Vol. 29, No. 1, 2025, Pages 135-153

Thi-Qar Medical Journal (TQMJ)

Thi-Qar Medical Journal was established in 2006 and is published by the College of Medicine, University of Thi-Qar, Iraq

ISSN (PRINT): 1992-9218 | ISSN (ONLINE): 3006-4791

www.jmed.utq.edu.iq utjmed@utq.edu.iq

Physical and Psychosocial Health Challenges Associated With Late Motherhood: A Cross-Sectional Study

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Received: 22.03.2025
Revised:10.04.2025
Accepted: 18.05.2025
DOI:
10.32792/jmed.2025.29.16

Keywords:
Assessment
Late motherhood
Physical Challenges
Psychological Challenges
Social Challenges

How to cite

Shajwan Mohammed Hamza [1*], Blend B. Ameen [2]. Physical and Psychosocial Health Challenges Associated with Late Motherhood: A Cross-Sectional Study.*Thi-Qar Medical Journal (TQMJ).* 2025;29(1):Page numbers.

Abstract

Late motherhood refers to pregnancy at 35 years or older. The frequency of late births has increased since the 1980s due to factors such as improved healthcare, career and education opportunities for women, and evolving societal norms. While it offers advantages, later motherhood also presents physical and psychosocial challenges that occur after childbearing.To assessing the physical and psychosocial health challenges associated with late motherhood.This study employed a quantitative design/ Cross-sectional study using purposive sampling was conducted at Raniya City, from September 2024 to May 2025. Data were collected using a constructed questionnaire based on a review of relevant literature and standardized psychological assessment tools, and it had a reliability coefficient of r = 0. 922.Out of 180 participants, 52.8% were aged 35–38 years old, and 83.9% were housewives. Most had caesarean deliveries (75%). A lot of mothers said they experienced physical challenges, and Most mothers said that they weren't depressed, but they did have moderate anxiety, and Social challenges were less experienced. The study found significant associations between workload intensity and physical, anxiety, and social challenges. Furthermore, income level was associated with both physical and psychological challenges.Late motherhood is associated with a range of physical and psychosocial challenges, particularly anxiety and physical strain. Despite these challenges, most women reported low levels of depression, positive social support, and good adaptation to their roles.

Introduction:

Motherhood is a significant and distinctive experience in a woman's life. Increasingly, women are opting to postpone childbirth (1). This shift is mainly due to societal advancements such as greater access to contraception, longer life expectancy, gender equality, and expanded educational and career opportunities for women. In developed societies, shifting cultural norms have reduced pressures for early marriage and childbearing. However, socio-cultural factors, including challenges in finding a suitable partner, male preferences in partner selection, and cultural expectations favoring larger families in some regions, further contribute to delayed motherhood (2). Usually, the term "Late Motherhood Age" (LMA) refers to pregnancies

at or beyond 35 years old. It also includes advanced maternal age (≥45 years) and very advanced maternal age (≥50 years), both of which are linked to a higher likelihood of negative results. The low prevalence of significant challenges in this population complicates risk quantification; however, the correlation between LMA and adverse outcomes is well-established (3). Sociocultural and environmental factors complicate risk assessment, as the correlation between maternal age and pregnancy outcomes varies and is affected by external influences that differ between populations (4).

Beyond physical concerns, pregnant women of advanced age often experience psychological challenges, including heightened anxiety, which can negatively impact both maternal and fetal health. Older mothers may face increased distress during pregnancy, affecting their parenting behaviors (5). Common mental health issues following childbirth include postpartum depression, anxiety, insomnia, and adjustment disorder. Symptoms such as persistent sadness, overwhelming worry, trouble sleeping, and difficulty adapting to the changes of motherhood are common. While mild emotional ups and downs are typical in the early stages of motherhood, ongoing symptoms that disrupt daily life may signal a mental health condition. Recognizing these signs and seeking help is crucial, as therapies, medications, and lifestyle modifications can effectively manage these issues and promote better mental health (6). Advanced maternal age, specifically mothers aged 35 years and older, has been associated with increased anxiety during pregnancy and childbirth. Studies show that maternal anxiety can have significant consequences for both the mother and the baby (7). Maternal age of 35 years or older has been linked to elevated scores across all scales of the Depression Anxiety Stress Scales-21 (DASS-21) in female offspring, indicating potential long-term psychological effects (8).

Late motherhood is linked to specific biological and psychosocial problems. Comprehending the stress levels and coping mechanisms of women in late parenthood is crucial, as late motherhood is associated with various biological, social, and psychological difficulties for women (9). The experiences of pregnant women during this transition are interconnected, beginning with the realization of pregnancy, leading to personal and emotional changes, followed by necessary adjustments in both physical and social aspects of their lives (10). Studies show that older mothers experience more psychological discomfort throughout pregnancy and after delivery compared to younger mothers, with a higher prevalence of depressive symptoms, highlighting the importance of focused mental health assistance (11).

Late Motherhood Age (LMA) is particularly prevalent in developed countries, where women are delaying childbirth for personal, career, and financial reasons. Since 1970, the birth rate for women aged 35–39 has increased by 272%, and for women aged 40–44, it has increased by 318% (12). This study aimed to identify the prevalent of late motherhood in addition to assessing the physical and psychosocial health challenges associated with late motherhood.

