

Prenatal Depression Risk Reduction & Education Program

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Abstract: Prenatal depression is a serious issue often overlooked by both women and their healthcare providers. Depression during pregnancy not only causes sadness for the mother, it can also have significant developmental effects on the fetus, including altering of the baby's brain structure leading to increased vulnerability for mood disorders in the child's future. Additionally, depression during pregnancy may cause early delivery, increasing infant morbidity and mortality. The "Prenatal Depression Risk Reduction and Education program" is a program designed to increase awareness of prenatal depression, help pregnancy healthcare providers understand the signs and provide a diagnosis and treatment options to reduce the risk of adverse effects. It is designed to be integrated easily into a prenatal care visit series.

Keywords: prenatal depression, risk reduction, pregnancy

Perinatal Mood and Anxiety Disorders (PMADs), which include depressive disorders during pregnancy, affect 15-20% of all pregnant women (Bennet, Einarson, Taddio, Koren, & Einarson, 2004). These common disorders are associated with clinically relevant and identifiable risk factors that include previous depression, psychosocial stress, intimate partner violence, non-caucasian race, and young maternal age (Melville, Gavin, Guo, Fan, & Katon, 2010). Maternal depression causes a toxic environment for the child, often leading to preterm labor with a low birth weight child (Wadhwa, Sandman, & Garite, 2001). When identified and addressed, the risk for serious health adverse effects decreases and the health and wellbeing of both mother and baby increases.

This study began in suburban Maryland, the outskirts of Washington, DC. This is not an urban area, and is several miles away from farmland and the rural communities. Montgomery County, Maryland, is an active community with a multicultural population of citizens who spend their days shuffling kids around in minivans, commuting on the Beltway to work, and socializing at the local town pool.

In Montgomery County, there is a lack of social support and education regarding depression during pregnancy. Lack of, or weak, social support has a significant impact on the development of prenatal depression in the United States and worldwide. Limited social support has also been associated with physical problems during pregnancy and an overall reduced health status (Lui, Setse, Grogan, Powe, & Nicholson, 2013). In a racially and socioeconomically diverse sample, young, single, and African American women have the lowest social support, contributing to depression and depressive symptoms during pregnancy and in the postpartum period (Liu et al., 2013). By understanding these differences, it is easier to address the problem and provide additional support where it is needed in order to reduce or eliminate these disparities.

Pregnant women who are experiencing depressive symptoms also have a tendency to disregard prenatal health such as nutrition, prenatal medical care, and safety. They have a potential for increased smoking and substance abuse. When depression is not addressed prenatally, it often leads to postpartum depression, having a direct effect on maternal–infant attachment and child development including language and cognitive impairment, impulsivity, and attention-deficit disorder (Pearlstein, 2008). This can have a negative effect on children throughout their lifetime, reflecting in poor grades, difficult relationships, and potentially harmful activities such as drug use and criminal activity.

An advisory committee, comprised of maternal/child health professionals, mental health providers, parents, and advocacy group representatives was convened to discuss and determine the specific focus and center of main attention for the Participatory Action Research (PAR) public health project. Participatory action research (PAR) moves the focus of the community from being the "subject" to being a part of the research project, having perspectives and feedback that matter, sharing in the design and

development, and evolving with the process, hand in hand with the researchers. This collaboration is vital when working with pregnant mothers and new families. The active participation of research participants allows all parties to benefit from reaching both community and research goals. In the development of the Advisory Committee, we contemplated a multitude of factors to form an effective participatory action team. Before the planning and development of the team, we looked at the potential research, environment, players, and audience as well as stakeholders, budget, and current Administration climate.

Next we determined what type of team members to include, such as a physician, a psychologist, a midwife, a community leader, a health administrator, a parent in the community, a teacher in the local school system, etc. Further in the process, we determined the specific practitioner to involve, by name and job title. As part of the planning, we established the initial boundaries for the team as well as member roles and responsibilities. We considered the interpersonal relationships of the team and the team dynamics looking at environmental context, nature of the task, and team characteristics.

Utilizing the multiple dimensions of ultimate effectiveness, "A Model of Team Effectiveness," in *Essentials of Management and Leadership in Public Health*, we set a goal for multiple successful measures of team effectiveness including the building of positive experiences and enjoyable collaboration, performance, and satisfaction (Burke and Friedman, 2010). The Advisory Committee determined that the focus of the project be depression during pregnancy addressed through a prenatal depression risk reduction and education program.

