Sexual Behavior and Contraceptive Use among 18- to 19-Year-Old Adolescent Women by Weight Status: A Longitudinal Analysis

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Objective To describe the association between weight status and sexual practices among 18- to 19-year-old women.

Study design We analyzed a population-based longitudinal study of 18- to 19-year-old women residing in a Michigan county at cohort inception. Weekly journal surveys measured sexual practices, including contraceptive behaviors. Outcomes included proportion of weeks with a partner, proportion of weeks with sexual intercourse, number of partners, average length of relationships, proportion of weeks with contraception use, and proportion of weeks where contraception was used consistently. We examined 26,545 journal surveys from 900 women over the first study year. Ordinary least squares regression models for each outcome examined differences by weight status, controlling for sociodemographic characteristics.

Results The mean proportion of weeks in which adolescents reported sexual intercourse was 52%; there was no difference by weight status. Among weeks in which adolescents reported sexual activity, obese adolescents had a lower proportion of weeks where any contraception was used compared with normal weight adolescents (84% vs 91%, P = .011). Among weeks in which adolescents reported sexual activity and contraceptive use, obese adolescents had a lower proportion of weeks with consistent contraceptive use (68% vs 78%, P = .016) and oral contraceptive pill use (27% vs 45%, P = .001) compared with normal weight adolescents. All other relationships by weight status were not statistically significant.

Conclusions In this longitudinal study, obese adolescent women were less likely to use contraception, and less likely to use it consistently when compared with normal weight peers. Findings suggest obesity may be an important factor associated with adolescent women’s sexual behavior. (J Pediatr 2015;: - ).

The US adolescent pregnancy rate is one of the highest in the developed world.¹ One-quarter of all US women become pregnant at least once by age 20 years² with 18- and 19-year-olds at the highest risk for pregnancy.³ The consequences of adolescent pregnancy and childbirth are serious and numerous. Pregnant adolescents are more likely to experience miscarriage, stillbirth, and neonatal death, as well as to live in poverty and to rely on public assistance than women who delay childbearing.⁴,⁵

Reducing adolescent pregnancy is a national public health priority.⁶ To do so, we must identify the characteristics of adolescents who are at high risk for pregnancy by understanding adolescents’ sexual and contraceptive behaviors. Studies describing the sexual behaviors of adolescents have commonly done so by stratifying by age, race/ethnicity, and socioeconomic status. With over one-fifth of US adolescents currently obese, studies have also explored the relationship between weight status and sexual behaviors.⁷ However, the relationship between weight status and sexual behaviors such as contraceptive use remains unclear for adolescent women at highest risk for unintended pregnancy.

Among studies of sexual activity and weight status, some have shown that obese adolescent women have a higher likelihood for risky sexual behavior such as casual sex, multiple partners, sex without contraception, or sex under the influence of drugs or alcohol.⁸,⁹ Some studies have shown that obese adolescents are less likely to be sexually active overall,⁸,¹⁰ while other studies show no difference in sexual behaviors by weight status.¹²,¹³ Among studies that specifically studied contraceptive use and weight status, one study showed that obese women age 18-44 years were less likely to use contraceptives than normal weight women, and several studies showed no difference in contraceptive use by weight status.¹⁴,¹⁵ Furthermore, nearly all studies to date have been cross-sectional, several analyze a wide age group without a focus on those at greatest risk (18- to 19-year-olds), and many contain only basic information regarding sexual activity and contraceptive

| BMI | Body mass index |
| OLS | Ordinary least squares |
| RDSL | Relationship Dynamics and Social Life |

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use (eg, “Did you ever have sex?” and “Do you use contraception/condoms?”). As a result, there is a need for additional investigation to clarify how weight status affects sexual behaviors.

Understanding sexual behaviors by weight status among adolescents is vital because of the significant adverse maternal and fetal outcomes that are associated with obesity. Obese pregnant women are at increased risk for gestational diabetes, hypertensive disorders, thromboembolic complications, operative delivery, late stillbirth, birth injury, and their infants’ admission to neonatal intensive care. Furthermore, women who have given birth as adolescents are also at an increased risk for obesity and its associated comorbidities later in life, which likely contribute to a cycle of poor health among at-risk adolescents and their children.

To fill this gap, the aim of our study was to use longitudinal data to examine the relationship between weight status (normal weight vs overweight and normal weight vs obese) and specific sexual behaviors (length of relationships, frequency of sex, number of partners, use of specific types of contraception) among a population-based sample of 18- and 19-year-old adolescent women.

