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Unintended Pregnancy among the Urban Poor

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ABSTRACT *This article seeks to determine the proportion of pregnancies that are unintended among poor women in New York City, compare the New York City rate to national data, and examine factors associated with unintended pregnancy in this population. Pregnancy testing data collected between June 1, 1998, and June 1, 2001, from field sites operated by the Office of Family Health, New York City Department of Health and Mental Hygiene were analyzed. Pregnancy planning (intended vs. unintended) was examined by age group, race/ethnicity, marital status, frequency of contraceptive use, number of previous pregnancies, drug and alcohol use, and smoking. Odds ratios were calculated to determine if pregnancies were more likely to be unintended among women with certain characteristics. Logistic regression was used to examine independent risk factors for unintended pregnancy. Of the 20,518 women who had a pregnancy test during the study period, 9,406 (45.8%) were pregnant. Of the pregnancies, 82% were unintended. Marital status was the strongest predictor of unintended pregnancy, increasing the risk 2.5-fold for unmarried women. Adolescents and those who drank alcohol were also at increased risk of unintended pregnancy. The extremely high percentage of pregnancies that were unintended among the study population suggests that national unintended pregnancy rates are not representative of what occurs among low-income women in an urban setting. Unintended pregnancy interventions should be tailored for the urban poor and target unmarried, young women.*

KEYWORDS *Health and urban poor, Pregnancy planning, Unintended pregnancy.*

INTRODUCTION

Women with an unintended pregnancy, whether mistimed or unwanted, are more likely to delay prenatal care and to smoke and drink alcohol during pregnancy than those with an intended pregnancy.[1,2] Infants of an unwanted pregnancy are at an increased risk of having a low birth weight, dying before their first birthday, and being abused and are less likely to receive resources necessary for optimal development.[2]

Unintended pregnancy can be especially harmful to adolescent mothers and their children. Teenage mothers are less likely to earn a high school diploma and are more likely to rely on public assistance than mothers who delay pregnancy.[3] Compared to children born to adult parents, children of teen mothers are more likely to run

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away from home and drop out of school; daughters are more likely to become teen mothers themselves; sons are more likely to go to jail.[3]

In the United States in 1994, 78% of pregnancies among adolescents aged 15–19 years were unintended.[4] This problem, however, is not confined to teenagers. In the same year, 49.2% of all pregnancies were unintended.[4] The percentage of live births resulting from unintended pregnancies in 1999 ranged from 33.7% to 52.0% among 17 states (Alabama, Alaska, Arkansas, Colorado, Florida, Illinois, Louisiana, Maine, New Mexico, New York excluding New York City, North Carolina, Ohio, Oklahoma, South Carolina, Utah, Washington, West Virginia) participating in the Pregnancy Risk Assessment Monitoring System (PRAMS).[5] PRAMS data revealed that unintended pregnancy was more prevalent among younger women (<20 years old), black women (compared to white women), less-educated women (<12 years of education), and women relying on Medicaid.

It is unclear whether national data on unintended pregnancy from 1994 or more recent PRAMS data on unintended pregnancy are representative of unintended pregnancy among the urban poor. We hypothesized that the rates would not be the same because the populations are vastly different. This article seeks to identify the proportion of unintended pregnancy in a sample of urban poor women and to determine what factors are associated with unintended pregnancy in such a population.

METHODS

The Office of Family Health, New York City Department of Health and Mental Hygiene, operates five field sites in economically disadvantaged areas of the city that historically have poor birth outcomes. Among other services, these facilities provide free pregnancy tests on a walk-in basis. Pregnancy testing data collected at the field sites from June 1, 1998, to June 1, 2001, were analyzed. Records with missing information were excluded from analysis. Analysis was completed using SPSS version 10.1.

Prior to receiving their pregnancy test results, women are routinely asked "Did you plan to become pregnant at this time?" Unintended pregnancy was defined as answering "No" to this question. Pregnancy planning (intended vs. unintended) was examined by age group, race/ethnicity, marital status, frequency of contraceptive use, number of previous pregnancies, drug and alcohol use, and smoking. Odds ratios were calculated to determine if pregnancies were more likely to be unintended among women with certain characteristics.

A logistic regression model was then developed in which unintended pregnancy was the dependent variable, and the characteristics above were independent binary variables, except for number of previous pregnancies, which was entered as a continuous variable. Age and number of previous pregnancies were highly correlated using a Pearson correlation coefficient and were included as interaction terms in the regression model.

