CHAPTER V

RESEARCH FINDINGS

This chapter concerns with the data analysis and the main purpose is to point out any differences between two groups of subjects and the association of postterm pregnancy to the unfavorable outcomes.

Table 5.1 Socio-economic status

	TERM GROUP (244 subjects) Freq	Percent	POSTTERM GROUP (250 subjects) Freq	Percent
AGE (Year)				
< or = 35	215	88.1	221	88.4
> 35	29	11.9	29	11.6
EDUCATION				
Illiteracy	02	0.8	01	0.4
Primary school	47	19.3	21	8.4
Secondary school	60	24.6	66	26.4
High school	109	44.7	107	42.8
University	26	10.7	55	22.0
OCCUPATION				
Housewives	90	36.9	106	42.4
Own business	46	18.9	42	16.8
Farmer	10	4.1	07	2.8
Officer	70	28.7	79	32.0
Worker	28	11.5	16	6.0
LIVING PLACE				
Urban area	195	79.9	167	66.8
Rural area	49	20.1	83	33.2

The pregnant women who are more than 35 years old may be at high risk of developing the unfavorable fetal outcomes. Therefore, we categorized the maternal age into two categories as table showed above. The pregnant women in both groups are of similar age distribution, most of them are 35 years old or less.

The distribution of occupation is also similar in both groups. Of these 494 subjects, most of them are housewives, officers and workers, a few of them are farmers as table showed. It is easy to interpret that the hospital is at the central city, so a few of the farmers come to the hospital. That reason also interprets why the majority of subjects live in urban area. Two-third of them live in the urban area, only one-third live in the rural area. The percentage of living in rural area in postterm group is higher than in term group. It may be explained that the woman who lives in the rural area without obstetricians do not know the normal duration of pregnancy. As the result, they become postterm pregnancy more frequently than those who live in the urban area.

Nearly half of them have the educational level of high school, one-fifth are the secondary school in both groups. But the proportion of pregnant women at the level of university in postterm group is much greater than in term group. In contrast, the proportion of pregnant women at the level of primary school in the term group is much

higher than the proportion in postterm group. Only 2 women out of 244 term subjects and 1 out of 250 postterm subjects are illiterate. With regard to the imbalance of percentage of educational level in two groups, it may be explained that the women with high educational level know well about the gestational age, then they may wait the labour until the end of 41st week. Consequently, they become postterm pregnancy more frequently than those who are of lower level of education.

Table 5.2 General status of the pregnant women

	TERM GROUP(244)		POSTTERM GROUP(250)	
	Freq	Percent	Freq	Percent
PRENATAL CARE				
No	19	7.8	11	4.4
Yes	225	92.2	239	95.6
ULTRASOUND (examined before or at term)				
No	141	57.8	84	33.6
Yes	103	42.2	130	52.0
PARITY				
Primiparae	143	58.6	133	53.2
Multiparae	101	41.4	117	46.8

As table 5.2 shows, the proportions of prenatal in both groups are very high. Only small percentage among these women have no prenatal care. The condition of having ultrasound examination is considered as ultrasound that

have done before term or at term. 103 out of 244 subjects in term group comparing to 130 out of 250 subjects in postterm group were examined by ultrasound. In term pregnancy, the delivery can occur at 38th, 39th, 40th or 41st week of gestation, whereas, the pregnancy with longer gestational age has more chance of ultrasound examination. This explains the imbalance between two groups about the ultrasound examination is resonable. The postterm pregnancy has more chance of ultrasound examination than term pregnancy due to the longer gestational age. Of these 494 subjects, more than 50% of subjects in both groups are primiparae, the rest are multiparae.

Analysis of the whole sample

This is the first step of analysis. In this part of analysis, we analyse the whole set of data, which consists of the data of 250 postterm subjects and 244 term subjects. We look for the difference between two groups about the unfavorable fetal outcomes as expected.

Table 5.3 The average of the gestational age

	Term group (244)	Postterm group (250)
Mean	39.83	42.47
S.E.M	1.00	0.86

P-value: 0.0000

The average of gestational age of term group and postterm group are 40 wks and 42.5 wks, respectively.

Table 5.4 Percentage of unfavorable fetal outcomes in term group and postterm group

	Term group (244)		Postterm group (250)	
	Freq	Percent	Freq	Percent
F.G.R.	20	8.2	25	10.0
Large for date	14	5.7	21	8.4
Clifford syn.	28	11.5	49	19.6
FGR + CLIFFORD	07	2.9	14	5.6

The proportions of unfavorable fetal outcomes in postterm subjects are greater than in term subjects in every category.

