

## Assessment of Pregnant Women's Knowledge and Practices Toward Preterm Labor

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### الخلاصة

الهدف: تقييم معلومات وممارسات النساء الحوامل ذوات المخاض المبكر، والتعرف على العلاقة بين المعلومات والممارسات وبعض الخصائص الديموغرافية والانجابية والعوامل الاجتماعية والنفسية للحامل.  
المنهجية: دراسة وصفية استخدم فيها أسلوب التقييم، تم اختيار عينة عرضية مكونة من (100) امرأة حامل تعاني من المخاض المبكر من مستشفى العلوية التعليمي للولادة، م. اليرموك التعليمي العام، م. بغداد التعليمي العام، م. فاطمة الزهراء للولادة والإطفال، م. النعمان العام، م. ابن البلدي للولادة والإطفال في مدينة بغداد. شملت استمارة الاستبيان على جزأين يحتويان الخصائص الديموغرافية والاجتماعية، والتاريخ الطبي والحمل الحالي والسابق للحامل، والعوامل الاجتماعية والنفسية ومعلومات وممارسات النساء الحوامل ذوات المخاض المبكر. تم تحديد الثبات والمصدقية لاستمارة الاستبيان، وتم جمع البيانات من خلال استخدام الاستمارة الاستبائية وتطبيق تقنية المقابلة الشخصية ومراجعة سجلات الحوامل. تم تحليل البيانات من خلال تحليل البيانات بالأسلوب الوصفي والاستدلالي.  
النتائج: تشير نتائج الدراسة الى وجود متوسطات عالية في معلومات النساء فيما يتعلق بالتعريف وعلامات الأم البطن والعلامات اكديرية فيما يتعلق بالمغص المشابه لمغص الأم الحيض والتقلصات الرحمية، بينما تشير بقية الفقرات الى متوسطات واطنة أما فيما يتعلق بممارسات النساء أظهرت النتائج وجود متوسطات عالية في جميع الفقرات المتعلقة بممارسات النساء الحوامل نحو الولادة المبكرة، ماعدا فيما يتعلق بزيارة مركز الرعاية الصحية الأولية بانتظام، ومراجعة العيادات الخاصة في حالات النزف والغثيان والتقي وتسرّب السائل السلي.  
كما بينت نتائج الدراسة وجود علاقة ذات دلالة إحصائية مع مهنة الأم، حدوث الإجهاض التلقائي، الولادات الميئة، العوامل الاجتماعية ذات العلاقة مع الاجناد في العمل المنزلي، المشاكل العائلية، والأحداث الحياتية بين الأمانات والمخاوف النفسية في خوف الأم من عدم وجود الحماية من زوجها والخوف من أعباء الحياة اليومية تضعف قابليتها في استمرار الحمل، والخوف من ضعف قابليتنا على تغطية احتياجاتنا الشخصية. كذلك مع مصدر معلوماتنا.  
ممارسات الأمانات فيما يخص المخاض المبكر أظنرت وجود علاقة ذات دلالة إحصائية مع المستوى الاجتماعي، حدوث الاجناض، وناذة طفل غير سوي، مرتبة الحمل الحالي والعوامل الاجتماعية في غياب حماية الزوج، وفيما يخص المخاوف انفسية مع توقع وجود متعب في الحمل الحاني.  
التوصيات: أوصت الدراسة بتصميم وبناء برنامج تثقيفي للنساء الحوامل الواتي يعانون من المخاض المبكر لإدامة معلوماتن وممارساتن للحصول على مستوى تكافل من العناية الشخصية فيما يتعلق وحدود مشككتن.

### Abstract

**Objects:** To assess the pregnant woman's knowledge towards preterm labor, and identify the relationship between these women's knowledge and practices relative to their:

- Socio-demographic variables.
- Reproductive variables, previous and present history, social and psychological factors of pregnant women.

**Methodology:** A descriptive study used an assessment approach in order to assess the knowledge and practices of pregnant women with preterm labor.

A purposive sample of (100) pregnant women with preterm labor were selected from Al-Alwia maternity teaching hospital, Al-Yarmook teaching hospital, Baghdad teaching hospital, Fatimat Al-Zahra maternity & children hospital, Al-Na'aman general hospital, Al-Kadhimia Teaching Hospital and Ibn-Al-Baladi maternity & children hospitals in Baghdad City. The questionnaire consisted of part (1) which included socio-demographic characteristics previous and present obstetrical history, social and psychological factors, and source of information and part (2) pregnant women knowledge and practices regarding the preterm labor.

Reliability and validity of the questionnaire were determined. Data were collected through the use of the questionnaire, the application of the interview technique and review of the pregnant women records. Data were analyzed through descriptive and inferential data approach.

**Results:** The finding of the study shows high mean of scores in women's knowledge regarding the definition of preterm labor, in sign and symptoms in abdominal pain only, and in warning signs regarding pain like menstrual cramps and uterine contractions, while all remaining items oriented towards low mean of scores. Regarding practices, the results presented high mean of scores in all items regarding pregnant woman's practices towards preterm labor except in attending the primary health care center (PHCC) and visiting specialist clinic in bleeding, nausea, vomiting and leaking liquor.

