First issue!

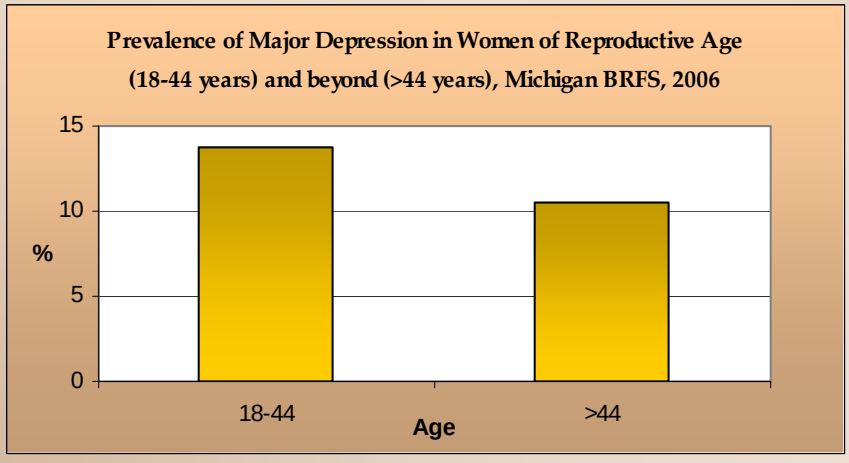
Women's Health Brief: Depression Life Span Approach

The lifespan is typically divided into five life stages that are based on age: children, adolescents, young adult, midlife, and the senior years. (4) As a woman develops across the lifespan, particular health risks or concerns can become more prevalent at certain times.

Another approach that may fit better within women's health arena is the two dimensional concept that involves recognizing that health and well-being occur over a continuum (horizontal dimension) and health risks can have potential impacts on offspring (vertical dimension).

Why women's health? In 2007, women represented 50.8% of the total U.S. population compared to 50.7% in MI. (1) While the life expectancy for women exceeds that of men (80.4 years vs. 75.2 years in 2004, respectively), (2) rates of morbidity and the need for health services are greater in women. "Women's health involves a woman's emotional, social, spiritual, and physical well-being and it is determined by the social, political, and economic context of her life, as well as biology."(3) Because of the interrelated nature of women's health and women's longevity, it is critical that we firmly grasp the multitude of health issues that affect women across the lifespan.

Why focus on depression in women? Depression impacts both family and society across the lifespan by affecting personal health and the well-being of offspring. Depression is more common in women than in men, particularly during the childbearing years. Women may present with different depressive symptoms than men and may respond differently to antidepressant treatment. In addition, depression in women can surface in association with specific points in the reproductive cycle, such as during the premenstrual period, during pregnancy and the postpartum period, and during the perimenopausal years. In this brief we report information about depression and mental health among women of reproductive age in Michigan.



Why women of reproductive age?
According to the Michigan Behavioral Risk Factor Survey* (MiBRFS), the only source of state-specific, population-based estimates of the prevalence of various behaviors, medical conditions, and preventive health care practices among adults, women of reproductive age (18-44 years) are at an increased risk of major depression (13.8%) compared to women aged greater than 44 years (10.5%).

** The BRFSS is an annual, random-digit-dial telephone survey of non-institutionalized adults aged 18 and older conducted in all states.*

How Does MiBRFS Define Major Depression? In 2006, the 10-question CDC Depression and Anxiety optional module was added to the Michigan Behavioral Risk Factor Survey. The first eight questions within this module were Patient Health Questionnaire (PHQ-8). These questions included 8 of the 9 DSM-IV criteria for diagnosis of major depression and asked respondents questions related to their mood in the past two weeks. This module did not include the 9th DSM-IV criteria (suicide) because of the inability to provide intervention while conducting the survey. The remaining two questions within this module were used to assess provider diagnosis of depressive and anxiety disorders.

When analyzing the data from this module it was decided that the PHQ-8 Algorithm #2 scoring method would be used for the classification of major depression. Through the use of this method a dichotomous variable was developed by first converting the number of days answered for each of the eight questions into a particular point value (0-1 day = 0 points; 2-6 days = 1 point; 7-11 days = 2 points; 12-14 days = 3 points). The points from each of the eight questions were then totaled to get the respondent's depressive symptoms severity score. Those respondents with a depressive symptoms severity score of 10 or greater were classified as having major depression.