Women at the facilities are also asked, "If you came here for a pregnancy test and the test is positive, have you decided what you would do?" (continue the pregnancy, have an abortion, undecided). What women would do with the pregnancy was examined by whether the pregnancy was intended. A z score was calculated to determine if the difference in the proportion of women who said they would continue the pregnancy, abort it, or were undecided was significantly different between women who planned and did not plan to become pregnant. Differences in the future

of the pregnancy were also examined by race/ethnicity, age, and marital status among women with an unintended pregnancy.

RESULTS

During the study period, 20,518 pregnancy tests were performed, of which 9,406 (45.8%) were positive. Information was missing on the records of 5.4% of pregnant women, who were excluded from analysis. There were 8,886 pregnant women in the final sample, the majority of whom were aged 20–29 years (54.7%), black non-Hispanic (62.3%), unmarried (82.6%) and had no insurance or relied on Medicaid (88.3%) (Table 1).

Most (82.1%) pregnant women stated that they did not plan to become pregnant at the time. Excluding records with missing information did not significantly affect the percentage of pregnancies that were unintended. Table 1 shows how the characteristics of women in the sample varied by pregnancy intent. The rates of unintended pregnancy were highest among adolescents, black non-Hispanics, unmarried women, those with no previous pregnancies, women who used drugs presently or in the past, women who drank alcohol, and women who smoked cigarettes. Unintended pregnancy was less likely among women aged 30–39 years (vs. 20–29), uninsured women (vs. privately insured), and those who used contraception sometimes or never (vs. always).

Marital status was the strongest predictor of unintended pregnancy in the regression analysis (Table 2). Unmarried women, including those who were single, separated, divorced, or widowed, were two and a half times more likely to have an unintended pregnancy than married women. Classifying women who were separated as married instead of unmarried had little effect on this result. Age was also significantly related to unintended pregnancy; women younger than 20 years of age were twice as likely as women aged 20–29 years to have an unintended pregnancy. Unintended pregnancy was more likely among women who reported drinking alcohol occasionally, weekly, or daily compared to women who reported never drinking. Only 10 (1.7%) of the women who reported drinking alcohol reported doing so daily.

When controlling for the characteristics noted above via regression analysis, race/ethnicity, drug use, and smoking no longer significantly increased the risk of unintended pregnancy. Factors that significantly lowered the risk of unintended pregnancy included age 30–39 years, having no insurance, using contraception sometimes or never, and having a previous pregnancy if aged less than 20 years.

Before receiving their pregnancy test result, 56.4% of pregnant women stated that they would continue their pregnancy if their test was positive, 24.9% said they would have an abortion, and 18.5% were undecided about what they would do (data not shown). This varied greatly by whether the pregnancy was planned. Women with an unintended pregnancy were significantly more likely to say they would terminate the pregnancy than women who planned to become pregnant (29.5% vs. 3.6%, $P < .001$) and were more likely to be undecided (21.7% vs. 4.0%, $P < .001$). Among women with an unintended pregnancy, the plans for the pregnancy did not vary significantly by race/ethnicity, but did vary by age and marital status. Women younger than 20 years of age and unmarried women were significantly more likely to state they would have an abortion than women 20–29 years old and married women. Women 30–39 years of age were significantly less likely to state they would have an abortion than women 20–29 years old.

TABLE 1. Unintended pregnancy by characteristics of women

	Total		Intended pregnancy		Unintended pregnancy		Significance	
	Number	%	Number	%	Number	%	OR	*P*
Total women	8,886	100.0	1,593	17.9	7,293	82.1		
Age, years								
10–19	2,432	27.4	238	9.8	2,194	90.2	2.20	<.001*
20–29	4,859	54.7	937	19.3	3,922	80.7	Referent	
30–39	1,453	16.4	394	27.1	1,059	72.9	0.64	<.001*
40–49	142	1.6	24	16.9	118	83.1	1.17	.4776
Race/ethnicity								
White non-Hispanic	141	1.6	32	22.7	109	77.3	Referent	
Black non-Hispanic	5,533	62.3	827	14.9	4,706	85.1	1.67	.0113*
Hispanic	1,674	18.8	393	23.5	1,281	76.5	0.96	.8333
Asian	129	1.5	41	31.8	88	68.2	0.63	.0931
Other	1,409	15.9	300	21.3	1,109	78.7	1.09	.6986
Marital status								
Married	1,547	17.4	555	35.9	992	64.1	Referent	
Unmarried†	7,339	82.6	1,038	14.1	6,301	85.9	3.40	<.001*
Payment for medical care								
Insurance	1,037	11.7	142	13.7	895	86.3	Referent	
Medicaid	2,365	26.6	350	14.8	2,015	85.2	0.91	.3986
No insurance	5,484	61.7	1,101	20.1	4,383	79.9	0.63	<.001*
Present frequency of contraceptive use								
Always	1,152	13.0	114	9.9	1,038	90.1	Referent	
Sometimes	4,698	52.9	696	14.8	4,002	85.2	0.63	<.001*
Never	3,036	34.2	783	25.8	2,253	74.2	0.32	<.001*