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The finding of the study also presented a significant association between preterm labor and women's occupation, abortion occurrence, still birth and social factors in items of overload housework, family conflicts, and presence of sad and happy events, psychological fears, including the fear of not having partner support, fear of daily housework, fear of weak ability to cover their personal needs and source of information.

The pregnant women's practices regarding the preterm labor had a significant association with women's socioeconomic status, abortion occurrence, delivery of abnormal fetus, and order of pregnancy. Also there is an association between the practices and the social factors concerning absence of partner support. Regarding the psychological fears there was a significant association presented in the expecting of troubles during pregnancy.

**Recommendation:** The study recommended that health education program can be designed and constructed for pregnant women toward preterm labor to promote their knowledge and practices to assume an optimal level of self-management within the parameters of their problem.

**Keywords:** preterm labor, premature labor, prematurity, practice & knowledge

### Introduction

Preterm birth is the major clinical problem associated with prenatal mortality, serious neonatal morbidity and moderate to severe childhood disability in wealthy countries<sup>(1)</sup>.

Preterm delivery affects approximately one in ten births and is the cause of at least (75%) of neonatal deaths excluding those related to congenital malformations<sup>(2)</sup>. Preterm delivery is the leading cause of neonatal death, which is about (80%) for pregnancy delivering at (24) weeks, decreasing to (< 2%) for those delivering after (33) weeks. The risk of preterm delivery varies with maternal characteristics, such as ethnic origin, age, cigarette smoking and drug abuse, as well as previous obstetrics history<sup>(3)</sup>.

The nurse one of the health team members, plays an important role in prevention and early detection of the cause of preterm labor through her skill in assessing the pregnant women for factors and symptoms of preterm labor, nurses can do much in the advocacy role measurements should be taken to improve public education and access to antenatal care, counseling, referral to community, resources, nutrition's counseling are essential preventive components of care<sup>(4)</sup>.

The application of nursing principles to conserve health of the women in all organizations emphasize on prevention, recognition and treatment of illness and injury and require special skills and counseling, environmental health rehabilitation and human relations<sup>(5)</sup>.

Therefore, it is the intention of the present study is to assess the knowledge of health practices of pregnant women who have preterm labor.

### Methodology

A descriptive study used to assess the knowledge and health practices for pregnant women in gestation age (24-37) weeks suffering from preterm labor.

It was comprised of the pregnant women who admitted to maternity departments and hospitals in Baghdad City, who were diagnosed as preterm labor. These hospitals are Al-Alwia maternity teaching hospital, Al-Tarmook teaching hospital, Baghdad teaching hospital, Fatimat Al-Zahra maternity & children hospital, Al-Na'aman general hospital, Al-Kadhimia teaching hospital and Ibn-Al-Baladi maternity & children hospitals in Baghdad City.

A purposive (non-probability) sample of (100) pregnant woman admitted to the hospital with preterm labor. A questionnaire interview form was designed and developed by the researcher to measure the variables underlying the present study.

The questionnaire consisted of two parts

**Part 1:**

- Demographic characteristics of the pregnant women.
- Reproductive information.
- Information related to the previous obstetrical history.
- Variable related to the recent pregnancy.
- Social factor.
- Pregnant psychological fears.
- Pregnant information about preterm labor.

**Part II**

This part was comprised of two sections, which are knowledge section presented to assess pregnant women's knowledge towards preterm labor, it was comprised of (45) items scored as (3) for I know, (2) for Uncertain, and (1) for I don't know, with cutoff point (2)

((Sum score for knowledge = (45 items) \* 2 cut off point =90 (<90 90 >90) in regard to less than, equal 8, more than))

Health practices section presented to assess pregnant women's health practices toward preterm labor. It was comprised of (29) items, related scored as (3) for always, (2) for Sometimes, and (1) for Never, with cutoff point (2).

((Sum score for practice = (29 items) \* 2 cut off point =58 (<58 58 >58) in regard to less than, equal, 8 more than))

Data were collected through the using of the developed questionnaire, interview technique with pregnant women and review of the pregnant women records. The data collection was carried out from February 28th 2004 to June 15th 2004.

The content validity was determined through panel of experts to investigate the content of the questionnaire for its clarity, relevancy and adequacy.

Correlation coefficient for the reliability of the assessment tool was (0.90) for knowledge items and (0.92) for practices items, which were consistent with what specialist had recommended with respect to the pilot study findings, the conclusion proved that the questionnaire was adequately reliable and valid to measure pregnant women knowledge and practices

The data of the study were analyzed through the application of Descriptive data analysis and inferential data analysis.

