

OBSTETRICIAN-GYNECOLOGISTS' PRACTICES, KNOWLEDGE AND DECISION-MAKING
REGARDING THE DIAGNOSIS OF POSTPARTUM DEPRESSION AND PSYCHOSIS

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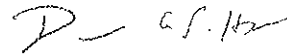
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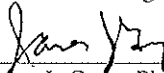
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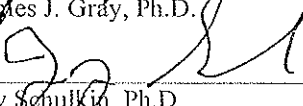
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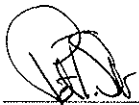
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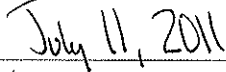
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ABSTRACT

Postpartum depression (PPD) and psychosis (PPP) affects women, infants, and families. Obstetrician-gynecologists (ob-gyns) are often the only medical contact for new mothers, and so can identify women needing psychological care. This study assessed ob-gyns' knowledge, beliefs and practices regarding PPD/PPP screening. Surveys were sent to 400 members of the American College of Obstetricians and Gynecologists.

Response rate was 56%. Routine screening is more common for PPD (72%) than PPP (30%). Personal experience is associated with increased screening. PPP screening barriers are those previously found for PPD: time constraints, training, and knowledge of diagnostic criteria. Ob-gyns agreed more strongly that low prevalence limits screening for PPP than PPD, though those with lower prevalence estimates did not screen less for PPP.

This study is the first to explore ob-gyns' knowledge, beliefs and practice regarding PPD and PPP. Ob-gyns are screening for PPD/PPP, though not universally so. Future research should identify ways to mitigate screening barriers.

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CHAPTER 1

INTRODUCTION

Postpartum psychiatric disorders are particularly critical to identify as they can have a detrimental effect on the mother, infant, and family if left untreated. For example, postpartum depression (PPD) and postpartum psychosis (PPP) have significant impacts on the child, including adverse effect on cognitive (e.g., Seidman, 1998), emotional (e.g., Breznitz & Friedman, 1988), and social (e.g., Seidman, 1998) development, in addition to impaired mother-infant bonding (e.g., Stein et al, 1991). Obstetrician-gynecologists are primary care providers for women over the life cycle and are often the first and most frequent point of medical contact that postpartum women have regarding their own health care. In fact, more than 60 percent of women with low incomes receive health care exclusively from their obstetrician (Miranda et al., 1998). As such, it would be of benefit for obstetricians to be familiar with the diagnosis of PPD, PPP and other mental health issues that may arise in postpartum. Though it depends on the health and condition of each individual, the American College of Obstetricians and Gynecologists (ACOG), the professional society for this medical subspecialty, recommends that new mothers be seen by their obstetrician-gynecologists approximately 4-6 weeks after delivery. The recommendations also note that a visit within 1-2 weeks of delivery may be advisable after a cesarean delivery or pregnancy complication (e.g., those who suffered from severe preeclampsia or hypertension). These recommendations also encourage physicians to

attend to maternal-infant bonding and emotional status, especially in women with complicated births (ACOG and AAP, 2007). These visits can be useful in screening mothers for postpartum psychiatric illness given that visits occurring within 4 weeks of delivery occur within the onset period required for a mental health diagnosis to be considered “postpartum.”

Additionally, the diagnosis of postpartum psychiatric disorders is complicated by the fact that symptoms (e.g., fatigue, sleep disturbances, weight/appetite changes) may be confused with normal physiological changes associated with the postpartum period. Nevertheless, clinicians should be prepared to screen for psychiatric disorders in postpartum women and be aware of valid and reliable assessment tools that exist for diagnosis.

Unfortunately, many obstetrician-gynecologists have had little training in managing patients’ psychosocial issues (ACOG, 1999), which may result in low depression detection rates that have been reported in obstetric and gynecologic settings (e.g., Buekens et al., 1998). Obstetrician-gynecologist residents feel less prepared to counsel patients about depression than residents in Internal Medicine or Family Practice (Park et al., 2005). Additionally, a vast majority (92%) of directors of accredited residency training programs in obstetrics/gynecology view mental health and psychiatry training for residents as minimal or suboptimal (Leigh, Stewart, and Mallios, 2006a). In one study (Leigh, Stewart, and Mallows, 2006b), significantly fewer directors of obstetrics-gynecology residency programs viewed interviewing skills taught by the program as adequate, as compared with directors of internal medicine and family practice residency programs. A majority of obstetrics-gynecology training directors would like

their programs to provide additional training in interviewing techniques, diagnostic interviewing, counseling and psychopharmacology (Leigh, Stewart, and Mallios, 2006b). A lack of training likely reduces the rates of depression screening that obstetrician-gynecologists perform; other physicians (e.g., pediatricians) have identified a lack of training regarding diagnosing mental health conditions as a barrier to the identification of maternal depression (Olson et al., 2002; Wiley et al., 2004). Increased diagnostic training in medical school, residency or via continuing medical education (CME) courses will likely improve the rates of screening and therefore detection of postpartum mental health concerns.

