54**	0.42**	—	
Overall QoL	−0.52**	0.61**	0.57**	0.33**	0.52**	—
Mother Age	−0.02	0.15*	0.17**	0.24**	−0.01	0.08
Child Age	−0.09	0.04	0.08	0.03	0.015	0.14*

* p < 0.05; ** p < 0.01 (two-tailed).

Relationships between socio-demographic factors, health-related factors, and quality of life

Results from the bivariate analyses shown in **Table 4** indicate that only a limited number of factors demonstrated statistically significant links with physical health domain scores. Caregivers of children with disabilities exhibited poorer physical health scores than caregivers of children without disabilities (p = 0.03). Employed mothers, in contrast, displayed higher physical health scores compared to mothers who were not employed (p = 0.01). Mothers whose children had more frequent hospital admissions reported reduced physical health-related quality of life relative to those with less frequent admissions (p = 0.04). Furthermore, mothers of children who required hospital inpatient stays showed lower overall quality of life than those whose children attended outpatient appointments only (p = 0.001). Refer to **Table 3** for additional details.

Table 4. Bivariate analysis examining factors influencing quality of life among Omani mothers caring for children with chronic conditions

Domain	Variable	Category	Statistic	Mean	SD	n	p-value
Physical Health	Child disability	Yes	1.80	38.52	17.69	56	0.03
		No		43.24	13.50	221	
	Reason for hospital visit	Outpatient appointment	−3.33	45.25	13.41	134	0.001
		Inpatient admission		39.51	15.09	142	
	Admission frequency	No admission needed	3.08	44.00	13.26	106	0.04
		1–2 times		43.76	14.14	71	
		3 or more times		39.42	15.76	100	
	Employment status	Employed	−2.38	44.95	12.45	104	0.01
		Not employed		40.68	15.47	173	
Psychological Health	Child disability	Yes	1.80	45.01	17.69	56	0.07
		No		49.58	17.09	221	
	Reason for hospital visit	Outpatient appointment	−2.05	50.87	15.84	134	0.04
		Inpatient admission		46.68	17.84	142	
	Admission frequency	No admission needed	5.16	52.20	15.78	106	0.00
		1–2 times		48.94	18.61	71	
		3 or more times		44.70	16.32	100	

	Employment status	Employed	−3.07	52.64	15.75	104	0.00
		Not employed		46.26	17.30	173	
Social Health	Child disability	Yes	2.60	46.71	19.82	56	0.01
		No		39.13	18.11	221	
	Admission frequency	No admission needed	5.84	50.23	15.70	106	0.00
		1–2 times		42.13	21.02	71	
		3 or more times		42.00	21.51	100	
	Marital status	Married	2.33	45.81	19.23	263	0.02
		Divorced or widowed		33.33	24.89	14	
	Family type	Nuclear	−2.40	43.34	20.75	194	0.01
		Extended		49.49	16.27	83	
Environmental Health	Child disability	Yes	2.80	57.81	19.30	56	0.005
		No		64.19	16.85	221	
	Admission frequency	No admission needed	4.30	43.60	15.57	106	0.01
		1–2 times		37.54	17.68	71	
		3 or more times		37.59	16.93	100	
	Marital status	Married	1.82	40.30	16.63	263	0.06
		Divorced or widowed		31.91	19.07	14	
	Education level	High school or less	−2.42	37.64	17.31	149	0.01
		College or higher		42.54	15.95	127	
	Employment status	Employed	−2.60	43.23	16.23	104	0.01
		Not employed		37.86	16.81	173	
	Family income	< 1300 $	6.17	34.11	16.08	61	0.002
		1300–2600 $		39.94	16.71	128	
		> 2600 $		43.78	16.51	88	
General Quality of Life	Child disability	Yes	2.60	57.81	19.30	56	0.01
		No		64.19	16.85	221	
	Admission frequency	No admission needed	8.12	68.16	13.70	106	0.00
		1–2 times		59.85	18.40	71	
		3 or more times		59.50	19.22	100	
	Child comorbidity	Yes	2.49	64.17	16.82	53	0.01
		No		57.54	19.51	224	
	Education level	High school or less	−2.50	60.48	18.72	149	0.01
		College or higher		65.74	15.68	127	
	Employment status	Employed	−2.10	65.74	17.15	104	0.03
		Not employed		61.19	17.57	173	
	Family income	< 1300 $	3.13	57.99	15.81	61	0.04
		1300–2600 $		64.45	17.49	128	
		> 2600 $		64.06	18.25	88	
	Family type	Nuclear	−2.00	61.53	18.12	194	0.04
		Extended		66.11	15.68	83	

