ARAŞTIRMA MAKALESİ / *RESEARCH ARTICLE*

Prenatal Attachment Levels and Affecting Factors of Pregnant Women Living in İstanbul and Kars

İstanbul'da ve Kars'ta Yaşayan Gebelerin Prenatal Bağlanma Düzeyleri ve Etkileyen Faktörler

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ABSTRACT

Aim: *This research was carried out to determine prenatal attachment grades and its effecting factors of pregnants living in two different cities placed in the west and east sides of Turkey.*

Material and Method: *The research was a descriptive type and was carried out in three different hospitals, which served in Istanbul and Kars. The universe of this research has consisted of pregnants applied to those hospitals in told above. A sampling of the research has consisted of 5173 pregnants applied to and agreed on the research in the hospitals above between November 2014 and June 2015. Collecting data 'Personal Information Form' and 'Prenatal Attachment Inventory' were used. Evaluating data, percentage, average and standard deviation, and t-test and ANOVA test were used.*

Results: *Prenatal attachment grades of the pregnants living in Kars city: 60.57±9.20; Prenatal attachment grades of the pregnants living in Istanbul: 59.16±10.82. Average prenatal attachment of all pregnants involved in the research 59.89±10.03. Prenatal attachment grades of the pregnants who are above 40 years of age, the primary school graduated, are not working, whose income is lesser than their outcomes, live in a crowded house and whose marriage time is more than 11 years, is lower than other participants (p<0.05). Pregnancy numbers of pregnants, situation whether the pregnancy is planned or not, that who decided the pregnancy, living children numbers, having disabled children and the case of getting pregnant with treatment has got meaningful differences with the prenatal attachment of pregnants (p<0.05); there are no meaningful statistical differences with pregnancy month and prenatal attachment grades. (p>0.05). Prenatal attachment grades of the pregnant who go to controls in fewer times, have no education, and do not make sufficient controls during their pregnancies are stated lower (p<0.05).*

Conclusion: *It was found that prenatal attachment increased as perceived social support increased in pregnant women. In order to increase prenatal attachment, it is recommended to continue social support to pregnant women.*

Key words: *pregnancy; prenatal attachment; women; nursing*

ÖZET

Amaç: *Bu çalışma, Türkiye'nin doğusunda ve batısında iki farklı ilde yaşayan gebelerin prenatal bağlanma düzeylerini ve etkileyen faktörleri belirlemek amacıyla yapılmıştır.*

Materyal ve Metot: *Tanımlayıcı nitelikteki araştırma, İstanbul ve Kars'ta hizmet veren üç farklı hastanede yapılmıştır. Araştırmanın evrenini, araştırmanın yapıldığı yılda adı geçen hastanelerin polikliniklerine başvuran gebeler oluşturmaktadır. Araştırmanın örneklemini Kasım 2014 - Haziran 2015 tarihleri arasında çalışmanın yapıldığı hastanelere başvuran ve çalışmaya katılmayı kabul eden 5173 gebe oluşturmuştur. Verilerin toplanmasında, "Kişisel Bilgi Formu" ve "Prenatal Bağlanma Ölçeği kullanılmıştır. Verilerin değerlendirilmesinde yüzdelik, ortalama, standart sapma, t testi ve ANOVA testi kullanılmıştır.*

Bulgular: *Kars ilinde yaşayana gebelerin prenatal bağlanma düzeyi puan ortalaması 60,57±9,20; İstanbul'da yaşayan gebelerin prenatal bağlanma düzeyi 59,16±10,82 olarak bulunmuştur. Araştırmaya dâhil olan tüm gebelerin prenatal bağlanma düzeyi puan ortalaması 59,89±10,03'tür. Kırk yaş ve üzeri yaş grubunda olan, ilköğretim mezunu, bir işte çalışmayan, geliri giderinden az olan, kalabalık ailede yaşayan ve evlilik süresi 11 yıl ve üzeri olan gebelerin prenatal bağlanma düzeyleri daha düşük bulunmuştur (p<0,05). Gebelerin gebelik sayısı, gebeliğin planlı olma durumu, gebelik kararını kimin verdiği, yaşayan çocuk sayısı, engelli çocuğu olma durumu ve gebeliğin tedavi ile olma durumu ile prenatal bağlanma ölçeği puan ortalaması arasında istatistiksel olarak anlamlı farklılık saptanmış (p<0,05); gebelik ayı ile prenatal bağlanma ölçeği puan ortalaması arasında istatistiksel olarak anlamlı farklılık bulunmamıştır (p>0,05). Gebeliği süresinde az kontrole giden, eğitim almayan ve gebelik boyunca gerekli testleri yaptırmayanların prenatal bağlanma ölçeği puan ortalamaları daha düşük bulunmuştur (p<0,05).*