**Methods**

The Relationship Dynamics and Social Life (RDSL) study began with a representative, random, population-based sample of 1003 heterosexual young women, ages 18-19 years at time of study inception, residing in a sociodemographically diverse Michigan county. They were followed weekly for 2.5 years. The sampling frame was the Michigan Department of State driver’s license and Personal Identification Card database. The Institutional Review Board of the University of Michigan approved this study.

The RDSL study focused on women ages 18-19 years because these ages are characterized by the highest rates of unintended pregnancy, which is the research focus of the RDSL study.

A 60-minute, face-to-face baseline survey interview was conducted by trained research staff between March 2008 and July 2009 to assess sociodemographic characteristics, self-reported anthropometric measurements including height and weight, attitudes, relationship characteristics, contraceptive use, and pregnancy history. At the conclusion of this baseline interview, respondents were invited to participate in a weekly journal-based survey where they were asked to report on their thoughts and behaviors from the previous 6-7 days. For each journal interview, respondents could elect to complete the journal on the Internet or with an interviewer by phone, which prospectively measured pregnancy desires and pregnancy, as well as relationship characteristics such as commitment, sex, and contraceptive use. The journal portion of the study concluded in January 2012. Respondents were paid $1 per weekly journal with $5 bonuses for on-time completion of 5 weekly journals in a row. We refer to the period between journals as a “week,” though it may vary from 5-13 days because of variations in when respondents completed journals. If journals were completed after 13 days, respondents referred only to the prior week when responding to journals.

The response rate for the full baseline interview was 88%; 79% of women completed 12 months or more of weekly surveys. We restricted our analyses to respondents who completed journals during the first 12 months of the study, when response rates were the highest. However, analysis of journals from the full 2.5 years of the study found no significant difference in our findings. This resulted in 900 respondents who contributed 26,545 weeks of data. The mean number of journals for women in the first 12 months is 30.34 (median = 34). To focus on women at risk for unintended pregnancy, we eliminated the small number of weeks in which the respondents were pregnant during the study period (<1% of weeks in which sex occurred). This focused our analysis on women who were most in need of contraception. We also conducted sensitivity analyses for the contraception models that excluded weeks in which the respondent had a strong desire to become pregnant (and no desire to avoid pregnancy). The results did not differ from those presented.

**Body Mass Index**

Body mass index (BMI) was calculated with a standard equation using respondents’ self-reported height and weight. Consistent with other studies of older adolescents, weight status in our study was determined using adult BMI ranges (normal weight = BMI 18.5-24.9 kg/m², overweight = BMI 25.0-29.9 kg/m², obese = BMI ≥30 kg/m²). Underweight adolescents were excluded, as they were not the focus of this study and also because of the very low prevalence within our sample (4.9%).

**Relationships and Sexual Intercourse**

Each week, respondents identified their most important partner during the past week. Note that “partner” refers to anyone the respondent considered “special” or “romantic,” or anyone with whom she had sexual contact during the prior week, which could include a texting “pen-pal,” a 1-night stand, a fiancée, or anyone in-between.

Proportion of weeks in a relationship was calculated by dividing the number of weeks in which the respondent identified a partner by the total number of weekly interviews.

We computed the proportion of weeks in which sex occurred among those weeks when a respondent identified a partner. In each week, the respondent identified a partner, she was asked whether she had sexual intercourse (“...did you have sexual intercourse with ___? By sexual intercourse, we mean when a man puts his penis into a woman’s vagina.”).

Total number of partners was calculated by counting the number of unique partners reported.

Average length of relationships (in months) was calculated by summing the number of days with each unique partner, converting this to months (1 month = 30.4 days, the average number of days in a month), and dividing by the number of partners.

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Contraceptive Use

Among the weeks in which sex occurred, we calculated the proportion of weeks that any contraception was used.

Proportion of weeks that contraception was used consistently was calculated in weeks that any contraception was used. Specifically, respondents were asked, “…since the last interview, did you or your partner use some method of birth control every time you had intercourse?”

Specific contraceptive method used was based on several questions asked each week. Respondents who answered affirmatively to using any method were asked about specific noncoital methods (birth control pills, birth control patch, NuvaRing (Merck, Kenilworth, New Jersey), Depo-Provera (Pfizer, New York, New York) [other contraceptive shot], implant [Implanon (Merck, Kenilworth, New Jersey) or other], or intrauterine device), as well as coital methods (rhythm, condom, diaphragm or cervical cap, spermicide, female condom, or withdrawal).

