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# The Impact of Antenatal Care on Maternal Mental Health in Rural Maharashtra

Cameron Barker

*SIT Graduate Institute - Study Abroad*, [cbarke2@emory.edu](mailto:cbarke2@emory.edu)

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**THE IMPACT OF ANTENATAL CARE ON MATERNAL MENTAL HEALTH IN  
RURAL MAHARASHTRA**

Cameron Barker

Academic Director: Dr. Azim A. Khan

Advisor: Mr. Ravi Arole at CRHP-Jamkhed

SIT Study Abroad: Public Health, Policy Advocacy, and Community

Fall 2015

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## **Abstract**

This study seeks to understand the major mental health concerns experienced by pregnant women and recent mothers in rural villages in Maharashtra and how these concerns are impacted by different elements of holistic antenatal and postnatal care. The risk factors that may lead to poor maternal mental health are strongly tied to social factors and vary from community to community. Unfortunately, in most developing countries mental health takes a back seat to other health issues deemed more pressing. This is especially true for female specific illnesses, given that the overall health of women and girl children is often neglected. The Village Health Workers at the Comprehensive Rural Health Project - Jamkhed, Maharashtra over see a variety of types of antenatal and postnatal care in order to mitigate the risk factors that can lead to Maternal Depression. This study investigates not only the intended, overt consequences of this care but also its unintentional impact on Maternal Mental Health. Through interviews with community members, health professionals, and Village Health Workers this study illustrates the complexities of Maternal Depression, its risk factors, and how it is perceived by the communities in which its consequences are most severely experienced.

## **Introduction**

Maternal Health has been a subject of public health strategies and development policies for decades. Many aspects of maternal health are clear and easy to measure: rates of anemia, cases of postpartum hemorrhage, maternal mortality. This makes Maternal Health an easily quantifiable target. In fact Millennium Development Goal 5 is simply “Improve Maternal Health”. What one might assume is a relatively complex goal is reduced to two targets: firstly, reduce by three quarters, between 1990 and 2015, the maternal mortality ratio; secondly, achieve, by 2015, universal access to reproductive health. The Millennium Development Goals are a reasonable proxy for what are considered key public health initiatives by the global community, and what is notably missing from them is any sort of qualitative measure of a healthy life. Fortunately, in 2001 the WHO released a statement moving beyond these quantitative measures towards a realization of their definition of health, which includes both mental and social well-being. This was one of the first steps in moving towards a more comprehensive interpretation of maternal health that moves beyond simply measuring survival outcomes and taking into account the complete health of women.

The World Health Report in 2001, however, focused exclusively on mental and neurological disorders. While this is less holistic than ‘not merely the absence of mental disease’, it did set the tone of a millennium where mental health would not always be deemed less significant than physical health. The purpose of this study is to understand what happens at the intersection of these two fields, Maternal Mental Health. Based on observations and interviews with community members, Village Health Workers, and medical professionals, this research sought to understand three things: firstly, what are the major mental health concerns of pregnant

women and recent mothers; secondly, how are these concerns perceived by the rest of the woman's family, her community; lastly, how, if at all, are these concern impacted by antenatal and postnatal care? This study took a much more holistic approach to mental health than merely focusing on diagnosable mental illness and instead chooses to focus on the promotion of mental health and the prevention of a broad spectrum of types of Maternal Depression.

It is challenging to develop meaningful metrics that asses something as abstract as mental health. This ambiguity has contributed to significant variation within the research on Maternal Mental Health. Part of this variation has arisen because, "accurate estimates of PND [Post-Natal-Depression] prevalence are difficult to obtain as cultural norms may affect women's reporting of their symptoms and methods used to determine prevalence rates impact their accuracy" (Shivalli, 2015). Using the ICD-10 Diagnostic Criteria for Postpartum Depression, it is estimated that between 13-22% of recent mothers in India suffer from Postpartum Depression (Shidhaye, PR, and PA Giri, 2015). Rates of Postpartum Depression are significant cause for concern on their own, but when one considers that Postpartum Depression is just one subset of spectrum of depressive conditions that mothers and pregnant women face, it becomes clear that maternal mental health should be a specific public health concern in the Indian context. However, it remains unclear how cultural norms in India impact the experience of mental illness in pregnant women and mothers and this understanding is fundamental to building and implementing effective policy.

While the prevalence rates vary drastically between reports (13-52%), there are some agreed upon predicative factors associated with developing one or another form of Maternal Depression. In South Asia generally, predictive factors are considered to be low socioeconomic

status, lack of social support, adverse life events, disappointment with the sex of the baby, and bad relationship with mother-in-law or partner (Shidhaye, PR, and PA Giri, 2015). Additionally, in India specific contexts, it has been demonstrated that low self-esteem, antenatal anxiety, women's agency, and a history of abuse can have a significant impact on the development of maternal depression (Halbreich, 2006). All of these elements were addressed either directly or indirectly during interviews with community members in selected villages. The relevance and experience of these various factors were analyzed in the specific context of the villages sampled in order to understand how various cultural practices interacted with the risks.