Materials and Methods:

Study design and ethical approval

A quantitative, cross-sectional study was carried out to assess the physical and psychosocial health challenges associated with late motherhood. The study was conducted from September 22, 2024, to May1, 2025 at Rania Pediatric and Maternal Teaching Hospital, as well as at Kewarash Primary Healthcare Centers and two private pediatric clinics in Ranyia City. Ethical approval for this study was obtained by the ethical committee of the College of Nursing/University of Raparin and the research center department at the University of Raparin with ID number (No:43, date: 25/11/2024, reference: 2866/28-5-2023). An official letter was issued from the University of Raparin Presidency to the Raparin Directory of Health ID number (No:645, Date: 28/10/2024), and then an official letter was sent to Raniya Pediatric and Maternal Teaching Hospital, Kewarash Primary Health Care Center, and two private maternal clinics in Raniya city to assist the researcher to conduct his data collection ID numberer (No:4919, Date: No:4919,Date:29/10/2024). In addition, informed consent was obtained from every participant.

Sampling Technique and Sample Size Determination

The purposive sampling technique was employed to recruit participants who met the inclusion criteria for this study. The inclusion criteria were: mothers aged 35 years and older, mothers with children aged two months to two years, and mothers who provided their informed consent to participate in the study. Exclusion criteria included pregnant women, mothers who declined participation, and mothers with infants under two-month-old or children older than two years. The sample size was determined by considering expected attendance rates at maternal health centers and insights from prior studies on late motherhood in similar populations. Ultimately, a total of 180 participants were included in the final analysis.

Data collection and study instrument

Data collection took place from November 2024 to April 2025, using a constructed questionnaire developed through an extensive review of the literature, prior studies, and standardized tools including the DASS-21 (Depression Anxiety Stress Scales) and HSCL-25 (Hopkins Symptom Checklist).

The questionnaire consisted of five main parts:

- Part One: Socio-demographic characteristics – including age, education, occupation, perceived workload, income, residence, and smoking status.
- Part Two: Obstetrical history – covering age at marriage, gravidity, number of miscarriages, stillbirths, parity, birth type, gestational age, infant feeding practices, child's age, time since last pregnancy, consanguinity, and anthropometric measures.
- Part Three: Physical health challenges – focusing on the mother's ability to perform physical and hygiene tasks, physical flexibility, nutritional status, postnatal weight changes, and energy levels.
- Part Four: Psychological health challenges – divided into two sub-sections:

**Depression symptoms* (17 items) including mood, self-confidence, guilt, social isolation, and appetite/sleep disturbances.

**Anxiety symptoms* (15 items) including stress, worry, restlessness, difficulty concentrating, physical manifestations, and work–family role conflict.

- Part Five: Social health challenges – consisting of 14 items related to social support systems, confidence, loss of social activities, peer connections, community engagement, parenting dynamics, and family time.

To measure the information items accurately and statistically. the researcher used the following scale and scores to find out the physical challenges as the following (Highly affected scored 2 points, moderately affected scored 1 point, and not affected, scored 0 point). For the Psychological and Social health challenges the a three-level Likert scale ((Always, sometimes, and never) was applied, and the question were scored as (Highly affected scored 2 points, moderately affected scored 1 point, and not affected, scored 0 point). In order to find the level of health challenges (Physical, psychological, and social), scores of responses are categorized according to the following: High health challenges= (2-1.34), Moderate health challenges = (1.33-0.67):2; Low health challenges = (0.66-0). Data were collected through face-to-face interviews using a structured interview approach. Each interview lasted approximately 15 to 30 minutes, depending on interruptions such as childcare or feeding.

Validation, reliability, and statistical data analysis

To ensure the validity of the questionnaire, it was reviewed by 29 experts in relevant fields. From October 4 to October 29, feedback was received from 17 experts, who evaluated the questionnaire for relevance, clarity, and comprehensiveness. Based on their input, minor phrasing changes and additions were made to enhance the accuracy of the instrument. A pilot study was conducted from November 12 to November 23, 2024, involving a purposive sample of 13 mothers who visited hospitals, health centers, and clinics in Ranya. The pilot helped in refining the tool and ensuring its usability and clarity in real-world settings.

The internal consistency reliability of the questionnaire was measured using Cronbach's alpha, calculated via SPSS software (version 27). The overall Cronbach's alpha for the 52-item instrument was 0.922, indicating high reliability. Data were analyzed using descriptive statistics, mean scores, and inferential statistical methods, particularly the chi-square test.

Results:

Table (1): Socio-demographic feature of Late motherhood N=180

NO.	Sociodemographic characteristics		F	%
1	Age Groups	35-38	95	52.8
		39-42	66	36.7
		43-46	19	10.6
2	Level of Education	Illiterate	37	20.6
		Able to Read and Write	13	7.2
		Primary School Graduate	61	33.9
		Secondary School Graduate	29	16.1
		Institute Graduate	25	13.9
		University graduate with a postgraduate degree	15	8.4
3	Occupational Status	Government Employee	25	13.9
		Self-employed	4	2.2
		Housewife	151	83.9
4	Income Level	Sufficient	62	34.4
		Barely Sufficient	104	57.8
		Insufficient	14	7.8
5	Residential Area	Urban	121	67.2
		Suburban	54	30
		Rural	5	2.8
6	Smoking Status	Current Smoker	0	0.0
		Ex-Smoker	0	0.0
		Never Smoked	180	100

F: Frequency, % Percentage

Table (1) revealed several key findings regarding the socio-demographic characteristics of the Additionally, Body Mass Index (BMI) was used to evaluate postnatal weight abnormalities among the participants. In terms of age groups, more than half 95 (52.8%) were aged 35-38 years old. 33.9% of participants were primary school graduates. The result also shows majority (83.9%) of study sample are housewives. Concerning income levels, over half of the participants (57.8%) reported their income as barely sufficient, 34.4% considered it sufficient. For the residential area, most participants (67.2%) lived in urban areas, and only 2.8% in rural areas. Lastly in terms of smoking status, all participants (100%) reported that they had never smoked, with no current or ex-smokers identified.