Table 5.5 The rate of fetal growth retardation in postterm pregnancy and term pregnancy

Subject group	Small for date		Total
	Presence	Absence	
Postterm	25	225	250
Term	20	224	244
Total	45	449	494

Odds ratio: 1.24
95% Confidence interval: 0.64 - 2.42
Chi-square: 0.48
P-value: 0.49

Table 5.5 indicates that there is no difference about the rate of FGR in postterm pregnancy and term pregnancy. The rate of fetal growth retardation in postterm group is slightly higher than the rate in term sample. But it has no meaning in term of generalizing to the target population because the 95% confident interval falls within 0.64 - 2.42. In other words, there is no evidence that the rate of fetal growth retardation in postterm pregnancy is greater than in term group.

Table 5.6 Adjusted Odds ratio of "Small for date"

Stratified variable	Odds ratio	95% C.I	P-value
Age	1.24	0.67 - 2.30	0.59
Parity	1.31	0.70 - 2.43	0.48
Occupation	1.26	0.68 - 2.35	0.57
Education	1.19	0.63 - 2.25	0.71
Living place	1.16	0.61 - 2.17	0.77
Prenatal care	1.23	0.67 - 2.26	0.61
Fetal sex	1.24	0.67 - 2.30	0.59

In order to control the confounding factors, which can affect the Odds Ratio (O.R.) of fetal growth retardation, the O.R. was adjusted by factors, which had been estimated being confounder such as maternal age, parity, occupation and so on. We stratify the data into subgroups and analyse each subgroup. Finally, we get the summary result from the analysis of all subgroup by using the method of Mantel-Haenszel.

After we stratified the data into subgroups using age, parity, occupation, education, living place, prenatal care, fetal sex. As table 6 shows, the results are very close to the crude odds ratio (table 5.5). Therefore, we can state that all variables in the table 5.6 are not confounders for fetal growth retardation.

Table 5.7 The factor affects on the odds ratio of FETAL GROWTH RETARDATION

Variable	Range	Coeff	S.E	Sig	O.R
PARITY	0:PRIMIPARAE 1:MULTIPARAE	-1.23	.421	.003	.290
Clifford[1]	0:Absent 1:Present	1.28	.711	.072	3.60
Amniotic fluid	0:White 1:Not white	.626	.738	.395	1.87
Prenatal care	0:Absent 1:Present	.614	.797	.441	1.85
Living place	0:Urban area 1:Rural area	.337	.368	.359	1.40
Fetal sex	0:Female 1:Male	.153	.341	.652	1.16
Gesta.age[2]	38 - 48wks	.092	.115	.422	1.09
Maternal age	19 - 45	.042	.038	.267	1.04
Education[3]	0 - 14	-.085	.063	.173	.917
Ultrasound	0:Absent 1:Present	-.348	.351	.322	.706
(Constant)		-7.19	4.92	.177	

(1) Clifford syndrome or placental dysfunction syndrome
(2) Gestational age
(3) Educational range

0: Illiteracy
1 - 5: Primary school
6 - 9: Secondary school
10 - 12: High school
13: College
14: University

As the table shows, there is only one variable, the parity of the pregnant women, among 10 independent variables that may affect on the odds ratio. We use the sample regression coefficient to estimate the population regression coefficient. The P-value equal to 0.003 means that the regression coefficient(Beta) of the parity in the population is not equal to zero. The logistic regression equation shows as follow

Ln odds = -7.19 - 1.23(Parity)

Where

Parity is equal to 0(Primiparae) or 1(Multiparae)

When the pregnant women are primiparae then the ln odds is equal to -7.19. Similarly, when the pregnant women are multiparae then the ln odds is equal to -8.42. As the result, the odds ratio being equal to 0.3 means the rate of FGR in multiparae is lower than in primiparae. Consequently, the We can state that the small for date occurs more frequently in primiparas women than in multiparas women.

Table 5.8 Rate of "Clifford syndrome" in postdate pregnancy and term pregnancy

Subject group	Clifford syndrome Present	Absent	Total
Postdate	49	201	250
Term	28	216	244
Total	77	417	494

Odds ratio: 1.88
95% Confidence interval: 1.10 - 3.22
Chi-square: 6.19
P-value: 0.012

As showed in this table, there is a difference about the rate of the placental dysfunction syndrome in two groups (P-value=0.012). 95% confident interval indicates the rate of Clifford syndrome in postdate population is greater than in term population. So we can state that the postterm population have the greater rate of placental dysfunction syndrome.