Project Plan Outline

As a public health leader, it is vital to have effective and valuable communication with a wide range of leaders and stakeholders in the community. This article identifies the influential people in the community who are involved in the development of a community-based maternal/child public health project in a suburban community. Details regarding the assembly of an advisory committee of these key stakeholders to help determine the focus of the project are addressed. Additionally, the steps in the planning process are defined including pros and cons on program planning, analysis, and evaluation. Needs, qualitative data, and gaps analyses supported a research program and public health outreach education initiative to reduce prenatal depression.

The Prenatal Depression Risk Reduction and Education program Advisory Committee, comprised of maternal/child health professionals, mental health providers, parents, and advocacy group representatives has been put together to work on a Participatory Action Research (PAR) public health project to reduce prenatal depression in Montgomery County, Maryland. Research in health disparities shows that social stigma, prejudice, and bias are present within the community with respect to mental health and psychological support. Overcoming these disparities is necessary to find an effective solution to the public health problem of prenatal depression.

The key stakeholders in maternal/child public health included organization and community leaders in Montgomery County as well as local maternal mental health professionals, such as counselors and social workers, pregnancy health care providers (including a midwife and an obstetrician), the leaders of local mom's groups, a representative from a pregnancy or parenting outreach and advocacy group, local doulas, and community members who are or will be parents. These people formed the advisory committee to help determine the specific focus and center of main attention for the project. They were fundamental to the success of the Participatory Action Research (PAR) process and to this research project.

Mental health professionals are a fundamental part of the maternal/child health system. They play a role in understanding the social and emotional dynamic of the mother-baby dyad, the maternal stressors that parents experience, the developmental challenges that may be present as well as the typical developmental psychology of an offspring and her mother. Counselors, psychologists, or social workers are also aware of a woman's roller-coaster of emotions during and after pregnancy, and are equipped with ways to help balance the hormonal and emotional shifts.

Pregnancy healthcare providers, such as midwives and obstetricians, are crucial to having a healthy pregnancy, labor, and birthing. By helping a mother keep her own body healthy, the

environment in which the baby develops is full of essential nutrients and is safe and secure. A healthcare provider also tracks the progression of a woman's pregnancy, helps her if she should fall ill, and educates her on her body, the physical development of her baby, and the anatomy and physiology of labor and delivery.

Parenting support groups, such as mom's clubs, parent meet-and-greet groups, coffee breaks, and playgroups allow a mother to ask questions or learn about parenting in an unbiased and neutral social format. Although there are generally no experts in maternal wellness or child development in these groups, the socialization factor, emotional support, and camaraderie can be quite significant in a mothers' life. These peer groups are often the way pregnant and new mothers learn about the normalcy of events in their lives or attain any psychosocial support, especially if they are not in the workforce.

Advocacy group leaders have great information on the resources and needs in the area. Especially where pregnancy and parenting are concerned, advocacy group leaders tend to have a multidimensional perspective on the desires, likes, and dislikes of local mothers. In the DC metro area, advocacy groups are abundant, but this allows them to be focused and finely tuned. The passionate enthusiasm of advocacy group leaders could have both a positive and negative impact on the advisory team, providing heightened eagerness and attention, but also vehemently opposing anything they feel is not in their group's interest.

Doulas are trained labor and postpartum support individuals who are educated in the care and attention to mothers. Although they are not counselors or health care providers, doulas provide a special service to moms by educating them on childbirth choices, clothing, sleeping, feeding, and other care efforts and duties. They are thoroughly familiar with pregnancy and birth needs from the mom's perspective. They see new mothers at longer intervals than midwives and doctors do. They also spend a significant amount of time and focus in productive conversation with the new mother, allowing for understanding of the mother's needs from a very intimate perspective.

Adults in the community that either have or will have children are an important group to include in the stakeholder team. They are the consumers—the customer, the ultimate end user of the public health services. These community citizens provide invaluable feedback, points, and criticism. They are also personally familiar with the process of attaining support and know what is needed and not needed for a family living in that community from their individual perspective.

Process Model

The process for our Participatory Action Research project began by clarifying the purpose of the research. The researchers and community worked together to develop a goal or mission statement through discussion of desired outcomes and needs. We then discussed and documented a strategic roadmap for getting to the goal (Krishnaswamy, 2004). We defined the key stakeholders in the community from the perspective of maternal/child public health.