Figure 1: The pie chart shows that the majority **of participants (46%) experienced a** heavy workload**. A** considerable proportion **(39%) reported a** moderate workload**, while a** small minority **(15%) experienced a** light workload**.**

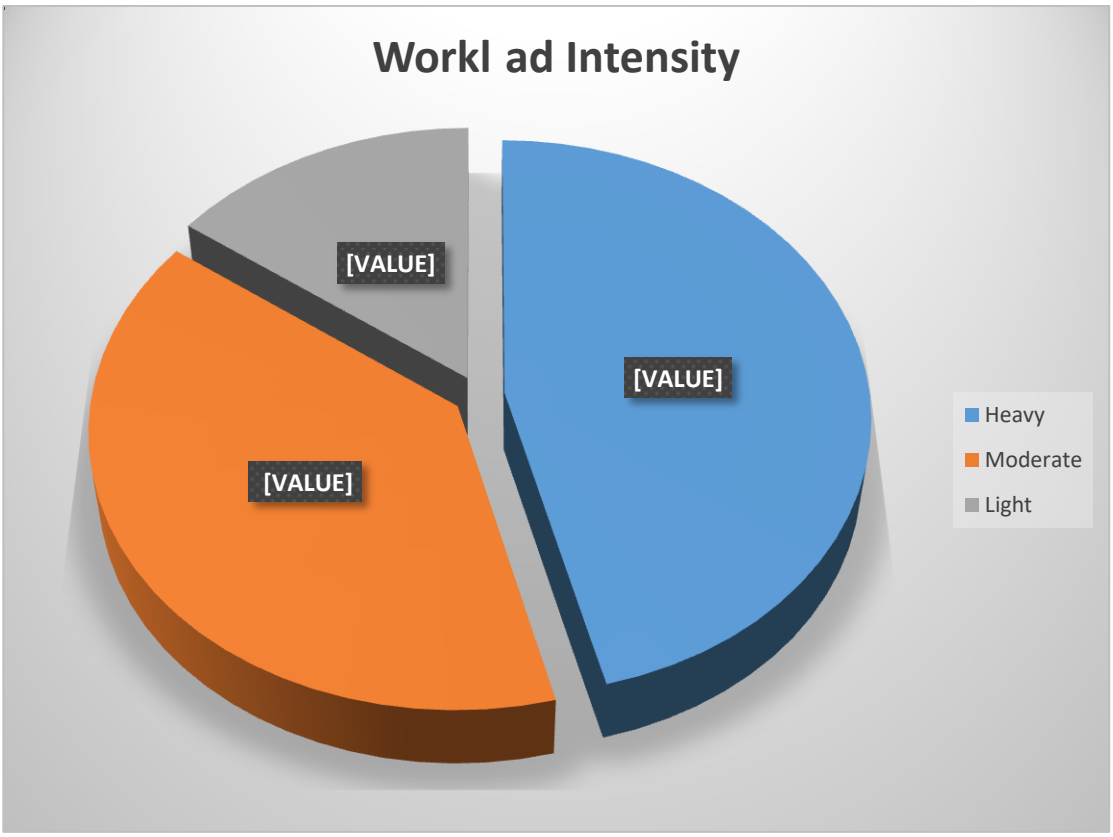

Figure 1: Experienced **workload** by study sample(N=180)

Table (2): distribution of obstetrical information of the study sample(N=180):

No	Feature	Variable	F	%
1	Age at marriage	13-17	21	11.7
		18-22	65	36.1
		23-27	51	28.3
		28-32	26	14.4
		33-37	17	9.4
2	Gravidity	Primigravida	6	3.33
		Multigravidas (2 to 4 pregnancy)	88	48.89
		Grand Multigravidas (5 or more pregnancy)	86	47.78
3	Types of birth	Normal	14	7.78
		Normal with episiotomy	31	17.22
		Cesarean section	135	75.00
4	Infant feeding method	Exclusive breastfeeding	101	56.11
		Mixed feeding (breastfeeding and bottle feeding)	50	27.78
		Exclusive bottle feeding	29	16.11
5	BMI	Underweight	1	0.56
		Obesity	179	99.44
6	Pregnancy status	Planned	59	59.0
		Unplanned	41	41.0
7	Number of Miscarriages	0	103	57.2%
		1-3	72	40.0%
		4+	5	2.8%
8	Number of Stillbirths	0	169	93.9%
		1-3	10	5.6%
		4+	1	0.6%
9	Number of Live Births	1	10	5.6%
		2-3	70	38.9%
		4+	100	55.6%
10	Gestational Age at Delivery	Preterm	35	19.4%
		Term	142	78.9%
		Post-term	3	1.7

F: Frequency, % Percentage

This table (2) shows that the majority of participants (36.1%) were married, ages 18–22**.** (28.3%) between ages 23-27 and only (9.4%) were married at 33-37 years or older. shows that the majority of participants were Multigravida (48.89%) and Grand Multigravida (47.78%). The majority of births are Cesarean Sections (75.00%), followed by Normal births with Episiotomy (17.22%) and Normal births (7.78%). The most common infant feeding method is mixed feeding (56.11%), followed by exclusive bottle feeding (27.78%) and exclusive breastfeeding (16.11%). The majority of individuals (99.44%) have obesity, while only 0.56% fall into the underweight or low BMI category. This highlights that underweight individuals are rare in the dataset. This shows that 59% of the cases were planned, while 41% were unplanned. The majority were planned. The data indicates that the majority of participants (57.2%) had no history of miscarriage, while 40.0% had experienced 1-3 miscarriages, and 28.2% had experienced 4 or more miscarriages. Regarding stillbirths, the

vast majority (93.9%) reported none. In terms of live births, most participants (55.6%) had 4 or more live births, 38.9% had 2–3 live births, and 5.6% had 1 live birth. For gestational age at delivery, the majority (78.9%) delivered at term.