Depression in Women of Reproductive Age

According to the 2006 Michigan Behavioral Risk Factor Survey (MiBRFS), 13.9% of women aged 18-48 years report being depressed, defined as a Depressive Symptoms Severity Score ≥ 10. While the prevalence of depression does not vary significantly by age, health insurance status, or educational attainment, women of race other than black or white and those having household incomes less than $35,000/year are at increased risk of depression relative to whites and women with greater incomes respectively.

Women of childbearing age reporting depression were more likely to characterize their health as fair to poor, were more likely to smoke cigarettes at the time of survey, and were less likely to engage in leisure-time physical activity.

Accordingly, the odds of reporting depression increased significantly with the number of co-morbid conditions reported by women of reproductive age participating in the BRFS. Women with depression were significantly more like to be obese, have a disability or diabetes, or have ever had angina, coronary heart disease, or a heart attack.(Table 2) Nearly a quarter (23.8%) of these women reported that they had two other co-morbid conditions, compared to 5.4% of women who were not depressed.

Depression is not only associated with a number of co-morbidities, but it is also known to exacerbate them by impacting treatment compliance. According to a meta-analysis published in the Archives of Internal Medicine, the odds of treatment non-compliance are three fold greater among depressed compared to non-depressed persons. (4)

Depression also has significant economic implications. A study published in the Journal of Occupational Medicine reports that depressive disorders were associated with greater lengths of disability claims and greater disability relapse, and are the most common DSM-IV Axis-I-level diagnoses encountered in the Employee Assistance Programs. Depressive disorders were also reported to have the largest medical plan costs of all behavioral health diagnoses.

Table 1. Depressive Symptoms Severity Score Distribution among Women of Childbearing Age (18-48 Years) (PHQ-8 Algorithm 1)[a] 2006 Michigan BRFS

Response Category	%
No Depression (0-4 points)	65.6
Mild Depression (5-9 points)	20.6
Moderate Depression (10-14 points)	8.4
Moderately Severe Depression (15-19 points)	3.6
Severe Depression (20+ points)	1.9

Table 2. Prevalence of Major Depression among Women of Childbearing Age (18-48 Years) (Depressive Symptoms Severity Score ≥ 10, Algorithm 2)a, 2006 Michigan BRFS

Demographic Characteristics		%	Adjusted Odds Ratio
Age	18 - 34 †	14.3	(Reference)
	35 - 48	13.4	1.14
Race	White	12.6	(Reference)
	Black	16.2	0.82
	Other	24.8	2.50*
Education	Less than high school	34	(Reference)
	High school graduate	19.5	0.78
	Some college	12.8	0.45
	College graduate	6.2	0.28*
Household Income	< $20,000	32.3	4.73*
	$20,000- $34,999	21.2	2.89*
	$35,000- $49,999	15.2	2.13
	$50,000- $74,999	7.8	1.14
	≥ $75,000	6.4	(Reference)
Health Insurance	Has Health Care Coverage	13	(Reference)
	No Health Care Coverage	19.2	1.15

Depression in Pregnant and Postpartum Women

Given the estimated prevalence of depression in women of reproductive age of 13.9% and that approximately 187,000 pregnancies occur annually in Michigan, an estimated 25,000 women experience depression while pregnant each year.

According to the 2001-2003 Michigan Pregnancy Risk Assessment Monitoring Survey (PRAMS), the only source of state-specific, population-based health information for women delivering a live birth in the state, 8.7% of the respondents reported having ever been diagnosed with a mental illness by a health professional; although, this is likely an under-estimate of mental illness given that it is often undiagnosed.

In terms of postpartum depression (PPD) that can occur anytime during the first year after delivery, PRAMS respondents were asked how depressed they felt for at least 2 weeks in the months following their delivery with choices ranging from not depressed at all to very depressed. Nearly 23% of PRAMS respondents reported being very (8.5%) or somewhat (14.4%) depressed in the months following delivery.