**Results:**

**Table (1) Distribution of women's knowledge items score according to 3-point likert scale.**

Knowledge Items	I know	Uncertain	Don't know	Total	MS
Definition	63	2	35	100	2.28
Signs & symptoms:					
Abdominal pain	49	2	49	100	2.0
Backache	44	2	54	100	1.9
Sluggish fetal movement	15	4	81	100	1.38
Vaginal discharge	33	3	64	100	1.96
Vaginal bleeding	19	3	78	100	1.42
Fever	28	1	71	100	1.49
Cervical dilatation	46	5	49	100	1.97
Uterine contraction	44	6	50	100	1.94

**Table (!)continued**

Knowledge Items	I know	Uncertain	Don't know	Total	MS
Uterine contraction	44	6	50	100	1.94
Premature rupture membrane	33	1	66	100	1.67
<b>Causes :</b>					
Unknown causes	5	2	93	100	1.12
General infection	7	6	87	100	1.2
Urinary tract infection	8	4	88	100	1.2
Placenta previa	10	■	90	100	1.2
Abruptio placenta	5	1	94	100	1.11
Multiple gestation	3	1	96	100	1.7
Cervical incompetence	7	2	91	100	1.16
Trauma	16	1	83	100	1.33
Uterine fibroids	4	2	94	100	1.1
Hypertension	11	5	84	100	1.37
Diabetes mellitus	6	4	90	100	1.16
Poly hydromnious	1	■	99	100	1.02
Anemia	2	2	96	100	1.06
Maternal age < 20 & > 35	9	3	88	100	1.91
<b>Warning signs :</b>					
Pain like menstrual cramps	56	3	41	100	2.15
Lower back pain	27	5	68	100	1.59
Abdominal colic with diarrhea	12	3	85	100	1.27
Watery & mucous discharge	39	2	59	100	1.8
Bloody vaginal discharge	33	2	65	100	1.68
Leaking liquor	42	8	50	100	1.92
Uterine contractions	70	-	30	100	2.4
<b>Predisposing factors :</b>					
Malnutrition & loss of appetite	11	3	86	100	1.25
Smoking	10	2	88	100	1.22
Low economic status	11	3	56	100	1.25
Uterine abnormalities	8	1	91	100	1.17
Previous preterm labor	9	1	90	100	1.19
Premature rupture membrane	4	3	93	100	1.11
Gynecological diseases	8	3	89	100	1.19

**Table (1)continued**

Knowledge Items	I know	Uncertain	Don't know	Total	MS
Drug addiction	12	3	85	100	1.25
Occupational fatigue	33	2	65	100	1.68
Emotional stress	35	4	61	100	1.74
Social problems	32	4	64	100	1.68
Household fatigue	40	2	58	100	1.82
Sexual violence	20	2	78	100	1.42
Excessive coffee drink	23	13	64	100	1.59

The table reveals that there were high mean of scores in women's knowledge regarding definition of preterm labor, abdominal pain signs, & pain like menstrual cramps, while all remaining items oriented towards low mean of scores

**Table (2) Distribution of women's practices items score according to 3-point likert scale regarding preterm labor.**

Practices items	Always	Some times	Never	Total	MS
Attending PHCC	16	40	44	100	1.72
<b>Visiting special clinic in:</b>					
Vaginal bleeding	37	22	41	100	1.96
Nausea & vomiting	27	7	66	100	1.61
Uterine contraction	71	12	17	100	2.54
Sluggish fetal movement	46	12	42	100	2.01
Leaking liquor	38	17	45	100	1.92
Backache	75	12	31	100	2.36
Increase fluid intake	71	24	5	100	2.66
Decrease coffee intake	35	51	4	100	2.21
Prevent taking spicy foods	39	38	23	100	2.16
Taking frequent meals	63	35	2	100	2.61
Rich protein food intake	46	41	13	100	2.33
Reduce CHO intake	62	25	13	100	2.51
Reduce salty diet	45	42	13	100	2.32
Prevent smoking	92	4	4	100	2.88
Complete rest	75	16	9	100	2.66
Prevent daily muscular stress	81	11	8	100	2.43
Prevent trauma	84	11	5	100	2.79
Prevent lifting heavy things	83	11	6	100	2.77
Chang hard work	94	2	4	100	2.9
Prevent sexual relations	62	25	13	100	2.49
Observe urine color & frequency	75	17	8	100	2.67
Vaginal hygiene	95	5	0	100	2.95
<b>Follow' doctor prescription in:</b>					
Blood investigation	88	7	5	100	2.83
Measuring weight	78	6	16	100	2.62
Urine test	86	10	4	100	2.82
Measuring B/PR	89	8	3	100	2.86
Ultrasound	94	5	1	100	2.95
Taking treatment	90	5	5	100	2.85

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The table show that there were high mean scores in all items regarding women's practices toward preterm labor except for attending the PHCC regularly ,and visiting special clinic in case of vaginal bleeding, nausea and vomiting , and leaking liquor.