Sonuç: *Gebelerde algılanan sosyal destek arttıkça, prenatal bağlanmanın arttığı tespit edilmiştir. Prenatal bağlanmanın artırılması için gebelere verilen sosyal desteğin sürdürülmesi önerilir.*

Anahtar kelimeler: *gebelik; prenatal bağlanma; kadın; hemşirelik*

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Introduction

The most crucial decision of humans in their lifetime is having a baby. A wish of being a mother bears great importance in women's life. Having babies provides continuing human generations. Whereas pregnancy is a physiological process in which women live important biological differences, it is also a process that can be defined as a sociological, physiological, complex crisis. It is important that adopting a mother role in the future in the meantime[1].

Muller[2,3] defines prenatal attachment as an absolute relationship between a mother and her unborn baby.

Rubin researched gaining the mother role of women and reported that the importance of the prenatal process in having an instant relationship between mother and her baby after birth is excellent levels. In this research, he detected that the relationship between a mother and her baby is a behavior that develops after the prenatal process. Based on his observations, he defines that there are four different duties of women before birth. According to him, these are searching for a safe transition both for baby and mother, providing expecting as a special one by other individuals, bonding to baby, and giving herself to baby[4].

According to Cranley[5], the definition of maternal-fetal bonding is that; a woman who creates a close relationship with her unborn baby by her behaviors. Peppers and Knapp[6] offer that bonding of woman and the unborn baby started in the prenatal process, not in the neonatal process, and they contribute to the development of the process.

The most critical stage of bonding of mother and an unborn baby starts in just before the birth, and it continues in the following times after birth. Bonding a safe relationship between mother and baby bears great importance in the social and emotional development of baby[7,8]. In a bonding relationship, the mother is a key factor. In a mother-baby relationship, the more mother and baby react against their behaviors, the more the quality of their relationship is. Some researchers offer that consistency of mother and baby relationship also creates the base of future lives. The earlier and healthier the relationship between mother and baby starts, the stronger the emotion of mothers are. This special bondings of a mother with a baby are the most important determinant in baby's spiritual development[9,10].

Forming of mother and baby bondings, it is stated that there are planning of pregnancy, wishing for pregnancy, trusting emotion of mother, socio-economical and cultural situation of the family, spousal relations, spouse supports, family, and social relations of woman factors[11].

It is essential to detect the mother-fetus bonding level. Because it is possible to help pregnant ones who bear weak bonding risk, act recklessly, or have no information about bonding by education and motivation. Nurses have got significant pay in adopting positive pregnancy and birth experience on pregnants. Effective prenatal caregiving to pregnants increases the positive fetal results by raising the prenatal process and, afterward, life quality. Nurse helps pregnant women by decreasing the concerns of mother candidates, giving a positive perspective about being a mother and overcoming prejudices about mother behaviors. These cases make learning the mother's behavior process easier. Detecting risky mother candidates during pregnancy and helping mother candidates about emotional bondings are essential inside of nurses[12].

There are some researches about the prenatal attachment of mother and baby in after birth times in our country. However, researches about maternal-fetal bondings in the prenatal era are limited. The aim of this study was carried out to determine prenatal attachment grades and its effecting factors of pregnants living in two different cities placed in the west and east sides of Turkey.

Material and Method

Before the beginning of the research, permission from Dereli Yilmaz[12] was requested. After that, an approval from University Ethical Council was received (17.12.2014/56). Application permission was received regarding hospitals. In the scope of research, before collecting data from pregnants, the scope and aim of the research were told. The research is definer and relation-seeking featured. The research was carried out with volunteer pregnants in three government hospitals between November 2014-June, 2015. The environment of the research has consisted of pregnants who applied the hospitals and clinics above between told dates and places. Annual and monthly numbers of applied pregnants regarding hospitals for prenatal controls. As so, 5173 patients who applied to regard hospitals regarding dates becomes the environment of the research. Two thousand nine hundred sixty of those live in Kars, and 2483 of those live in Istanbul. Criteria involving in sampling are capable of reading and writing, speaking

in Turkish, and having no risks in pregnancy. Sociodemographical features and obstetrical features create the independent variables of the research. The prenatal attachment inventory point average creates the dependent variables of the research.