TABLE 1. ***Continued***

	Total		Intended pregnancy		Unintended pregnancy		Significance	
	Number	%	Number	%	Number	%	OR	*P*
Number of previous pregnancies								
None	2,638	29.7	384	14.6	2,254	85.4	1.44	<.001*
One	2,257	25.4	445	19.7	1,812	80.3	Referent	
Two	1,648	18.5	343	20.8	1,305	79.2	0.93	.3990
Three or more	2,343	26.4	421	18.0	1,922	82.0	1.12	.1295
History or present drug use								
Yes	347	3.9	33	9.5	314	90.5	2.13	<.001*
No	8,539	96.1	1,560	18.3	6,979	81.7	Referent	
Any present alcohol use								
Yes	594	6.7	69	11.6	525	88.4	1.71	<.001*
No	8,292	93.3	1,524	18.4	6,768	81.6	Referent	
Present smoking								
Yes	1,415	15.9	188	13.3	1,227	86.7	1.51	<.001*
No	7,471	84.1	1,405	18.8	6,066	81.2	Referent	

OR, odds ratio.
*Significant at $\alpha = .05$.
†Single, divorced, widowed, separated, other.

TABLE 2. Logistic regression model that predicts unintended pregnancy

Variable	OR (95% CI)	*P*
Age, years		
10–19	2.03 (1.66–2.47)	<.001*
30–39	0.67 (0.54–0.84)	<.001*
40–49	0.88 (0.43–1.83)	.7362
Hispanic	0.82 (0.54–1.26)	.3727
Asian	0.88 (0.50–1.56)	.6698
Black non-Hispanic	1.24 (0.82–1.89)	.3088
Other race/ethnicity	1.06 (0.69–1.63)	.7957
Unmarried	2.51 (2.19–2.87)	<.001*
Medicaid	0.93 (0.74–1.16)	.5173
No insurance	0.75 (0.62–0.92)	.0046*
Sometimes use contraception	0.61 (0.50–0.76)	<.001*
Never use contraception	0.36 (0.29–0.45)	<.001*
Number of previous pregnancies	1.03 (0.99–1.08)	.1533
Past or present drug use	1.40 (0.96–2.05)	.0802
Any present alcohol use	1.45 (1.11–1.91)	.0066*
Any present smoking	1.14 (0.95–1.36)	.1474
Interaction: Age in years × Number of previous pregnancies		
10–19	0.86 (0.75–0.99)	.0337*
30–39	1.05 (0.98–1.13)	.1660
40–49	1.18 (0.96–1.45)	.1188

CI, confidence interval; OR, odds ratio.
*Significant at $\alpha = .05$.

DISCUSSION

This study assessed the proportion of unintended pregnancy and factors associated with such pregnancy in a population of urban poor women receiving free pregnancy tests at the New York City Department of Health and Mental Hygiene facilities and fills an important gap in the literature on the subject. Of pregnancies among the study population, 82% were unintended. Adolescents, unmarried women, and those who consumed alcohol were at a significantly increased risk of unintended pregnancy in the multivariate analysis. Marital status was the strongest predictor of unintended pregnancy, increasing the risk 2.5-fold for unmarried women. Women aged 30–39 years, uninsured women, those who sometimes or never used contraception, and teenagers with a previous pregnancy were at a decreased risk of experiencing an unintended pregnancy in the multivariate analysis.