This study took place in Jamkhed, Maharashtra at the Comprehensive Rural Health Project (CRHP). The Comprehensive Rural Health Project in Jamkhed has been able to establish a network of Village Health Workers (VHWs) that provide antenatal and postnatal care to women in the selected Project Villages with which they have partnerships. These Village Health Workers have received training regarding the physical health concerns that women face before, during, and after birth, among other issues specifically relevant to their respective communities. The Village Health Workers are quite proficient in providing this care as is reflected in maternal and infant health outcomes in Project Villages. For example in the year 2013-2014, 99% of pregnant women received antenatal care, the neonatal mortality rate was 10.9/1000 (compared to an all India rate of 29/1000), and there were zero deaths due to postpartum hemorrhage (World Bank, 2014). It is abundantly clear that VHW are extremely effective providers of physical care to new and expecting mothers. However, a program was started in the spring of 2014 to provide VHWs with training about how to recognize and counsel for clinical mental illness, including depression and anxiety. This puts these VHWs in a unique position to impact the holistic well being of



women in their communities during and after pregnancy. This study is being conducted in light of the growing body of research that suggests the integration of mental health screening during antenatal and postnatal care visits as best practice (Shidhaye, PR, and PA Giri, 2015; Halbreich, 2006; Patel, 2002)

## **Methods**

This research made use of four main methodologies in order to compile as complete a picture as possible in a limited amount of time. Most all interviews were completed with the assistance of a local translator familiar with both the language and the Project Villages sampled. The first component of the study consisted of holding focus groups with Village Health Workers, during which they were asked about health issues related to Maternal Depression and perceptions of mental health in their communities (Appendix 1). These focus groups were held in order to have a better understanding of both the mental health care the VHWs provide and also some idea of how mental health is perceived in these communities. The data collected during these focus groups was used to design questionnaires to be used with community members in the Project Villages.

The second main element of this study involved traveling with CRHP's Mobile Health Team to some of the villages served by CRHP's VHWs. Based on the advise of the VHWs and the Mobile Health Team, women were selected to be interviewed. Women in the communities were interviewed using a semistructured framework in their homes about what they perceive to be the greatest challenges to the mental health of mothers and pregnant women in their community (Appendix 2). No women who were experiencing depressive symptoms, as determined by the Mobile Health Unit and their VHW, were included in this study. Only mothers

who had given birth within the last year were included in order to avoid any recall bias when discussing antenatal care appointments and mental or emotional well being during pregnancy. However, there was a significant source of bias introduced by conducting the interviews in the homes of the women: while this was the most culturally appropriate approach, mothers-in-law and husbands were never far, which may have had an impact on the women's comfort speaking freely. Additionally, no mothers under eighteen were included in this study. The exclusion of mothers under eighteen, presents a limitation to this work as adolescents have baseline different mental health needs than older women do, which will be further elaborated upon in later discussion.

The third component was analysis of VHW mental health training curriculum and its application. Mental Health Training Sessions are part of the voluntary weekly training that Village Health Workers receive on the CRHP campus. Analysis of the mental health curriculum was essential to understanding the extent to which the knowledge the VHWs was medicalized and to what degree it was culture specific. Additionally, analysis of the curriculum provided insight into the VHWs counseling capacity and style, which was used during discussions with women about their experiences with their VHWs during and after pregnancy. This was incorporated into questionnaires used among community members in order to ensure that the questions were reflective of the familiar vocabulary and concepts used by VHWs during regular health visits.

Lastly, a handful of medical professionals, including a gynecologist and medical social workers were consulted in order to get the most medicalized, formal perspective on this issue. This was used to help interpret data collected relating to changes in sleep, appetite, and

concentration during and after pregnancy. Information shared by medical professionals was also used to shape questions that were asked about culture specific presentations of depression and prevention techniques during interviews with community members.

Throughout this study, for a variety of reasons, the use of the clinical terminology, including Postpartum Depression and Maternal Depression was almost never used. With the exception of the health professionals, the terms Postpartum Depression, Maternal Depression, and Mental Illness were entirely excluded from all interviews. Clinical terminology is completely unrecognized among Village Women and would have created unnecessary confusion. Additionally, by omitting clinical terminology, the women interviewed were able to use culturally specific terminology to discuss their experiences, which gave valuable insights into metaphors of illness used within these specific communities.

The VHWs have knowledge of depression and mental illness, however their specific knowledge of Postpartum Depression is limited as their training program is less than a two years old. Before the initiation of this program, mental illness was not discussed as a medicalized condition in any way in the Project Villages, although the problem certainly existed. This is due, in part, to the fact that the specific presentation of PPD in this area is not well known. Sinha has found that, “culture makes a difference to the experience of stress, and is an important factor with regard to the kind of social support system available to the individual for coping with it, ” contributing to differences in the presentation of mental illness (Sinha, 1996). Therefore, while the VHWs have received training about homogenized, standardized presentations of Maternal Depression, it still remains unclear how Maternal Depression specifically presents in these and other similar communities. VHWs do not frequently recognize Maternal Depression as a distinct

mental illness; however, they do recognize behavioral changes, changes in appetite and sleep, and other such indicators before and after delivery.

Interview questionnaires (appendix) were designed to ask about typical somatic signs and behavioral changes shown to be associated with Maternal Depression. This research makes use of theories derived in the field of indigenous psychology, which has been defined by The International Association for Cross-Cultural Psychology as, “research that emanates from, adequately represents, and reflects back upon the cultural context in which the behavior is observed” (Misra, 1990). Additionally, neither the researcher nor VHWs have official psychiatric training. Rather, this research seeks to understand what VHWs and mothers consider to be the most significant barriers to full mental health and how appropriate antenatal care and postnatal care can impact the experience of depressive symptoms in recent mothers.