**Table (3) Association between (100) women's socio-demographic characteristics and women's knowledge and practices the regarding preterm labor.**

Variables	Knowledge			*2	df	p<	Sig.	Practices			*ξ	df	p<	Sig.
	<90	90	Total					<58	58:	Total				
Maternal age														
<20	7	-	7	1.391	3	0.708	■	5	5	7	6.243	3	0.100	-
20-29	47	5	52					24	5	52				
30-39	32	4	36					15	21	36				
40-49	4	1	5					-	5	5				
Total	90	10	100					41	56	100				
Educational level														
Illiterate	23	-	23	6.381	3	0.094	■	10	13	23	6.381	3	0.094	-
Primary school	31	2	33					20	13	33				
Secondary school	31	6	37					12	25	37				
College & above	5	2	7					2	5	7				
Total	100	10	100					44	56	100				
Occupation														
Officer	9	4	13	7.215	2	0.027	S	3	10	13	3.803	2	0.149	-
Housewives	80	6	86					40	46	86				
Worker	1	-	1					1	-	1				
Total	90	10	100					44	56	100				
Residential area														
Rural	17	1	18	0.182	1	0.188	■	11	7	18	2.608	1	0.106	-
Urban	73	9	82					33	49	82				
Total	90	10	100					44	56	100				
Type of family														
Single	36	5	41	0.382	1	0.542	-	16	25	41	0.698	1	0.403	-
Extended	54	5	59					28	31	59				
Total	90	10	100					44	56	100				
Socioeconomic status														
Low < 89	75	6	81	3.880	2	0.144	-	41	40	81	7.586	2	0.023	S
Moderate(90-120)	10	2	12					10	10	12				
High (121-150)	5	2	7					1	6	7				
Total	90	10	100					44	56	100				

Significant associations were depicted out of this table between women's occupation only and their knowledge regarding the preterm labor, while there is a significant association between women's practices regarding the preterm labor and socioeconomic status.

**Table (4) Association between (100) women's reproduction characteristics and their knowledge and practices regarding the preterm labor.**

Variables	Knowledge			X <sup>2</sup>	df	p<	Sig.	Practices			X <sup>2</sup>	df	p<	Sig
	<90	90:	Total					<58	≥58	Total				
<b>Menstrual regularity</b>														
Regular	79	8	87	0.481	1	0.488	-	36	51	87	1.865	1	0.172	-
Irregular	11	2	13					8	5	13				
<b>Total</b>	<b>90</b>	<b>10</b>	<b>100</b>					<b>44</b>	<b>56</b>	<b>100</b>				
<b>Gravidity</b>														
M	52	3	55	3.696	2	0.166	-	23	32	55	0.277	2	0.871	■
4-5	22	3	25					12	13	25				
6+	16	4	20					9	11	20				
<b>Total</b>	<b>90</b>	<b>10</b>	<b>100</b>					<b>44</b>	<b>56</b>	<b>100</b>				
<b>Parity</b>														
Null:	39	3	42	3.066	3	0.382	■	19	23	42	3.858	3	0.277	■
1-3	37	4	41					16	25	41				
4-5	9	1	10					7	3	10				
*6	5	2	7					2	5	7				
<b>Total</b>	<b>90</b>	<b>10</b>	<b>100</b>					<b>44</b>	<b>56</b>	<b>100</b>				
<b>Abortion occurrence</b>														
Nulli	63	4	67	11.352	3	0.010	5	35	32	67	S.X>6	3	0.030	S
1-2	21	4	25					5	20	25				
3-4	6	1	7					4	3	7				
5+	-	1	1					1	1	2				
<b>Total</b>	<b>90</b>	<b>10</b>	<b>100</b>					<b>44</b>	<b>56</b>	<b>100</b>				
<b>Pregnancy interval</b>														
≤ 1 year	29	-	29	5.781	4	0.216	■	17	12	29	8.759	4	0.067	-
1-2	28	-	33					9	24	33				
3-4	14	3	17					9	8	17				
5+	14	1	15					5	10	15				
	5	1	6					4	2	6				
<b>Total</b>	<b>90</b>	<b>10</b>	<b>100</b>					<b>44</b>	<b>56</b>	<b>100</b>				
<b>Still birth no.</b>														
None	71	5	76	6.433	2	0.040	S	35	41	76	0.846	2	0.655	-
1-2	15	5	20					7	13	20				
3-4	4	-	4					2	2	4				
<b>Total</b>	<b>90</b>	<b>10</b>	<b>100</b>					<b>44</b>	<b>56</b>	<b>100</b>				
<b>Pregnancy order</b>														
1	38	1	39	7.403	5	0.06	-	20	19	39	12.348	5	0.03	S
2	9	3	12					11	12					
3	9	2	11					9	11					
4	18	1	19					9	19					
5	5	1	6					2	6					
6+	11	2	13					7	6	13				
<b>Total</b>	<b>90</b>	<b>10</b>	<b>100</b>					<b>44</b>	<b>56</b>	<b>100</b>				

This table indicated that there were significant associations between women's knowledge and practices regarding the preterm labor and abortion occurrence, but there were significant associations between still birth, and women's knowledge regarding the preterm labor, also there was significant association between pregnancy orders and women's practices regarding the preterm labor.