SD = standard deviation; n = sample size

Mothers' psychological well-being was notably lower among those whose children were hospitalized at the time of the survey, with significant links observed for employment status (p = 0.00), hospitalization frequency (p = 0.00), and reason for admission (p = 0.04) **(Table 2)**. In terms of social health, higher scores were associated with older maternal age (r = 0.166, p = 0.00), caring for a child with disabilities (p = 0.01), marital status (p = 0.02), and living in an extended family setting (p = 0.01), indicating that mothers in extended households experienced better social functioning than those in nuclear families **(Table 2)**. Environmental health was significantly influenced by caregiving for a child with disabilities (p = 0.00), frequent hospital admissions (p = 0.01), mothers' educational attainment (p = 0.01), employment (p = 0.01), and monthly family income (p = 0.00).

Overall maternal quality of life was significantly affected by having a child with disabilities (p = 0.01), repeated hospitalizations (p = 0.00), maternal education (p = 0.03), employment (p = 0.04), family income (p = 0.04), family structure (p = 0.01), and the presence of comorbid conditions in the child (p = 0.01).

Determinants of quality of life across domains

To identify the key factors affecting mothers' quality of life, five linear regression models were analyzed. Physical health was primarily determined by perceived burden (p = 0.001) and the child's reason for hospitalization (p < 0.01), which together accounted for 13.3 percent of the variability. Psychological health was best predicted by maternal age (p = 0.00) and perceived burden (p = 0.00), explaining 23.5% of its variance. Social health scores were influenced by perceived burden (p = 0.00) and maternal age (p = 0.00), with the model accounting for 21.2% of the variation. Environmental health was significantly predicted by higher household income (p = 0.01) and perceived burden (p = 0.00), explaining 25 percent of the variance. For overall general quality of life, family income (p = 0.02) and perceived burden (p = 0.00) were the strongest predictors, jointly accounting for 31.4% of its variation **(Table 5)**.

Table 5. Bivariate analysis examining factors influencing quality of life among Omani mothers caring for children with chronic conditions

Variable	Factor	Unstandardized coefficients		Standardized beta	*p*-value	95% CI
		beta	SE			
Physical Health	Constant	47.97	5.41		0.00	36.99 to 58.37
	Reason for the hospital visit	6.13	1.85	0.21	0.00	2.17 to 9.22
	Perceived Burden	− 0.317	0.09	− 0.20	0.00	− 0.51 to − 0.13
Psychological Health	Constant	33.89	5.87		0.00	22.40 to 45.58
	Mother's age in years	0.65	0.14	0.27	0.00	0.38 to 0.96
	Perceived Burden	− 0.56	− 0.32	− 0.32	0.00	− 0.77 to − 0.35
Social Health	Constant	41.86	7.15		0.00	28.58 to 56.58
	Mother Age	0.46	0.18	− 0.01	0.01	0.16 to 0.86
	Extended Family	4.85	2.53	0.12	0.05	0.11 to 9.91
	Perceived Burden	− 0.67	0.12	− 0.31	0.00	− 0.92 to − 0.42
Environmental Health	Constant	46.81	3.01		0.00	25.64 to 49.41
	Mother Age	0.33	0.15	0.11	0.01	0.06 to 0.66
	Family income between 500–1000	5.50	2.61	0.15	0.05	0.25 to 10.84
	Family income greater than 1000	9.84	3.25	0.22	0.01	2.69 to 15.71
	Perceived Burden	− 0.70	0.10	− 0.38	0.01	− 0.85 to − 0.42
General Quality	Constant	69.60	5.89		0.00	58.41 to 81.58
	Family Income between 1300–2600	5.73	2.60	0.16	0.02	1.38 to 11.82
	Perceived Burden	− 0.86	0.10	− 0.46	0.00	− 1.07 to − 0.65