Table (3): Mean of score and Severity of physical problems items of the study sample(N=180)

No	Items of physical problem	H.A (%)	M.A (%)	N.A (%)	M.S	Severity
1	Ability to perform daily physical activities	54 (30.0)	44 (24.4)	82 (45.6)	0.84	**M.A**
2	Performing daily personal hygiene	103 (12.2)	55 (30.6)	22 (57.2)	1.06	**M.A**
3	Physical flexibility since giving birth	62 (34.4)	41 (22.8)	77 (42.8)	0.92	**M.A**
4	Maintaining good nutrition	89 (49.4)	59 (32.8)	32 (17.8)	1.32	**M.A**
5	Increase in body weight after childbirth	34 (18.9)	47 (26.1)	99 (55.0)	0.64	**N.A**
6	Changes in energy levels since becoming a mother	129 (71.7)	10 (5.6)	41 (22.8)	1.49	**H. A**
Total		471 (36.1)	256 (23.7)	353 (40.2)	1.045	**M.A**

H. A=Highly Affected M. A=Moderately affected N. A=Not affected M. S= Mean of Score S. Severity %= Percentage

This table shows that the item 6 which is about changes in energy levels since becoming a mother was falls into the High health challenges category with mean of score 1.49. And Item 5 about Increase in body weight after childbirth falls into the Low health challenges" category with mean of score 0.64 The remaining items (1,2,3,4) fall into the moderate health challenges category.
was the least affected item.

Table (4): Mean of score and Severity of depression problems items of the study sample(N=18)

NO	Items of depression	Always %	Sometimes %	Never %	M.S	Severity
1	Have you experienced prolonged periods of sadness or lack of interest in activities you usually enjoy?	69 (38.3)	25 (13.9)	86 (47.8)	0.91	**M.S. D**
2	Blaming yourself	31 (17.2)	6 (3.3)	143 (79.4)	0.38	**L.S. D**
3	The feeling of being trapped or caught	55 (30.6)	17 (9.4)	108 (60.0)	0.71	**M.S. D**
4	Feeling a loss of interest in things	64 (35.6)	14 (7.8)	102 (56.7)	0.79	**M.S. D**
5	feel happy and content in your role as a mother?	176 (97.8)	4 (2.2)	0 (0.0)	0.02	**L.S. D**
6	I felt that life was meaningless	47 (26.1)	9 (5.0)	124 (68.9)	0.57	**L.S. D**
7	Feelings of guilt or inadequacy about the timing of motherhood	21 (11.7)	8 (4.4)	151 (83.9)	0.28	**L.S. D**
8	I feel disappointed after giving birth	41 (22.8)	9 (5.0)	171 (95.0)	0.51	**L.S. D**
9	I feel more confident about myself after giving birth	171 (95.0)	9 (5.0)	0 (0.0)	0.05	**L.S. D**
10	How often do you feel emotionally drained because of the demands of motherhood?	59 (32.8)	24 (13.3)	97 (53.9)	0.79	**M.S. D**
11	I feel my appearance is not appropriate after giving birth	8 (4.4)	24 (13.3)	148 (82.2)	0.22	**L.S. D**
12	I can’t work efficiently as usual	26 (14.4)	45 (25.0)	109 (60.6)	0.54	**L.S. D**
13	Difficulty falling in sleep	76 (42.2)	19 (10.6)	85 (47.2)	0.95	**M.S. D**
14	Loss of appetite after becoming a late mother	29 (16.1)	22 (12.2)	129 (71.7)	0.44	**L.S. D**
15	Loss of sexual interest	31 (17.2)	32 (17.8)	117 (65.0)	0.52	**L.S. D**
16	Difficulty finding common ground with younger parents	15 (8.3)	5 (2.8)	160 (88.9)	0.19	**L.S. D**
17	Do you feel isolated or lonely because of your responsibilities as a mother?	33 (73.3)	15 (8.3)	132 (73.3)	0.45	**L.S. D**
Total		952 (34.3)	287 (9.4)	1862 (60.9)	0.49	**L.S. D**

H.S.D=Highly Symptom Depression M.S.D=Moderately Symptom Depression L.S.D=Low Symptom Depression M.S= Mean of Score S. Severity %= Percentage

This table shows that the mean of score are low on item (2,5,6,7,8,9,11,12,14,15,16,17) and moderate on items (1,3,4,10,13) while there are not highly significant items in any items. that the mean score for depression problems was 0.49, which falls within the "Never" range (0.00–0.66).

Table (5): Mean of score and Severity of anxiety problems items of the study sample(N=180)