CHAPTER 2

POSTPARTUM PSYCHIATRIC DIAGNOSES

In the DSM-IV, there are no separate categories for postpartum depression or psychosis. A postpartum specifier can be added to a major depressive, manic or mixed episode of Major Depressive Disorder, Bipolar I Disorder, Bipolar II disorder, or to Brief Psychotic Disorder if the onset occurs within four weeks of delivery (APA, 2000). The upcoming DSM-V is likely going to continue to utilize this postpartum specifier, as evidence does not support the idea that postpartum mental health diagnoses are separate nosological entities from non-postpartum mental illnesses. However, it should be noted here that the DSM-V may change the required onset period for one or all of these conditions. For example, recommendations included either (1) maintaining the four week onset specifier for manic and mixed episodes, but extending the period to six months for depressive episodes, or (2) extending the criteria to require onset for manic, depressive, and mixed episodes to within two months of delivery (Jones, 2010).

Postpartum mental health problems fall within three broad categories: postpartum blues, depression and psychosis. Postpartum blues are subclinical and transient feelings of fear, anger, and anxiety that affect between 50% and 80% of mothers (Evins and Theofrastous, 1997). The propensity to develop postpartum blues is unrelated to psychiatric history, environmental stressors, cultural context, breastfeeding, or parity (Hapgood, Elkind and Wright, 1988). However, those factors may influence whether an

episode of the “baby blues” develops into major depression, highlighting the importance of social factors in the etiology of postpartum mental health problems.

While PPD is less common, it is by no means a rare occurrence, affecting between 10% and 20% of American women (Seidman, 1998), or a half million women in the United States annually (Wisner, Parry and Piontek, 2002). Postpartum depression, according to the Diagnostic and Statistic Manual of Mental Disorders, Fourth Edition (APA, 2000), is a major depressive episode that occurs within the 4 weeks subsequent to delivering a child. To receive this diagnosis, one must exhibit five of the following symptoms (one of which must either be depressed mood or decreased interest or pleasure) for every day, or almost every day, for at least two weeks:

- Depressed mood most of the day
- Markedly diminished interest of pleasure in all, or almost all, activities
- Significant weight loss when not dieting or weight gain, or decrease or increase in appetite
- Insomnia or hypersomnia
- Psychomotor agitation or retardation
- Fatigue or loss of energy
- Feelings of worthlessness or inappropriate guilt
- Diminished ability to think or concentrate, or indecisiveness
- Recurrent thoughts of death or suicide ideation without a specific plan, or a suicide attempt or specific plan for committing suicide.

About one-third of major and minor depressive episodes in women are associated with reproduction-related life events (Weissman, Leaf and Tischler, 1988), and postpartum depressive episodes are thought to contribute to the higher rate of mood

disorders among women than men in the United States (e.g. Hobfoll, et al., 1995; Llewellyn, Stowe and Nemeroff, 1997; Warner, et al., 1996). Additionally, women are more likely to experience mild and moderate depressive episodes following childbirth than at any other time (e.g. Cox, Murray & Chapman, 1993; Hopkins, Marcus & Campbell, 1984), making postpartum psychiatric disorders particularly relevant to obstetrician-gynecologists.

One meta-analysis found that the point prevalence estimates for PPD were not significantly different from those for major depressive disorder in similarly aged non-childbearing women (Gaynes, et al, 2005). However, one study (Cox, Murray & Chapman, 1993) directly compared the incidence (i.e. new onset) of PPD to that of non-childbearing women of similar age and revealed that mothers at 5 weeks postpartum were more than three times as likely as the comparison group to have a new episode of major or minor depression.

The most serious and rare of the postpartum mental health issues is postpartum psychosis, which usually requires hospitalization, and affects only about 1-2% of mothers (Kendell, Chalmers and Platz, 1987; Evins and Theofrastous, 1997). As compared with non-postpartum psychotic mood episodes, there is more disorientation and lability in postpartum episodes (Attia, Downey & Oberman, 1999). As compared with non-psychotic depressive episodes, women with postpartum psychosis who harbor thoughts of harming their infants are more likely to act on them (Attia, Downey & Oberman, 1999). The far-reaching and drastic consequences that psychiatric illness in the postpartum period can have on mothers and their families are well documented (see Table 1). For mothers, debilitating symptoms can persist for up to two years (Feinberg, et al., 2006),

and there is an increased risk for recurrent depressive episodes (Philipps and O'Hara, 1991; Kumar and Robson 1984; Wrate, et al., 1985; Stein, et al., 1991; Field, et al., 1985; Cicchetti, et al., 1997; Murray and Cooper, 1997; Beardslee, et al., 1983; Cogill, et al., 1986; Nettelbladt, et al., 1985; Uddenberg and Engleson, 1978) as well as future postpartum depressive episodes (Gotlib, et al., 1989; Evans, et al., 2001).