Table 5.9 Adjusted odds ratio of "Clifford syndrome"

Stratified variable	Odds ratio	95% C.I	P-value
Age	1.88	1.14 - 3.11	0.018
Parity	1.90	1.15 - 3.13	0.016
Occupation	1.87	1.13 - 3.10	0.020
Education	1.81	1.08 - 3.03	0.031
Living place	1.83	1.11 - 3.04	0.024
Prenatal care	1.87	1.14 - 3.09	0.017
Fetal sex	1.89	1.14 - 3.13	0.017

The result in table 5.9 indicates that these factors are not the confounding factors which affect the result of crude odds ratio. The adjusted odds ratio, the confident limit, and P -value are very close to the crude odds ratio (table 5.8). So we can state that the significance of the rate of placental dysfunction syndrome is true. The greater rate of having the placental dysfunction syndrome in postdate pregnancy is real situation without confounders.

Table 5.10 The factors affect on the odds ratio of PLACENTAL DYSFUNCTION SYNDROME

Variable	Range	Coeff	S.E	Sig	O.R
GESTA.AGE[1]	38 - 48wks	.2212	.0848	.009	1.25
Ultrasound	0:Absence 1:Presence	.2657	.2671	.319	1.30
Prenatal care	0:Absence 1:Presence	.1268	.5354	.812	1.13
Living place	0:Urban area 1:Rural area	.0158	.2900	.956	1.02
Maternal age	19 - 45	-.010	.0286	.722	.989
Education[2]	0 - 14	-.063	.0483	.191	.938
Parity	0:Primiparae 1:Multiparae	-.244	.2951	.407	.783
Fetal sex	0:Female 1:Male	-.299	.2605	.250	.741
(Constant)		-10.04	3.65	.006	

(1): Gestational age
(2): Educational range

0: Illiteracy
1 - 5: Primary school
6 - 9: Secondary school
10 - 12: High school
13: College
14: University

The table indicates that there is only one indepent variable, the gestational age, among 8 variables that affects on the odds ratio. Using the sample regression coefficient to estimate the population regression coefficient, we can say that the population coefficient is not equal to zero because P-value is equal to 0.009. In other words, gestational age affects on the odds ratio of placental dysfunction syndrome (P.D.S.) The logistic regression equation shows as follow

Ln odds = - 10.04 + 0.22 (Gestational age)

Where

Gestational age ranges from 38 - 48 wks

For interpretation, whenever the gestational age increases one week, the ln odds increases 0.22 unit. Consequently, the odds ratio increase 1.247 times.

Furthermore, with the analysis of the simple logistic regression on the association of gestational age and placental dysfunction syndrome, we found that the gestational age of 38 weeks and 39 weeks were not linearly

correlated to the odds ratio of P.D.S.. In other words, only the gestational age of 40 wks to 48 wks affect on the O.R. of P.D.S. instead of 38 to 48 wks as mentioned above. It was found that regression coefficient, standard error (S.E) of coefficient, P-value, O.R are 0.245, 0.107, 0.022 and 1.277, respectively. The constant, S.E of constant and P-value are -11.83, 4.50 and 0.0087, respectively. The equation shows again as follow

Ln odds = - 11.83 + 0.245 (Gestational age)

Where

Gestational age ranges from 40 - 48 wks

Whenever the gestational age increases 1 weeks, the ln odds will increases 0.245 unit. Subsequently, the odds ratio will increase 1.277 times. It implies that the longer gestational age (40 - 48 wks) is the greater rate of placental dysfunction syndrome.

Table 5.11 Rate of "Large for date" in postdate pregnancy comparison to term pregnancy

Subject group	Large for date		
	Presence	Absence	Total
Postdate	21	229	250
Term	14	230	244
Total	35	459	494

Odds ratio: 1.51
95% Confidence interval: 0.71 - 3.23
Chi-square: 1.33
P-value: 0.24

Table 5.11 shows there is not a difference about the rate of "large for date" in two groups. Sample odds ratio indicates the greater rate of "large for date" in postterm subjects but it also have no value to generalize to the target population. Because the lower limit of 95 per cent confident interval is less than 1, and the upper limit is 3.23. Therefore, the greater rate of "large for date" is not demonstrated.

Table 5.12 Adjusted odds ratio of "Large for date"

Stratified variable	Odds ratio	95% C.I	P-value
Age	1.51	0.75 - 3.05	0.32
Parity	1.46	0.72 - 2.95	0.38
Occupation	1.50	0.74 - 3.04	0.34
Education	1.50	0.73 - 3.10	0.35
Living place	1.61	0.80 - 3.23	0.23
Prenatal care	1.51	0.75 - 3.07	0.33
Fetal sex	1.49	0.74 - 3.01	0.34

This table show some variables, which were estimated to be the confounding factors. We also use the method of Mantel-Haenszel to recalculate. The odds ratio, the confident interval and P-value after adjustment are similar to the result of table 5.11. It means that these variables are not confounders.