Data Collecting Instrument

Personal data form: This form was prepared according to regarding literature information by researchers. There is 21 question about demographical and obstetrical features of pregnants.

Prenatal attachment inventory: The scale was prepared in 1993 by Muller[2], and was adapted to Turkish in 2013 by Kizilkaya Beji and Dereli Yilmaz[12]. This scale has consisted of 21 articles and four Likert scales. Every article is marked between 1 and 4, then a minimum of 21 and a maximum of 84 points can be got at the end of the test. The more point the pregnant gets from the scale, the more she can bond to her baby. These numbers are pointed as follows. 1: Never, 2: Sometimes, 3: Frequently, 4: Always. Dereli Yilmaz and Kizilkaya Beji[12] determined the total Cronbach alfa coefficient as 0.84. In Metin's[13] research, the coefficient of the scale was determined as 0.86.

Regarding form and scales were applied by meeting with pregnants face to face without not intervening in their pregnancy treatment process.

Statistical Analyses

Data were evaluated in SPSS 21 statistic package software. Evaluating data, percentage, average standard deviation, t-test, and ANOVA test were used.

Results

36.6% of the pregnants in the research are between 22–27 years group, 61.5% of them are primary school graduated, 79.6% of them do not work, and 70.3% of whose income and the outcome is equal. 54.9% of them live with 1–4 persons in their house, 35.5% of them have been married for 1–5 years, 97.2% of them have got official marriage with their husbands (Table 1).

37.6% of pregnants have experienced three times, and above giving birth, 37.5% of them have got no living child. 2.2% of them have got a disabled child. 84.8% of whose pregnancy was planned, 75.7% of them gave the decision of pregnancy with their husbands 66.5% of them are in 7–9 months of their pregnancy. 2.8% of them got pregnant after medical treatment, 47.2% of them went for control for 1–5 times during their pregnancy, and 52.4% of them have got some information from their doctor/nurse or midwife. 66.1% of pregnants prefer natural birth, 84.5% of them want to give birth in a public hospital, and 79.1% of them make their test done during their pregnancy (Table 1).

Prenatal attachment grades of pregnants in the scope of research was illustrated in Table 2. Average prenatal attachment grades of pregnants living in Kars 60.57±9.20; Average prenatal attachment grades of pregnants living in Istanbul 59.16±10.82. Average points of prenatal attachment grades of pregnants who attend the research 59.89±10.03 (Table 2).

Age groups, education level, and working situations and comparisons of prenatal attachment inventory point average were given in Table 3. A meaningful difference was detected between features with prenatal attachment ($p<0.05$). Prenatal attachment levels of the pregnants who are in 40 and above years group, the primary school graduated, not working and having less income than outcome, living in a crowded house, and whose marriage times is more than 11 years are lower (Table 3).

Comparison of prenatal attachment scale point average according to pregnancy based features of pregnants and whether having children were given in Table 3. Giving birth times of pregnants, planning situation of pregnancy, who decided the pregnancy, living children numbers, having disabled children and pregnancy with medical treatment has got a meaningful statistical difference with prenatal attachment point average ($p<0.05$); and there are no meaningful statistical differences with pregnancy month and prenatal attachment scale point average ($p>0.05$) (Table 3).

Comparison of prenatal attachment inventory point average according to number of doctor controls during pregnancy, having education during pregnancy, and making necessary tests done were given in Table 3. There are meaningful differences between prenatal attachment scale point average and how many times she went for control, having an education, and making necessary tests done during her pregnancy ($p<0.05$). Lesser number of doctor controls, ones having no education and are not making necessary tests have got lower prenatal attachment scale point average.