Next in the process we discussed the importance of developing a trusting relationship with the community that provided confidence and ease of communication. Once trust was achieved, it was important for a PAR team to be on the same page with goals and objectives as well as developing a common understanding (Margoluis & Salafsky, 1998). We endeavored to make sure all involved understood the terminology and discussions, with respect for each other throughout the process. Psychologists, for example, may look at different elements than a midwife or a parent. Breaking down the barriers by supporting a common goal often helps to make the group more cohesive.

Finally, the identification of the research question itself was addressed. The team went over the initial maternal/child health issues that had been brought to the table. This was followed by a planning meeting with a whiteboard to draw out the main issues and why a research project would be valuable. We looked at it from a public health perspective seeing what could be realistically implemented to address the issue (Krishnaswamy, 2004).

Priority Issue

After multiple meetings and active discussions, the Advisory Committee determined the need for more support in the area of reducing the risk of depression in pregnancy (also called prenatal or antenatal depression) with the target population as pregnant women in a suburban area (specifically, for this project, Montgomery County, Maryland). The focus on mental health disorders during pregnancy is low in this area. The Advisory Committee felt that designing a prenatal depression risk reduction and education program that could be implemented into prenatal care would be for effective, valuable, and utilized. As many women were already attending prenatal care visits, with their focus being on physical care and support of the mother, introducing the importance of mental health and focus on the baby, and learning how these are all connected could be addressed when their healthcare provider already had their attention.

After discussion with the group, we determined the need for more support in the area of reducing the risk of depression in pregnancy. The target population was pregnant women in a suburban area (Montgomery County, Maryland). Perinatal Mood and Anxiety Disorders (PMADs) affect 15-20% of all pregnant women, and to the surprise of many mothers, includes depression or anxiety in during pregnancy, not just in the postpartum period (Marcus, 2009). Symptoms range from sadness, fear, and anger to appetite and sleep disturbance, panic attacks, hyper-vigilance, and thoughts of infanticide or suicide.

One of the main determinants of depression during pregnancy, although it is often ignored or not given the attention it deserves, is stress (Kofman, 2002). Stress can be cultural, environmental, or social. A parent may give an adult child a hard time for having a child with a spouse they disapprove of. Society may disapprove of a lesbian mother's choice to carry a child. Co-workers may belittle a single mom for being artificially inseminated. There are religious prejudices and lifestyle issues as well as heredity and personal choice. As described on Blum's (1981) paradigm, all of these factors play in potential stress during pregnancy. Stress not only has an effect on the mother, raising blood pressure, causing headaches and digestive problems, and, of course, mental health issues such as anxiety and depression. It is also directly related to the child's development. More stress correlates to fewer synapses, potentially stunting brain development or leading to behavioral issues and disorders (Kofman, 2002). Additionally, aberrant white-matter structure has been recorded in the amygdala of neonates whose mothers had depressive symptomatology (Rifkin-Graboi et al, 2013). Prenatal depression directly affects the child's brain development.

This education and outreach program can significantly reduce stress by providing support, education, and understanding. This considerably reduces the risk of prenatal depression, leading to healthier pregnancies and infants, both psychologically and physically. Our stakeholders felt that education during pregnancy for both the pregnant mothers and the general public would increase awareness that depression during pregnancy exists and needs to be addressed and supported.

Data Collection and Analysis

The population estimate in Montgomery County for 2012 was 1,004,709 (Montgomery County, Maryland, 2013a). About half of this population, 51%, is female. The state of Maryland is also about half female. Depression is the leading cause of disease-related disability among women worldwide (Melville, et al, 2010). Many of these women will become mothers. Almost one-quarter of all pregnant women experience depressive symptoms during their pregnancy (Barrio & Burt, 2000). With such a heavy population of women, the potential for depression in pregnancy is high.

Caucasian citizens make up 63.2% of the county, which is not much different from the 60.8% rate of Caucasians in the state. African Americans comprise 18.3% of the population of the county, which is lower than the 30% African American rate in the state. Even with the relative low rate, the 18% of African Americans in Montgomery County may not be making use of the maternal mental health resources. African American women generally have more faith and trust in places of worship than in their doctors and therapists, especially when it comes to mental health issues (Muzik & Borovska,

2010). Understanding this allowed for the design and development of the Antenatal Depression Risk Reduction and Education program to include religious resources and faith based suggestions.