Table 5.13 The factors affect on the odds ratio of LARGE FOR DATE

Variable	Range	Coeff	S.E	Sig	O.R
FETAL SEX	0:FEMALE 1:MALE	.819	.3651	.025	2.27
Parity	0:Primiparae 1:Multiparae	.636	.4196	.129	1.89
Amniotic	0:White 1:Not white	.426	.4646	.359	1.53
Gesta.age[1]	38 - 46wks	.126	.1166	.278	1.13
Ultrasound	0:Absence 1:Presence	.068	.3782	.857	1.07
Education[2]	0 - 14	.010	.0681	.882	1.01
Maternal age	19 - 45	.006	.0408	.882	1.01
Prenatal care	0:Absence 1:Presence	-.005	.7959	.994	.994
Living place	0:Urban area 1:Rural area	-.627	.4810	.192	.534
(Constant)		-8.77	5.039	.082	

[1] Gestational age
[2] Educational range

0: Illeteracy
1 - 5: Primary school
6 - 9: Secondary school
10 - 12: High school
13: College
14: University

From the result of multiple logistic regression as showed above, there is only fetal sex that effects on the odds ratio. The equation shows as follow

$$\text{Ln odds} = -8.77 + 0.819(\text{Fetal sex})$$

Where

Fetal sex is equal to 0(Female) and 1(Male)

The ln odds in male infants are bigger than the log odds in female infants. As the result, the odds ratio is equal to 2.3. In other words, the rate of large for date in male infants is greater than in female infants.

Table 5.14 The rate of "Intervention due to fetal distress" in posterm pregnancy and term pregnancy

Subject group	Intervention due to Fetal distress	Others	Total
Postterm group	33	217	250
Term group	11	233	244
Total	44	450	494

Odds ratio: 3.22
95% confident interval: 1.51 - 7.01
Chi-square: 11.50
P-value: 0.00069

As table 5.14 shows, there is a definite difference about the rate of "Intervention due to fetal distress" between the postterm gravidas and the term gravidas. The sample odds ratio indicates that the rate of intervention due to fetal distress in postterm group is greater than in term group. We can generalize to the target population by

using the confident interval, which point out the greater rate of intervention due to fetal distress in postterm population in comparison to term population.

Table 5.15 The rate of "meconium release" in postterm pregnancy and term pregnancy

Subject group	Amniotic colour change Presence	Absence	Total
Postterm	49	201	250
Term	21	223	244
Total	70	424	494

Odds ratio: 2.59
95% Confident interval: 1.45 - 4.66
Chi-square: 12.27
P-value: 0.00046

As table 5.15 shows, there is a definite difference between the postterm pregnancy and term pregnancy about the rate of "meconium release into amniotic fluid". It is 95 per cent confident that the population rate of "meconium release" in postterm pregnancy is greater than the population rate in term pregnancy.

Table 5.16 The rate of low Apgar score in postterm and term pregnancy

Subject group	Low Apgar score Presence	Absence	Total
Postterm	24	226	250
Term	15	229	244
Total	39	455	494

Odds ratio: 1.62
95% Confident interval: 0.79 - 3.36
Chi-square: 2.02
P-value: 0.15

We could not detect the significance between term pregnancy and postterm pregnancy about the rate of low Apgar score. There is no evidence that the rate of low Apgar score in postterm population is greater than in term population.

Table 5.17 The rate of infant with combination of FGR and Clifford syndrome

Subject group	FGR + Clifford Present	Absent	Total
Postterm	14	236	250
Term	7	347	244
Total	21	473	494

Odds ratio: 2.01
95% Confident interval: 0.74 - 5.65
Chi-square: 2.26
P-value: 0.13

There is no significance between the postterm population and term population about the rate of infant getting the FGR and Clifford syndrome at the same time. It is not definite that the rate of disease in postterm group is not greater than in term group.

Table 5.18 The mean of the birthweight(in Gm.)

	Term group (244)	Postterm group (250)
Mean	3050.365	3111.600
SEM	374.902	393.690

P-value: 0.07

There is no significance between mean of the birth weight of term group and postterm group(t-test).

Table 5.19 The difference of the birthweight between Term group and Postterm group

Weight category	Term group Freq	Term group Percent	Postterm group Freq	Postterm group Percent
2000 - 2500	12	4.9	16	6.4
2501 - 3000	109	44.7	89	35.6
3001 - 3500	100	41.0	105	42.0
3501 - 4000	21	8.6	37	14.8
Above 4000	2	0.8	3	1.2

Chi-square: 7.26
P-value: 0.12

Within the range of 3,501 - 4,000 Gm., the proportion in postterm group is slightly higher than in term group. In contrast, within the range of 2,501 - 3,000 Gm., the proportion in term group is slightly higher than in term group. There is evidence that there is no difference between two birthweight distribution of postterm population and term population.

