

## Body image and body mass index of pregnant women do not affect the growth indicators of newborns. A Cross-Sectional Study

*Prikaz tijela i indeks tjelesne mase trudnica ne utječu na pokazatelje rasta novorođenčadi. Presječna studija*

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### Summary

**Aims:** The aim of the study is to investigate the relationship between the body image and body mass index (BMI) of pregnant women with newborn growth indicators in selected hospitals of Shiraz University of Medical Sciences.

**Methods:** A cross-sectional study was conducted on 420 pregnant women over 17 years old, who were selected by consumptive sampling method, in the hospitals affiliated to Shiraz University of Medical Sciences. The research questionnaire was conducted through the multidimensional questionnaire of a person's attitude towards her body image (MBSRQ). Due to the large number of sample size, Pearson's inferential test was used and  $P < 0.05$  was considered statistically significant.

**Results:** The mean age of the women was  $29.52 \pm 6.04$  year, mean BMI was  $24.66 \pm 3.96$  kg/m<sup>2</sup>, and mean score of body image was  $249.86 \pm 22.27$ . The body image score was not significantly associated with newborn growth indicators (birthweight  $p = 0.222$ , length  $p = 0.534$ , head circumference  $p = 0.537$ ). Also, the women's BMI was not significantly related to the newborn growth indicators (birthweight  $p = 0.180$ , length  $p = 0.577$ , head circumference  $p = 0.720$ ). The BMI was inversely related to satisfaction with different body parts ( $p < 0.001$ ), individual's attitude towards weight ( $p < 0.001$ ) and total score of women's body image ( $p < 0.001$ ).

**Conclusions:** the body image in pregnancy had a significant relationship with the women's BMI. However, more comprehensive prospective studies are recommended to carefully examine the effects of pregnant women's body image on newborns growth (both term and preterm), because studies in this area are very limited..

**Key words:** birthweight, body image, body mass index, growth, infant, mental health

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### Sažetak

**Ciljevi:** Cilj istraživanja je istražiti odnos između prikaza tijela i indeksa tjelesne mase (BMI) trudnica s pokazateljima rasta novorođenčeta u odabranim bolnicama Sveučilišta medicinskih znanosti u Shirazu.

**Metode:** Presječna studija provedena je na 420 trudnica starijih od 17 godina, koje su odabrane metodom konzumnog uzorkovanja, u bolnicama pridruženim Sveučilištu medicinskih znanosti u Shirazu. Istraživanje je provedeno putem višedimenzionalnog upitnika stava osobe prema prikazu tijela (MBSRQ). Zbog velikog broja veličina uzorka korišten je Pearsonov inferencijalni test i  $P < 0,05$  se smatrao statistički značajnim.

**Rezultati:** Prosječna dob žena bila je  $29,52 \pm 6,04$  godine, srednji BMI bio je  $24,66 \pm 3,96$  kg/m<sup>2</sup>, a srednja ocjena prikaza tijela bila je  $249,86 \pm 22,27$ . Rezultat slike tijela nije značajno povezan s pokazateljima rasta novorođenčadi (porođajna težina  $p = 0,222$ , duljina  $p = 0,534$ , opseg glave  $p = 0,537$ ). Također, BMI žene nije

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have affected the results of the study. This can be a strength of the study, because the influence of confounding factors has been prevented.

### Conclusion

The results showed that there was no significant relationship between the body image or women's BMI with the newborn growth indicators. Our suggestion is that in order to clarify the issue possible necessary interventions need to be carried out, more specific studies should be conducted on the importance and impact of women's body image on the growth indicators of the fetus and newborn (both term and preterm), because the studies in this field are very limited.

### Study limitations

1. In this study, only newborns with no health problems were examined, this limitation caused many newborns to be excluded from the study.

2. Due to the selection of the sample among the women hospitalized in the delivery department, many women did not want to participate in the study due to pain.

### Suggestions

Regarding the relationship between body image and BMI, it is recommended to develop and implement body image support programs in health care centers during pregnancy. Group and prospective studies are also recommended to examine the neonatal and maternal consequences associated with body image.

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