Table 1. Impact of Postpartum Depression and Psychosis on Mothers and Families

Maternal Consequences	Child Consequences	Family Consequences
Recurrent depression (e.g., Philipps & O'Hara, 1991)	Sleep issues (e.g., Olson et al, 2002)	Marital stress (e.g., Wrate et al., 1985)
Future episodes of PPD (e.g., Evans et al 2001)	Colic (Akman et al, 2006)	Separation/divorce (e.g., Boyce, 1994)
Infanticidal ideation (e.g., Chandra et al., 2002)	Delayed development (e.g., Sharp et al., 1995)	Paternal psychiatric disorder (e.g., Harvey & McGrath, 1988)
Suicidal ideation (e.g., Georgiopoulos et al., 1999)	Temperament difficulties (e.g., Needleman et al., 1991)	Low satisfaction with intimacy (Zelkowitz & Milet, 2001)
Impaired mother-infant bonding (e.g., Stein et al., 1991)	Impaired mother-infant bonding (e.g., Stein et al., 1991)	Negative view of parental role (e.g., Dragonas, Thorpe & Golding, 1992)
Changes in plans for future children (e.g., Peindl et al., 1995)	Behavioral problems (e.g., Beck, 1999)	Problems adjusting to parenthood (e.g., Dragonas, Thorpe & Golding, 1992)
Decreased marital satisfaction (Zelkowitz & Milet, 2001)	School problems (Olson et al., 2002)	Decreased marital satisfaction (Zelkowitz & Milet, 2001)
Dissatisfaction with family functioning (Zelkowitz & Milet, 2001)	Less time spent being read to (e.g., McLennan & Kotelchuck, 2000)	Increased worry about family responsibilities (Zelkowitz & Milet, 2001)
Low confidence in parenting skill and expectation of parenting (e.g., Field, 1998)	At danger due to poorer prevention practices (e.g., Minkovitz et al., 2005)	Less satisfaction with changes in routines and recreation (Zelkowitz & Milet, 2001)

Table 1 Continued

Negative perceptions of infant behavior (e.g., Mayberry & Affonso, 1993)	Impaired attention and emotion regulation (Breznitz & Friedman, 1988)
Unnecessary medical evaluation (LaRocco-Cockburn et al., 2003)	Impaired cognitive functioning (e.g., Seidman, 1998)
Disability (LaRocco-Cockburn et al., 2003)	Insecure attachment (e.g., Hipwell, 2000)
Increased mortality due to suicide or accidents (LaRocco-Cockburn et al., 2003)	Delayed expressive language development (e.g., Cox et al., 1987)
Lower health-related quality of life (e.g., Tam & Chung, 2007)	Future psychiatric illness (e.g., Abbott et al., 2004)
Likely to discontinue breastfeeding (e.g., McLearn et al., 2006)	At risk of neglect/abuse (e.g., Buist, 1998)
Concern regarding intimacy with spouse (LaRocco-Cockburn et al., 2003)	Increased risk for violent behavior (e.g., Hay et al., 2003)
Less gratified by parenthood (Zelkowitz & Milet, 2001)	Atypical brain function (e.g., Dawson et al., 1997)
Feel restricted by parenthood (Zelkowitz & Milet, 2001)	Social deficits (e.g., Seidman, 1998)

Given the wide range of consequences that occur for mothers and their families, the detection of postpartum depressive and psychotic episodes is important. Because obstetrician-gynecologists are frequently the first and most frequent point of contact for postpartum maternal health care, obstetrician-gynecologists are in a unique position to protect and improve the health and functioning of entire families.

CHAPTER 3

ASSESSMENT OF POSTPARTUM DEPRESSION AND PSYCHOSIS

Unrecognized psychiatric illness can be especially serious, causing unnecessary medical evaluation, disability, medical illness and increased mortality due to suicide or accidents (e.g. Fawcett 1993; Wells et al, 1989). As such, early and accurate detection is a necessity. Fortunately, one study (Forsythe, Kotelchuck and Declercq, 2007) found that 60% of women reported having been screened for depression at their postpartum visit, though this study did not determine how these patients were assessed (i.e. via verbal discussion of symptoms or validated questionnaire).