Table 5.20 The factors predict the birthweight

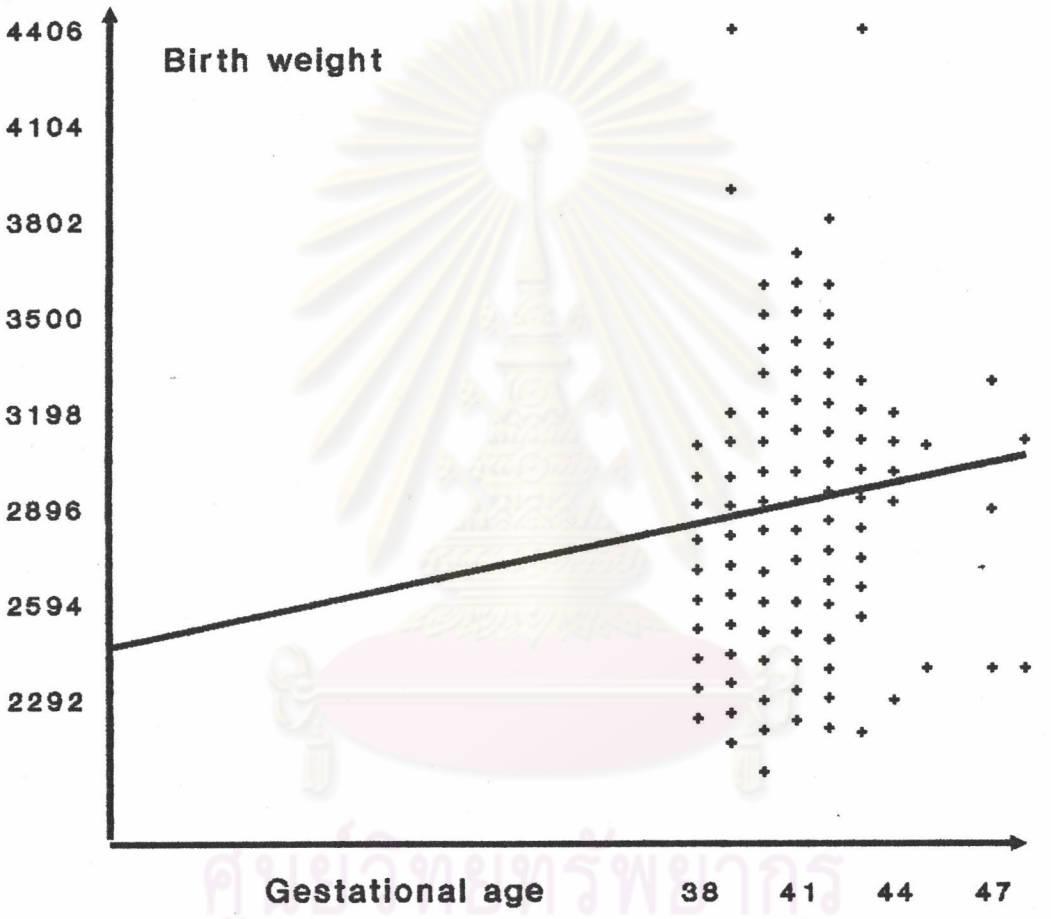
Variable	Range	Coeff	S.E of coeff	Sig
Parity	0:Primiparae 1:Multiparae	131.369	34.362	.0001
FETAL AGE	38 - 48wks	28.692	10.617	.0071
Living place	0:Urban area 1:Rural area	-76.925	38.680	.0473
(Constant)		1862.7	434.773	.0000

BIRHTWEIGHT = 1862.75 + 131.369(Parity) + 28.692(Fetal age)
- 76.925(Living place)

There are only three variables to be in the regression equation for predicting the birthweight among seven variables such as parity, fetal age, living place, prenatal care, education, ultrasound, maternal age. In this equation, we can see that fetal age increases one week then the birthweight will increase 28.692 gm. The pregnant women who live in the urban area will have the baby with 77 gm heavier than those who live in the rural area. The babies born to the mothers who are multiparae women weighed, on the average, more than babies born to mothers who are primiparae women, when length of gestation and living place are taken into account, the amount of the difference, on the average, is 131 gm.

From the regression equation we see that the most important factor to predict the birthweight is the fetal age. In other words, the gestational age is linearly correlated with the birthweight. We found that sample Pearson correlation coefficient is equal to 0.13 (R = 0.13). The significant P-value (0.005-0.001) means the population correlation coefficient is not equal to zero. But this correlation is not strong because the coefficient of determination R^2 is equal to 0.017 (only 1.7 per cent of variation can explain by this correlation line.