## **Discussion**

### *Presentation of Symptoms*

Village Health Workers are taught to recognize four different categories of signs and symptoms of depression: physical, emotional, cognitive, and behavioral. All of the elements of the ICD-10 Diagnostic Criteria for Postnatal Depression are included in one of the four categories. However, in discussions about signs and symptoms of depression VHWs emphasized behavioral and physical symptoms of depression far more frequently than emotional and cognitive dimensions. The cognitive and emotional dimensions were also acknowledged but were given lesser credence. Specifically for depression in women, VHWs said the most common signs and symptoms were loss of appetite, trouble sleeping, loss of interest in socialization, behaving aggressively towards her children. This is in line with a cross cultural studies of

depression which noted that, “somatisation was observed more in Indian patients than in the west where ailments were more frequently manifested in psychological forms” (Sinha 1996).

There are a few reasons why this tendency towards somatization may occur. The first, and most obvious, reason for this differential presentation of depression can be tied to the vastly different cultural setting of this study as compared to most of the research about maternal depression. The vast majority of the research about Maternal Depression has been conducted in Western settings, and while diagnostic criteria are designed to function cross culturally, it is impossible to fully account for the ways in which culture can change the presentation of an illness. Given that depression is in essence never discussed as an illness in the communities sampled, a vocabulary for discussing the emotional dimensions of the experience of this illness does not exist. It is challenging to recognize the purely emotional symptoms of depression if one does not have the vocabulary to explain the experience. Comparatively, behavior is observable by all, Village Health Worker and community member alike. Therefore, it is easier for people to report visible behaviors and actions than it is to explain the emotional impact of an illness for which there is a very limited vocabulary.

The lack of a vocabulary to discuss the emotional experience of depression is coupled with the fact that many of the mental or emotional, medically recognized diagnostic criteria have different implications and are variably applicable in the specific context where this study was conducted. For example, “loss of interest or pleasure in activities that are normally pleasurable” assumes that the person being diagnosed has time for leisure activities. The women in the villages where this research was conducted typically worked upwards of twelve hours doing agricultural labor in addition to being responsible for food preparation, cleaning, and child care.

This is not to say that these women live a life devoid of pleasurable activities. It is simply critical to keep in mind that the presentation of mental illness in people living subsistence lives is necessarily different than those with greater resources and free time.

One of the few overtly emotional symptoms that the VHWs said they look for postpartum when checking on women's mental health was feelings of guilt and self blame. These questions were virtually exclusively directed at women who had given birth to a second or third female child. VHWs noted that often after the birth of a girl child, especially if it is the second or third girl child, women feel extremely guilty and distraught because most people believe that the woman should be held responsible for the gender of the child. The impact of cultural beliefs surrounding the birth girl children will be elaborated upon in later discussion.

### *Risk Factors for the Development of Maternal Depression*

#### A. Domestic Violence

VHWs and mothers interviewed both identified domestic violence as one of the major risk factors for a woman developing depression after delivery. Domestic violence is an inherently stressful experience regardless of the social context and one that has been tied to increased rates of depression in cultures across the world. Domestic violence is characterized by both physical and emotional violence, including overly controlling behavior and deprivation of various resources. In the specific area where this research was conducted domestic violence typically includes actual physical violence and also threats of violence which can be nearly as damaging psychologically. Additionally emotional violence includes not allowing women to make decisions for themselves in terms of both daily household needs and larger issues such as health

care. Given that women's agency is considered a major risk factor, it is only logical that, "Women who experience violence in the home are significantly more likely to have poor self-reported health and suicidal thoughts and to experience other health problems" (Ellsberg et al. 2008). Husbands and mother-in-laws can take control of a woman's daily routine, controlling everything from opportunities for socialization to food consumption, including medical care.

One of the specific facets of domestic violence that was identified as particularly damaging to women's health was alcoholism among husbands. Alcoholism was associated with increased physical violence, in addition to having implications for the financial health of the family. Given that many of the families in the sampled villages live at subsistence levels or below, any expenditure on alcohol takes away from funds for other household necessities. This puts mothers in a uniquely challenging position where they are not only coping with physical violence at the hands of an alcoholic partner, but they also must manage a household at or below the cusp of poverty.

Throughout much of India, physical domestic violence at the hands of a husband is rivaled by a variety of types of violence at the hands of a mother-in-law. For example, there were domestic violence survivors on CRHP's campus who had been either starved or doused with kerosene and set on fire by mother-in-laws. While these are extreme forms of violence, there are many smaller every day forms of violence that women in rural India endure. These are exasperated by typical living environments and cultural norms that require women to live in extremely close proximity with their mothers-in-law. This became exceedingly clear during interviews when mother-in-laws either specifically sat in on the interview or were within ear shot, attending to household matters. Many of the homes of the women interviewed had one or

two rooms, and husbands typically worked outside of the home. This meant that for the women who did not regularly work agricultural jobs outside of the home or who had an infant less than a month old, they spent the entirety of their days with their mother-in-law in a one or two room house. It is clear how if one has a negative, let alone an abusive relationship with the mother-in-law this would be incredibly damaging to mental health.

## **B. Birth of a Girl Child**

In about half of the women interviewed, the birth of a girl child was explicitly noted as an event that may have serious implications for the mental health of the mother. Typically it was said that one girl child was not a significant source of distress, but if a woman had given birth to two or three girl children, particularly if she had not given birth to any male children, then she would typically be “under great tension”. There are in essence two types of stress that may surround the birth of a girl child for a woman. The first type of woman was explained as one who has internalized the prevailing cultural beliefs about the value of girl children. For a woman living in poverty, a girl child may be seen purely as a resource drain. Girl children are deemed less valuable than boys because eventually it will cost a significant amount of money to marry her off, educating her before sending her to her husband's village is a waste of resources for the family, and she also will not be able to perform last funeral rights for her parents, a skill kept in male hands. For these reasons, and many more, there were women who expressed that the birth of a girl child was an extremely stressful event that was linked in their minds to the future worsening of poverty.