A number of studies have shown that the use of valid depression screening methods leads to increased recognition of depression (Rucker, Frye and Cygan, 1986; Iliffe et al., 1994; Gold and Baraff, 1989; Zung, 1990; Georgiopoulos, et al., 2001). There are several screening tools for PPD available to the obstetrician-gynecologist, including the Postpartum Depression Screening Scale (PDSS; Beck and Gable, 2000), the Postpartum Depression Checklist (PDC; Beck, 1995), and Edinburgh Postnatal Depressive Scale (EPDS; Cox, Holden and Sagovsky, 1987). The latter is possibly the most commonly cited assessment of PPD as it is brief, and accounts for the overlap between depressive symptoms and the natural changes of the postpartum period (e.g. sleep disturbances, weight loss). The EPDS is a 10-item self report questionnaire that asks women to respond based on how they have felt in the previous seven days.

Despite the existence of valid and reliable assessment tools, most obstetrician-gynecologists rely on clinical judgment to identify psychiatric disorders, relying on the woman looking depressed or volunteering information that they are experiencing psychiatric symptoms, as opposed to implementing routine inquiry or questionnaires. Previous findings have suggested that health care practitioners do not accurately identify depressive symptoms without the assistance of a valid, structured screening tool (Klinkman, et al., 1998; Rost, et al., 1998; Evins, Theofrastous and Galvin, 2000; U.S. Preventive Services Task Force, 2002), which is disconcerting because physicians frequently make diagnostic decisions based on evidence provided by imperfect indicators (e.g. relying on patients to spontaneously report the occurrence of symptoms). Relying on women to self-identify and report their symptoms is difficult given that depressed women often do not recognize their symptoms as depression (Whitton, Warner & Appleby, 1996).

One study (Williams et al, 1999) showed that obstetrician-gynecologists' recognition of a depressive disorder was almost always prompted by patient characteristics; 95% relied on the patient looking depressed, only 4% routinely asked about depression symptoms and 1% based diagnosis on screening questionnaire results. The reliance on unstructured, non-validated methods may result in cases of postpartum psychiatric disorders being overlooked. The obstetrician's office has been the primary arena for detection of postpartum depressive episodes, but it is poorly detected in this setting (Pop, et al., 1993; Chaudron, et al., 2001). Unstructured methods have been shown to detect only the most severe and chronic patients, even when done by a psychologist (Klinkman, Schwenk and Coyne, 1997).

Failing to routinely perform assessments and reliance on unstructured screening and diagnostic methods may lead to the use of heuristics, or “rules of thumb,” that provide a crude estimate when a valid and reliable tool is not available (Croskerry, 2002). Unfortunately, though this method is efficient, it is less precise, and can result in inaccurate diagnoses. Heuristics are problem-solving short cuts, which, for the majority of cases, work economically and accurately. When they fail, however, heuristics lead to errors due to cognitive biases (Croskerry, 2002; Tversky & Kahneman, 1974; Baron, 1988/2008). One specific bias, the availability heuristic will be discussed in Chapter 5.

The reliance on heuristics is increased when physicians are under time pressure, cognitive load, and when resources are limited (Groopman, 2007). Cognitive load can be increased when the physician is tired, treating a lot of patients, or managing complicated cases (Croskerry, 2002; Groopman, 2007). The reliance on heuristics has been shown to be reduced through the use of clinical decision rules or algorithms, as well as other aids that reduce uncertainty and cognitive load. Thus, access to and use of valid assessment tools can reduce the reliance on heuristics and will likely reduce diagnostic errors.

Some have estimated that about 50% of maternal PPD cases go undetected (Gale and Harlow, 2003), though one community survey found that 80% of depressive reactions following childbirth are undetected (Menos and Wilson, 1998). Spitzer and colleagues (2000) found that approximately 20% of 3,000 obstetric and gynecology patients met criteria for psychiatric diagnoses, though 77% of these women were not recognized by the obstetrician-gynecologist. Another study found that a substantial proportion (29.8%) of patients reported psychiatric symptomatology and significant levels of functional impairment that had not been recognized as depressed by their

obstetrician-gynecologist (Birndorf, et al., 2001); unfortunately this study did not address the possibility of false positives. Another study (Ferguson, Jamieson & Lindsay, 2002) of women at high risk for postpartum depression (i.e. poor social support, lack of financial and social resources), where a high prevalence of postpartum disorders would be expected, found that obstetrician-gynecologists using clinical evaluation identified no patient as depressed; however, in the same high-risk population, a cutoff score of 10 on the EPDS identified 30% of women as being depressed, a rate much higher than the 0% reported by clinical judgment. The findings indicate that the use of validated assessment tools, such as the EPDS, as opposed to clinical judgment, can improve the accurate detection of postpartum depression and reduce the amount of cases overlooked by obstetrician-gynecologists.

