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ORIGINAL ARTICLE

Investigating relationship between stress, anxiety and depression with birth growth indexes in pregnant women with COVID-19

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ABSTRACT

Background: Pregnancy can be affected by various psychological factors. These factors have adverse effects on the woman, her fetus. While COVID-19 is a new threatening subjects with less information yet. Therefore, This study conducted to determine the relationship between stress, anxiety and depression with birth indices in pregnant women admitted to the coronary care unit of hospitals in Kerman province in 2020.

Methods: This is a descriptive analytical and across-sectional study carried out in Kerman, Iran in 2020. The research samples were 315 mothers affected with Covid-19 who have hospitalized in Covid-19 critical care wards in hospitals. The subjects entered in study by convenience method. The gathering tool was a questionnaire with two parts included demographic data and DASS-21 questioner. Collected data was analysed by SPSS version 18.0 .The Significance level considered 0.05.

Results: The results showed that in terms of depression, 23.5% of subjects were in severe status, in terms of anxiety 47.6% were in very severe status and finally 29.2% were in severe stress. The results showed that the variables of stress, anxiety and depression were statistically inversely related to weight and height at birth (P< 0.05), but other indicators were not significantly related(P>0.05).

Conclusions: Regard to the adverse effects of stress, depression and anxiety on neonatal outcomes in patients with Covid-19 critical care wards . It is recommended to be consider to such as mental health screening programs and strategies to reduce depression and anxiety in these mothers, To be considered by the health-treatment officials of the country.

Key-words: Coronavirus-Stress-Anxiety-Depression-Pregnancy-Birth Index, DASS-21.

INTRODUCTION

Coronaviruses are important pathogens in humans and animals (1). It has recently been shown that a new member of the coronavirus family (COVID-19) can lead to acute respiratory syndrome in humans or death in some patients (2). The first infected patient was reported on December 12, 2019 in Wuhan, China (3). Since then, it has spread to other countries in various ways, including travel, and now COVID-19 has become pandemic or global, affecting all countries of the world (4). Low pathogenesis and high transmissibility (5) are two unique features of this new virus that distinguish it from other members of the coronavirus family such as SARS-CoV and MERS-CoV, making it a major public health emergency in the world (6). Iran is one of the top 10 countries in the world with the highest rate of infection (7). Adults, especially the elderly, and cardiovascular, respiratory, diabetic, hypertensive, cancer, patients, obese individuals, patients with AIDS and people who have had organ transplants are at higher risk (8). Limited information is available on pregnant women and infants with COVID-19, and data suggest that congenital and perinatal transmission to infants from infected women may occur (9). Factors such as high mortality and morbidity of humans despite the passage of 3 months from the onset of the disease, lack of any definitive treatment or prevention, fear of possible disease and prediction of some researchers on possible infection of a large percentage of the population has caused a lot of psychological stress in the society (8). Pregnant women are a very important part of society, who, in addition to enduring the psychological stress caused by corona-related issues, face other stressors that result from certain changes during pregnancy (10). Particularly stressful issues during pregnancy include physical and fitness changes (11), mood and emotional changes, anxiety about parenting (12), anxiety about childbirth and the health of the infant (13). For many women, pregnancy is a stressful period (14). Experimental studies show that 15-25% of women experience stress, anxiety or depression during pregnancy, which is higher than in the postpartum period (15). The World Health Organization has reported that mental disorders in pregnant women affect fetal and neonatal health (16). Psychological stress during pregnancy can be defined as anxiety or depression (12). One of the effects of stress on the fetus is a disorder in the birth growth indexes (17). However, birth growth indexes are both epidemiologically and clinically important because measuring these parameters provides useful information for neonatal care. These indexes are also necessary to diagnose nutritional and growth status and lead to the identification of high-risk infants. Therefore, these indexes have a very important role on the health of the subsequent days of the baby's life and it is important to identify the causes related to these indexes and correct some modifiable factors (18). In this regard, research has shown that infants born to mothers with high anxiety scores are more vulnerable to poor nervous system development, more irritability, and less mental development (19). Despite the importance of the effects of the pregnant mother's mental stress on the fetus and infant, most studies on maternal anxiety and

depression and birth growth indexes in developed countries (20) are limited to the relationship between maternal stress, anxiety and depression and birth growth indexes in Iran. In view of all the above, and since this relationship has not been studied in the population under study (pregnant mothers hospitalized in the corona ward), this study aims to investigate the relationship between stress, anxiety and depression with birth growth indexes in pregnant mothers admitted to the corona ward of Kerman hospitals in 2020.