**Table (5) Association between (100) women's obstetrical history and their knowledge and practices regarding the preterm labor.**

Variables	Knowledge			X <sup>2</sup>	df	p<	Sig.	Practices			*2	df	p<	Sig.
	<90	90	Total					<58	≥58	Total				
<b>Type of last delivery</b>														
NVD	27	6	33	3.87	2	0.276	-	16	17	33	1.796	2	0.616	■
CIS	24	2	26	2				16	10	26				
None	39	2	41					19	22	41				
<b>Total</b>	<b>90</b>	<b>10</b>	<b>100</b>					<b>44</b>	<b>56</b>	<b>100</b>				
<b>Last delivery Place</b>														
Home	13	3	16	2.683	2	0.261	-	8	8	16	0.673	2	0.714	-
Hospital	38	5	43					17	26	43				
None	39	2	41					19	22	41				
<b>Total</b>	<b>90</b>	<b>10</b>	<b>100</b>					<b>44</b>	<b>56</b>	<b>100</b>				
<b>Previous premature delivery</b>														
Yes	16	3	19	0.874	1	0.350	-	7	12	19	0.488	1	0.485	-
No	74	7	81					3	44	81				
<b>Total</b>	<b>90</b>	<b>10</b>	<b>100</b>					<b>44</b>	<b>56</b>	<b>100</b>				
<b>Twin gestation</b>				1.87	1	0.17	-				0.64	1	0.42	-
Yes	2	1	3	1		1		2	1	3	5		2	
No	88	9	97					42	55	97				
<b>Total</b>	<b>90</b>	<b>10</b>	<b>100</b>					<b>44</b>	<b>56</b>	<b>100</b>				
<b>Gynecologic disease</b>				2.11	1	0.14	■				0.93	1	0.33	-
Yes	25	5	30	6		6		11	19	30	5		3	
no	65	5	70					33	37	70				
<b>Total</b>	<b>90</b>	<b>10</b>	<b>100</b>					<b>44</b>	<b>56</b>	<b>100</b>				
<b>Family history of disease.</b>														
Yes	18	3	21	0.542	1	0.461	-	10	11	21	0.141	1	0.707	-
No	72	7	79					34	45	79				
<b>Total</b>	<b>90</b>	<b>10</b>	<b>100</b>					<b>44</b>	<b>56</b>	<b>100</b>				
<b>Delivery of abnormal fetus.</b>														
Yes	4	2	6	0.278	1	0.598	■	3	3	6	2.002	1	0.049	S
No	86	8	94					41	53	94				
<b>Total</b>	<b>90</b>	<b>10</b>	<b>100</b>					<b>44</b>	<b>56</b>	<b>100</b>				

This table indicates a significant association only between delivery of abnormal fetus and women's practices regarding the preterm labor.



**Table (6) Association between the variables related to present pregnancy and women's Knowledge and practices related to preterm labor.**

Variables	Knowledge			**	df	p<	Sig.	Practices			*γ	df	p<	Sig.
	690	≥90	Total					<58	≥58	Total				
<b>Attending PHCC</b>														
None	37	7	44	3.068	2	0.216	■	14	30	44	6.826	2	0.033	S
Regular	15	1	16					11	5	16				
Irregular	38	2	40					19	21	40				
<b>Total</b>	<b>90</b>	<b>10</b>	<b>100</b>					<b>44</b>	<b>56</b>	<b>100</b>				
<b>Medical disorder</b>														
None	25	2	27	1.451	4	0.41	-	11	16	27	1.820	4	0.12	-
Hypertension	16	2	18					6	12	18				
Diabetes	7	1	8					4	4	8				
Anemia	38	4	42					21	21	42				
Others * .	4	1	5					2	3	5				
<b>Total</b>	<b>90</b>	<b>10</b>	<b>100</b>					<b>44</b>	<b>56</b>	<b>100</b>				
<b>ITI</b>														
Yes	71	6	77	1.813	1	0.178	■	32	45	77	0.810	1	0.368	-
No	19	4	23					12	11	23				
<b>Total</b>	<b>90</b>	<b>10</b>	<b>100</b>					<b>44</b>	<b>56</b>	<b>100</b>				
<b>Twin gestation</b>														
Yes	1	-	3	0.344	1	0.558	-	3	-	3	3.936	1	0.047	S
no	87	10	97					41	56	97				
<b>Total</b>	<b>90</b>	<b>10</b>	<b>100</b>					<b>44</b>	<b>56</b>	<b>100</b>				
<b>Cervical circulage</b>														
Yes	9	4	13	7.162	1	0.007	H.s	4	9	13	1.062	1	0.303	-
No	81	6	87					40	47	87				
<b>Total</b>	<b>90</b>	<b>10</b>	<b>100</b>					<b>44</b>	<b>56</b>	<b>100</b>				
<b>Planning for pregnancy</b>														
Yes	67	5	72	2.66*	1	0.102	■	32	40	72	0.021	1	0.886	-
No	23	5	28					12	16	28				
<b>Total</b>	<b>90</b>	<b>10</b>	<b>100</b>					<b>44</b>	<b>56</b>	<b>100</b>				

This table reveals that there was a significant association between women's attending PHC centers and twin gestation and their practices regarding the preterm labor, while there was a significant association between cervical circulage and women's knowledge regarding the preterm labor.