Figure 2. Correlation between birth weight and gestational age



Correlation coefficient : R = 0.13

95% C.I : 0.04 - 0.21

P-value : 0.005 - 0.01

Comment from first step of analysis

As we have seen in the first step of analysis. We could not find out the expected difference between two groups about the fetal growth retardation and large for date infant. We can interpret that the whole set of postterm pregnant women includes the pregnant women with 42 weeks of gestation that passed the term at most one week only. In other words, the mix of all postterm pregnancy may make the significance being unclear. The pregnant women with 42 weeks that compare to pregnant women at term may not be significant. As we mentioned in the part of litterature review, only 12 percent of pregnant women that are diagnosed by using the last normal menstrual period without reconfirmation of early ultrasound are real postterm pregnancy. Therefore, not all pregnant women with 42 weeks of gestation are postterm pregnancies. In addition, the number of pregnant women with 42 weeks is the majority of the postterm group. As the result, the average of gestational age in postterm group is as low as 42.5 weeks. Finally, we decided to go further to the second part of analysis.

Analysis of specific data

Analysis of early postterm pregnancy

The early postterm pregnancies are the pregnant women at 42 weeks of gestation that consist of 171 subjects. The gap of gestational age between two groups is small. We thought the majority of this group may be unreal postterm pregnancy. We estimated that there is no difference between two groups about the unfavorable fetal outcomes as expected. The analysis is always done with the comparison of early postterm pregnancy to term pregnancy.

Table 5.21 The percentage of unfavorable fetal outcomes in early postterm and term pregnancy

	Term group(244)		Early postterm(171)	
	Freq	Percent	Freq	Percent
F.G.R.	20	8.2	11	6.4
Large for date	14	5.7	13	7.6
Clifford syn.	28	11.5	31	18.1
F.G.R. + CLIFFORD	07	2.9	08	4.7

The table indicates that the proportions of unfavorable fetal outcomes in early postterm pregnancy are similar to those in term pregnancy except the proportion of Clifford syndrome is greater in early postterm pregnancy.

Table 5.22 The rate of "small for date" in early postterm and term pregnancy

Subject group	Small for date		
	Presence	Absence	Total
Postterm	11	160	171
Term	20	224	244
Total	31	384	415

Odds ratio: 0.77
95% C.I: 0.33 - 1.76
Chi-square: 0.45
P-value: 0.50

The result shows that there is no association between the early postterm pregnancy and small for date. The 95 percent confident interval shows that it is no evidence about the rate of small for date in early postterm population and term population.

Table 5.23 The rate of "Clifford syndrome" in early postterm and term pregnancy

Subject group	Clifford syndrome		
	Present	Absent	Total
Postterm	31	140	171
Term	28	216	244
Total	59	356	415

Odds ratio: 1.71
95% C.I: 0.94 - 3.10
Chi-square: 3.65
P-value: 0.056

As the table shows, it is not definite that the rate of Clifford syndrome in early postterm population is greater than in term population. In other words, it is no definite evidence showing an association of early postterm pregnancy and Clifford syndrome.

Table 5.24 The rate of "Large for date" in early postterm and term pregnancy

Subject group	Large for date		
	Present	Absent	Total
Postterm	13	158	171
Term	14	230	244
Total	27	388	415

Odds ratio: 1.35
95% C.I: 0.58 - 3.17
Chi-square: 0.57
P-value: 0.44

There is not an association of early postterm pregnancy to large for date. The confident interval rate of large for date in early postterm population is not greater than in term population.

Table 5.25 The rate of "Amniotic colour change" in early postterm and term pregnancy

Subject group	Meconium release		
	Present	Absent	Total
Postterm	31	140	171
Term	21	223	244
Total	52	363	415

Odds ratio: 2.35
95% C.I: 1.24 - 4.46
Chi-square: 8.32
P-value: 0.004

There is an association of early postterm pregnancy and meconium release. It was found that the rate of meconium release in early postterm pregnancy is greater than in term pregnancy.

Table 5.26 The rate of "Intervention due to fetal distress" in early postterm and term pregnancy

Gestational class	Intervention due to Fetal distress	Others	Total
Postterm	20	151	171
Term	11	233	244
Total	31	284	415

Odds ratio: 2.81
95% C.I: 1.23 - 6.50
Chi-square: 7.51
P-value: 0.006

This table also shows that early postterm pregnancy and intervention due to fetal distress are associated each other. The greater rate of intervention due to fetal distress compared to term pregnancy has been proved.