The second general category of woman who expressed concern about the birth of a girl child did not herself value daughters less than sons, but was concerned about the reaction that her husband and his family would have if she were to have a female child. For example, Mansa told the story of her neighbor who came to know that she was pregnant with a girl child. This woman valued both genders equally and wanted to carry the pregnancy to term. Unfortunately, the woman's mother-in-law would not allow for the birth of a third girl child and took Mansa's neighbor to a nearby private clinic where she received an abortion against her will. For a woman such as Mansa's neighbor, the birth of a female child meant a greater threat of domestic violence. There are a plethora of examples of women who have been set on fire by her husbands family because they want a new wife who they feel will be more capable of having female children. From the perspective of these mother's the birth of a girl child is a traumatic event because of the consequences it may have for both her own health and that of her baby's.

To contextualize these experiences as it pertains to maternal depression, many women answered questions about adequate sleep and stress with answers about in-law relationships. Women explained that they often lost sleep worrying that they may be pregnant with a female child and wondering how their in-laws would treat them if this were the case. As sex-detection sonography is illegal in India, if a woman's family cannot afford to pay some type of bribe, the majority of women do not know the gender of their babies during pregnancy. This uncertainty and the threat of violence to herself or her fetus make for an extremely stressful pregnancy. Given the data that has shown poor maternal health during pregnancy is one of the greatest indicators of Postnatal Depression, this type of concern is a clear risk factor for the development of postpartum depression if a woman does indeed give birth to a girl child.

### C. Lack of Social Support

Research in cultures all across the globe have demonstrated the protective effect of strong social networks against mental illness. The trope of India includes compound families, crowded spaces, and lack of concern for privacy. One might think that in a small village, in a culture where familial relationships are so heavily emphasized and neighbors are referred to as “older sister” or “auntie” that social support is widely available in the community. However, for many women there is a vast difference between the reality of communal living and lack of privacy and true social support.

When asked if she was aware of other mothers that had displayed depressive symptoms, most women could come up with only one example and usually one that would have been dramatic or severe enough to be news in the village. Women mentioned these cases as relatively distant neighbors that they knew of, not as close friends or “older sisters”. One can extrapolate that if a woman knows of no or only one instances where a mother is unhappy with the gender of her child, that she is not able to speak with many mothers about this considering how widespread the issue truly is. The notion that women living in the villages together do not necessarily have supportive, positive relationships was best exemplified by an interjection from the husband of Survana during an interview. When asked if she was aware of any women that displayed depressive symptoms after delivery, Survana’s husband chimed in from the kitchen, “No, she would not know of things like that. She does not go around to other people’s houses”. Village Health Workers explained that in most villages, a woman who goes from house to house is considered to be up to questionable activities and may even be a sex worker. This is not to say that women in villages live in isolation; this is certainly not true. Community members would

absolutely know all of their neighbors, their children, their struggles, the type of work they do, and many more life details. However, this is distinct from a supportive community of female friends. Women in these villages were expected to work dutifully within their homes with little opportunity for socialization with other women outside of their own families.

In the context of motherhood, one must consider that a woman moves into her husband's house after the wedding, assuming that she is married post-menarche. A woman's husband is typically from a different village, meaning that when a woman marries she moves away from her own mother, childhood friends, and her familiar social environment. A woman of course has time to develop social relationships of some sort in her husband's village before the birth of her children; however, given that it is not common practice for women to socialize outside of the home, presumably if a woman becomes pregnant soon after her marriage she would not have a close, supportive friendship with female neighbors whom she could discuss concerns with during pregnancy. This lack of social support particularly during the pregnancy contributes to higher antenatal anxiety, which has been clearly established as a predictive factor for maternal depression.

In what turns out to be both a blessing and a curse, it is almost certain that a woman would return to her mother's village in the last month of pregnancy for delivery and for a least a few weeks after delivery. The return to the mother's village for these six to eight weeks can certainly be a source of social support; unfortunately, it may also mean that she moves out of a Project Village, away from her typical health care provider, the local VHW. Regardless of the care a woman receives in the month following delivery, she does inevitably return to her

husband's village where her social network is curtailed by various cultural stigmas associated with women outside the home.

#### **D. Age**

As stated previously, no women under eighteen were interviewed for this study, thus the following section is based upon information and anecdotes shared by Village Health Workers. Therefore, this information carries the risk of being biased as it was not shared directly by the girls whose experiences are recounted. It is a well known fact that child marriage is an unfortunately common practice throughout many areas of India. Adolescents not only require different mental health supports, but are also at particular risk for falling into poor mental health in the face of adverse life events. Village Health Workers shared a plethora of stories of adolescent girls who had been married off against their will, and consequently frequently attempted to run away, fell into poor physical and mental health, and were fundamentally vulnerable. For these adolescent girls who become mothers in a new village, unable to consent to sexual interaction by nature of their age, and without the support of peers or her mother, the risk of maternal depression is irrefutably massive.