SE= standard error, CI=confidence interval

The results of this research provide valuable understanding regarding the quality of life (QoL) among Omani mothers acting as the main caregivers for children suffering from chronic conditions. Moreover, the investigation identifies the elements linked to different dimensions of QoL in these mothers. The data indicate that the mothers exhibited a moderate level of QoL, a result that aligns with earlier research carried out in Oman and neighboring Gulf nations sharing comparable sociocultural and religious environments [37]. As an example, mothers in Oman responsible for children with metabolic conditions described an average QoL [2, 6, 21, 37], whereas in Saudi Arabia, those caring for children with thalassemia predominantly indicated moderate to low QoL, with just 24% indicating high QoL [2]. Comparable patterns emerged for mothers of autistic children [6] as well as caregivers of youngsters with chronic illnesses in Qatar [21].

In this investigation, only a small proportion of mothers indicated high QoL in most domains (ranging from 1% to 11.9%), although 38% noted high scores in overall QoL. Certain prior research in Oman has documented reduced QoL in maternal caregivers. For instance, those looking after children with autism spectrum disorder in Oman experienced diminished QoL owing to elevated stress levels and scarce specialized services [5]. In Jordan, employed mothers displayed markedly lower QoL compared to those not working, attributed to conflicts between job demands and caregiving duties [15]. Likewise, research in the Netherlands revealed decreased QoL among caregivers of children with sickle cell disease, underscoring the demands of managing intricate health requirements [40]. This pattern underscores that, irrespective of differences in societal assistance, medical resources, and cultural standards across nations, the QoL of individuals caring for children with chronic disorders remains adversely affected [32, 38]. Strengthening psychological, social, and medical assistance may contribute to elevating the QoL of these caregivers [31].

This research revealed that Omani mothers responsible for children with chronic illnesses faced a moderate level of caregiving burden, mirroring outcomes observed in Iran [28] and Malaysia [17]. Nevertheless, Al-Balushi *et al*. [3] noted that 66% of parents (including fathers) of children with ADHD in Oman perceived no burden, pointing to differences in experiences that could stem from involving both parents in the sample. On the other hand, Shattnawi *et al*. [34] in Jordan documented higher burden intensity, especially in cases of substantial functional limitations in the children. Such discrepancies might arise from divergences in medical infrastructure, specialized care initiatives for conditions such as autism, assistance from expert groups, economic circumstances, and societal views on caregiving. Factors potentially alleviating the burden in Oman encompass sociocultural elements including religious faith, complimentary medical services, availability of household assistance, robust familial bonds, and broader kinship structures [18, 35].

The investigation determined that the sensed burden of caregiving significantly predicted every domain of QoL for Omani mothers of children with chronic conditions. Heightened duties in caregiving, emotional distress, and diminished personal leisure lead to reduced QoL in physical, psychological, and social areas. These outcomes correspond with prior research that has pinpointed caregiving burden as a primary element adversely influencing QoL [15, 20, 39]. Regardless of variances in culture and economy, the psychological and physical demands of caregiving seem to impact caregivers in a comparable universal manner. Among non-modifiable variables, the mother's age emerged as a notable predictor for QoL in the psychological, social, and environmental domains. This outcome is in agreement with the work of Toledano-Toledano and colleagues (2020) and could reflect the contributions of accumulated life experience, coping mechanisms, and greater economic security in older mothers. Such insights emphasize the importance of customized assistance for younger mothers, who might encounter more difficulties in their caregiving roles [20].