MATERIALS AND METHODS

This is a descriptive-analytical cross-sectional study. The research population included all infected pregnant women hospitalized in the COVID-19 intensive care unit in hospitals of Kerman province in 2020. Data were collected from all cities in the province that have hospitals with COVID-19 wards. In this study, the samples included all pregnant mothers who met the inclusion criteria and were hospitalized in special COVID-19 wards in all cities of Kerman province and were selected by census. Data were collected over a period of 3 months (May to August 2020). Eligible pregnant mothers were included in the study by census. In this study, 325 questionnaires were distributed, of which 315 questionnaires were fully completed and returned (response rate was about 97%). Inclusion criteria included having informed consent to participate in the study, maternal age between 20 to 40 years, gestational age between 28 to 35 weeks, no diagnosed mental illness, no pregnancy with previous and current complications, no use of neuroleptics, lack of any conflict, family and mental problems such as the death of a loved one or divorce attempt, etc., during at least the last 3 months. The important point for pregnant women to enter the study was hospitalization and attendance of the pregnant woman in the stressful atmosphere of the COVID-19 intensive care unit for at least 72 hours, and they would be excluded from the study if all sections of the questionnaire were not completed. Data collection tool was a questionnaire consisting of two parts, the first part of which included a demographic information sheet containing such information as maternal age, gestational age, income, education level of mother and her husband, occupation of mother and her husband, duration of marriage, the number of children, whether the pregnancy was wanted or not, the number of pregnancies, the sex of the fetus and the number of days hospitalized in the COVID-19 ward. The second part of the questionnaire included Depression-Anxiety-Stress Scale (DASS-21) developed by Lovibond and Lovibond (1995) to measure depression, anxiety, and stress with 21 items (21). The DASS-21 scale includes self-report components to assess negative emotional states of anxiety, depression and stress. Each of the subscales consists of 7 items, the final score of each of which is obtained through the sum of the scores of the related questions. Thus, items 3, 5, 10, 13, 16, 17 and 21 measure depression, items 2, 4, 7, 9, 15, 19 and 20 measure anxiety, and items 1, 6, 8, 11, 12, 14 and 18 measure stress. A higher score on this scale indicates higher anxiety, depression, and stress in the subject. In the study of Antoni et al., The alpha coefficient for depression, anxiety and stress was 0.97, 0.92, and 0.95, respectively, and the correlation between depression and stress was 0.48, between anxiety and stress was 0.53, and between anxiety and depression was 0.28 (22). The scoring method is such that for each item, a score ranging from zero (did not apply to me at all) to 3 (applied to me very much) is considered. Since DASS-21 is the abbreviated form of the main scale (42 items), the final score of each of the subscales must be doubled. The validity and reliability of this tool have been confirmed and used by Lovibond and Lovibond (1995) (20). Lovibond and Lovibond (1995) obtained the validity of the DASS-21 scale as 0.77 and the reliability of the scale and its components as Cronbach's alpha of 83%. In Iran, it has been studied by various researchers, including Sahebi et al. (2005), Jokar and Samani (2007). The retest validity for the Depression, Anxiety and Stress scales is 0.80, 0.76, 0.77, and the validity of this scale has also been favourable confirmed by confirmatory factor analysis (23, 24). After obtaining permission from the Ethics Committee of the University and taking permission from the authorities, the researcher went to the intensive care unit of patients with COVID-19, observing all the principles of safety and health, and identified eligible patients, and the research objectives, the confidentiality of the answers, and information about the results of the research were fully explained. After obtaining informed consent in written form from the samples, personal information questionnaires and the DASS-21 scale were given to them for completion. Then, the questionnaires were completed by the patients or their caregiver personally, and in case of illiteracy, they were completed with the help and guidance of the researcher, and the approximate time to complete the questionnaires was about 10 minutes. To record information about birth indexes (head circumference, height, weight and APGAR score), the hospital record number of all samples was recorded at the top of the demographic questionnaire, and after delivery, information about the infant was collected and recorded in three ways: 1- Maternal file (the form of infant characteristics), 2- Referring to the family health file available in health centers, and 3- Phone call to the contact number registered in the hospital records of pregnant mothers.

