In Taiwan, the birth rate for adolescent girls aged 15-19 years old has remained as high as approximately 15 per 1000 during the past decade, which is the highest among developed countries in Asia. In comparison, the birth rate for adolescents aged 15-19 years old in the US was about 10 per 1000 in the 1990s, approximately 2 times that of most other Western countries. These high rates raise great societal and medical concern, since childbearing in adolescence not only results in many negative consequences of parenthood, but also carries an increased risk of adverse birth outcomes including low birth weight and pre-term birth. In the United States, the risk of low birth weight or pre-term birth is increased 2 to 3 times among mothers less than 20 years of age compared to mothers who are 25-29 years old. In Taiwan, this risk was about 1.2 to 2.5 times higher among adolescent mothers. Many factors, including biological immaturity, poor sociodemographic status or inadequate prenatal care and nutrition, have been considered and examined as potentially contributing to the adverse outcomes of adolescent childbearing. The main limitations with the previous studies include an inadequate control for sample selection and potential confounding factors. The relation between factors of young age and sociodemographic risk factors to adverse birth outcomes are even less clear for repeat births to adolescent mothers, partly due to most research being done on first births of adolescent childbearing, just like Wang and Chou’s report in this issue.

Research in the early 1980s began to emphasize both very young maternal age (less than age 16) and poor prenatal care as crucial variables in the development of perinatal risk. Studies in the late 1980s and early 1990s attributed the increased risk of poor birth outcomes to psychosocial characteristics such as risk-taking behaviors or poor nutrition and inadequate prenatal care rather than to physiologic factors related to young maternal age. On the other hand, a couple of research reports in the late 1990s indicated that younger age conferred an increased risk of low birth weight and preterm birth in first births to teenagers after controlling for confounding sociodemographic characteristics. The role of a young age (biological immaturity) in increasing the risk of adverse outcomes could include a young gynecological age (immaturity of uterine or cervical blood supply) and maternal competition with the developing fetus for nutrients. However, related research in the past 2 years found that first teenage births are not independently associated with an increased risk of adverse pregnancy outcome; second teenage births are associated with a significantly increased risk of pre-term births, especially the risk of extremely early pre-term birth after adjusting for potential confounding factors such as risk-taking behaviors and socioeconomic deprivation.

In conclusion, it is evident that adolescent pregnancies have demonstrated increased risk for a variety of poor birth outcomes. However, it remains to be seen whether this association is mainly due to unfavorable sociodemographic status, biological immaturity, or both. Using recent research, what we are sure of now is that after controlling for other risk factors, young maternal age is not as associated with adverse pregnancy outcomes as for first teenage births, but strongly associated with preterm birth in teenage multiparas. A high priority should be placed on interventions to prevent repeat pregnancies and the associated risk of prematurity.

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Understanding the Risk Factors for Adverse Birth Outcomes in Adolescent Pregnancies

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