#### **E. Socioeconomic Status**

The experience of socioeconomic status appeared to work in two contradictory ways as it pertains to Maternal Mental Health. There were typically two types of women who were available to be interviewed midmorning and mid-afternoon when village visits and interviews were conducted for this study: these were women that either had very young infants, usually less

than a month old, or women who were a part of families that were wealthy enough to not depend upon her as an additional source of income. The assessment about the relative wealth of the family was made based off of observations of the home, information shared during interviews, and the insights of the Village Health Worker who has knowledge of the socioeconomic status of most every member of her village. The women whose families also relied upon her as a source of income were typically not home and the Village Health Worker shared that she, with the baby in tow, was involved in whatever work was usually done in her village (working on a farm, in a sugar cane factory, etc.).

For a woman who's survival is dependent upon her agricultural labor, the experience of depression is necessarily different than the western conception of depression. A woman who is an agricultural laborer and whose family is at or below the poverty line embodies the risk factors of "adverse life events" and "low socioeconomic status". Given that this broad category of woman was at work and therefore not available for interview, this study cannot meaningfully speak to what her experience of depression was realistically like. One can only consider the fact that a woman in this type of situation, experiencing many risk factors for depression, likely has a very different presentation of maternal depression that what is typically seen in the West. This is certainly an area where further research would be quite useful. Again, it is essential to know that while the life of a woman in the above described position is not necessarily going to be depressed. Adverse life circumstances do not prevent people from living full and happy lives; however, for the purposes of this study it is necessary to talk about these factors and their negative, damaging effects on maternal mental health.

The women who were most frequently available to be interviewed were women who were part of a family that was well established enough to not depend on her labor as a source of income. While this degree of financial security certainly would protect a mother from the risk factors associated with low socioeconomic status, it exposed her to a different type of potentially harmful lifestyle, specifically with respect to socialization. As mentioned previously, social support, or the lack thereof, is a critical factor in the development of depression. For the women who are not involved in any type of work outside the home opportunities for social interaction are even further limited. Agricultural labor is done in large groups, with many women working together. This of course does not necessarily mean that the women have positive social relationships; however, it is an opportunity for a woman to interact with non-familial women who can potentially offer support if a friendship does evolve. For the woman who does not work outside the home, the typically slightly more wealthy women, this opportunity for basic socialization is not available.

The mother that works within the home as a homemaker is additionally not considered particularly valuable. Women interviewed who were involved in some sort of income generation, be it tailoring, farming, or some other form of small business expressed a sense of worth and value attributed to that work. Her ability to provide an income stream for her family was associated with a far greater sense of self worth than doing the thankless job of homemaking. Given that feelings of low self esteem and self worth are considered to be indicators of maternal depression, by western focused diagnostic criteria, it is clear that the mother whose sole purpose is homemaking and inherently considers her work to be insignificant it also, in a unique way, at an increased risk for developing clinical depression.

## F. Infant Mortality

One of the hallmarks of maternal depression is struggling to bond with the baby or feeling overtly negative emotions towards the baby. The idea of bonding with the baby has a special connotation in the minds of many of many mothers in settings where infant mortality is a significant problem. All of the mother's interviewed who had infants younger than forty days old had observed the cultural practice of waiting to name the baby. Although the rates of infant mortality in Project Villages has been steadily declining, this is still something that is in the forefront of many mothers minds. Families typically wait the forty days to name an infant because this is the point at which the death of the infant becomes less likely. While no mother can stop herself from loving her baby, most women do make a conscious attempt to maintain a certain emotional distance. This is done to protect the mental health of the mother lest something happen to her child. However, in the context of maternal depression, if a woman is experiencing other risk factors for maternal depression and is also intentionally remaining distant from her child this may lead to an environment that makes a woman particularly susceptible to maternal depression.

### *The Impact of Antenatal Care and The Role of Village Health Workers*

Many of the woman interviewed mentioned a variety of sources of antenatal care providers including government nurses, anganwadi workers, and VHWs. However, when they mentioned Village Health Workers it was in a very off-hand manner, as if it should have been entirely obvious that the Village Health Worker would have provided ANC. When asked how many ANC visits she had with the VHW, most women seemed confused by the question; "everyday, she lives across the way," was the response of almost every woman interviewed. The

VHW is relatively seamlessly integrated into the lives of women in the community. In this way, VHWs and the various programs they institute in their respective communities are able to address almost every one of the major risk factors that women cited as detriments to their mental health. What makes the ANC provided by VHWs to pregnant women so effective in preventing postnatal depression is that the care is fully holistic. VHWs do not simply provide iron tablets, nutritional information, and check weight; during each ANC visit the VHW address the whole woman, checking on physical health, emotional concerns, and social needs. However, ANC is not the only form of ANC that exists in these communities. Women also discussed a traditional form of ANC based in a mythological text that has adopted Ayurvedic components called *Garbh Sanskar*.

#### A. Family Counseling

A pregnant woman lives with her husband's family and the VHW physically visits to her home regularly where parents-in-laws, husbands, and other family members are always near by. Village Health Workers are able to begin dismantling stigmas and harmful practices that affect women by discussing these matters with the whole family when they go for ANC check ups. For example, in cases where there is domestic violence VHWs speak with the mother-in-law and the husband in such a culturally fluent way about the consequences of their actions and the effect that they are having on the health of the mother and baby. Village Health Workers force mother-in-laws to realize that if they damage the health of mother they are inflecting negative consequences on the potential son that they so desperately want. Many VHWs have decades of experience dealing with alcoholism so with their frequent visits and the authority they have are



able to hold alcoholic men accountable for their behavior and encourage behavioral changes throughout the community. A pregnant woman can rely on her VHW to interfere and counsel in cases of domestic violence or alcoholism; the assurance of having a dependable, authoritative figure to help a woman problem solve relieves many of the anxieties that a woman may have before and after pregnancy. The prevention of initial antenatal anxiety helps to reduce the likelihood of developing maternal depression after delivery.