Montgomery County has a 17.9% Hispanic population, which is significantly higher than the 8.7% Hispanic rate for all of Maryland (US Census Bureau, 2013). Statistically, the teen pregnancy rate is higher in the Hispanic population, as well as the average number of children per family. The belief of this community is to have children young (MacDonald, 2006). It is not only acceptable, but also encouraged with pro-fertility values and the importance of large families. Hispanic women have the highest unmarried birthrate in the U.S., which could greatly impact maternal mental health (MacDonald, 2006). Single parenting, plus additional environmental and psychological stressors present in teen pregnancy, can easily lead to antenatal depression. Furthermore, having large families is a financial strain, especially for young mothers, leading to additional stress and potential depressive symptoms. With such a high rate of Hispanics, Montgomery County is an important area to address maternal/child health issues, especially depression.

Economically, Montgomery County is one of the wealthiest counties in Maryland. The average household income is \$95,660, over \$20,000 higher than the state average of \$72,419. The rate of persons below poverty level is only 6.3%, almost a third lower than the state's 9% poverty rate (US Census Bureau, 2013). The county is well financed for healthcare and mental wellness services. In 2013, \$39,370,476 was spent for Health and Human Services Department, which included such maternal/child health services as the Improved Pregnancy Outcomes Program which works with mothers who experienced a fetal or infant loss to increase the chances of having healthy subsequent pregnancies. A Family Planning/Reproductive Health Program, offers gynecological services to low income teens and adults (Montgomery County, MD, 2013). With the wealth of county resources available in healthcare and mental health, designing and implementing an antenatal depression risk reduction program should not be a strain on the budget or county agenda.

Montgomery County has the resources and ability to provide risk reduction and preventive care for antenatal depression, but these resources are not regularly or readily applied to prenatal mental health. The county has a self-reported rate of 12.4 percent for depression diagnosis (U.S. Department of Health and Human Services, 2013). This statistic includes pregnant women, but only reflects the self-reported rate. Many women do not understand the signs of depression during pregnancy, feeling that sadness, tiredness, and frustration are normal parts of pregnancy. They often blame crying and anger on hormonal changes. While it is true that normal hormonal changes do cause emotional roller-coasters, depressive symptoms that interfere with daily life are not normal. Furthermore, many practitioners fail to use formal screening tools for depression or assume their clients are experiencing normal pregnancy concerns. This leads to depressive symptoms being missed in almost half of pregnant women (Muzik & Borovska, 2010).

There are significant inconsistencies in how healthcare providers approach mental health issues. Some pregnancy care providers discuss emotional and psychological issues, test for signs of prenatal depression with the Edinburgh Postnatal Depression Scale (validated to be used for pregnancy) and regularly refer out if more support is needed. Other providers reflect a strong stigma with mental health issues or have misunderstandings, assuming that depression is more prevalent in the postpartum period so they avoid discussions and ignore the signs (Gawley, Einarson, & Bowen, 2011). There is also a bias within some practices where certain populations, such as low income mothers, are asked more frequently about potential depression or other mood issues and the more affluent Caucasian women, who appear happy, are not even approached. They may be suffering in silence or not aware that their feelings of guilt, fear, or anxiety should be treated in order to prevent potentially serious adverse effects. Generally the views of medical, pharmacy, and nursing students lean towards mental health stigma, with stigma most strongly reflected in the nursing profession (Gawley, et al, 2011). All pregnancy care providers should have a thorough understanding and respect for perinatal mood and anxiety disorders and understand how to recognize and either treat or refer when symptoms present.

If depressive symptoms are identified, getting treatment is still an issue. There are many barriers and obstacles that pregnant women face including treatment location and options as well as personal concerns about embarrassment, weakness or mental illness stigma (Muzik & Borovska, 2010).

Reaching these women in a way that is more accessible and acceptable to them is the key to gaining a high usability rate, increasing the neonatal outcomes and reducing the adverse reactions from maternal mental health issues.

Besides using the funds directly from the county to support the Prenatal Depression Risk Reduction and Education Program, there is a possibility of collaboration with an existing program. Montgomery County government manages a Maternity Partnership Program, which is a community based program to make prenatal and postpartum services available for uninsured, low-income women (Montgomery County, MD, 2013b). Currently, antenatal depression support is not part of this program, as the main focus is prenatal clinic visits, immunizations, dental care, and other physical aspects. Integrating preventive methods such as treating preexisting depression, attending to marital discord, addressing disparities in younger aged and minority women, addressing nutrition, and providing emotional and social support could significantly reduce the prevalence of antenatal depression and the adverse impact on the physical, cognitive, and emotional development of the baby (Bario & Burt, 2000). Collaborating with the Maternity Partnership Program would be a great way to implement the Prenatal Depression Risk Reduction and Education Program and to reach this target community with a program that focuses on pregnancy support, but in an area not currently addressed.