Ethical considerations: The present study has been registered in the ethics committee of Jiroft University of Medical Sciences under the number IR.JMU.REC.1399.007 Information about the research implementation, duration of study, confidentiality and anonymity of the questionnaire and the volunteer participation in the study were given to the participants. Written informed consent was obtained from the participants.

RESULTS

In this study, the mean age of pregnant women with COVID-19 was 27.90 ± 5.51 ،their mean gestational age was 31.13 ± 1.98 weeks, mean number of children was 1.49 ± 0.93 and number of abortions was 0.49 ± 0.71. The mean duration of marriage and length of hospital stay were 6.05 ± 4.55 year and 6.42 ± 2.83 day, respectively. In terms of occupation, 61% (192) were housewives, 22.2% (70) were self-employed, and 16.8% (53) were employed. The frequency of occupations of the

husbands 35.9% (113) as employed, 59.4% (187) as self-employed, and 4.4% (15) as unemployed, respectively. Regarding the education of pregnant women, 43.5% (137 people) had the high school diploma or below, 50.2% (158 people) had a bachelor's degree and 6.3% (20 people) had a master's degree or higher. Also, the education level of pregnant women's husband was 34.9% (110 people) with the high school diploma or below, 52.7% (166 people) with a bachelor's degree and 12.4% (39 people) with a master's degree or higher.

In terms of income, 21.9% (69) of pregnant women with COVID-19 stated that their monthly income is less than one million Tomans. 46% (145) reported that their income is between 1 to 2 million Tomans per month and 32.1% (101) reported that their monthly income is higher than 2 million Tomans. The current pregnancy of 35.6% (112) of the participants in this study was unintended. Fetal sex was reported male in 50.2% (n = 158) of cases, and the rest of cases was female. Regarding depression, 3.8% (12) were normal, 20.3% (64) had mild depression, 52.4% (165) had moderate depression, and 23.5% (n = 74) had severe depression. 6.6% (20) of participants had moderate anxiety, 46% (145) had severe anxiety, and 47.4% (150) very at severe condition, and finally 7.6% (24) had mild stress, 63.2 (199) had moderate stress, and 29.2% (92) had severe stress. The results of one-way ANOVA or its non-parametric counterpart, Kruskal-Wallis test, showed that there was no statistically significant difference in terms of stress, anxiety and depression with different levels of monthly family income, women's education, spouses' education, women's occupation and spouses' occupation ($P > 0.05$). The results of independent t-test also showed that the mean scores of depression and anxiety in pregnant women who had an unwanted pregnancy were higher than women who had a planned pregnancy. In addition, the mean depression and anxiety of pregnant women whose fetuses were boys were higher than those of pregnant women whose fetuses were girls $(P \leq 0.05)$ (Table 1). The results of Spearman correlation coefficient test showed that the depression and anxiety variables have a statistically direct and significant relationship with pregnant mothers' age, duration of marriage, number of children, the number of abortions and the length of hospital stay $(P \leq 0.05)$. With increasing gestational age and duration of marriage, the number of children, the number of abortions and the length of hospital stay, their depression and anxiety scores also increase. No relationship was observed between stress and demographic variables $(P > 0.05)$ (Table 2). The results also showed that the variables of stress, anxiety and depression were statistically significantly inversely related to birth weight and height indices $(P \leq 0.05)$, but other indicators were not significantly related $(P > 0.05)$ (Table 3).