Despite patient reports of having been assessed for depression at a postnatal visit, postpartum women suffering from psychiatric disturbances are likely under-detected by obstetrician-gynecologists. This can be due to the reliance on unstructured assessments, the use of inappropriate assessments, or the overlap of symptoms in PPD and the normal postpartum period. These issues can impact physicians' willingness and/or ability to screen for postpartum mental health problems, which raises concern because it has been found that if unidentified, and subsequently untreated, postpartum mental health disorders tend to recur after subsequent pregnancies (Robling, et al., 2000), and can have profound impacts on the child, spouse, and other important relationships (See Table 1).

CHAPTER 4

BARRIERS TO SCREENING

Despite the availability of effective screening tools, postpartum depression remains highly underdiagnosed and undertreated in the United States (e.g. Cox, Holden, Sagovsky, 1987; Boyd, Le, Somberg, 2005; Georgiopoulos et al, 2001). Therefore, it is important to discuss what factors are inhibiting routine screening behavior. This chapter will discuss several factors that have been identified as possible barriers to depression screening: time constraints and competing demands, lack of knowledge about resources, lack of training to treat depression, uncertainty that screening improves outcome, and lack of personal experience with either PPD or PPP.

There are a variety of barriers preventing obstetrician-gynecologists from assessing their patients for all postpartum psychiatric illness, though much of the research revolves around screening for and diagnosing PPD. Despite the fact that obstetrician-gynecologists recognize depression as a serious health issue and feel responsible for its diagnosis, they are limited by deterrents, such as time constraints (Chaudron et al, 2007; LaRocco-Cockburn et al, 2003), lack of knowledge about resources (Chaudron et al, 2007), lack of training to treat depression (LaRocco-Cockburn et al, 2003) and uncertainty that screening improves outcomes (LaRocco-Cockburn et al, 2003).

Primary care physicians, including obstetrician-gynecologists, have a wide array of issues about which to be concerned. Clinical encounters present numerous demands

that compete (i.e., “competing demands”) for the attention of the doctor, and these demands increase with more complex patients (e.g. those with co-morbid diagnoses, or chronic illnesses) and there is not enough time to address each demand. Within a single visit, physicians address acute symptoms, monitor chronic illness, assess emotional and mental health, provide preventive services and counseling, provide prescriptions and referrals, as well as the diverse administrative aspects of patient care (Williams, 1998), all of which occurs in the average primary care appointment time of 10 (Yawn et al, 2003) to 18 minutes (Mechanic, McAlpine and Rosenthal, 2001). Thus, prioritization plays a key role in the day to day care of patients; if a physician has a complicated patient other issues may take precedence in the limited time of a patient visit. The screening for postpartum mental health issues then represents an active choice from multiple clinician and patient priorities such as treatment of acute illness, provision of preventive services, and response to patient requests. This is supported by previous findings (LaRocco-Cockburn et al., 2003) that 73% of obstetrician-gynecologists believe time constraints and competing demands will interfere with the ability to screen all patients for depression. About half (47%) agreed that depression screening in all patients would take too much time away from the appointment (LaRocco-Cockburn et al., 2003).

One observational study (Tai-Seale & McGuire, 2006) of primary care providers revealed that an average of 6.5 topics were covered in an average 17.4 minute clinical encounter, limiting the depth with which each topic can be discussed. This same study also showed that patient and physician each spoke for less than one minute per topic, of which only 4% were mental health concerns. Another interesting result from this study regarding time constraints was the finding that topics raised later in the session were

given less time for discussion, which the authors argue is due to the opportunity costs of physician time being higher as the session lengthens (Taie-Seale and McGuire, 2006). For example, longer sessions means the physician must see fewer patients, stay later, cut back on his documentation or sacrifice his time to recharge, eat or use the restroom between appointments. Thus, time constraints and the resulting competing demands are key barriers to screening for psychological concerns, including postpartum psychiatric illness.

As mentioned above, a lack of training may also deter physicians from screening for postpartum mental health problems. In a large survey study of obstetrician-gynecologists, Schmidt and colleagues (1997) showed that a majority of respondents neither received residency training (80%) nor completed a continuing medical education course (60%) on the treatment of clinical depression in women. Approximately 50% of obstetrician-gynecologists cited incomplete knowledge of diagnostic criteria as a barrier to identification of depression (Williams et al., 1999), and another study (LaRocco-Cockburn et al, 2003) found that 45% of obstetrician-gynecologists felt they did not have appropriate training to treat depression. Being unsure of what to do after identifying patients with mental health concerns (i.e. both lack of training and lack of knowledge of treatment options or resources) prevents physicians from screening for postpartum psychiatric illness. Further evidence that a lack of training results in diminished screening rates comes from a study of family physicians (Seehusen et al, 2005). This study showed that receiving training about PPD in residency and through medical literature were both associated with increased screening rates during postpartum gynecologic visits. Thus, it seems important that obstetrician-gynecologists be educated about postpartum mental

health in general, as well as screening and diagnosis for specific diagnoses. As such, this research will assess obstetrician-gynecologists' opinions about their training and preparation to handle these responsibilities.