For our analysis, we applied the following mutually exclusive categories: (1) intrauterine device, implant, or Depo-Provera (referred to as long-acting reversible contraception); (2) birth control pills, birth control patch, or NuvaRing (referred to as pill as a shorthand because this category is dominated by pill use, 94.5%); (3) condom (male or female); and (4) withdrawal. Preliminary analyses included separate categories for each method type, but results were not different for the methods included in long-acting reversible contraception or for those included in pill; therefore, they were combined for parsimony. Because of small sample sizes, weeks were excluded when only an “other” method was reported (eg, spermicide only) or the specific method used was not provided. For weeks in which multiple methods were used, we first top-coded that week as the more effective method for pregnancy prevention (eg, weeks of condom and birth control pill use were coded as pill). Therefore, weeks coded as condom use, for instance, are weeks in which a condom only or a condom along with another, less effective method was used. We then created a variable for dual method use (weeks in which the respondent reported using a hormonal method and a condom).

Proportion of weeks used for each specific method was calculated by dividing the number of weeks in which the respondent or her partner used each specific type of contraceptive method by the number of weeks in which any contraceptive method was used.

Sociodemographic and Reproductive Background Characteristics

Sociodemographic and reproductive background characteristics were measured at baseline included age, race/ethnicity (non-Hispanic White, non-Hispanic Black, Hispanic, or other), education (less than high school graduate, high school graduate or general education development, more than high school graduate), childhood public assistance (“While you were you were growing up, did your family ever receive public assistance?”; Women, Infants and Children Program, Family Independence Program, cash welfare, or food stamps), and whether they have ever had a pregnancy result in a live birth (yes/no). Race/ethnicity was subsequently collapsed into 2 categories for analysis: Black, and non-Black because of low prevalence of respondents in the other groups.

Statistical Analyses

Descriptive statistics were calculated for baseline sociodemographic characteristics as well as for each weight category (normal weight, overweight and obese). The $\chi^2$ or t tests were performed to detect significant differences in proportions or means, respectively. Unadjusted ordinary least squares (OLS) regression models were used to evaluate bivariate relationships between weight status and each outcome. Then a series of adjusted (multivariate) OLS models were used to examine the effect of weight status on each outcome, controlling for known confounders including age, race/ethnicity, childhood public assistance (a measure of socioeconomic status), and history of a live birth.32-34 For clarity of presentation, we calculated the adjusted proportion or mean for each dependent variable across each BMI weight category using each fully adjusted OLS regression model using normal weight as the reference group. The presented results are from the final multivariate model. All analyses were conducted using STATA software, v 13.0 (StataCorp, College Station, Texas).

Results

Baseline characteristics (n = 900 18- to 19-year-old adolescent women) are presented in Table I. As expected, normal-weight, overweight, and obese adolescents differed in several respects. The racial/ethnic distribution of normal weight adolescents differed significantly from that of overweight (P = .019) and obese peers (P = .005). For example, non-Hispanic Black respondents comprise 26% of the normal weight population, but 35% of the overweight population and 39% of the obese population. There were also significantly different proportions of normal weight and obese adolescents who had received childhood public assistance (31% vs 53%, P < .001) or ever had a live birth (11% vs 17%, P = .041).

Unadjusted bivariate statistics comparing each outcome across weight categories are presented in Table II. Briefly, there were no significant differences among 18- to 19-year-old adolescents in different weight categories for measures of relationships and sex in the unadjusted models.

However, after controlling for potentially confounding factors (Table III), obese adolescents used contraception in 84% of weeks, whereas normal weight peers used contraception in 91% of weeks (P = .011). Among those weeks in which adolescents reported sexual activity and contraceptive use, obese adolescents consistently used contraception less frequently than did normal weight adolescents (68% vs 78%, P = .016). Obese adolescents also...
used oral contraceptive pills less frequently than normal weight adolescents (27% vs 45%, \(P = .001\)). All other relationships did not differ significantly in multivariable models.

### Discussion

In this longitudinal study of 18- to 19-year-old women, we found that obese adolescents did not differ from normal weight adolescents in frequency of sexual intercourse or number of partners. However, sexually active obese 18- to 19-year-old adolescent women were significantly less likely than normal weight peers to use any contraception; when obese adolescents used contraception, they used it less consistently than did normal weight adolescents, even after controlling for important confounders. Consequently, sexually active obese adolescents in our sample were less protected from unintended pregnancy, compared with normal weight adolescents.