## B. Birth of a Girl Child

The VHWs also have an effective strategy for addressing these feelings soon after the birth of the child in order to prevent the symptom from becoming very serious. VHWs have knowledge of chromosomes and the fertilization process, so in very simple terms they explain to women that they do not contribute to the sex determination of the baby. VHWs use a farming metaphor, relatable in this farming community, to explain that it is not the earth that controls which crops grow - it all depends on which seed the farmer plants. VHWs expressed that this metaphor is comforting and easily understood by mothers in their villages. However, they also expressed the importance of explaining this metaphor to the families of the mothers they care for. Village Health Workers accompany pregnant women to the hospital for delivery, where they share this metaphor with the mother. Most women return to their mothers villages for the last month of their pregnancy so it is uncommon for the mother-in-law to be with the woman during labor and delivery. However, VHWs make many visits to the woman for postnatal care when she returns to her husbands house and during these visits the agricultural metaphor and a basic explanation of chromosomes is also shared with the husband's family.

This address elements of self blame that a woman may feel and may influence the in-laws so that it is clear they cannot blame the woman for the birth of girl. However, VHWs also go beyond simply explaining that a woman should not be blamed for having a girl, but they also actively work to promote gender equality. During ANC and PNC visits VHWs discuss the value of girls with women and families. They foster a home environment where girl children are seen to be equally valuable as boy children. If it were not for these ANC and PNC visits women and their girl children would not have a constant reminder that the girl children of the home should be considered valuable.

### C. Social Support

Village Health Workers, with the assistance of a social worker from the Mobile Health Team, facilitate women's groups and self help groups that meet regularly. Ostensibly, the purpose of these groups is a financial security net and a source of basic health information. Women attend meetings to discuss issues relevant to their lives in the village but can also take a loan from the group when needed. For example, many women that have been told they will need a cesarean section, take a loan from the women's group in order to afford the procedure without falling into debt or getting entangled with a money lender. While this group is never marketed to the community as a place for women to socialize outside of the house, this indeed how the group begins to function when it has been established in a village for some time.

The women's group is not simply a space where women are able to interact with other village women outside of their homes. The group is marketed as a place where women can receive basic health information, and the presence of the Village Health Worker cements the idea that this is a respected, informative space in the minds of the community members. However, the

medico-financial nature of the group means that it is a very easy space for women to bring up issues they may be having with their pregnancy, in their homes, etc. In this way, the group gives pregnant women a chance to socialize with peers and also intentionally seek support from them without partaking in any controversial behavior that a husband or in-law may be opposed to.

In addition to addressing the social needs of women and giving the woman a chance to interact with the mobile health team, these groups help to relieve a degree of the anxiety that comes with being pregnant while existing below the poverty line. The women interviewed that were members of these types of groups explained how reassuring it was during pregnancy to know that if a cesarean section would be necessary or if the baby needed additional visits to the doctor they could easily access a loan. In this way, women's groups serve as social network that comes with a financial security net that relieves many of the anxieties that a woman without social or financial independence would otherwise lack.

#### **D. The Influence of the Village Health Worker**

In medical anthropology there exists a term to describe the status differential that exists between doctors and patients in the west, 'the white coat effect'. This term is used to describe a doctor patient interaction where a person may not feel comfortable asking questions of the doctor and follows the doctors orders without necessarily understanding them because society has decide this is how patients should interact with health care providers. To a certain extent, there exists a white coat effect for village health workers. Village Health Workers are selected by their community and are empowered to take control of a highly valuable and respected position in the village. Village Health Workers have been so effective in reducing the burden of disease in their

respective communities that they have earned the deep respect of the community and have been given a much higher status than a poorly educated woman would otherwise have.

The status of the VHW allows her to intervene in elements of village life that are not necessarily health related. While there of course many negative health consequences if a girl is married off too young, these are not perceived by the community: it is simply a part of their history and culture. The status that the VHW has been given, allows her to overtly disagree with elements of the culture that she disagrees with. When she hears word of a potential child bride, the VHW has the ability to attempt to intervene and discourage this practice. Regardless of the health consequences, the VHW works to encourage behavioral changes in the community and to question her wisdom is to disrespect her status in the community.

Most VHWs have the trust of her respective community and they are confident of her capabilities. For a woman with little access to other ANC and PNC resources, simply the presence of her VHW can have a reassuring effect. This was most frequently emphasized when a woman had previously had a complicated pregnancy. In addition to fretting about the gender of the baby, many women expressed that they would frequently worry about complications arising because they had risky pregnancies in the past. For women in these communities, know that there was someone who could provide free, effective care just down the street should a complication arise enabled a certain peace of mind.

### *Traditional Antenatal Care*

#### A. Garbh Sanskar

Given the rich history of traditional medicine in India, it is essential to include non-western forms of Antenatal Care in this analysis. When asked from whom they received antenatal

care, the vast majority of women interviewed included their mother-in-law, their own mothers, and other female relatives. Whether or not these female family members are able to provide competent biomedical care is less relevant than the impact that they may have on the social or emotional health of pregnant mothers. Given that all of the women interviewed lived with their mother-in-laws, it was easy to see how if one has a positive relationship with a mother-in-law during pregnancy it could be quite supportive and reassuring. That being said, if one does not have a strong relationship with a mother-in-law or is experiencing domestic violence at the hands of the husband's family, it would be incredibly damaging to both the physical and mental health of pregnant women.