DISCUSSION

The aim of this study was to determine the relationship between stress, anxiety and depression with birth growth indexes in pregnant women admitted to the COVID-19 ward of hospitals in Kerman province in 2020. In the present study, it was found that there is no statistically significant difference between stress, anxiety and depression with different levels of monthly family income, women's education, spouse's education, their women's job and spouse's job. This result can indicate the wholescale effects of COVID-19 disease on pregnant women's mental and psychological stats rather than on income, education and occupation of the baby's parents. Shahyad and Mohammadi (2020) in a study entitled 'Psychological effects of the COVID-19 outbreak on the mental health status of the individuals' states that the outbreak of COVID-19 is one of the factors that can increase the level of anxiety, stress and depression in pregnant women (25). The present study also found that the average scores of depression and anxiety in pregnant women who had unwanted pregnancies were higher than women who had planned pregnancy. However, 35.6% (112) of women had unwanted pregnancies, which indicates the relative ineffectiveness of family planning interventions in the current health system, and its promotion can reduce unwanted pregnancies as a health goal in family planning programs to help reduce the number of depressed pregnant mothers and the number of babies born with impaired birth growth indexes. In addition, the inclusion of a new health program to screen for depression in pregnant mothers and timely treatment interventions in COVID-19 disease can be an effective step in improving the birth growth indexes of their newborns. It should be noted that the results of this study are consistent with the study of Gholami et al. (26). The results of the present study also showed that the average depression and anxiety of pregnant women whose fetuses were boys were higher than those of pregnant women whose fetuses were girls. These results were not consistent with studies in China and Turkey. In these studies, mothers with girl babies were more prone to depression, so that in the study of xie et al. in China, the prevalence of depression in mothers who gave birth to a baby girl was twice as high as in mothers who gave birth to a baby boy (27). Probably the reason for the inconsistency of the results of these studies with the present study could be in the cultural differences and customs related to the region. Pregnancy is the most stressful period of a woman's life, so in this period there is a possibility of psychological complications such as depression, anxiety, and stress (28). If this period is associated with COVID-19 and maternal hospitalization in a stressful ward of isolated respiratory tract patients, it may increase the likelihood of these complications. In this study, one third of subjects reported moderate (52.4%) and severe (23.5%) levels of depression. A significant proportion of pregnant women with COVID-19 disease suffered from severe (46%) and very severe (47.6%) anxiety and more than half of them (63.2%) had moderate stress and (29.2%) severe stress. The means obtained in this study are higher than similar studies (33-39). The reason for this increase in mean stress, anxiety, and depression in the present study may be related to the condition of mothers with coronavirus and hospitalization in the COVID-19 intensive care unit, or to the size of the population and the tools used to investigate. The present study shows a significant negative relationship between

stress, anxiety and depression and neonatal weight at birth. As the intensity of stress, anxiety and depression of mothers increases, the weight of infants decreases. Mothers who experience prenatal anxiety are more likely to engage in unhealthy behaviors during pregnancy or to fail to attend prenatal examinations to reduce their anxiety or in response to their anxiety symptoms (34). Anxiety is followed by an increase in stress-related hormones (cortisol and norepinephrine), increased vascular resistance and decreased uterine blood flow, fetal growth retardation, increased infection, and subsequent low birth weight (35). This finding (the relationship between anxiety and birth weight) is consistent with the results of some studies (29, 36-39). In the study of Najafi et al. (29), Bahrami et al. (40), Dunkel Skter et al. (41), Francon et al. (42), Banner (39), Grout et al. (43), Stewart et al. (44) and Dadi et al. (33), it was found that there was a significant negative relationship between depression and neonatal weight at birth, which is consistent with the present study. However, it is not consistent with the study of Hussein et al. (45) and Hanlon et al. (46). Studies have shown that although anxiety and depression are two separate disorders, they overlap in 30-50% of cases and these two factors can have adverse effects on midwifery, fetal and neonatal outcome (29). In explaining the reason for the negative relationship between the severity of depression and birth weight, it can be said that one of the influential factors in proper fetal weight gain is proper nutrition and mental peace of the mother. Mothers with depressive symptoms may not have the motivation to feed on time and properly due to decreased motivational functions, or may not receive adequate prenatal care due to social isolation. On the other hand, due to sleep and appetite disorders, the nutrition of depressed mothers will be affected, thus increasing the chances of low birth weight babies in depressed mothers. Other results of the present study show a significant negative relationship between stress, anxiety and depression with neonatal height at birth. As mothers become more stressed, anxious, and depressed, their babies' height decreases. In the study of Aj et al. (47) and Abedi et al. (48), between stress and infant height, in the study of Najafi et al. (29) and Shayghan et al. (49), between anxiety and infant height, and in the study of Stuart et al. (44), Harfam et al. (50) a significant negative relationship between depression and neonatal height at birth was found, as in our study. However, in the study of Hussein et al. (45), contrary to our study, no relationship was found between depression and height. This discrepancy can be attributed to cultural reasons such as the type of nutrition, the supportive attitude of those around to the mother's depression, and the non-random selection of samples. In this study, no relationship was found between stress, anxiety and depression with other indexes such as head circumference and 1-minute Apgar and 5-minute Apgar scores. In the study of Najafi et al. (29), Abedi et al. (48), and Ponirakiz et al. (51) as in the present study, no relationship was found between stress, depression and anxiety with head circumference. However, significant negative relationship was found in the study of Aj et al. (47), between maternal stress and neonatal head circumference, in Bahrami et al.'s study (40), between maternal depression and neonatal head circumference, and in the study of Shaghaghi et al. between anxiety and head circumference. It seems that due to the different growth rate of fetal head circumference at different times of pregnancy and since the main growth rate of fetal head circumference is in the early months of pregnancy, part of the differences observed in the results of different studies, is related to the time of the study in different months of pregnancy and the present study was performed in the last months of pregnancy. In terms of Apgar score index, Shaghaghi et al. (52), Abedi et al. (48), and Aj et al. (47), as in our study, did not find a relationship between stress, anxiety and depression with Apgar score, but Rumi et al. (53) found a significant negative relationship between maternal stress and fetal Apgar score.