Another program, Healthy Mothers, Healthy Babies (HMHB) of Montgomery County, can also be leveraged, partnered with, or piggy-backed on. This program is designed to serve uninsured and underinsured pregnant women and new mothers at risk of depression. Unfortunately, there are many insured women who can afford help but do not seek it. Often they do not know that sadness or anger that they are feeling is not normal. It is downplayed by medical staff and is shunned by friends, family, and community as normal pregnancy emotions. It may be avoided due to embarrassment, misconception, misunderstanding, shame, or social pressure.

There is a huge gap in prenatal care services within Montgomery County and the state of Maryland as a whole when it comes to prenatal mental health. HMHB is the only program we are aware of in Montgomery county that addresses prenatal depression and they only provide services for underinsured and uninsured pregnant and new moms, leaving insured mothers to find their own answers and support, which is not that easy or readily available.

This type of program is vital to the health and wellness of these mothers and it would be wonderful if there was a similar program for insured and higher income families. HMHB trains community providers on “how to talk to women.” There is a 12-session home-based therapy program where each pregnant mother has a case manager who educates and supports the program participants and, if necessary, finds other kinds of support they need.

Health Disparities

Within Montgomery County, Maryland, there is a wide range of cultures and ethnicities. There is also a wide range of socioeconomic statuses, income levels, and education levels. All of these factors have an effect on the mental and physical health of a pregnant woman. Often it is related to seeking or attaining care, while other issues include high teen pregnancy rates and nutritional deficiencies in the low SES areas of the county.

There are huge disparities in health literacy, treatment usage, and access to care. Some programs provide free or low cost services meant to reduce depression during and after pregnancy. These programs are generally geared towards the low income population and leave little support for the more affluent and insured population. Health insurance companies do not regularly include perinatal mood and anxiety support and education programs, and obstetric offices often fail to provide these services. Training for maternal healthcare providers is also very inconsistent. While most midwifery schools teach a course on maternal emotional and psychological issues, many obstetricians are not trained in this area. Nurses have some training but are generally schooled to pay attention to clinical and physical signs and symptoms more than emotional and mental health issues.

The Prenatal Depression Risk Reduction and Education program is being designed to support the research in health disparities that shows social stigma, prejudice, and bias are barriers to receiving mental health and psychological support during pregnancy. By recognizing and addressing these

health disparity hurdles, overcoming the disparities becomes easier. These disparities are immoral and unethical to the women not getting the care they need (Jones, 2010). Addressing disparities in health literacy and understanding, as well as the statistical fact that immigrants are less likely to seek help for mental health issues, is vital to developing an effective solution for the public health problem of prenatal depression (Nadeem et al, 2007).

The Healthy Mothers, Healthy Babies of Montgomery County program also shows many disparities pronounced and marked discrepancies for support. They reflect a huge gap within immigrant communities. Immigrants are less likely to seek help for mental health issues (Nadeem et al, 2007). Ethnic minority populations are already at a higher risk for depression, so the disparities in mental health support lead to even greater rates of depression and other perinatal mood and anxiety disorders, effecting both mother and child. Treatment-seeking behavior is often driven by psychosocial acceptance and cultural support and understanding. Mental health stigma reduces the desire for psychological care in immigrant women to a greater extent than in Caucasian women born in the United States (Nadeem et al, 2007).

As a perinatal psychologist I have seen and studied many significant social and environmental factors that have a direct effect on mental health during pregnancy. Blum's Force Field and Well-Being Paradigm of Health provides a strong justification for the use of a systems approach to public health management (Blum, 1981). The rationale reflected by Blum's paradigm associates strongly with the psychologically holistic perspective, where emotional and physical experiences are closely interconnected. When a child is developing in the womb, emotional and physical aspects are closely related. Even after birth, a child's physical development can be enhanced or stunted by addressing her emotional needs. A developing child requires adequate physical, social, and emotional stimulation, which is severely lacking when a mother is depressed during pregnancy. Speech and language acquisition relies strongly on the conversations a mother has, both directly and indirectly with her child, throughout pregnancy and after birthing. A mother with attentive, interactive conversations will most likely have a child with earlier speech and more advanced verbal skills.

Some of the greatest health disparities in prenatal mental health issues are directly related to social pressures, cultural understanding, psychosocial beliefs, and societal stigma regarding mental health issues. Depression in pregnancy is common and could lead to serious issues if not treated including early delivery, low birth weight, preeclampsia, and cognitive or emotional dysfunctions in the baby, and elevated cortisol levels at birth (Pearlstein, 2008). Not only do many pregnant women avoid mental health support if they even realize they need it, maternal care providers often overlook the importance, significance, or magnitude of mental health problems during pregnancy.