### Table I. RDSL survey respondent baseline characteristics, n = 900

<table>
<thead>
<tr>
<th></th>
<th>Total</th>
<th>Normal weight*</th>
<th>Overweight†</th>
<th>Obese‡</th>
<th>Normal* vs overweight†</th>
<th>Normal* vs obese‡</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>100%</td>
<td>100%</td>
<td>99.4%</td>
<td>99.6%</td>
<td>.094</td>
<td>.184</td>
</tr>
<tr>
<td>Ever had sex</td>
<td>77% (691)</td>
<td>77% (665)</td>
<td>78% (207)</td>
<td>76% (181)</td>
<td>.186</td>
<td>.384</td>
</tr>
<tr>
<td>Age (mean [SD])</td>
<td>19.2 (0.57)</td>
<td>19.3 (0.56)</td>
<td>19.2 (0.58)</td>
<td>19.2 (0.58)</td>
<td>.086</td>
<td>.984</td>
</tr>
<tr>
<td>Race</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-Hispanic White</td>
<td>58%</td>
<td>58%</td>
<td>57% (124)</td>
<td>57%</td>
<td>.938</td>
<td>.036</td>
</tr>
<tr>
<td>Non-Hispanic Black</td>
<td>31%</td>
<td>31%</td>
<td>31% (63)</td>
<td>31%</td>
<td>.199</td>
<td>.782</td>
</tr>
<tr>
<td>Hispanic</td>
<td>8%</td>
<td>8%</td>
<td>8% (19)</td>
<td>6%</td>
<td>.019</td>
<td>.124</td>
</tr>
<tr>
<td>Asian or other§</td>
<td>2%</td>
<td>2%</td>
<td>3% (1)</td>
<td>2%</td>
<td>.102</td>
<td>.760</td>
</tr>
<tr>
<td>Education</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;HS graduate/ GED</td>
<td>21%</td>
<td>21%</td>
<td>21% (46)</td>
<td>21%</td>
<td>.019</td>
<td>.142</td>
</tr>
<tr>
<td>HS graduate/ GED</td>
<td>22%</td>
<td>22%</td>
<td>22% (46)</td>
<td>23%</td>
<td>.067</td>
<td>.409</td>
</tr>
<tr>
<td>&gt;HS graduate/ GED</td>
<td>57%</td>
<td>57%</td>
<td>54% (124)</td>
<td>59%</td>
<td>.005</td>
<td>.336</td>
</tr>
<tr>
<td>Childhood public assistance</td>
<td>37%</td>
<td>37%</td>
<td>36% (79)</td>
<td>38%</td>
<td>.113</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Had a live birth</td>
<td>14%</td>
<td>14%</td>
<td>13% (29)</td>
<td>15%</td>
<td>.059</td>
<td>.041</td>
</tr>
</tbody>
</table>

GED, general education development; HS, high school.

Childhood public assistance defined as receiving Women, Infants, and Children Program, Family Independence Program, cash welfare, or food stamps “while growing up.”

Bolded values signify significant \(P\) values as defined as \(P < .05\) in a 2-tailed test.

*\(\text{BMI} = 18.5-24.9\).
†\(\text{BMI} = 25-29.9\).
‡\(\text{BMI} \geq 30\).
§Student t test was performed to detect differences between means and \(\chi^2\) tests were performed to detect differences between proportions.