CONCLUSION

The outbreak of COVID-19 due to its rapid transmission, which is characteristic of this virus, has caused a state of emergency in global health in less than several months around the world. This contagious disease has not only caused concerns about public physical health, but also caused a number of psychological diseases in the community, especially pregnant mothers. In this situation, it is necessary to maintain the mental health of pregnant mothers because psychological problems cause disorders in the birth growth indexes and the birth of high-risk infants. Considering the research findings in the present work, which indicate high levels of stress, anxiety, and depression in pregnant mothers and hospitalization in the COVID-19 ward and the effect of these psychological complications on some birth growth indexes of the newborns born to these mothers, planning for preventive measures in the first and second level of prevention in the field of prevention and diagnosis of psychological symptoms in pregnant women, especially mothers with coronavirus and prevention of intrauterine growth disorders in fetuses of pregnant mothers, especially in mothers with COVID-19 disease, are considered necessary, and it is recommended that mental health screening and strategies should be considered by health officials in the country to reduce depression and anxiety of these mothers. In general, it can be said that despite the serious attention paid by the Iranian health care system to prenatal care in terms of physical health of the pregnant mother and significant achievements in reducing infant mortality and promoting growth indexes, it seems that the forgotten dimension of a pregnant mother's health, i.e., her mental and psychological dimension, is still a major obstacle to achieving a healthy pregnancy in Iranian mothers and giving birth to babies with acceptable developmental status. women are mostly

found to be disadvantaged due to the culture of less valuing them than men(54). Stress responses to physiologic condition is not stable and have continuously alteration, therefore, proper knowledge of these stresses and physiologic conditions aid nutritionists to have appropriate decision about nutrition supporting time and method(55).Therefore, due to the adverse effects of stress, depression and anxiety on neonatal outcomes in mothers with COVID-19 disease, it is recommended that mental health screening programs and strategies to reduce depression and anxiety in these mothers be considered by health officials. Pregnancy is a critical period in the lives of

women and is associated with their increased nutritional requirements. Adequate nutrition during this period has a significant impact on maternal and child health. Pregnancy is a critical period in the lives of women and is associated with their increased nutritional requirements. Adequate nutrition during this period has a significant impact on maternal and child health(56).

Limitations: The cross-sectional investigation of stress, anxiety and depression of pregnant mothers is regarded as a limitation of research. Certainly, monitoring the mental state of mothers in each trimester of pregnancy will reflect more results of their stress, anxiety and depression. The DASS assessment scale alone may not provide sufficient tools to assess mothers' stress, anxiety, and depression, and the need for other complementary assessment methods such as interviews, clinical monitoring, and studies in different research environments and cultures with more statistical populations is recommended.

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Authors' contribution: Ahmadi M. performed the measurements ,was involved in planning and supervised the work, Dastyar N. processed and performed the analysis, drafted the manuscript and designed the figures. They wrote the manuscript with scientific support and helped supervise the project. Arbabisarjou A, and Salari N. involved in interpreting the results, worked on the manuscript and edited it. All authors discussed the results and commented on the manuscript. All authors read the final copy of manuscript and confirmed it for submission.