Table 5.27 The rate of "Low Apgar score" in early postterm pregnancy and term pregnancy

Subject group	Low Apgar score Present	Absent	Total
Postterm	13	158	171
Term	15	229	244
Total	28	387	415

Odds ratio: 1.26
95% C.I: 0.54 - 2.90
Chi-square: 0.34
P-value: 0.56

There is no association of early postterm pregnancy and low Apgar score. The rate of low Apgar score in early postterm pregnancy is greater than in term pregnancy.

Table 5.28 The rate of infant with combination of F.G.R. and Clifford syndrome

Gestational class	F.G.R. + Clifford Present	Absent	Total
Postterm	08	163	171
Term	07	237	244
Total	15	400	415

Odds ratio: 1.66
95% C.I: 0.53 - 5.25
Chi-square: 0.94
P-value: 0.33

As the table shows, we cannot state that the rate of infant with combination of F.G.R. and Clifford syndrome in early postterm pregnancy is greater than in term pregnancy. There is no association of early postterm to the infant with the combination of F.G.R. and Clifford syndrome.

Table 5.29 The mean of the birth weight (in gm) in early postterm and term group

	Term group (244)	Early postterm (171)
Mean	3050.365	3095.789
S.E.M.	374.902	360.845

P-value: 0.21

The mean of birth weight in term pregnancy is not different from that in early postterm pregnancy.

Table 5.30 The difference of the birth weight between term group and early postterm group

Weight category	Term group Freq	Term group Percent	Postterm group Freq	Postterm group Percent
2000 - 2500	12	4.9	08	4.7
2501 - 3000	109	44.7	66	38.6
3001 - 3500	100	41.0	74	43.3
3501 - 4000	21	8.6	21	12.3
Above 4000	2	0.8	2	1.2

Chi-square: 2.49
P-value: 0.65

The P-value shows that there is no difference about the birth weight distribution between the early postterm population and term population.

Analysis of the late postterm pregnancy

The late postterm pregnancies are the pregnant women with the gestational age of 43 weeks or above that consist of 79 cases. We think that they are more close to the real postterm pregnancy and the gap of gestational age between two groups is bigger. We expected that the difference between them about the poor fetal outcomes can be found.

Table 5.31 The average of gestational age

	Term group (244)	Late postterm group (79)
Mean	39.83	43.5
S.E.M.	1.00	0.9

P-value: 0.0000

The average of gestational age of late postterm group and term group are 43.5 wks and 40 wks, respectively.

Table 5.32 FREQUENCY OF F.G.R., LARGE FOR DATE, CLIFFORD IN TERM GROUP AND LATE POSTTERM GROUP

	TERM GROUP(244) Freq	Percent	LATE POSTTERM(79) Freq	Percent
FGR	20	8.2	13	16.5
LARGE for DATE	14	5.7	08	10.1
CLIFFORD syn.	28	11.5	18	22.8
F.G.R. + CLIFFORD	7	2.9	6	7.6

The table indicates that the proportion of the "small for date" infant, "large for date" infant and Clifford syndrome in late postterm group are always twice as high as in term group.

Table 5.33 Rate of "small for date" in late postdate pregnancy and term pregnancy

Subject group	Small for date Present	Absent	Total
Postterm	14	65	79
Term	20	224	244
Total	34	289	323

Odds ratio: 2.41
95% Confident interval: 1.08 - 5.34
Chi-square: 5.75
P-value: 0.016

The significant P-value indicates that there is a association between the late postterm pregnancy and "small for date" infant. In addition, the sample odds ratio shows

the rate of "small for date" in postterm group is twice as high as the rate in term group. In other words, I.U.G.R. occurs more frequently in late postdate pregnancy than in term pregnancy. The lower limit of confident interval is higher than 1, it implies that the rate of having I.U.G.R. in late postterm pregnancy is at least a little bit greater than the rate in term pregnancy. The upper limit of confident interval means that I.U.G.R. can occur more frequently in late postterm pregnancy, the rate of I.U.G.R. in late postdate pregnancy can be five time as high as the rate in term pregnancy. According to the P-value and confident interval, we state that the rate of having I.U.G.R. in late postterm pregnancy is greater than the rate in term pregnancy in term of generalizing to the target population.

Table 34: Rate of "Clifford syndrome" in late postdate pregnancy comparison to term pregnancy

Subject group	Clifford syndrome Presence	Absence	Total
Postdate	18	61	79
Term	28	216	244
Total	46	277	323

Odds ratio: 2.28
Confidence interval: 1.11 - 4.63
Chi-square: 6.25
P-value: 0.012

There is a strong association between late postdate pregnancy and placental dysfunction syndrome (P-value: 0.012). The sample odds ratio is greater than 2 (2.28) and the lower limit of confident interval is greater than 1 (1.11). Therefore, we can state that the rate of having the placental dysfunction syndrome in the late postterm pregnancy is much higher than that in the term pregnancy in term of the whole population.