**Table (7) Association between social factors and women's knowledge and practices regarding the preterm labor.**

Variables	Knowledge			X <sup>2</sup>	df	P<	Sig.	Practices			X <sup>2</sup>	df	P<	Sig.
	<90	≥90	Total					<58	58+	Total				
Absence of partner support														
Yes	14	1	15	0.218	1	0.641	-	11	4	15	6.162	1	0.013	H.s
No	76	9	85					33	52	85				
Total	90	10	100					44	56	100				
No desire in pregnancy														
Yes	15	3	18	1.084	1	0.298	■	11	7	18	2.608	1	0.106	-
No	75	7	82					33	49	82				
Total	90	10	100					44	56	100				
Neglect ion of health care														
Yes	16	3	19	0.874	1	0.350	■	10	9	19	0.709	1	0.400	-
No	74	7	81					34	47	81				
Total	90	10	100					44	56	100				
Over load house work														
Yes	29	7	36	5.575	1	0.018	H.s	20	16	36	3.048	1	0.081	-
No	61	3	64					24	10	64				
Total	90	10	100					44	56	100				
The use of violence in sexual relations														
Yes	11	3	14	2.362	1	0.124	-	8	6	14	1.141	1	0.285	-
No	79	7	86					36	50	86				
Total	90	10	100					44	56	100				
Family problems and conflicts														
Yes	20	5	25	3.704	1	0.050	S	11	14	25	0.000	1	1.000	-
No	70	5	75					33	42	75				
Total	90	10	100					44	56	100				
Presence of sad and happy events														
Yes	23	6	29	5.186	1	0.023	U.S	11	18	29	0.611	1	0.435	-
No	67	4	71					33	38	71				
Total	90	10	100					44	56	100				

This table shows that there was a significant association between women's practices regarding the preterm labor and the absence of partner support. While there was significant association between women's knowledge regarding the preterm labor and over load housework, family problems, conflicts and presence of sad and happy events.

**Table (8) Association between psychological fears and women's knowledge and practices Regarding the preterm labor.**

Psychological items	Knowledge			**	df	p<	Sig.	Practices			*2	Df	p<	Sig.
	<90	90						<58	58					
I fear of not continuing my pregnancy عق No	50 40	7 3	57 43	0.766	1	0.381	-	27 17	30 26	57 43	0.610	1	0.435	-
Total	90	10	100					44	56	100				
Expecting of troubles during pregnancy Yes No	38 52	7 3	45 55	2.806	1	0.094	-	15 29	30 26	45 55	3.778	1	0.050	S
Total	90	10	100					44	56	100				
I fear of not having my partner support Yes No	21 69	6 4	27 73	6.139	1	0.013	S	13 31	14 42	27 73	0.258	1	0.611	-
"Iota,	90	10	100					44	56	100				
I fear of daily loads weaken my ability to continue the pregnancy Yes No	41 49	9 1	50 50	7.111	1	0.008	S	26 18	24 32	50 50	2.597	1	0.107	-
"Iota,	90	10	100					44	56	100				
I fear of my weak ability to cover my personal needs Yes No	38 52	8 2	46 54	5.171	1	0.023	S	21 23	25 31	46 54	0.094	1	0.759	-
Total	90	10	100					44	56	100				
Reflection of war evidence on my pregnancy Yes No	51 39	6 4	57 43	0.0-11	1	0.840	-	25 19	32 24	57 43	0.001	1	0.974	-
Total	90	10	100					44	56	100				
I feel restless, unstable and insecure. Yes No	75 15	8 2	83 17	0.071	1	0.790	-	38 6	45 11	83 17	0.630	1	0.427	-
Total	90	10	100					44	56	100				

**Table (9) continued**

Psychological items	Knowledge			X <sup>2</sup>	df	P<	Sig.	Practices			X <sup>2</sup>	Df	P<	Sig.
	<90	≥90						<58	≥58					
<b>I feel continuously with fear without any cause</b>				<b>0.482</b>	<b>1</b>	<b>0.488</b>	-				<b>0.233</b>	<b>1</b>	<b>0.630</b>	-
Yes	73	9	82					37	45	82				
No	17	1	18					7	11	18				
<b>Total</b>	<b>90</b>	<b>10</b>	<b>100</b>					<b>44</b>	<b>56</b>	<b>100</b>				
<b>I fear of complication occurrence during pregnancy</b>				<b>0.810</b>	<b>1</b>	<b>0.368</b>	-				<b>0.014</b>	<b>1</b>	<b>0.906</b>	-
Yes	70	9	79					35	44	79				
No	20	1	21					9	12	21				
<b>Total</b>	<b>90</b>	<b>10</b>	<b>100</b>					<b>44</b>	<b>56</b>	<b>100</b>				
<b>Expecting congenital deformities for my fetus</b>				<b>0.148</b>	<b>1</b>	<b>0.700</b>	-				<b>0.216</b>	<b>1</b>	<b>0.648</b>	<b>1</b>
Yes	68	7	75					34	41	75				
No	22	3	25					10	15	25				
<b>Total</b>	<b>90</b>	<b>10</b>	<b>100</b>					<b>44</b>	<b>56</b>	<b>100</b>				