Ethical Considerations

Looking specifically at mental health support during pregnancy, there are huge treatment usage and access to care issues. Some programs provide free or low cost services meant to reduce depression during and after pregnancy but they are few and far between, and only available to a low income population. Generally, midwifery and obstetric offices fail to provide mental health services. It is ethically and morally appropriate to design a program for all women to access, regardless of income.

Realistically, the low SES population of pregnant women has more mental health and wellness issues and significantly more factors leading to prenatal depression, such as lack of a support system, relationship stress, financial issues, and having to work a stressful job while pregnant. This is generally why there are more programs geared towards these women.

Unfortunately, prenatal depression is still a factor in middle and high SES communities and families, so the Prenatal Depression Risk Reduction and Education program is being designed to be implemented within midwifery and obstetric offices in areas with a wide range of economic statuses.

Implementing the Prenatal Depression Risk Reduction and Education program would address misconceptions about pregnancy emotions and mood disorders that often prevent women from seeking interventions and support needed for a healthy pregnancy and birth. Unfortunately, the statistics of immigrant or low SES mothers having a higher prevalence of depression might come across wrong or be taken as an unethical assumption, even though it is statistically relevant. To allay potential moral

concerns of the public, I would state the principle of public health, “to protect and promote health; address fundamental causes of health risks,” and explain that some of the risk is cultural and economic (Public Health Leadership Society, 2002).

Additionally, the “Prenatal Depression Risk Reduction and Education program” was designed around the ethical principle that “public health programs and policies should incorporate a variety of approaches that anticipate and respect diverse values, beliefs, and cultures in the community,” and that even though there may be a different approach based on age, culture, or socio-economic status, it was designed that way to reach all audiences with fairness and equality (Public Health Leadership Society, 2002). A prenatal depression brochure or seminar for teenage moms will not be marketed and promoted with the same materials or examples as one for older moms. In order to best serve the public in prevention and risk reduction, we need to realistically address these differences. This is meant as an inclusion criteria in order to address all the potential differences that could be a barrier to seeking help for mental health issues during pregnancy (Nadeem, et al, 2007).

Global Implementation

Internationally, a program that focuses on prenatal depression must be handled delicately and with a high level of cultural sensitivity. In certain communities, mental health stigma is so strong that people are punished or shunned for seeking help. In other communities, women are not allowed to share their feelings and emotions due to normative behavior associated with “appropriate” discourse in medical interactions (Marshall, 2003).

Misunderstandings and miscommunication due to language barriers can be overcome prior to executing a program in another country by translating materials clearly before implementation and having instructors who are fluent in the language teach the program. This will help to alleviate confusion or apprehension especially when dealing with sensitive topics like pregnancy and depression.

Asian/Pacific Islanders have one of the lowest rates of adherence to recommended prenatal care, including mental health support (Bengiamin, Chang, & Capitaman, 2011). Traditional eastern healthcare follows a holistic model when spiritual aspects are included with the physical and emotional, and can often all be attended to by prayer, an herbalist, or a spiritual healer. Having a stronger understanding of the socio-cultural context of avoidance or forestalling of prenatal mental health support can help adjust the Antenatal Depression Risk Reduction and Education program to result in more effective utilization and reception (Bengiamin, Chang, & Capitaman, 2011).

It is vital to be knowledgeable of the range of cultural approaches regarding the application of ethics to the practice of public health internationally and respect cultural differences (Marshall, 2003).

Conclusion

The Prenatal Depression Risk Reduction and Education program is a public maternal/child mental health and wellness program designed to reduce prenatal depression. This program’s development and potential implementation deals intimately with the ethical considerations that should be addressed to avoid moral complications or barriers present in the community or that could potentially arise with the program’s implementation. By looking at the disparities and the stigmas related to prenatal depression, it is easier to design risk reduction strategies to approach ethical issues early in the process. By presenting prenatal support and education in an accessible and respectful way to a wide audience with multiple beliefs, cultures, and socio economic statuses, an unbiased approach can be implemented.