Table 5.35 Rate of "Large for date" in late postdate and term pregnancy

Subject group	Large for date Present	Absent	Total
Postdate	08	71	79
Term	14	230	244
Total	22	301	323

Odds ratio: 1.85
95% Confidence interval: 0.68 - 4.95
Chi-square: 1.81
P-value: 0.17

There is not an association of late postterm pregnancy to "large for date" in term of statistical significance and also clinical significance. We could not conclude the difference about the rate of "large for date" in the whole population in term of generalization from the result of study since the lower limit of confidence interval is below 1 (0.68) and the upper limit is equal to 4.95. It means that whenever we repeat the study 95 percent

we make sure that the odds ratio of "large for date" will fall within 0.68-4.95.

Table 5.36 Rate of "Amniotic colour change" in late postdate pregnancy and term pregnancy

Subject group	Amniotic colour change Present	Absent	Total
Postdate	18	61	79
Term	21	223	244
Total	39	284	323

Odds ratio: 3.13
95% Confident interval: 1.49 - 6.59
Chi-square: 11.30
P-value: 0.0008

There is a strong association between late postdate pregnancy and amniotic colour change. The sample odds ratio is equal to 3.13 and 95 percent confident interval falls within 1.49 -6.59. This interval is always greater than 1, so we can state that the rate of having the amniotic colour change in late postterm pregnancy is much greater than that in term pregnancy.

Table 5.37 The rate of low Apgar score in late postterm pregnancy and term pregnancy

Subject group	Low Apgar score Present	Absent	Total
Postterm	11	68	79
Term	15	229	244
Total	26	297	323

Odds ratio: 2.47
95% Confidence interval: 1.00 - 6.08
Chi-square: 4.88
P-value: 0.027

There are an association of the low Apgar score to late postterm pregnancy. The rate of the low Apgar score in the late postterm group is greater than in the term group. According to the confident interval, we can state that the rate of low Apgar score in late postterm pregnancy in the population is greater than the rate in term pregnancy.

Table 5.38 The rate of infant with combination of F.G.R. and Clifford syndrome

Subject group	FGR + Clifford Present	Absent	Total
Postterm	15	64	79
Term	17	227	244
Total	32	291	323

Odds ratio: 3.13
95% Confident interval: 1.38 - 7.08
Chi-square: 9.66
P-value: 0.0018

There is a strong association of late postterm pregnancy and the infant having FGR and Clifford syndrome at the same time. The rate of disease in late postterm population is greater than the rate in term population.

Table 5.39 Rate of "Intervention due to fetal distress" in late postdate and term pregnancy

Subject group	Intervention due to Fetal distress	Others	Total
Postdate	13	66	79
Term	11	233	244
Total	24	299	323

Odds ratio: 4.1
95% C.I: 1.65 - 10.63
Chi-square: 12.38
P-value: 0.0004

There is a strong association between intervention due to fetal distress and gestational age. We are 95 percent confident that the odds ratio in the population falls within 1.65 - 10.63. The rate of intervention due to fetal distress in the late postterm pregnancy is much higher than the rate in term pregnancy.

Table 5.40 The mean of the birth weight

	Term group (244)	Late postterm group (79)
Mean	3050.365	3145.823
S.E.M.	374.902	457.447

P-value: 0.06

The P-value shows no statistical significance. According to the mean of birth weight of two groups, we can see that the difference is too small, 3145 gm compare to 3050 gm. It is not clinically significant. There is not a

difference of the mean of birth weight between term pregnancy and late postterm pregnancy.

Table 5.41 The difference of the birth weight between term group and late postterm group

Weight category	Term group		Severe postterm	
	Freq	Percent	Freq	Percent
2000 - 2500	12	5	8	10
2501 - 3000	109	44	23	29
3001 - 3500	100	41	31	39
3501 - 4000	21	9	16	20
Above 4000	2	0.8	1	0.9

Chi-square: 13.39
P-value: 0.01

The P-value indicates a statistical significance. There is a difference between the birth weight distribution of postterm pregnancy and term pregnancy. Postterm pregnancy is more likely than term pregnancy to find the birth weight less than 2500 and 3500 - 4000 Gm. but less likely to find the birth weight 2501 - 3000 Gm..

Comment from the second part of analysis

Briefly, when we rule out the data of pregnant women at 42 weeks of gestation the significance between postterm and term pregnancy about the unfavorable fetal outcomes has been clearly demonstrated.