Significant association was found out from this table between women's Practices and their expect of trouble during pregnancy only, while there was a significant association between women's Knowledge regarding the preterm labor and their fear of not having partner support, fear of daily loads weaken their ability to continue their pregnancy, and fear of their weak ability to cover their personal needs.

### Discussion

Interpretation and discussion of the present study finding were presented with supportive evidence available in the literature, and organized with regard to the study objectives:-

Regarding knowledge of the pregnant women concerning preterm labor, the study revealed that the pregnant women knowledge was low concerning preterm labor.

The study had reported that there were a slightly high mean of scores (2.28) regarding pregnant knowledge about definition, and one symptom of preterm labor in (abdominal pain sweep to back). While other signs & symptoms oriented toward negative knowledge.

It was stated that the expectant mother must be able to identify subtle symptoms of preterm labor in order to seek care quickly. The results also demonstrated low mean of score in all items related to women's knowledge regarding causes of preterm labor. These results were indicative for low educational level of pregnant women with preterm labor. In relation to warning signs, it was found that the higher mean of score was (2.4) in uterine contraction, and (2.15) in pain like

menstrual cramps, while the remaining items oriented toward low mean of scores. Early warning signs allow for decision to be made regarding, the place, the timing and the route of delivery which in turn may enhance the outcome (7). In relation to predisposing factors; the study had reported that there was low mean of scores in all items. During the antenatal period, the nurse should identify the women at risk for preterm labor by noting the presence of predisposing factors (8).

Regarding the practices of pregnant women concerning the preterm labor, the results revealed high mean of scores in all the items except in attending the primary health care center, and visiting the special clinic in vaginal bleeding, nausea & vomiting, and leaking liquor. The prenatal care is one that should be provided by health center, a risk score of preterm delivery based on the history and examination which may be useful as an initial screen to identify women at particularly high risk (9). Maternal assessment of fetal activity keeps the women in touch with her fetus and provide on going assessment of fetal status (10). Notably the study reflects the existence of high mean scores in women practices in fluid intake, decrease coffee, prevent spicy food, taking frequent meals, rich protein & vitamins, and reduce carbohydrate and salty diet. Regarding smoking the study revealed high mean of scores. These results were certainly satisfactory and mean that most of the pregnant women are alert of the affect of smoking on the pregnancy outcomes. Regarding the rest & activity all items oriented toward high mean of scores. Regarding sexual activity & vaginal hygiene the study also revealed high mean of scores. There is evidence suggesting the existence of a relationship between coital activity during pregnancy and preterm labor (11). As conclusion related to women health practices, there are a large variety of practices that affect the health of women. Health practices may be affected by some factors as families from low socioeconomic group, this group has a lack of knowledge and leads to poor skills.

Regarding the socio-demographic characteristics, the results indicated that there is a significant association between women's occupation and their knowledge regarding preterm labor at ( $P < 0.027$ ;  $2-7.215$ ), while there is a significant association between women's practices and socioeconomic status at ( $P < 0.023$ ,  $7 \ll \blacksquare$  7.586)

One of the most important variables which directly or indirectly affected the chances of survival is the socioeconomic status, this includes such variables as father's and mother's education, occupation and income, prenatal education generally and the mother's particularly are closely associated with better reproductive behavior. Most premature delivery is associated with low socioeconomic status whether measured by family income, educational level, residency, social class or occupation (12). Another study demonstrated that the source of income is unstable and insufficient to meet basic needs of daily living and medical needs during pregnancy (10).

Generally, these results indicated that the pregnant women's knowledge regarding preterm labor was very poor and oriented toward low means of scores in all items, and they were unaware of any variable predisposing to preterm labor. While most of them experiencing many complications during their pregnancies. This also may be due to unavailability of the resources, and lack of information, education of the pregnant women regarding preterm labor should be considered as an integral part of their management. It was viewed that any condition that might adversely affect the health of the women during pregnancy, labor and delivery' places the pregnant women in a risk category, in which variable psychological and developmental factors can place the mother at high risk (12).

Regarding Reproductive characteristics, the results shows that there was a significant association between women's knowledge regarding preterm labor and abortion occurrence at ( $POOIO$ ,  $*2 = 11.352$ ). still birth at ( $P < 0.04$ ;  $*2 = 6.433$ ). Also there is a significant association between women's practices and abortion

occurrence at (PO.030,  $\chi^2 = 8.966$ ), and pregnancy order at ( $P < 0.03$ ,  $\chi^2 = 12.348$ ).

