



# THE EFFECT OF MATERNAL ANAEMIA ON BIRTH WEIGHT OF NEWBORNS IN DHQ RAWALPINDI

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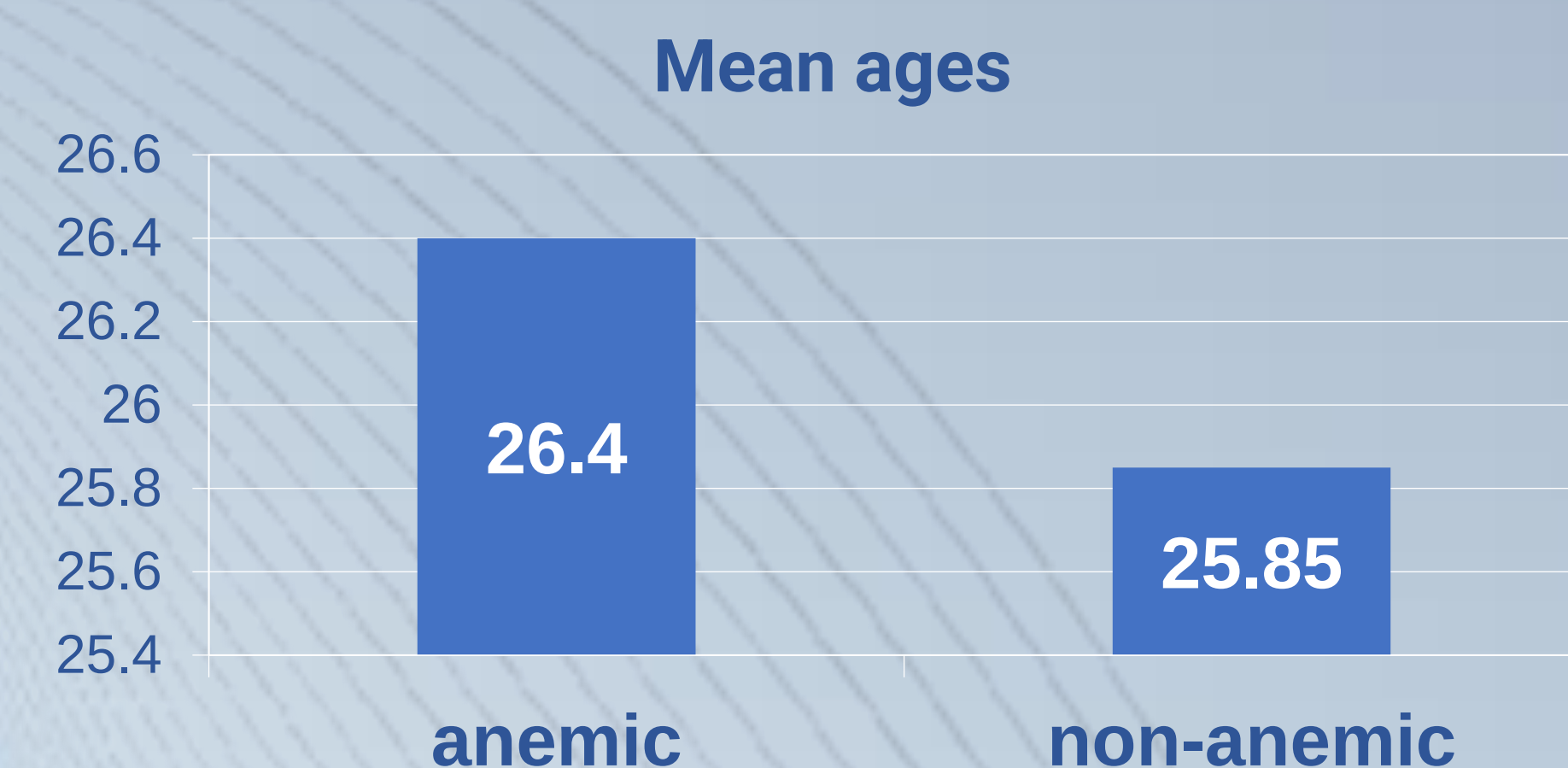
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## Introduction

A leading health issue of poor countries is anemia in pregnant women which causes increased maternal and fetal morbidity<sup>1</sup>. Anemia is considered to be a predictor of preterm birth and low-birth weight<sup>2</sup>. Anemia, a global health issue, affects pregnant women belonging to the developing countries to a greater extent. Although in pregnant women, the prevalence of anemia, across the globe is 36.5% but in low and middle class income countries it rises to 56% and in South Asia it is 48%<sup>3</sup>. Detrimental effects of gestational anemia can often be observed, like preterm labour, PPRM, low birthweight, SGA fetus, low apgar score or even intrauterine fetal demise<sup>4</sup>. Suboptimal Hb and ferritin levels usually lead to low birth weight<sup>5</sup>.

## Objectives

The study aimed at identifying anemia as a cause of low birth weight by comparing the weight of newborns of anemic mothers with the non anemic.



## Materials & Methods

A comparative cross sectional study conducted in DHQ hospital affiliated with Rawalpindi medical university. About 150 patients were taken , with 75 patients in each group by consecutive non probability sampling. Anemic mothers were allocated to Group A whereas Group B had the non-anemic Group B. A Hb concentration level of <11g/dl was considered as anemic whereas Hb of >11gm/dl as non anemic . The information was collected on a proforma through a questionnaire as well as information collected from the labour ward record. All pregnant women with singleton pregnancies were included . Those with a history of preterm labour, high order pregnancy , obstetric conditions and medical problems e.g hypertensive disorders and gestational diabetes were excluded from this study.

## Results

The bar chart depicts the mean ages in anemic and non-anemic mothers. The mean ages of the mothers in both the groups were comparable (26.40 versus 25.85). The birth weights in the two groups is demonstrated in the table. There was a significant association of reduced weight of the newborn in anemic mothers. In mothers who were anemic 24% of the babies had low weight at birth as compared to 0% in their counterpart( $p<0.001$ )

## Discussion

Maternal anemia, a very common health problem has many fetal implications, low birthweight being one of them. In our study both the groups had almost the same mean age. Even the extremes of age were not seen to have any association with the haemoglobin level. However, a statistically significant association between the birth-weight and level of haemoglobin in the two groups was observed. The birth weight was significantly less in the anemic group. These results were comparable with a study carried out by Shah et al(2022) and Anwar Razzaq(2019).6,10. A systematic review carried out by Figueiredo et al in 2018 demonstrated maternal anemia to be a predisposing factor for reduced weights of neonates at birth .On the other hand many other studies whose outcome was low birth weight disproved of it14,15,16. However studies conducted on large sample sizes about 290,622 pregnant females demonstrated a definite association supporting our results17.

| Group    | Low birthweight | Normal weight |
|----------|-----------------|---------------|
| A (n=75) | 18 (24%)        | 57(76%)       |
| B (n=75) | 0 (0%)          | 75 (100%)     |
| p-value  | <0.001*         |               |

## Conclusions

**Anemia in pregnancy is significantly associated with reduced neonatal birth-weight**

## References

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2. Raymond Powrie, Michael Greene, William Camann. De Swiet's Medical Disorders in Obstetric Practice [Internet]. Vol. 5th ed. Chichester, West Sussex: Wiley-Blackwell; 2010 [cited 2022 May 22]. Available from: <https://search-ebscohost-com.rcog.idm.oclc.org/login.aspx?direct=true&db=nlebk&AN=321010&site=ehost-live>