Table 1. *Introducer, pregnancy and birth features of pregnants*

Variables		Numbers	Percentage
Age groups	16–21	882	17.1
	22–27	1892	36.6
	28–33	1424	27.5
	34–39	816	15.8
	40 and above	159	3.1
Education level	Primary	3179	61.5
	High school	1244	24.0
	College and above	750	14.5
Working situation	Working	1054	20.4
	Not Working	4119	79.6
Economical situation	Less income than outcome	952	18.4
	Equal income and outcome	3637	70.3
	More income than outcome	584	11.3
Individuals living with in the house	1–4	2841	54.9
	5–9	2018	39.0
	10 and above	314	6.1
Marriage time	Less than 1 year	992	19.2
	1–5 years	1835	35.5
	6–10 years	1322	25.6
	11 years and above	1024	19.8
Official marriage	Yes	5030	97.2
	No	143	2.8
Giving birth times	First	1855	35.9
	Second	1371	26.5
	Third and above	1947	37.6
Numbers of living children	No	1938	37.5
	1	1400	27.1
	2	831	16.1
	3 and above	1004	19.4
Having disabled children	Yes	114	2.2
	No	5059	97.8
Is it a planned pregnancy?	Planned	4387	84.8
	Not planned	786	15.2
Who decided the pregnancy?	Women herself	266	5.1
	Husband	470	9.1
	Together	3914	75.7
	Parents	69	1.3
	Unplanned pregnancy	454	8.8
Recent pregnancy month	1–3	586	11.3
	4–6	1147	22.2
	7–9	3440	66.5
Pregnancy with medical treatment	Pregnancy with treatment	144	2.8
	Natural pregnancy	5029	97.2
How many times did she go for control during pregnancy?	1–5 times	2443	47.2
	6–10 times	2405	46.5
	11 times and above	325	6.3
Having education about pregnancy	No education	1823	35.2
	Having education from doctor/nurse/midwife	2710	52.4
	Having education from internet, TV or newspaper	432	8.4
	Other (occupational educations)	208	4.0
Preferred giving birth way	Natural birth	3421	66.1
	Caesarean birth	1506	29.1
	Not sure	246	4.8
Where she wants to give birth	Home	71	1.4
	Private hospital	729	14.1
	Public hospital	4373	84.5
Make necessary tests during pregnancy?	She made.	4091	79.1
	She didn't make because she expect it is unnecessary.	249	4.8
	She didn't make because she didn't know.	382	7.4
	She didn't make because she didn't want abortion if necessary.	237	4.6
	She didn't make because test time hasn't come yet.	214	4.1
Total		5173	100.0

Table 2. *Prenatal attachment scale point average of the pregnants*

Living city	numbers	Min. and max. points from scale	Average of points from scale X ± SS
Kars	2690	23–84	60.57±9.20
Istanbul	2483	25–84	59.16±10.82
Scale Total	5173	21–84	59.89±10.03

Table 3. *Comparison of prenatal attachment scale point averages of pregnants according to introducer, pregnancy and birth features of pregnants*

Features		Prenatal attachment scale X ± SS	Test and p value
Age group	16–21	60.68±9.36	F: 8.512
	22–27	60.13±9.78	p: 0.007
	28–33	60.16±10.09	
	34–39	58.53±10.91	
	40 and above	57.21±10.41	
Education level	Primary school	59.04±10.16	F: 30.448
	High school	61.11±9.44	p: 0.000
	College or above	61.48±9.91	
Working	Yes	61.25±9.85	t: 4.944
	No	59.54±10.05	p: 0.000
Economical situation	Less income than outcome	58.54±10.44	F: 19.220
	Equal income and outcome	59.94±9.91	p: . 000
	More income than outcome	61.79±9.82	
Persons who live with	1–4	60.51±9.92	F: 12.771
	5–9	59.04±10.17	p: 0.000
	10 or above	59.78±9.76	
Marriage time	Less than 1 year	61.11±9.78	F: 15.256
	1–5 years	60.42±9.38	p: 0.000
	6–10 years	59.38±10.27	
	11 years	58.42±10.85	
Giving birth times	First	61.28±9.48	F: 40.132
	Second	60.12±9.54	p: 0.000
	Third or above	58.40±10.67	
Planned or not planned pregnancy	Planned	60.39±9.58	t: 8.519
	Not Planned	57.10±11.89	p: 0.000
Who decided the pregnancy?	Woman herself	60.49±10.38	F: 32.035
	Husband	59.57±10.62	p: 0.000
	Together with husbanc	60.53±9.47	
	Parents	56.85±9.03	
	Unplanned pregnancy	55.11±12.42	
Recent pregnancy months	1–3	59.35±11.10	F: 2.238
	4–6	60.37±10.13	p: . 107
	7–9	59.82±9.80	
Living children	No	61.13±9.45	F: 21.509
	1	59.96±9.76	p: 0.000
	2	58.75±10.29	
	3 or above	58.35±10.93	
Having disabled children	Yes	58.36±11.24	t: 1.643
	No	59.92±10.00	p: 0.039
Pregnancy with a medical treatment	With a treatment	62.94±11.51	t: 3.702
	Natural pregnancy	59.80±9.97	p: 0.005
How many times did she go to doctor control?	1–5 times	59.45±10.29	F: 6.968
	6–10 times	60.12±9.82	p: 0.001
	11 times and above	61.47±9.47	
Having any education about pregnancy	No education	59.01±10.15	F: 12.391
	Education from doctor/nurse/midwife	60.25±10.00	p: 0.000
	Education from internet, TV, newspaper	61.89±9.96	
	Other (occupational education)	58.83±8.65	
Making necessary test done during pregnancy	Yes	60.38±9.80	t: 6.801
	No	58.06±10.67	p: 0.000