No	Items of Anxiety	Always	Sometime	Never	M.S	Severity
1	How often do you feel overwhelmed or anxious about your responsibilities as a mother?	67 (37.2)	24 (13.3)	89 (49.4)	0.88	M.S. A
2	How often do you worry about your age affecting your ability to care for your child?	31 (17.2)	29 (16.1)	120 (66.7)	0.51	L .S. A
3	How difficult was the adjustment to motherhood for you?	92 (51.1)	19 (10.6)	69 (38.3)	1.13	M.S. A
4	I found myself getting agitated	61 (33.9)	35 (19.4)	84 (46.7)	0.88	M.S. A
5	Do you feel confident in your ability to manage your parenting responsibilities?"	164 (91.1)	10 (5.6)	6 (3.3)	0.12	L.S. A
6	Difficulty concentrating or focusing	125 (69.4)	18 (10.0)	37 (20.6)	1.49	H.S. A
7	I found it difficult to relax	65 (36.1)	25 (13.9)	90 (50.0)	0.86	M.S. A
8	I felt that I was rather touchy	92 (51.1)	16 (8.9)	72 (40.0)	1.11	M.S. A
9	I have fear from unknown	88 (48.9)	17 (9.4)	75 (41.7)	1.07	M.S. A
10	I had dryness of my mouth since I become mother	38 (21.1)	53 (29.4)	89 (49.4)	0.72	M.S. A
11	I have muscle tension since I give a birth	105 (58.3)	13 (7.2)	62 (34.4)	1.24	M.S. A
12	I experienced trembling or shaking (eg, in the hands)	10 (5.6)	36 (20.0)	134 (74.4)	0.31	L.S. A
13	Worried about public situations in which I might panic and make a fool of myself	55 (30.6)	18 (10.0)	107 (59.4)	0.71	M.S. A
14	I worry about not controlling my family life	14 (7.8)	44 (24.4)	122 (67.8)	0.57	L.S. A
15	Do you struggle to balance work responsibilities with motherhood?	20 (11.1)	57 (31.7)	102 (56.7)	0.57	L.S. A
Total		1027 (38.03)	414 (15.3)	1258 (46.59)	0.81	M.S. A

H.S. D=Highly Symptom Anxiety M.S. D=Moderately Symptom Anxiety L.S. D=Low Symptom Anxiety M.S= Mean of Score S. Severity %= Percentage

This table shows that the mean of score are low on item (2,5,12.14,15) and moderate on items (1,3,4,7,8,9,10,11,13) while highly significant on items (6). This table shows that the mean score for anxiety problems was 0.81, which falls within the "Sometime" range (0.67–1.33)

Table (6): Mean of score and Severity of social problems items of the study sample(N=180)

No	Items of social	Always	Sometime	Never	M.S	Severity
1	Find support from your husband	168 (93.3)	9 (5.0)	3 (1.7)	0.08	L.S. Ch
2	Find support from your family	169 (93.9)	8 (4.4)	3 (1.7)	0.08	L.S. Ch
3	Find support from your friends	52 (28.9)	106 (58.9)	22 (12.2)	0.83	M.S. Ch
4	I feel confident in public social occasions	155 (86.1)	18 (10.0)	7 (3.9)	0.13	L.S. Ch
5	Have you lost social activities (e.g., outings with friends) since childbirth?	57 (31.7)	37 (20.6)	86 (47.8)	0.84	M.S. Ch
6	Do you feel isolated from your peers due to being an older mother?	58 (32.2)	28 (15.6)	94 (52.2)	0.80	M.S. Ch
7	Do you feel shy and embarrassed, making you socially isolated?	38 (21.1)	20 (11.1)	122 (67.8)	0.47	L.S. Ch
8	Do you often feel misunderstood by others regarding your experiences as a late mother?	161 (89.4)	11 (6.1)	8 (4.4)	0.17	L.S. Ch
9	I feel I am not relating to some groups in society	25 (13.9)	53 (29.4)	102 (56.7)	0.58	L.S. Ch
10	I have nothing to share with others in society	23 (12.8)	49 (27.2)	108 (60.0)	0.53	L.S. Ch
11	I am involved in community activities or support groups	104 (57.8)	54 (30.0)	22 (12.2)	0.73	M.S. Ch
12	It is challenging for me to make a balance between work and family responsibilities	24 13.3)	71 (39.4)	85 (47.2)	0.63	L.S. Ch
13	I am building a strong relationship with my children	145 (80.6)	32 (17.8)	3 (1.7)	0.21	L.S. Ch
14	I spend quality time with my family	170 (94.4)	9 (5.0)	1 (0.6)	0.06	L.S. S
Total		1349 (53.5)	505 (20.04)	666 (26.4)	0.44	L.S. S

H.S.S=Highly social challenge M.S.S=moderately social challenge L.S.S=Low social challenge M.S= Mean of Score S. Severity %= Percentage

This table shows that the mean of score are low on item (1,2,4,7,8,9,10,12,13,14) and moderate on items (3,5,6,11) while there are not highly significant items in any items. the mean score for social problems was 0.44, which falls within the "Never" range (0.00–0.66).

Table (7): association between late motherhood problems and sociodemographic variables(N=180)

Socio-demographic variable	Physical Health Challenges		Psychological Health Challenges				Social Health Challenges	
			Depression		**Anxiety**			
Age	**P-value**	0.248	**P-value**	0.307	**P-value**	0.201	**P-value**	0.308
	Chi-square	5.404	**Chi-square**	4.812	**Chi-square**	5.978	**Chi-square**	4.808
Level education	**P-value**	0.304	**P-value**	<0.001	**P-value**	0.471	**P-value**	0.204
	Chi-square	13.945	**Chi-square**	33.615	**Chi-square**	11.691	**Chi-square**	15.719
Occupation Status	**P-value**	0.969	**P-value**	0.575	**P-value**	0.743	**P-value**	0.301
	Chi-square	0.5489	**Chi-square**	2.896	**Chi-square**	1.961	**Chi-square**	4.870
Workload intensity	**P-value**	0.030	**P-value**	0.237	**P-value**	0.002	**P-value**	0.011
	Chi-square	10.743	**Chi-square**	5.528	**Chi-square**	16.494	**Chi-square**	12.989
Income level	**P-value**	0.020	**P-value**	0.002	**P-value**	0.002	**P-value**	0.312
	Chi-square	11.652	**Chi-square**	16.714	**Chi-square**	16.639	**Chi-square**	4.766
Residential Area	**P-value**	0.994	**P-value**	0.067	**P-value**	0.384	**P-value**	0.046
	Chi-square	0.236	**Chi-square**	8.766	**Chi-square**	4.168	**Chi-square**	9.688
Types of birth	**P-value**	0.011	**P-value**	0.455	**P-value**	0.093	**P-value**	0.101
	Chi-square	13.088	**Chi-square**	3.650	**Chi-square**	7.967	**Chi-square**	7.747
Pregnancy status	**P-value**	0.119	**P-value**	0.251	**P-value**	0.079	**P-value**	0.842
	Chi-square	4.252	**Chi-square**	2.764	**Chi-square**	5.065	**Chi-square**	0.343
Consanguinity	**P-value**	0.841	**P-value**	0.099	**P-value**	0.143	**P-value**	0.154
	Chi-square	0.346	**Chi-square**	4.627	**Chi-square**	3.894	**Chi-square**	3.741
BMI	**P-value**	0.510	**P-value**	0.797	**P-value**	0.510	**P-value**	<0.001
	Chi-square	1.345	**Chi-square**	0.454	**Chi-square**	1.345	**Chi-square**	21.620

