

significant differences in fetal weight in the latter part of pregnancy (after 34–38 weeks of gestation) included maternal parity and race, and fetal sex.

The advantage of this study is the large sample size. Limitations of the study are that the data were collected more than 30 years ago in only two U.S. states. In addition, a number of variables that may affect fetal weight (i.e., maternal smoking, disease, nutrition, and addictions) were not evaluated in this study.

8.6.2. Doubilet et al. (1997)—Improved Birth Weight Table for Neonates Developed From Gestations Dated by Early Ultrasonography

Doubilet et al. (1997) matched a database of obstetrical ultrasonograms over a period of five years from 1988 to 1993 to birth records for 3,718 infants (1,857 males and 1,861 females). The study population included 1,514 Whites, 770 Blacks, 1,256 Hispanics, and 178 who were either unclassified, or classified as “other.” Birth weights were obtained from hospital records, and a gestational age was assigned based on the earliest 1st trimester sonogram. The database was screened for possible outliers, defined as infants with birth weights that exceeded 5,000 grams. Labor and delivery records and mother-infant medical records were retrieved to correct any errors in data entry for infants with birth weights exceeding 5,000 grams. The mean gestational age at initial sonogram was 9.5 ± 2.3 weeks. Regression analysis techniques were used to derive weight tables for neonates at each gestational age for 25 weeks of gestation onward. Weights for each gestational age were found to conform to a natural logarithm distribution. Polynomial equations were derived from the regression analysis to estimate mean weight by gestational age for males, females, and males and females combined. Table 8-31 provides the distribution of neonatal weights by gestational age from 25 weeks of gestation onward. The advantage of this study is that it provides body weights for neonates based on a relatively large sample. A limitation is the age of the data.

8.7. REFERENCES FOR CHAPTER 8

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