The income of the participants exerted a notable effect on their QoL. Elevated earnings were associated with improved physical and psychological health, as evidenced in research involving parents of children with metabolic disorders in Oman [37]. Parallel patterns appear in other groups, where lower earnings correlate with reduced emotional health and increased psychological strain [15, 16]. The provision of no-cost healthcare in Oman probably reduces certain economic pressures for caregivers, yet challenges such as inadequate specialized facilities continue to influence their QoL [8]. Increasing economic aid for families with limited income might enhance well-being for both mothers and their offspring. Additionally, in contrast to results from elsewhere, this study indicated that comorbid conditions in the children did not influence the

QoL of Omani mothers caring for those with chronic illnesses. In nations such as the Netherlands and Australia, caregivers of children with multiple conditions noted lower QoL because of amplified clinical complexities [29, 30]. The endurance shown by Omani mothers could be linked to extensive family networks that buffer the effects of comorbidities on caregiver health [27].

Limitations

This study has a number of limitations that should be acknowledged. Primarily, the use of convenience sampling at one tertiary institution restricts the extent to which the results can be applied to the wider population. Although Sultan Qaboos University Hospital serves patients referred from various parts of Oman and includes mothers from different areas, the participants may not fully reflect all Omani mothers who are primary caregivers for children with chronic conditions. Additionally, the dependence on self-administered questionnaires introduces the possibility of recall bias and social desirability bias. Respondents might inaccurately report their experiences due to faulty memory or a desire to give answers perceived as favorable. This issue is especially pertinent in the sensitive area of caregiving, where mothers' responses could be affected by their emotional state at the time of data collection, particularly if their child was admitted to the hospital. As a result, levels of perceived burden or quality of life might have been either inflated or downplayed.

Another limitation stems from the cross-sectional nature of the research, which prevents the establishment of causal relationships between maternal quality of life and the identified predictors. The data therefore represent only a momentary view and cannot reveal how these factors might change or influence one another over an extended period. Future investigations employing longitudinal designs would be valuable for tracking developments over time and clarifying directional effects. Lastly, several potentially important psychosocial confounders were not assessed. Elements such as level of religiosity, extent of perceived support from the wider family network, and personal coping mechanisms were omitted, yet they could substantially affect maternal burden and well-being. Subsequent research should incorporate these aspects to offer a fuller picture of the influences on mothers caring for children with chronic illnesses.

Recommendations

The results underscore the importance of developing comprehensive, culturally sensitive strategies to elevate the quality of life and lessen the perceived burden experienced by mothers of children with chronic conditions. Healthcare professionals should introduce holistic support programs, including psychological counseling and peer support groups [43]. Adopting integrated care frameworks that address both clinical and emotional requirements, along with routine evaluations of caregivers, is vital [22]. At the policy level, authorities should broaden financial assistance, encourage adaptable employment policies, and improve availability of community-based services for families with chronically ill children [14, 33]. Training programs for medical staff and empowerment workshops for mothers could strengthen assistance and promote effective management of caregiving challenges. Public awareness efforts may also contribute to diminishing stigma and building greater societal backing. Upcoming studies should focus on assessing the effectiveness of interventions aimed at reducing caregiver strain and strengthening support structures for these mothers.

Conclusion

The research illuminates the strong association between perceived caregiving burden and quality of life among Omani mothers responsible for children with chronic illnesses. Elevated levels of perceived burden are closely linked to diminished quality of life, highlighting the pressing requirement for specific interventions and robust support mechanisms. Although Oman possesses advantageous sociocultural features—including religious practices, universal free healthcare, access to household helpers, and extensive family and kinship ties—these elements may moderate but do not fully offset the challenges of caregiving. The results demonstrate that, even with these cultural and institutional strengths, the demands of caregiving continue to affect maternal well-being. Consequently, the development of customized psychological, social, and medical support services remains critical. Collaborative actions involving healthcare practitioners, government bodies, and community groups are necessary to provide effective assistance to these mothers and enhance their overall quality of life.

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