Maternal mental and physical health is of great importance for child development without adverse outcomes. Prenatal depression intervention programs could make a significant difference in the brain development of a fetus whose mother shows depressive symptomatology (Rifkin-Graboi et al, 2013). Depression during pregnancy (prenatal depression) occurs in approximately one in five women but the majority of these cases are not even acknowledged (Gawley, et al, 2011). Prenatal depression is significantly undiagnosed and untreated (Barrio & Burt, 2000). With little acknowledgement,

understanding, and support, depression in pregnancy can go unnoticed and ignored. Without treatment this can lead to negative physical and emotional consequences for both mother and child, including early delivery, low birth weight, preeclampsia, and cognitive or emotional dysfunctions in the baby included elevated cortisol levels at birth (Pearlstein, 2008). With treatment of maternal depression, the risk of psychopathology in the baby is significantly decreased (Rifkin-Graboi et al, 2013). The Prenatal Depression Risk Reduction and Education program is designed to prevent these health, trauma, intellectual dysfunction, and developmental disorders from occurring by adding education and support to prenatal care visits for patients by training practitioners.

Misunderstanding, stigma, and cultural attitude keep many pregnant women from seeking or understanding mental health support or treatment during pregnancy. Especially in low SES and immigrant populations, the misconceptions supporting pregnancy emotions and mood disorders prevent the often necessary interventions and support needed for a healthy pregnancy and birth. These misapprehensions are also present in many healthcare providers and family members, discouraging additional mental health support, presenting negative attitudes, and shunning the signs of serious problems. Increased education on perinatal mood and anxiety disorders (PMADs) is vital for both practitioners and women to reduce disparities and increase access to and use of mental health support during pregnancy. The Prenatal Depression Risk Reduction and Education program training provides hands-on skills to help maternal providers address these issues, handouts for risk signs, and suggestions for treatment.

There are significant inconsistencies in how healthcare providers approach mental health issues, so addressing these in a consistent format helps both practitioners and patients. Some pregnancy care providers discuss emotional and psychological issues, test for signs of prenatal depression with the Edinburgh Postnatal Depression Scale (validated to be used for pregnancy), and regularly refer out if more support is needed. Other providers reflect strong stigma with mental health issues or have misunderstandings, assuming that depression is more prevalent in the postpartum period so they avoid discussions and ignore the signs (Gawley, Einarson, & Bowen, 2011). This program encourages the use of the EPDS at scheduled prenatal visits as well as providing discussion questions, rating criteria, risk reduction handouts, support groups, and community outreach suggestions.

In order to determine the success of the outcome of the Prenatal Depression Risk Reduction and Education program, EPDS scores will be collected from prenatal care visits at 10 different locations. The scores will be gathered blindly, with no personal data. All EPDS scores will be documented and compared at one, six, and 12 months into the program. We will be looking for a drop in EPDS scores after program implementation by at least 10%.

We will also compare the county reported rate for depression diagnosis before program implementation to the rate one year and two years after program implementation. We would be looking for a drop of at least 10% in depression diagnosis to consider the program a success.

The Prenatal Depression Risk Reduction and Education program teaches that all women should be approached about prenatal depression regardless of their SES, race or culture. This program would allow all maternal and pregnancy care providers to have a thorough understanding and respect for perinatal mood and anxiety disorders, and understand how to recognize and either treat or refer when symptoms present.

Depression during pregnancy is a serious issue that warrants better attention, focus, and care. Our children deserve healthy physical and emotional environments in which to develop and our mothers deserve support. By integrating the Prenatal Depression Risk Reduction and Education program into prenatal care that is already being received, clinicians and patients are afforded an extra defense in preventing prenatal depression and the harmful side effects that accompany it for both mother and child.

References

Barrio, L., & Burt, V. (2000). Depression in pregnancy: Strategies for primary care management. *Women's Health in Primary Care, 3*(7), 490-498.