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Table 1- Relationship between depression, anxiety and stress and qualitative demographic variables (n = 315)

	Depression	P	**Anxiety**	P	**Stress**	P
Spouse income						
Less than 1 million Toman a month	16.80 ± 4.26		20.51 ± 3.89		22.88 ± 4.12	
Between 1-2 million Toman a month	17.14 ± 4.29	0.83	20.03 ± 4.28	0.64	23.27 ± 3.67	0.78
Above 2 million Toman a month	16.86 ± 4.86		20.48 ± 4.51		23.08 ± 4.01	
Education level						
High school diploma & lower	17.32 ± 4.42		20.49 ± 4.18		23.05 ± 4.03	
Above high school diploma & bachelor	16.56 ± 4.42	0.23	19.96 ± 4.30	0.29	23.04 ± 3.80	0.37
Master & above	17.85 ± 4.93		21.35 ± 4.57		24.30 ± 3.25	
Spouse's education level						
High school diploma & lower	17.78 ± 4.28		20.45 ± 4.38		23.37 ± 3.82	
Above high school diploma & bachelor	17.21 ± 4.37	0.76	20.16 ± 4.33	0.96	22.90 ± 3.85	0.73
Master and above	16.90 ± 5.29		20.38 ± 4.32		23.28 ± 3.95	
Job						
housewife	17.13 ± 4.30	0.55	20.25 ± 4.14	0.64	22.88 ± 3.77	0.33
Self-employed	16.46 ± 4.45		20.01 ± 4.13		23.39 ± 4.14	
Employee	17.09 ± 5.07		20.74 ± 4.90		23.68 ± 3.88	
Spouse job						
Unemployed	18.07 ± 4.20	0.62	21.07 ± 4.18	0.43	23.80 ± 3.39	0.79
Self-employed	16.89 ± 4.39		20.03 ± 4.20		23.10 ± 3.88	
Employee	16.97 ± 4.64		20.58 ± 4.39		23.07 ± 3.93	
unwanted pregnancy						
Yes	18.05 ± 4.17	0.001	21.10 ± 4.36	0.01	23.14 ± 4.01	0.91
No	16.38 ± 4.52		19.83 ± 4.16		23.09 ± 3.80	
Fetus gender						
Male	17.56 ± 4.39	0.02	20.97 ± 4.47	0.004	23.28 ± 3.85	0.46
Female	16.39 ± 4.46		19.58 ± 3.94		22.96 ± 3.88	

Table 2 – Relationship between depression, anxiety, and stress and quantitative demographic variables

	Depression	Anxiety	Stress
Age	$\rho = 0.21$ $P < 0.001$	$\rho = 0.13$ $P = 0.021$	$\rho = 0.10$ $P = 0.070$
Gestational age	$\rho = 0.01$ $P = 0.991$	$\rho = 0.03$ $P = 0.643$	$\rho = 0.04$ $P = 0.554$

Duration of marriage	$\rho = 0.26$ $P < 0.001$	$\rho = 0.17$ $P = 0.003$	$\rho = 0.10$ $P = 0.071$
Number of abortions	$\rho = 0.14$ $P = 0.012$	$\rho = 0.06$ $P = 0.255$	$\rho = 0.04$ $P = 0.441$
Duration of hospital stay	$\rho = 0.28$ $P < 0.001$	$\rho = 0.12$ $P = 0.040$	$\rho = 0.03$ $P = 0.635$

Table 3 – relationship between depression, anxiety, and stress and birth indexes

	Depression	Anxiety	Stress
Height	$\rho = -0.20$ $P < 0.001$	$\rho = -0.14$ $P = 0.012$	$\rho = -0.15$ $P = 0.008$
Weight	$\rho = -0.26$ $P < 0.001$	$\rho = -0.17$ $P = 0.003$	$\rho = -0.18$ $P = 0.002$
Head circumference	$\rho = -0.05$ $P = 0.400$	$\rho = -0.11$ $P = 0.067$	$\rho = -0.08$ $P = 0.137$
1-*minute Apgar* score	$\rho = -0.08$ $P = 0.146$	$\rho = -0.05$ $P = 0.380$	$\rho = -0.14$ $P = 0.013$
5-*minute Apgar* score	$\rho = -0.04$ $P = 0.497$	$\rho = -0.07$ $P = 0.232$	$\rho = -0.08$ $P = 0.201$