An issue unique to postpartum mental health issues is that many of the symptoms of postpartum psychiatric issues mirror the normal physiological changes that occur within the immediate postpartum period. These overlapping symptoms include weight changes, changes in appetite, sleep disturbances, fatigue or loss of energy (which could also lead to loss of interest in activities, or perceived psychomotor retardation), and a diminished ability to think or concentrate. As a result, physicians may interpret these presenting problems as normal adjustment to motherhood and neglect to screen for postpartum psychiatric conditions.

One final potential reason for the lack of identification of postpartum mental health problems may be a lack of personal experience with either PPD or PPP. Morgan and Schulkin (2006) found that obstetrician-gynecologists who have had loved ones suffer from non-postpartum depressive episodes were more likely to screen patients for depression. Similarly, Coleman and colleagues (2007) found that having a friend who has been diagnosed with an anxiety disorder significantly increased the likelihood that obstetrician-gynecologists would screen for such conditions in patients, as well as their level of interest in doing so. Hill (2003) also found that those with personal experience with premenstrual dysphoric disorder (PMDD) were more likely to endorse attitudes indicating they are responsible for the diagnosis and treatment of this disorder, more accurate in diagnosing PMDD than major depression, and were more skeptical of the

effectiveness of antidepressants. As such, personal experience may influence the likelihood that a physician will screen for these postpartum mental health concerns. Increased training, knowledge and personal experience regarding postpartum psychiatric illness are all associated with increased screening and identification of depression. One possible reason for this is that these three factors keep the construct of postpartum mental illness available in one's mind; therefore, when a patient comes in presenting with a certain set of symptoms, the possible diagnosis of PPD or PPP will come to the forefront of the physician's mind. Having these potential diagnoses available in one's cognition will lead to a cognitive disposition to respond in some certain way; most likely, it will lead the physician to respond by further assessing the emotional and psychological state of the patient.

CHAPTER 5

COGNITIVE FACTORS IN DIAGNOSTIC DECISION-MAKING

In diagnosing patients, a series of complex decisions are required. First, symptoms must be determined to exist, and their severity must be assessed. They must be found to meet pre-existing criteria, and other diagnoses must be ruled out. After a diagnosis is made, the clinician must then choose the most appropriate course of action, and then later decide whether or not the treatment is working or if alterations are necessary. Therefore, it is important to consider some of the biases that may influence physician decisions.

One bias that is particularly relevant is the availability heuristic, which affects the prevalence estimates and probabilities physicians use to determine the presence or absence of disorder. Accurate estimates of probability are important because subsequent diagnosis and treatment are affected. The availability heuristic has been demonstrated by social cognition research that has shown that availability of constructs within one's mind is a factor in decision-making (Higgins, 1996; Wyer & Srull, 1989). The availability heuristic is a phenomenon that occurs when probability and prevalence estimates are influenced by how easily one can recall a similar event (Tversky & Kahneman, 1974). For example, people often wrongly estimate that there are more English words that begin with the letter "r" than that have "r" as the third letter, which is due to the availability heuristic (i.e., because words beginning with "r" come to mind more easily; Tversky and Kahneman (1973)).

Poses and Anthony (1991) demonstrated the effect of the availability heuristic on diagnostic probability estimates in patients with possible bacteremia. Physicians reported the number of patients they could recall who had positive blood cultures in the past month. Those who reported a greater number of patients having had bacteremia in the past had higher estimates that a new patient had the same disorder. Additionally, only two of five patients for whom they had estimated a 1.0 probability actually had bacteremia.

Based on the findings that probability and prevalence estimates are significantly higher in those who have a readily available memory of an example, it is important to determine what characteristics increase the availability of constructs in a physician's mind. It is likely that those with more recent cases will estimate higher prevalence rates, as will physicians who have more salient cases.

As previously mentioned, three aspects of medical practice that may influence the availability of a construct (and therefore the frequency or accuracy of diagnosis) are training, knowledge and personal experience. For example, personal experience is likely associated with increased availability; availability is influenced by the degree to which information is emotionally compelling and vivid (Peters et al, 2006). Tanenbaum (1994) performed a study that exposed physicians to outcomes research and medical literature, but found that doctors continued to rely on personal experience despite being presented with contrary data. Similarly, personal experience has been associated with increased screening rates for a variety of conditions (e.g. depression (Morgan and Schulkin, 2003), domestic violence (Horan et al, 1998), anxiety (Coleman, 2008)).