In addition to the emotional support offered by older female family members, many women mentioned the practice of *Garbh Sanskar*, which loosely translates to “the culture of the womb”. *Garbh Sanskar* is now an Ayurvedic practice based on selection of religious mythologies. The story that women mentioned during interviews was that of Abhimanyu from the *Mahabharata*, one of the two major Sanskrit epics of ancient India. In this story, Abhimanyu's father, Arjuna, confides in his wife about particular strategies of war initiatives and his plans for the beginnings of an upcoming battle. Abhimanyu is able to hear this discussion while inside the womb of his mother. When he grows up and is a warrior himself, he is able to successfully initiate battles using the strategies he overheard, but he is not able to end them because his father did not share that information while he was in the womb. This is one of many stories in ancient Indian texts about the power of information received in the womb being able to effect the life and abilities of children when they grow up.

The woman interviewed mentioned the practice of *Garbh Sanskar* when asked if they had concerns that prevented them from sleeping or being able to concentrate during their pregnancy.

They discussed *Garbh Sanskar* as being particularly helpful to them during times of high stress because of its focus on stress reduction and tranquillity. Based upon the story of Abhumanyu, *Garbh Sanskar* posits that if a woman is able to provide the proper low stress, nurturing, healthy environment for her baby when he or she is in the womb, the baby will grow up to be a healthy, tranquil, wise adult. The proper womb environment as described by the theories of *Garbh Sanskar* is maintained by a variety of behavioral strategies. There are a selection of yoga poses that are necessary for a woman to practice regularly in order to reduce her own stress level and to make sure that her blood is flowing properly throughout her body. The yoga poses are supplemented by *pranayama* (yogic breathing). This is additionally helpful in ensuring proper blood flow and the low stress level deemed essential for the proper physical growth and mental development of the fetus. The purpose of *Garbh Sanskar* is not explicitly preservation of mental health; however, this cultural practice inadvertently has a highly beneficial effect on a woman's mental status.

Unfortunately, the full resources and benefits of *Garbh Sanskar* are not widely available to women in low resource settings. One woman interviewed showed the book she owned detailing the practices and theories of *Garbh Sanskar*, and it had a price sticker of Rs. 270. Given that many people live a subsistence lifestyle just at or below the poverty line (which is Rs. 60 a day), Rs. 270 is clearly far too expensive for most families. Additionally, owning a book implies being able to read and many women interviewed were technically literate but reading a longer, more complicated text would certainly have been above their education level. For these reasons, it would be beneficial to teach the basics of *Garbh Sanskar* to lay people and barefoot counselors such as VHWs. If barefoot counselors were trained in this previously existing and accepted form

of ANC, it would be able to incorporate it into more typical Western, biomedical ANC check-ups.

### *Community Perceptions of Maternal Depression*

#### A. Black Magic

There was no shortage of stories of black magic being used as a treatment tool for maladies of a variety of types both during and after pregnancy. Black magic is an extremely complex issue and its use as a treatment for mental illness cannot be properly addressed here given the scope of this study. However, given the frequency with which it was mentioned, it also cannot be neglected when discussing community perceptions of mental illness. One story was particularly illustrative:

Vandana's sister began behaving strangely after the birth of her second child. She became removed from her family, would not engage in conversation, began to let her clothes become dirty, and stopped caring for her children or showing affection for them. Her family acknowledged that this was indeed something to be quiet concerned about. Her husband first took her to receive treatment from a private hospital in Jamkhed where he hoped she could be given some sort of pill to help improve her mood and restore her to her previous self before the birth of her child. Unfortunately for Vandana's sister and her family, the treatment provided by the private hospital was not effective. The next strategy seemed clear: western medicine had been ineffective so the next provider of care would be the local black magician. Vandana's sister was taken to the magician and he performed a variety of rituals and prescribed a treatment of the magico-religious variety. To this day Vandana's sister seems to be well, behaving as she did before the pregnancy and caring for her children and self as she typically would.

Mental Health is a fickle and complicated illness to treat. It is unclear why some people benefit from pharmacological interventions and why others do not, however it has been shown time and time again that confidence in the provider of care is almost as important as the care itself. If a woman were to feel strongly that her local Black Magician would be able to cure her of her strange behavioral condition, who is to say that this would absolutely be less effective than Western-talk therapy. It would certainly be beneficial to do further research about the impact of black magic on mental health in rural India. However, for present purposes it is enough to know that for some people living in these villages it is considered a useful and effective form of treatment for the symptoms of maternal depression.

## **B. Community Perceptions**

The opinions about women who experienced the symptoms of maternal depression varied from house to house within the villages, and it would be not be particularly useful to generalize the information that was shared. However, there were a variety of trends that cover a spectrum of opinions and all of which have been shown to be well established concepts in other similar studies. The most obvious perception of mental health is that it is a highly stigmatized illness in many communities. Similar studies has shown that, “mental illness in women may attract a greater amount of shame and dishonor and has a greater impact on family life due to the woman’s role in running domestic activities of the household,” and this was certainly true for women in a handful of the families interviewed (Patel, 2003). Ashoka, who has since the time of this story took place been educated about mental health, cried as she shared the story of her mother who was shunned by the rest of her village when she began to show symptoms of severe mental illness. She cried as she recounted not only the shame she felt because of the way the



village treated her mother and herself but also because at the time she had thought the rest of the village was justified in doing so. Having since been educated about mental illness and having more knowledge about the issues, she expressed that mental illness is a sickness like any other and is nothing to be ashamed of.