Discussion

36.6% of pregnants are in the 22–27 age group, 61.5% of them are primary school graduated, 79.6% of them are not working, and 70.3% of whose income and the outcome are equal. 54.9% of pregnants are living with 1–4 persons in their house, 35.5% of them have been married for 1–5 years, and 97.2% of them have got official marriage (Table 1). These discoveries show that mothers in this research have got a lower education level, have got no economic income, have got a medium-income level, and newly married.

37.6% of pregnants had have three, and above births, 37.5% of them have got no living children, 2.2% of them have got disabled children. 84.8% of pregnants have planned pregnancy, 75.7% of them made the pregnancy decision with their husband, 66.5% of them are in the 7–9 month period of pregnancy. 2.8% of pregnants became pregnant after medical treatment, 47.2% of them went for control 1–5 times during their pregnancy, and 52.4% of them obtain information from their doctor/nurse or midwife. 66.1% of pregnants prefer normal birth, 84.5% of them prefer giving birth in a public hospital, and 79.1% of them make their necessary tests done during their pregnancy (Table 1).

In Metin's[13] research, 44.5% of pregnants had have three and above giving births, and 74.9% of them wants pregnancy. In AluşTokat, Okumuş and Dennis's[11] research, 69.3% of participants give normal birth. Willing to be pregnant is considered beneficial both for mother in pscyhological ways and then milking baby consistently.

Prenatal bonding grades of pregnants were given in Table 2. Prenatal attachment grades of the pregnants living in Kars city 60.57±9.20; prenatal attachment grades of the pregnants living in Istanbul 59.16±10.82. Average prenatal attachment of all pregnants involved in the research 59.89±10.03 (Table 2). There are some similar researches in literature. In Metin's research[13], prenatal attachment scale point average is 61.409±11.785; In Dereli Yilmaz's and Kizilkaya Beji[12] research, prenatal attachment scale point average is high as 60.71±10.12 and 61.72±10.7. In Armstrong and Edward's[14] research, prenatal attachment scale point average is 60.7±10.1.

Age groups, education level, and working situations and comparisons of prenatal attachment scale point average were given in Table 3. A meaningful difference was detected between features with the prenatal attachment scale ($p<0.05$). Prenatal attachment levels of the pregnants who are in 40 and above years group, the primary school graduated, not working and having less income than outcome, living in a crowded house, and whose marriage times is more than 11 years are lower (Table 3).

There are some similar researches in literature. In Metin's[13] research, a difference of prenatal attachment scale point average according to education level and marriage time is meaningful ($p<0.05$). Pregnants having education in primary school level have got lower prenatal bonding scale point average. Regarding research, Dereli Yılmaz and Kızılkaya Beji[12] cited that pregnants who graduated from high school and university have got higher prenatal scale point average than primary school graduated. In light of these data, it can be said that higher education level effects prenatal bonding levels in a positive way. By continuing, it was detected that that prenatal bonding grade in 1–2 years of marriage times are higher is caused by their first birth[13]. In Lerum ve LoBiondo-Wood's[15] research, income level and planning of pregnancy have got an effect on bonding. In Günay's[16] research, the education level of pregnants shows differences according to prenatal attachment grades.