X^2 value =Chi squire test P. Value <0.05, taken as significancy HS= Highly significance

The table above shows no significant association between the age and physical health challenges at p = (0.248), psychological health challenges (depression p = 0.307 and anxiety p = 0.201), or social health challenges at the level of p = (0.308). The table also shows a significant association was found between level of education and anxiety (p=0.001), suggesting education may influence anxiety levels. However, we found no significant associations with physical health (p=0.304), depression (p=471), or social challenges (p=0.204). The table above shows no significant association between the occupational status and physical health challenges at p = 0.969. No association was seen between age and psychological health challenges (depression p = 0.575 and anxiety p = 0.743) or social health challenges (p = 0.301). The table also shows workload intensity demonstrated significant associations with physical health (p = 0.030), anxiety (p = 0.002), and social factors (p = 0.011). This evidence indicates that increased workload intensity may negatively impact physical health, contribute to anxiety, and influence social interactions. Although the association with depression (p = 0.237) was not statistically significant, it was close to the threshold and could be explored further. Furthermore, the table indicated that income level was significantly associated with physical health (p = 0.020) and psychological health challenges (depression p = 0.002 and anxiety p = 0.002). However, the association with social challenges (p = 0.312) was not significant.

Moreover, the result illustrated an association between the residential area with social factors (p = 0.046), indicating that living conditions might influence social well-being. However, no significant associations were found with physical health (p=0.994), depression (p=0.067), or anxiety (p=0.384). As well Types of birth were significantly associated with physical health (p = 0.011), which indicated that the type of delivery might impact physical outcomes in the future. However, no significant associations were found with depression (p = 0.455) and anxiety (p = 0.093), or social factors (p = 0.101). The table shows pregnancy status did not demonstrate a significant association with physical health challenges (p = 0.119), psychological health challenges (depression p = 0.251 and anxiety p = 0.079), or social challenges (p = 0.842). Similarly, consanguinity showed no significant associations with physical health challenges (p = 0.841), psychological health challenges (depression p = 0.099 and anxiety p = 0.143), or social challenges (p = 0.154). BMI demonstrated a significant association with social factors (p < 0.001), suggesting that body weight may influence social interactions. However, we found no significant associations with other outcomes, such as physical challenge (p=0.510), psychological challenge (depression, p=0.797), or anxiety (p=0.510).

Discussion

The results of this study revealed that the highest proportion of participants (52.8%) were aged between 35 and 38 years. This suggests that late motherhood in this study population is more common in the early years of advanced maternal age, with a marked decline as age increases. This pattern may be attributed to the fact that many women marry in their late 30s and still desire to have children before they get older, given that fertility tends to decline significantly in the later stages of reproductive age, reducing the likelihood of natural conception. These findings align with those of (13), who reported a prevalence of 9.5% among women aged 35–39 years. Despite the fact that the particular setting of that study (such as geography and socioeconomic considerations) might not be the same as the current research. Additionally, (14) found that a significant majority of participants (83.9%) were housewives. The high percentage of homemakers can reflect the sociocultural norms prevalent in the studied place, where women may place a higher value on taking care of the home. Economic challenges were evident, with 57.8% of participants reporting insufficient income. This highlights the financial strain that may accompany late motherhood, potentially due to factors such as reduced employment opportunities or increased healthcare expenses. The fluctuating employment and economic conditions in Kurdistan over the past decade may have contributed to this situation

Regarding smoking, 100% of the participants reported never having smoked, a finding in consistent with (15). he stated the majority of participants (67.2%) resided in urban areas were smoker.

Furthermore, 46% of participants reported a heavy workload, reflective of the significant domestic responsibilities women often bear, especially in cultures like Kurdistan, where child-rearing and housework are traditionally seen as the woman's role.
Table 2. Indicated that the majority of participants were married between the ages of 18–22. In many societies, including Kurdistan, early marriage is often culturally encouraged. Additionally, the majority of births in this sample were Cesarean sections, which aligns with the findings of (16, 17), AMA women (≥ 35 years old) used pre-labor cesarean sections more frequently than women in the 20–29 age range.
the study also found that 57.2% of participants had no history of miscarriage, while 40% had experienced 1–3 miscarriages, and 28.2% had experienced four or more. Several factors may contribute to this, including a higher prevalence of medical conditions in older mothers, increased risk of obstetric complications, and differing clinical practices. However, further investigation is needed to determine the specific reasons for the high Cesarean section rate in this population.
Regarding stillbirths the study also found that majority 93.9% of participants had no history of stillbirths, the high number of live births could be related to the cultural context that favors large family sizes, and potentially linked to the early ages of marriage. This finding consists with consistent with (15, 17, 18). Further, obesity was common among participants in which 99.4 of study sample were obese. Obesity in late motherhood is a significant concern due to its association with increased risks of gestational diabetes, preeclampsia, and other adverse maternal and neonatal outcomes (19).