Table 3. Prevalence of Severity of Depression after Delivery by Demographic Characteristics, MI PRAMS, 2001-2003

Demographic Characteristics		Very Depressed	Moderately Depressed	Slightly Depressed	Not Depressed
Age	18-34	7.5*	14.2	33.8	44.6*
	35-48 (ref)	4.4	11.9	30.6	53.0
Race	NH-White (ref)	6.1	14.7	33.5	45.7
	NH-Black	9.0	13.2	33.2	44.6
	Hispanic	13.1*	7.2*	36.5	43.2
	Asian/PI	8.4	14.8	19.2	57.6
	American Indian	6.4	9.2	39.4	45.0
Education	Less than high school	11.5*	15.8	32.2	40.5*
	High school graduate	8.6*	15.4	34.6	41.5*
	Some college	6.6*	13.4	32.8	47.1
	College graduate (ref)	3.1	11.3	33.1	52.5
Income	<=$15,000	12.3*	18.0*	33.1	36.6*
	$15,000-$25,000	9.0*	17.1	35.2	38.7*
	$25,001-$35,000	7.1	12.8	37.8	42.3*
	$35,001 + (ref)	3.9	12.1	32.8	51.2
Health Insurance	Medicaid	13.2*	17.8	30.8	38.1*
	None	11.1*	15.8	36.7	36.4*
	Private/HMO (ref)	4.7	12.5	32.9	49.9

Women less than 35 years of age, of Hispanic ethnicity, having less education or less family income, and with Medicaid or no health insurance were more likely to report being very depressed in the months following delivery relative to older women, non-Hispanic whites and women with greater education or family income and with private health insurance respectively. Pregnancy outcomes such as preterm delivery or having a low birth weight infant may increase a woman's chances of experiencing PPD. On the other hand, PPD may affect a woman's ability to function as a new mother and can impair the cognitive and language development of the newborn (3). It also has a long-term effect on the woman's confidence as a mother and then further in her well being and health.

According to PRAMS, while 22.0% of women reporting any depression in the months following delivery desired help, only 4.5% actually sought it. These were more likely non-Hispanic black women, with lower education and/or income, and unmarried.

Limitations

The currently used indicator may result in an underestimation of the true prevalence of major depression among women of childbearing age in Michigan. That is not only because of the self reporting assessment but also due to the fact that some individuals with major depression who were taking medication or receiving treatment may not have displayed/reported any symptoms when interviewed.

Public Health Implications

Depression is a prevalent condition in women of all age groups and more so during the reproductive age. Depending on the depression classification system or definition used, prevalence estimates range from approximately 8% to more than 50%.

The Michigan Department of Community Health contracted with Michigan Public Health Institute Systems Reform to organize and facilitate in 2005 a conference titled "Depression as a Public Health Concern" and to draft a state plan for the prevention and control of depression in Michigan. There were 4 populations of focus: prenatal to 5 years (included maternal depression); school-age children and adolescents; adults 19-64 years; and older adults (65+ years). Recommendations are being implemented.

Depression is quite common during pregnancy and especially in the postnatal period, occurring in approximately 10%-20% of women following delivery. As a result, two major recommendations emerged in the past: 1/ Implement standardized screening for PPD during prenatal and post delivery to identify mothers at risk; 2/Improve mother's education about the signs and symptoms of PPD during the third trimester as well as offer information of various hotlines and help groups.

In the ongoing effort to improve the health status of pregnant women and infant Medicaid beneficiaries, the Michigan Department of Community Health (Medical Services Administration and Bureau of Family, Maternal and Child Health) has initiated an effort to re-engineer the Maternal Support Services and Infant Support Services (MSS/ISS) programs. The two programs were integrated and are now referred to as the Maternal Infant Health Program (MIHP). Screening for depression is now part of the initial MIHP risk identification process and thus appropriate referrals are made in a timelier manner. As of Oct. 1, 2008, most pregnant Medicaid beneficiaries are required to participate in Medicaid Health Plans. This is advantageous for MIHP clients with depression because health plans provide up to 20 outpatient visits per year for women with mild to moderate mental health disorders. Access to treatment for mild to moderate disorders was much more limited for women who did not participate in health plans. Women with severe and persistent mental health disorders are served by Community Mental Health Services Programs.

However, the screening is still based on self assessment tools and receiving the appropriate care remains a challenge. Therefore, there is a need for improvement of both, assessment and management of depression to thus better inform the health care system and public health.

Limited availability of mental health services for all persons in need, regardless of age or gender, is a huge problem. Health Affairs Today reports that two-thirds of primary care physicians can not get mental health services for their clients. Barriers to mental health care include shortages of providers, health plan barriers, and lack of adequate insurance coverage. The need for both, mental health screening and services is evident.

Given the number of co-morbidities associated with depression, the impact of depression on treatment compliance and personal/family well being as well as on offspring outcomes, public health education and programs addressing this issue are desperately needed. Services for women of reproductive age are particularly important, as maternal depression has such profound negative consequences for young children.

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