Further support for the association between experience, training, knowledge and availability is provided by the theoretical model proposed by Schmidt and colleagues

(1990). They hypothesize that physicians' knowledge of medical problems is contained in "illness scripts." They theorize that these scripts are based on education, acquired medical knowledge, as well as past experience, especially recent experience. The scripts are based on associative networks, which are strengthened through medical education and training. As the physician gains more experience and training, the scripts become stronger networks that explain symptom presentations that belong to certain diagnostic categories. Thus, the pattern recognition necessary to diagnosis will result in the activation of a network, or illness script. Thus, a reasonable assumption is that those with more training, education and personal experience with certain diagnoses will likely have stronger networks to be activated during a patient encounter, increasing the availability of those diagnoses.

Research has shown that more frequent and more recent events are particularly "available" in one's memory (Wyer & Srull, 1989), and may influence prevalence estimates. This study is, to our knowledge, the first to evaluate the availability heuristic's impact on prevalence estimates regarding postpartum depression and psychosis; we will determine if greater estimates of the number of recent cases (i.e. within the past 6 months) or frequent cases (i.e. over the course of their careers), are associated with greater prevalence estimates for each disorder.

CHAPTER 6

PHYSICIAN DEMOGRAPHIC FACTORS

Several studies indicate that physician factors are strongly associated with mental health diagnosis (e.g. Main et al., 1993; Callahan et al., 1996; Glied, 1998). Variables that are unique to the physician may impact the way in which postpartum psychiatric disorders are assessed and diagnosed. Several physician variables have been identified as having an effect on other aspects of obstetric and gynecologic practice, and it is of interest to determine their role in postpartum psychiatric care. These variables were investigated in order to identify any differences between groups.

Age

Physicians' ages and number of years in practice are typically correlated, with older physicians having more years in practice. These two variables have been shown to influence physicians' treatment of clinical issues (e.g. Hill et al., 2001; Hailey, et al., 1988), which may be due to several factors; physicians with more recent residencies may have been exposed to current techniques and up-to-date empirically-based assessments or treatments, or may also have benefited from the more recent view that obstetrician-gynecologists are responsible for primary care issues (e.g. Scholle and Kelleher, 2003). However, older physicians may have more clinical experience or specialization. Additionally, older or more experienced physicians may have greater amounts of

personal experience with certain disorders, which results in increased interest and/or knowledge in certain topics. As mentioned above, one recent study (Morgan and Schulkin, 2006) showed that personal experience leads to increased non-postpartum depression screening by obstetrician-gynecologists.

Whenever age groups are compared in the study reported below, gender will be controlled for, and vice versa. This will be done because gender and age are confounded when studying obstetrician-gynecologists; research has demonstrated that more women have been entering the workforce, and so, younger cohorts have a greater proportion of women (e.g. Anderson et al., 2008).

Gender

Physician gender can also influence clinical practice with regards to mental health care. For example, female doctors are more likely than males to discuss psychosocial issues with patients and focus on patients' affect and emotions (Roter and Hall, 1998), as well as ask more questions about psychological concerns (Hall et al., 1994), and prescribe antidepressant medication (Williams et al., 1999). These findings highlight the possibility that female respondents in this study may have different clinical practices regarding postpartum mental health.

Physician Race

It has been demonstrated that minority physicians are more likely to care for patients from underserved and minority populations (e.g. Moy & Bartman, 1995; Komaromy et al, 1996; Saha and Shipman, 2008; Xu et al, 1997), as well as patients from lower socioeconomic statuses (Saha and Shipman, 2008), which was discussed above as a

risk factor for postpartum mental health problems. Obstetrician-gynecologist residents from minority ethnic groups have also been shown to be more likely than whites to have a mentor and to report that their mentors provide helpful advice, which has been linked to greater success in professional development (Coleman, et al, 2005); this may also have an impact on knowledge, attitudes and clinical practice.

Further, African American physicians have been found to endure “racial fatigue” (Nunez-Smith, et al, 2007), which is the emotional and psychological sequelae of feeling isolated in an environment in which race regularly influences behavior, but is consistently ignored. Racial fatigue can result in professional dissatisfaction, changes in residency programs, specialties, geographic location, practices, hospitals, academic institutions, and career paths in search of more supportive work environments, all of which may influence physician practice. Similarly, Dyrbye et al, (2006) found that minority medical students in the US had lower sense of accomplishment, and low quality of life scores than non-minority medical students. Further, racial differences among physicians have also been demonstrated in preferences for end-of-life treatment and decision-making (Mebane et al., 1999).