Apart from the discovery of this research, in Metin's[13] research, the difference between point average is not statistically meaningful according to pregnant's age groups, working situations, and incomes ($p>0.05$). Lerum and LoBiondo-Wood[15], cited that the age of a mother does not affect the prenatal bondings. In Dereli Yılmaz and Kızılkaya Beji's[12] research, there are no differences between prenatal attachment according to economic status of pregnant, so it was evaluated like economic factors have got no effect on creating bonds between baby and mother. In the same research, there are no differences in prenatal attachment according to family types.

Comparison of prenatal attachment scale point average according to pregnancy based features of pregnants and whether having children were given in Table 3. Giving birth times of pregnants, planning situation of pregnancy, who decided the pregnancy, living children numbers, having no disabled children and pregnancy with medical treatment has got a meaningful statistical difference with prenatal attachment scale point average ($p<0.05$); and there is no meaningful statistical difference with pregnancy month and prenatal bonding

scale point average (p>0.05). Pregnant ones whose first birth, decide pregnancy with a plan and made this decision with her husband have got higher prenatal attachment grades.

In literature, some researchers are showing parallel discoveries. In Dereli Yılmaz and Kızılkaya Beji's[12] research, there are meaningful statistical differences between prenatal attachment grades of pregnant women, women who give her first birth have got higher prenatal attachment than others. In the same research, in planned pregnancies and ones who have no living children have got high prenatal bondings, the week of birth does not affect prenatal bondings. It was interpreted like a woman who planned and chose to have the right time for both herself and her husband's high prenatal bondings. Women have got any child yet follow her pregnancy sensitively, try to interpret every behavior acted by her child, and this case increases the relations and bondings. Similarly, In Günay's[16] research, it is seen that prenatal bonding levels of pregnants show differences according to giving birth times and how many children they have got.

Apart from discoveries, Condon and Esuvaranathan[17] determined that parity was not important in bondings. The first time carried out in couples has got second time experiences. Similarly, Berryman and Windridge[18], in their researches carried out on prenatal bonding grades of 35 years old and above pregnants, the parity was not important. Just because women who got pregnant with assistant reproduction ways had been waiting for pregnancy for a long time, may have high prenatal bondings grades. Unlike discoveries of the study, in Hjelmstedt, Widström, and Collins' s[19] studies, a woman who got pregnant with in-vitro fertilization have got similar prenatal attachment with other mothers. Similarly, Hjelmstedt et al. [19] suggest that there are no statistical differences between natural pregnancy and pregnancy with medical treatment.

Comparison of Prenatal Attachment Inventory Point Average according to doctor controls times during pregnancy, having education during pregnancy and making necessary tests done were given in Table 3. There are meaningful differences between prenatal bonding scale point average and how many times she went for control, having an education, and are not making necessary tests done during her pregnancy (p<0.05). Lesser number of doctor controls, ones having no education and is not making necessary tests have got lower prenatal bonding scale point average (Table 3).

That pregnants going for control, and having education about pregnancy and making necessary controls done provides an opportunity to track her baby's health closer, thus mother candidate who knows that her baby is raising healthy and bondings increases. A mother becomes aware of her baby in this way. The process of acceptance of the baby gets faster. Supporting the discoveries of the study, Lumley's[20] study, becoming apparent after using ultrasound during pregnancy, claims an increase in recognizing baby as a person. Laxton-Kane and Slade[21], claims that scanning test is an opportunity for mother for seeing her baby first time, and it increases the prenatal bondings.

Unlike this discovery, Kleinveld et al. [22] offers that prenatal scanning ways increase the bondings a little, but there are no differences between ultrasound or blood tests in bondings. Similarly, in Baillie, Hewison, and Maso's[23] study offers that, making necessary ultrasound scanning tests does not affect prenatal bondings.

Consequently, increasing family planning counseling is suggested in order to prevent unplanned pregnancies, especially for married and sexually active women, firstly in first-grade medical organizations. Widening prebirth preparation classes, providing participating all pregnants to these class' , thus meeting education and periodical controls needs. Evaluating prenatal bonding grades since the detection of pregnancy and tracking closely of whom prenatal bondings are lower.

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