### Table II. Unadjusted proportion or mean for each outcome by weight status

<table>
<thead>
<tr>
<th></th>
<th>Total</th>
<th>Normal weight* (reference)</th>
<th>Overweight†</th>
<th>Obese‡</th>
<th>Normal* vs overweight†</th>
<th>Normal* vs obese‡</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relationship and sex</td>
<td></td>
<td>Proportion/mean (SD)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Proportion of wk in a relationship</td>
<td>68% (37)</td>
<td>70% (36)</td>
<td>68% (37)</td>
<td>65% (37)</td>
<td>NS</td>
<td>NS</td>
</tr>
<tr>
<td>Proportion of wk in which sex occurred†</td>
<td>52% (36)</td>
<td>51% (37)</td>
<td>54% (36)</td>
<td>54% (34)</td>
<td>NS</td>
<td>NS</td>
</tr>
<tr>
<td>Average number of partners</td>
<td>2.1 (1.7)</td>
<td>2.0 (1.7)</td>
<td>2.3 (1.8)</td>
<td>2.1 (1.5)</td>
<td>NS</td>
<td>NS</td>
</tr>
<tr>
<td>Contraceptive use</td>
<td></td>
<td>Proportion/mean (SD)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Proportion of wk any contraception was used‡‡</td>
<td>89% (23)</td>
<td>91% (23)</td>
<td>92% (18)</td>
<td>84% (29)</td>
<td>.036</td>
<td>.004</td>
</tr>
<tr>
<td>Proportion of wk contraception was used consistently††</td>
<td>74% (33)</td>
<td>78% (32)</td>
<td>71% (34)</td>
<td>68% (35)</td>
<td>NS</td>
<td>NS</td>
</tr>
<tr>
<td>Specific contraceptive method use</td>
<td></td>
<td>Proportion/mean (SD)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Proportion of LARC wk†</td>
<td>9% (25)</td>
<td>8% (24)</td>
<td>9% (24)</td>
<td>12% (28)</td>
<td>NS</td>
<td>NS</td>
</tr>
<tr>
<td>Proportion of pill wk‡</td>
<td>39% (42)</td>
<td>45% (43)</td>
<td>36% (40)</td>
<td>27% (38)</td>
<td>.028</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Proportion of condom wk†</td>
<td>35% (39)</td>
<td>31% (38)</td>
<td>39% (39)</td>
<td>40% (41)</td>
<td>NS</td>
<td>.041</td>
</tr>
<tr>
<td>Proportion of withdrawal wk‡</td>
<td>17% (30)</td>
<td>16% (29)</td>
<td>17% (29)</td>
<td>22% (33)</td>
<td>NS</td>
<td>NS</td>
</tr>
<tr>
<td>Proportion of dual method use wk†</td>
<td>23% (33)</td>
<td>24% (34)</td>
<td>19% (30)</td>
<td>22% (34)</td>
<td>NS</td>
<td>NS</td>
</tr>
</tbody>
</table>

NS, not significant; LARC, long-acting reversible contraception.

LARC includes intrauterine device, implant, or Depo-Provera. Pill includes pill, patch, or ring. Dual method use includes LARC or pill and condom.

Bolded values signify significant \(P\) values as defined as \(P < .05\) in a 2-tailed test.

*\(\text{BMI} = 18.5-24.9\).
†\(\text{BMI} = 25-29.9\).
‡\(\text{BMI} \geq 30\).
§Student t test was performed to detect differences between means and \(\chi^2\) tests were performed to detect differences between proportions.

††\(\text{Computed only among respondents with a relationship (N = 834 women; 16,952 wk)}\).
‡‡\(\text{Computed only among wk in which sex occurred (N = 656; 8493 wk)}\).
§§\(\text{Computed only among wk in which any contraception was used (N = 641; 7558 wk)}\).
¶\(\text{Computed only among respondents who reported the specific type of contraception used (ie, not missing) (N = 637; 7503 wk)}\).

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Table III. Adjusted proportion or mean for each outcome by weight status

<table>
<thead>
<tr>
<th>Contraceptive use</th>
<th>Normal weight (reference)</th>
<th>Overweight</th>
<th>Obese</th>
<th>P value</th>
<th>Normal vs overweight</th>
<th>Normal vs obese</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proportion of wk any contraception was used</td>
<td>91% (88-93)</td>
<td>92% (88-95)</td>
<td>84% (80-87)</td>
<td>NS</td>
<td>.111</td>
<td></td>
</tr>
<tr>
<td>Proportion of wk contraception was used consistently**</td>
<td>78% (75-81)</td>
<td>71% (66-77)</td>
<td>68% (63-74)</td>
<td>NS</td>
<td>.016</td>
<td></td>
</tr>
</tbody>
</table>

Proportion of LARC wk†† 8% (5-10) 9% (5-12) 12% (7-16) NS NS
Proportion of pill wk†† 45% (41-49) 36% (29-42) 27% (21-34) NS .001
Proportion of condom wk†† 31% (27-35) 39% (33-45) 39% (33-46) NS NS
Proportion of withdrawal wk†† 16% (13-19) 17% (12-22) 22% (17-27) NS NS
Proportion of dual method use wk†† 24% (21-28) 19% (14-25) 22% (17-28) NS NS

NS, not significant.
Adjusted proportions/means for each outcome were calculated using the full OLS regression model that is adjusted for age, race, childhood public assistance, and ever having a live birth. LARC includes intrauterine device, implant, or Depo-Provera. Pill includes pill, patch, or ring. Dual method use includes LARC or pill and condom. Bolded values signify significant P values as defined as P < .05 in a 2-tailed test.