- Bengiamin, M., Chang, X., & Capitaman, J.A. (2011). Understanding traditional Hmong health and prenatal care beliefs, practices, utilization and needs. Retrieved from: https://www.researchgate.net/publication/266898405_Understanding_traditional_Hmong_prenatal_health_care_beliefs_practices_utilization_and_needs
- Bennett, H., Einarson, A., Taddio, A., Koren, G., & Enarson, T. (2004). Prevalence of depression during pregnancy: Systematic review. *Obstetrics and Gynecology*, 103(4), 698-709.
- Blum, H.L. (1981). *Planning for Health*, 2nd Edition. New York: Human Sciences Press.
- Brandes, M., Soares, C.N., & Cohen, L.S. (2004). Postpartum onset obsessive compulsive disorder: Diagnosis and management. *Archives in Women's Mental Health*, 7, 99-110.
- Burke, R., & Friedman, L. (2010). *Essentials of Management and Leadership in Public Health*. Sudbury: *Jones and Bartlett Learning*.
- Gawley, L., Einarson, A., & Bowen, A. (2011). Stigma and attitudes towards antenatal depression and antidepressant use during pregnancy in healthcare students. *Advances in Health Sciences Education*, 16(5), 669-679.
- Jones, C. (2010). The moral problem of health disparities. *American Journal of Public Health*, 100(Suppl 1), S47-S51.
- Kofman, O. (2002). The role of prenatal stress in the etiology of developmental behavioral disorders. *Neuroscience and Biobehavioral Reviews*, 26, 457-470.
- Krishnaswamy, A. (2004). Participatory research: Strategies and tools. *Practitioner Newsletter of the National Network of Forest Practitioners*, 22, 17-22.
- Liu, L., Setse, R., Grogan, R. Powe, N., & Nicholson, W. (2013). The effect of depression symptoms and social support on black-white differences in health-related quality of life in early pregnancy: The health status in pregnancy (HIP) study. *BMC Pregnancy and Childbirth*, 13, 125.
- MacDonald, H. (2006). Hispanic Family Values? *New York City Journal*, Fall.
- Marcus, S., (2009) Depression during pregnancy: Rates, risks and consequences--Motherisk update 2008, *Canadian Journal of Clinical Pharmacology*, 6(1), 15-22.
- Margoluis, R., & Salafsky, N. (1998). *Measures of success: Designing, managing and monitoring conservation and development projects*. Washington, DC: Island Press.
- Marshall, P. (2003). Public health research and practice in international settings: Special ethical concerns. Module 3. Case Western Reserve University. In *Ethics and Public Health: Model Curriculum*. Rockville, MD: Health Resources Service Administration.
- Melville, J., Gavin, A., Guo, Y., Fan, M., & Katon, W. (2010). depressive disorders during pregnancy: Prevalence and risk factors in a large urban sample. *Obstetrics and Gynecology*, 116(5), 1064-1070.
- Montgomery County, Maryland. (2013). Office of the County Executive. 2012 Annual Report. Retrieved from http://www.montgomerycountymd.gov/exec/annual_reports/2013.html.
- Montgomery County, Maryland. (2013). Report on Expenditures of Federal Awards. Department of Finance, Division of the Controller. Retrieved from http://www.montgomerycountymd.gov/finance/resources/files/data/financial/FY15_Single_Audit.pdf.
- Muzik, M., & Borovska, S. (2010). Perinatal depression: Implications for child mental health. *Mental Health in Family Medicine*, 7(4), 239-247.
- Nadeem, E., Lange, J., Edge, D., Fongwa, M., Belin, T., & Miranda, J. (2007). Does stigma keep poor young immigrant and U.S. born black and Latina women from seeking mental health care? *Psychiatric Services*, 58(12), 1547-1554.
- Pearlstein, T. (2008). Perinatal depression: Treatment options and dilemmas. *Journal of Psychiatry and Neuroscience*, 33(4), 302-318.
- Public Health Leadership Society. (2002). Principles of the ethical practice of public health. Retrieved from <http://ethics.iit.edu/ecodes/node/4734>.
- Rifkin-Graboi, A., Bai, J., Chen, H., Hameed, W.B., Sim, L.W., Tint, M.T., ..., Qui, A. (2013). Prenatal maternal depression associates with microstructure of right amygdala in neonates at birth. *Biological Psychiatry*, 74(11), 837-844. doi: 10.1016/j.biopsych.2013.06.019.
- U.S. Census Bureau. (2013). *State and county quickfacts*. Montgomery County, Maryland: United States Department of Commerce.
- U.S. Department of Health and Human Services. (2013). Community health status report: Montgomery County, Maryland: Self-reported diagnosis of depression. Retrieved from <http://www.healthymontgomery.org/modules.php?op=modload&name=NS-Indicator&file=indicator&iid=20178715>.
- Vella-Brodrick, D.A., & Allen, F.C. (1995). Development and psychometric validation of the mental, physical, and spiritual well-being scale. *Psychological Reports*, 77(2), 659-74.

- Wadhwa, P., Sandman, C., & Garite, T. (2001). The neurobiology of stress in human pregnancy: Implications for prematurity and development of the fetal central nervous system. *Progress in Brain Research*, *133*, 131–142.
- Wisner, K., Peindl, K., & Hanusa, H. (1996). Effects of childbearing on the natural history of panic disorder with comorbid mood disorder. *Journal of Affective Disorders*, *41*, 173-180.