Stigmatized or not, for most community members mental illness was considered an unfortunate reality, but it was not truly an illness. Many women expressed sympathy for mothers who were disappointed in the sex of a baby or were experiencing domestic violence. They did not think that the depressive symptoms reflected poorly upon the woman and understood the situation she was facing. However, they did not feel that the depressive behavior was something that needed the attention of a health professional. Women interviewed expressed that if they were to encounter a woman experiencing these symptoms they would counsel them, provide advice, discourage them from self harm, but never was it suggested that the woman may need to be taken to a health professional of some sort.

This concept has been clearly supported by research done by Patel who found that, “depression typically presents as medically unexplained physical symptoms such as tiredness, aches and pains, dizziness, palpitations, and sleep problems” and that “persons with depression rarely consult mental health professionals and tend to use somatic idioms such as vague aches and pains” (Patel, 2002). As previously mentioned, the presentation of symptoms in this study was found to typically be somatic as is supported by other studies such as the one mentioned above. Given the presentation of symptoms it is logical it would not seem necessary to seek a mental health professional specifically.

## **Conclusion**

Antenatal care is not simply what has been outlined by Western biomedical science. This is of course an irrefutably important element of the care that pregnant women need; however, antenatal and postnatal care that is able to address the whole woman is what is truly essential to preserving the mental health of the women in the villages included in this study. Women made use of Western forms of antenatal care, Ayurvedic forms of care based on mythological, religious texts, social support groups, and traditional magico-religious healers in order to address the broad spectrum of needs that pregnant women in low resources settings have.

This research adds to the growing body of literature that has discussed the important role that antenatal and postnatal care can play in preventing or mitigating the effects of postpartum depression. For women in rural southern India it has been shown that, “postnatal depression (PND) is one of the most common psychopathology and is considered as a serious public health issue because of its devastating effects on mother, family, and infant or the child” (Shivalli, 2015). For this reason it is essential that PND become a priority for a variety of care providers including gynecologists, government nurses, midwives, and lay people. VHWs have proven that they can be effective providers of holistic care; it is without a doubt that training community members to be experts about certain health care issues is feasible, worthwhile, and effective. Health systems throughout India would benefit tremendously by teaching providers to incorporate even basic mental health topics into routine physical care.

In an attempt to be as comprehensive as possible this research touched on a variety of topics that were not able to be fully explored; it is these areas that will be most essential to expand upon through further research. The prevalence and consequences of postnatal depression among adolescent girls must be studied in order to provide this wildly vulnerable population with

all of the appropriate care and support possible. Additionally, it is necessary to further study nonwestern forms of antenatal care. Western medicine is not known for its ability to address the non-biomedical health of patients and given that depression is so variable, social, and environmental, it is necessary to understand how other healing systems may be incorporated to better support the full spectrum of health needs that pregnant women in low resource settings have.

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## Appendix 1

### Interview Questions for VHWs

1. What is your name?
2. How long have you been working as a Village Health Worker?
3. Did you go to school?
  - a. if so, for how long?
4. Have you seen some of the mental health issues covered in your CRHP training in your villages?
  - d. if so, what are some of the major mental health issues you have seen?
  - e. if not, why do you think there are so few cases of mental health issues in your village?
5. In your community what specific mental health challenges do you see in women?
6. Do you think that antenatal care and postnatal care can impact a mother's mental health?
  - j. if yes, how so?
7. What do you talk about with women during antenatal care visits about mental health concerns
8. Are some of the mother's in your community upset if they have a girl child?
  - if so, what advise or support do you give them?
9. What do you know about the impact that domestic violence can have on mental health for mothers?
  - h. do you provide any support for women in these situations?
10. Before and after pregnancy do you see increases in mood swing? trouble sleeping? decreased appetite?
  - i. do you have a name for this?
  - j. how serious do you think this problem is?
  - k. what do you think causes these changes?
  - l. is there a way to prevent or cure these changes?
11. Do many people in your village know much about mental illness?
12. How might a new mother who has depression be seen by her family? the community at large?

## Appendix 2

### Questions for Moms

1. What is your name?
2. Did you go to school?
  - a. for how long?
3. What type of work do you do?
4. How many children do you have? Boys and Girls?
5. Did you receive antenatal care?
  - a. from whom?
  - b. how many visits did you have?
6. Did you receive postnatal care?
  - a. from whom?
  - b. how many visits did you have?
7. Did you have concerns during your pregnancy that prevented you from sleeping at least 7 hours a night? made it hard to concentrate? made you not interested in food?
  - a. after delivery?
8. Were you able to talk to anyone about these concerns? your VHW?
9. Are you part of a women's group or a self help group?
  - a. if yes, what are some things that you enjoy about going to the group?
  - b. was the women's group helpful for you during your pregnancy? after delivery?
10. Do you know other mothers who have seemed sad or acted differently, stopped eating, sleeping, doing work, after having a baby? a girl child?
  - a. if yes, why do you think this is? what is the cause?
  - b. is this a serious problem?
  - c. what do you think about mothers that feel this way?
11. Did your Village Health Worker counsel you about any issues related to the way you felt emotionally and acted during and after your pregnancy?
  - k. if yes, what did you learn from her?
12. Have you heard about these issues from anyone other than your Village Health Worker?
  - l. if yes, what were there opinions