Our study fills an important gap in the understanding of specific sexual behaviors that contribute to unintended pregnancy risk among a contemporary sample of adolescents. Our findings are consistent with the subset of prior studies that found no difference in overall sexual behaviors (vaginal intercourse or number of partners) and those that found that obese adolescents are less likely to use contraception. However, our study adds additional specificity as it describes that among obese 18- to 19-year-old adolescents who use contraception, they do not use it consistently and do not use methods that are more protective against pregnancy (eg, pill), adding to their risk for unintended pregnancies. The findings from this study of a large longitudinal sample have several important implications for clinical practice and policy in a society where obesity has become increasingly common. Potential reasons for our findings may include individual, clinician, and population-level factors.

On an individual level, obese adolescents have been shown to differ from their normal weight peers in several respects, including having lower self-esteem. If lower self-esteem acts as a barrier to negotiating and preparing for sex, obese adolescents may feel less comfortable asking clinicians for contraceptives or obtaining contraception from a pharmacy or over-the-counter retailer. Lower levels of contraceptive use may also result from the same socioeconomic barriers and limited health literacy that facilitated development of obesity. By understanding these barriers, parents, clinicians, and policymakers can appropriately tailor interventions to empower obese adolescents to make healthier sexual choices.

Several clinician-level factors also warrant further investigation. Primary care clinicians spend limited time discussing sexual health and often overlook obesity during adolescent clinic visits. Clinicians may be ill prepared or have limited time to address the complex and sensitive issues of obesity and sexual health during a short clinical encounter. Furthermore, recent changes in cervical cancer screening guidelines may have also decreased the frequency of visits among sexually active adolescents, thus, providing less opportunity for clinicians to offer contraception without an extra visit specifically for birth control. Given clinicians’ central role in providing contraception, it is imperative to understand whether clinicians are treating obese adolescents differently than their normal weight peers regarding sexual health counseling and contraceptive options, and if so, what these differences are. Research is warranted to identify strategies to improve clinical approaches that facilitate sexual and reproductive health education, counseling, and contraceptive management for obese adolescent women.

Public health and policy efforts also must address risky sexual behavior among obese adolescents at the population level. Obese adolescents may not be receiving the benefits of current public health campaigns. For example, do messages and announcements feature predominantly normal weight adolescents (with whom obese adolescents may not identify) or are they located in places that do not reach obese adolescents? In light of our findings, population-level campaigns should include both implicit and explicit messaging targeting individuals most at risk, specifically including obese adolescent women.

Finally, women who give birth as adolescents are at increased risk for obesity later in life. Beginning pregnancy as an overweight or obese adolescent further increases this risk. Negative health behaviors may be transferred from mother to child and, thus, efforts to decrease pregnancy among overweight and obese adolescents represent a promising intergenerational strategy to decrease obesity and poor health among a very high-risk population of young mothers and children.

Though our large longitudinal study has many strengths, several limitations must be noted. First, although our sample is population-based, it is not nationally representative,
which may limit its generalizability. Another important limitation in this study is the possible underreporting of potentially undesirable behaviors, such as poor adherence or non-use of contraceptives, or promiscuous sexual behavior. Nonetheless, we believe the RDSL’s data-gathering methods (telephone and Internet) minimized social desirability bias by enhancing respondent privacy and sense of anonymity. Further, we do not expect that this potential underreporting would differ substantially by weight status. Although weight and height are self-reported in this study, which may lead to underrepresentation of weight among overweight and obese adolescents, self-reported height and weight have been endorsed as an acceptable measure of BMI among adolescents. Finally, weight status was measured only once in the study, at the outset. Studies of the natural history of weight among US women in young adulthood indicate that it would be much more common for normal weight women to transition to obesity than vice-versa. To the extent that underrepresentation of weight or such transitions occurred in our cohort, they would be expected to bias toward null findings, thereby strengthening our confidence in our results.

Within this longitudinal sample, sexually active obese 18- to 19-year-old adolescents used less contraception and less consistent contraception than normal weight peers. These findings were robust to adjustment for potentially confounding factors. Our analyses underscore the importance of clinical awareness and public health outreach regarding young women’s sexual practices that may differ in meaningful ways related to weight status.

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