The most common infant feeding methods were mixed feeding (56.11%). Moreover, Moreover, 59% of pregnancies were planned, while 41% were unplanned. Unplanned pregnancies in late motherhood can present unique challenges related to psychological preparedness, financial stability, and access to prenatal care. This aligns with findings from (10). Furter more the study shows A majority of participants were multigravida (48.89%) and grand multigravida (47.78%), which reflects early marriage and multiple children, as suggested by (18).

The result of this study also shows that the most of participant mother their in-energy levels changed to worse since becoming a mother mean of score were 1.49. While increase in body weight after childbirth was not affected. Furthermore, that study indicated than the participant ability to perform their daily activities or personal hygiene and flexibility since giving birth was moderately affected additionally the mother ability to maintaining good nutrition was also moderately affected. Overall, the mean score for physical health challenges fell within the moderate range (M.S = 1.045), indicating that while late motherhood presents physical challenges, they are not overwhelmingly severe for most women. The variation in severity across different physical issues could be attributed to the physical changes associated with aging, which are commonly observed in women as they reach higher maternal ages.

Late motherhood women often face barriers to physical activity due to fatigue, lack of time, and physical discomfort. (20), indicated late motherhood had moderate score performing daily and taking care to their personal hygiene because fatigue and physical discomfort, it impacts a mother's ability to maintain personal hygiene routines. In addition, the mother’s physical flexibility will change. Their ligaments and joints are also more supple and flexible for a few months after birth (21). Nutrition in advanced maternal age mean score moderately postpartum women often face nutritional challenges due to limited time and energy, this supported by (22), stated that after childbirth, meeting nutritional needs is crucial but often difficult due to several challenges because the new parents may struggle with stress, lack of sleep, limited time and energy, hormonal changes, and physical recovery. These factors can make it hard to prepare and eat balanced meals, even though proper nutrition is essential for healing and overall well-being. Fatigue and decreased energy levels were common, with

participants reporting high levels of tiredness months after delivery. This aligns with (23), who found that poor sleep and depressive symptoms contribute to increased postpartum fatigue.

The findings indicate that significant depression-related issues were not prevalent among most participants, suggesting that depression is not a major concern for the majority of women in this study. This may be attributed to strong family ties in the region, where frequent visits to parents and relatives provide emotional support and reduce feelings of isolation. This finding is supported by (24), who state that women of advanced age with no history of depression were not at higher risk. Likewise (5, 25) indicated that maternal age was associated with lower depression symptom.
However, (17, 26) found that women of advanced maternal age have significantly higher rates of depression compared to younger women. Additionally, the generally low scores on the questionnaire were accompanied by moderate scores on some items, particularly in the question regarding difficulty falling asleep. This finding is supported by (27), they found that 16.5% of women experienced depressed symptoms and 60% of women had poor sleep quality two months after giving birth. While prior sleep problems and first-time parenthood were solely connected to poor sleep quality, depression was linked to sleep disruptions. Moreover, other symptoms such as prolonged sadness, loss of interest in activities, feeling trapped, and emotional exhaustion were reported at moderate levels, which can make daily life challenging for mothers in this study. However, these symptoms do not always prevent them from fulfilling their responsibilities (28).

Regarding anxiety level among late motherhood women, the findings indicate that participants experienced moderate levels of anxiety in general; this may reflect a balance between resilience and stress. While their maturity and coping skills help reduce severe anxiety, they still face physical challenges, social pressures, and work-life conflicts that contribute to moderate psychological strain. However, high levels of anxiety were not observed in this study. The participating mothers do not struggle to balance their work responsibilities with motherhood. They did not worry if their old age would affect their ability to care for their child. Despite that, some of the mothers felt overwhelmed or anxious about their responsibilities as mothers. They faced difficulty adjusting to motherhood and found themselves getting agitated and having difficulty relaxing. (7) found that the postponement of motherhood was associated with difficulties in achieving a successful pregnancy and a higher level of anxiety. In contrast, a study by (5) reported lower symptoms of depression and anxiety during pregnancy, as well as a decrease in postpartum depressive symptoms with advancing maternal age. Further noted that maternal age of 35 years and above was associated with increased scores on all DASS-21 (Depression, Anxiety, and Stress Scales) subscales in female offspring. In addition,(29) reported that women had the greatest difficulty concentrating during the early postpartum period.

The findings in Table 6 indicate that social health challenges were reported at low and infrequent levels, suggesting that while such challenges exist, they are not widespread among the participants. This may be attributed to the increasing social support available in the Kurdistan region including strong family ties and frequent visits from relatives This aligns with the findings of (9) who noted that social problems associated with late motherhood are generally not significant, Women point out that with the experience old age gives them, they feel more emotionally balanced, tolerant, mature, and responsible towards motherhood. With maturity, women feel more competent and secure to look after their children, and in this study, high support from family and husband was found. In contrast to this study (30) reported that family support' was at the lowest level with (mean = 1.91). While in this study the overall mean of score was low (0.44) which indicate low social challenge faced the study sample as the result shows the women in this study get support from husband their families. Family support is associated with lower rates of postpartum depression and anxiety (31). Moreover, late mother gets also support and help from their friends. Friend and peer support reduces isolation and improves emotional wellbeing (32). Beside that the study found that the late motherhood had their public social occasions they are not shy or embarrassed for being late motherhood but regarding