The percentage of unintended pregnancies among the study population was much higher than the percentage of unintended pregnancies nationally. This may be in part because of the age distribution of the study population. Almost a third (27.4%) of the women in the study were younger than 20 years, which is larger than the percentage of pregnancies to adolescents nationally (14.7%).[6] The relationship

between young age and unintended pregnancy found in the present study has been demonstrated in previous research.[4,5]

It is also possible that women worried about being pregnant and not desiring a pregnancy at the time were attracted to the free pregnancy testing and associated counseling offered at the department's sites. On the other hand, women who planned to become pregnant could be more likely to use over-the-counter home pregnancy tests. Women who do not plan a pregnancy may therefore be overrepresented in the study population because of this possible bias.

Another possible explanation for the extremely high percentage of unintended pregnancy observed is the low socioeconomic status of the study population because research suggests that low-income women are at increased risk of unintended pregnancy.[4,5,7] The women in the sample were considered poor because, in addition to using free services at clinics located in economically disadvantaged areas, the overwhelming majority (88.3%) had no insurance or relied on Medicaid.

The higher rates of unintended pregnancy may also be the result of combined effects of having a low income and living in an urban environment. Almost no research exists in this area. One study conducted focus groups with 87 primiparous, low-income women in Chicago, Illinois, who were 18 years or older when they gave birth; the study found that 63% of these pregnancies were unintended.[8] The rates were much higher for blacks (83%) and whites (86%) compared to Mexicans (39%) and Puerto Ricans (42%). The current study fills an important gap in the literature by providing rates of unintended pregnancy and factors associated with such pregnancy in a large sample of urban poor women.

Unintended pregnancy data are typically collected retrospectively and are therefore subject to recall bias. This study is unusual because it asks about pregnancy planning before women are given the results of their pregnancy test. Women may answer questions about pregnancy intent differently at different stages of pregnancy or after delivery. One other study found in the literature assessed pregnancy intention prior to women having knowledge of their pregnancy test results[9]; this analysis found that all 311 adult women attending Missouri health department clinics for pregnancy tests and enrolled in the study said that their potential pregnancies would be unintended.[9] This study was different from ours because the researchers did not know whether the women were actually pregnant.

The association between marital status and unintended pregnancy in the present study is consistent with what is found nationally,[4] as is the protective effect of being aged 30–39 years. Previous research also supports the association between alcohol consumption and unintended pregnancy observed here.[10]

In our study, women who reported never using contraception or using it only sometimes had a lower risk of unintended pregnancy, a counterintuitive observation. One possible explanation for this finding is that women who planned to become pregnant stopped using contraception or used it infrequently. Women who reported using contraception may also have selected unreliable methods, giving a false sense of security. These ideas are both supported by previous research.[11]

We do not fully understand the seemingly protective effect of having no insurance on unintended pregnancy. It may be related to the composition of the data because the majority of the women lacked insurance (61.7%), and many others relied on Medicaid (26.6%). In addition, women without insurance may also represent the working poor or be adolescents relying on their parent's health insurance. Additional research is needed to understand this finding better.

Previous research suggests that unintended pregnancy is more prevalent among black women than among white women.[5] This was also found in the current study, although after controlling for other factors, race/ethnicity was not predictive of unintended pregnancy. This finding must be interpreted with caution because the data are skewed; only a small fraction of the sample was white non-Hispanic (1.6%). Differences in pregnancy planning across racial/ethnic groups may exist; however, this study may have lacked the racial/ethnic diversity necessary to detect such a difference.

It is unclear whether the rates of unintended pregnancy found among the study population can be applied to urban poor women elsewhere. We know that the population of New York City is very different from that of the nation as a whole. Almost a third of the city's residents are black (26.6%) or Hispanic (27.0%) compared to 12.3% and 12.5%, respectively, nationally.[12] New York City residents are also more likely to be foreign born than the nation's residents as a whole (35.9% vs. 11.1%). The study population is even more different from that of the nation. Demographic characteristics of populations in other US cities such as Chicago and Los Angeles, California, are more similar to New York City than to the nation.[12–16] We therefore hypothesize that the rates of unintended pregnancy among poor women in other areas are more similar to the rates found in the current study than they are to national rates. This is supported by the small study in Chicago discussed earlier.[8]

CONCLUSION

The extremely high percentage of pregnancies that were unintended among the study population suggests that national unintended pregnancy rates are not representative of what occurs among the urban poor in New York City. The findings imply that interventions should be targeted to economically disadvantaged communities, adolescents, and unmarried women. They also suggest that interventions presently used to combat unintended pregnancy nationwide may need to be tailored to the urban poor.

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