The current study was in agreement with (Bernstein & Gabbe) who stated that bad obstetrical history includes abortion; still birth and previous premature birth are risk factors for preterm labor and prematurity<sup>(1)</sup>.

Regarding the pregnancy order, contrary to the popular belief that childbirth gets easier with each experience of mother. While the risks involved in repeated child bearing are many, and the risk to any woman is enormously affected by socioeconomic status, general status of health as access to good quality professional health care<sup>(14)</sup>.

Regarding the association between obstetrical history the result revealed a significant association between women's practices and the delivery of abnormal fetus at (PO.049,  $\chi^2 = 3.861$ ).

The previous delivery of newborn with birth defect, considered as indicators for high risk pregnancy on the physiological as well as psychological point of view<sup>(11)</sup>.

Association between the variable to present pregnancy indicated a significant association between women's attendance to primary health center (PHCC), twin gestation and their health practices regarding preterm labor at ( $P < 0.033$ ,  $\chi^2 = 6.826$ ) ( $P < 0.047$ ,  $\chi^2 = 3.936$ ) respectively also indicated significant association between their knowledge and cervical Cerclage at ( $P < 0.007$ ,  $\chi^2 = 7.162$ ).

In a previous study reported that pregnant women received antenatal care at the PHCC at this pregnancy and the previous one to compare between both outcomes based on three variables which affect pregnancy outcomes (social, medical and maternal factors). The study showed that there was a strong relationship between the regular antenatal care visits to the clinics and the early controlling of the risk factors during pregnancy, delivery' and post delivery which have a positive effect on the pregnancy outcome<sup>(13)</sup>.

Also the multiple pregnancies carry a higher risk of prenatal morbidity and mortality because the incidence of preterm delivery' is much higher than with single gestations<sup>(15)</sup>.

The women in recurrent cases of pregnancy loss because of this experience, they may manage their condition skillfully by gaining their knowledge through their previous experience and their regular attendance to PHCC and special clinics<sup>(16)</sup>.

Regarding the social factors, the study demonstrated significant association between pregnant women's knowledge regarding preterm labor and overload housework at ( $P < 0.018$ ,  $\chi^2 = 5.575$ ), family problem at ( $P < 0.05$ ,  $\chi^2 = 3.704$ ), and presence of sad and happy events at ( $P < 0.023$ ,  $\chi^2 = 5.186$ ). Also there is a significant association between women's knowledge and absence of partner support at ( $P < 0.013$ ,  $\chi^2 = 6.162$ ).

It was assumed that during pregnancy, the husband and wife are assumed to be supportive to each other at a time of great danger and growth together, the husband, in particular is seen as a primary source of help for his wife<sup>(17)</sup>. Some studies indicated that prolonged standing hours of work and physical fatigue during work are strong predictors of preterm labor<sup>(18)</sup>.

It was also demonstrated that women with positive marital relationship had the less disturbed reactions, and less negative attitude, and expressed little rejection and outward hostility. These women expressed little separation and anxiety during pregnancy<sup>(19)</sup>.

Regarding psychological fears the study indicated significant association between women's practices and their expectation of trouble during pregnancy at ( $P < 0.05$ ,  $\chi^2 = 3.778$ ). Regarding women's knowledge there is a significant association between the preterm labor and their fear of not having partner support at ( $P < 0.013$ ,  $\chi^2 = 6.139$ ), fear of daily loads weaken their ability to continue their pregnancy at ( $P < 0.008$ ,  $\chi^2 = 7.111$ ), and fear of their weak ability to cover their personal needs at ( $P < 0.023$ ,  $\chi^2 = 5.171$ ).

It was found that the low income who suffered from high levels of stress and anxieties throughout their pregnancies were more likely to deliver prematurely<sup>(20)</sup>. A study conducted in the university of California showed that the middle class women experienced high level of pregnancy related anxiety such as worries about the health of their baby or fear of labor and delivery were significant more likely to deliver prematurely. Also demonstrated that women with positive marital relationship had the less disturbed reactions and less negative attitudes and expressed little rejection and outward hostility<sup>(?)</sup>.

Fernando indicated that prolong standing longer hours of work, and physical fatigue are strong predictors of preterm labor. So, a women over-whelmed by poverty may not be able to overcome her as well as family demands and, therefore, may be prone to complications<sup>(\*)</sup>.

## Recommendations

The study recommended that:

1. Initiation of health education program and prenatal education courses can be designed and constructed for pregnant women toward preterm labor to promote their knowledge and practices to assume an optimal level of self-management within the parameters of their problem.
2. Improving health personnel knowledge especially the nurses to take their role in teaching and giving advice and instructions through prenatal care, and encouraging them to take a leader role in implementing health education.
3. Emphasizing on the mothers to attend PHCC from the first month of pregnancy for check and discover any abnormalities in mother & their family.

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