social activities e.g., outings with friends was challenging for them since they become mothers. New mothers often experience reduced social activities and increased isolation (33).
Regarding feeling isolated from their peers due to being an older mother, the study found that it was somehow a challenge for them because they had to balance their parenting responsibilities. and their daily work. Peer support plays a vital role in enhancing the social well-being of mothers, particularly those experiencing late motherhood. It provides emotional and practical assistance from peers, which can complement support from husbands, family, and friends, helping mothers feel valued, respected, and understood. This support fosters social connection, reduces feelings of isolation, and helps mothers regain confidence in public and social situations. For those who have lost social activities or feel disconnected due to age or parenting roles, peer support offers a sense of belonging and reduces stigma, making them feel less shy, embarrassed, or misunderstood. It also improves self-esteem and parenting competence, empowering mothers to relate better with others and reengage in social and community activities. Furthermore, peer support encourages involvement in local resources, helping mothers manage work-family balance, build stronger relationships with their children, and spend more quality time with their families by alleviating daily stress and emotional burden (34), Social support increases confidence and competence in social and parenting roles (35)

Associations with socio-demographic characteristics and health challenges

Concerning the associations between socio-demographic variables and health challenges. This study found that there is no significant association between age and health challenges (physical, psychological (depression, anxiety), and/or social health challenges). This finding in contrast to with (9), He founds that the pregnancy at an older age is influenced by various factors that can affect the healthy progression of the pregnancy, including physical, social, and psychological challenges for women. However, the result of this study shows a significant association between education level and depression ($p = <0.001$), although no significant association was found between education level and physical health challenges, anxiety, or social health challenges. Since most participants in this study had a low educational level. This suggests that lower education levels may face greater socioeconomic challenges because they did not have much information about health problems that arise from advanced maternal aging, in addition to limited access to mental health services, which can increase their risk of depression. This is Supported by (26) In their study about the association between maternal age and depression. The concluded that depression rates are much greater among older mothers than among younger mothers. In addition. (36) , about associations between education levels and prevalence of depressive symptoms: NHANES (2005-2018). The data analyzed data from 34,102 participants aged equal and more than 20 years and found that individuals with less than a 9th-grade education had significantly higher odds of experiencing depressive symptoms compared to those with a college degree or higher.

Regarding workload intensity was significantly associated with physical health challenges ($p = 0.030$), anxiety ($p = 0.011$), and social health challenges ($p = 0.002$), but not with depression ($p = 0.237$). The significant associations with physical health challenges and anxiety suggest that the demands of balancing work and family responsibilities may contribute to physical strain, fatigue, and heightened psychological stress. Additionally, the link to social health challenges emphasizes how a heavy workload may limit social interactions and support networks, further isolating individuals. These results underscore the role of workload in exacerbating physical and social health challenges in women with late motherhood, supported by (37), who indicated increased total work loud over time was associated with significantly poorer mental health and increased symptoms.

Furthermore, this study revealed a significant association between types of birth and physical health challenges, but no significant relationship with psychological and social health challenges. The type of birth may influence physical recovery because women who undergo cesarean sections, for example, may experience more physical complications such as delayed wound healing, fatigue, and prolonged pain compared to those who have normal births supported (38) founds the cesarean section is associated with prolonged physical recovery, higher pain levels, and delayed wound healing compared to normal delivery. Concerning income level, the study shows a significantly associated with physical health challenges ($p = 0.020$), anxiety ($p = 0.002$), and depression health challenges ($p = 0.002$) but no significant association was found with social health challenges ($p = 0.312$), this implies that economic factors play a crucial role in physical and psychological health outcomes in this population, because lower income leads to limited healthcare access, unhealthy lifestyles, and financial stress, which worsen physical and mental health. The lack of an association with social health challenges suggests that social support and community networks play a greater role in reducing isolation and stress, regardless of financial hardship.

Residential area showed a significant association with only social health challenges. This uneven distribution suggests that individuals living in urban environments may be more vulnerable to social health challenges, potentially due to factors such as limited social cohesion, increased population density, weakened neighborhood ties, and reduced opportunities for community involvement. About BMI the study showed a significant association with social health challenges but no associations were found with physical and psychological health challenges. Occupation status and Consanguinity and pregnancy status showed no significant association with any of the health challenges, including physical psychological, and social health challenges. This is because majority of participant were house wife 83.9%.

Conclusion

Late motherhood, characterized by pregnancy and childbirth at or beyond 35 years of age. Which represent a multifaced phenomenon involving a complex interplay of physical, psychological, and social challenges. The findings from this study indicate that women experiencing late motherhood commonly encounter moderate levels of anxiety and physical fatigue, alongside a spectrum of other health-related concerns. Notably, physical challenges were common, with participants reporting difficulties in performing daily activities and experiencing changes in energy levels. Psychologically, while moderate anxiety was observed, the study also revealed a significant proportion of participants who maintained low levels of depression and minimal social challenges, demonstrating resilience often supported by strong family and community networks. This suggests that positive social support systems play a crucial role in mitigating the psychological burden associated with late motherhood. Furthermore, many women successfully adapted to their maternal roles, reflecting a strong capacity for coping and adjustment.

Recommendations

The study underscores the importance of developing targeted healthcare interventions, particularly mental health counseling, prenatal education, and postpartum support, to address the specific needs of older mothers and the balance between motherhood and their daily lives. Tailored approaches that consider the physical, emotional, and social contexts of late motherhood can enhance maternal well-being and promote healthier outcomes for mothers and their children.

Acknowledgments:

We would like to express my thanks to all participant mothers for their valuable time and responses. Our gratitude goes to the Rania Pediatric and Maternal Teaching Hospital, as well as at Kewarash Primary Healthcare Centers and two private maternal clinics in Ranyia City for their generosity in allowing this research to be carried out and cooperation during the period of study.

Conflict of interest: There are no conflict of interest.

Funding: Ther is no funding for this study

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