Given that racial differences have been found to influence clinical practices in one medical area, and that minority doctors are serving patients at risk for PPD/PPP, it is possible that physicians from differing racial/ethnic backgrounds may have different preferences for mental health practice and decision-making, and so may assess and diagnose mental health disorders differently. A literature review did not reveal any direct study of this possibility; however, given that physicians of varying racial backgrounds have been shown to have different decision-making patterns in some areas (i.e. end-of-

life treatment), race/ethnicity was assessed to determine any differences that may arise with regard to psychiatric assessment.

Primary Care Provider vs. Specialist

As mentioned, obstetrician-gynecologists play a unique role that requires bridging both primary and specialty practice. Recently, there has been increased recognition of obstetrician-gynecologists as primary care providers (e.g. Scholle and Kelleher, 2003). However, not all physicians agree with their appropriate or preferred role (e.g. Scroggs et al., 1997), which can influence patient care. It has been shown that physicians who identify as a primary care provider are more likely than specialists to diagnose depression (Schmidt et al., 1997). As such, it is necessary to determine whether or not this self-identification impacts the assessment and diagnosis of postpartum psychiatric issues.

Early, Late, and Non-Respondents

It is inevitable that some physicians will respond earlier than others to research surveys, and there are possibly differences between respondents and non-respondents, resulting in response bias, and an unrepresentative sample. It has been unclear how response patterns are affected by physician variables. A study of response bias in physicians by Guadagnoli and Cunningham (1989) showed that physicians who had graduated from U.S. medical school and were more recently licensed were more likely to return questionnaires early on, but they did not differ on other demographic variables (e.g., gender). One study of teachers (Green, 1991) found that late responders had less positive attitudes regarding the survey topic, and less positive views of their own capabilities regarding the survey topic. However, contrary to these reports, Tambor and

colleagues (1993) determined that late responders did not differ on the principal outcome variable or knowledge of the topic, except on one subscore. However, they did find that later respondents helped to increase the representativeness of demographic and practice variables. In a review of the literature, Kellerman and Herold (2001) conclude that response bias may be less of a concern in physician surveys than in non-physician surveys because surveys of the general public regularly find demographic differences between early and late responders, whereas this is not true of physician surveys. They explain that this may be because doctors are more homogeneous regarding knowledge, training, attitudes, and behavior than the general population, and that differences among physicians may not be as strongly associated with willingness to respond or survey content as in the general population. They also support their conclusion with the finding that there are minimal differences in response rates between interviewer-administered and self-administered surveys. They state that most physicians are used to making quick and independent decisions and so one's decision to participate may not be influenced by an interviewer.

Considering that it is unclear how early, late and non-respondents may differ, but that they may differ in their views of their knowledge and confidence regarding a topic, or how relevant they feel a topic is to their practice, we investigated this variable for each hypothesis. This approach would also help to identify the effects of nonresponse; late-responders serve as a model for non-respondents. As such, differences between early- and late-responders provide an indication of the magnitude of the nonresponse bias. For example, if later responders are less knowledgeable, or have different clinical practice

patterns than early responders, it would highlight the possibility that non-responders may even more greatly differ from the responding sample.

Practice Location

Another physician variable that may influence screening practices is the physician's practice location. Paykel and colleagues (2003) found that urban subjects had higher rates of mental health conditions than their rural counterparts, including alcohol and drug dependence, though these differences were the result of urban subjects being from social groups with more adverse and stressful living situations.

This is not to say that rural mental health is not a problem; in fact, one study (Hauenstein and Peddada, 2007) estimated that 44% of rural impoverished women using community health centers have major depression. However, resources have historically been concentrated in urban areas, and there is limited availability, accessibility and acceptability of mental health care in rural areas. This problem is further compounded by the fact that with decreasing populations and eroding economic bases in many rural areas, funding for public mental health care has suffered (Sawyer, Gale and Lambert, 2006).

Though some studies (e.g. Parikh et al., 1996; Mainous & Kohrs, 1995) have failed to find differences in mental health status between rural and urban participants, it has been suggested there may be environmental and/or cultural factors that are unique to towns, regions, or local economies that affect both health behavior and health outcomes (Hartley, 2004). Given this possibility, this study inquired about practice location and assessed its impact on clinical practice regarding postpartum psychiatric issues.

CHAPTER 7

RESEARCH RATIONALE

The aim of this study was to determine the knowledge, practices and attitudes of obstetrician-gynecologists with regards to the screening, and diagnosis of postpartum depression and psychosis. Additionally, this research sought to understand the decision making strategies utilized by obstetrician-gynecologists, errors made, and potential barriers to screening that may lead to underdiagnosis of postpartum psychiatric disorders.

This is one of the first studies of obstetrician-gynecologists' screening of PPP. Given that much of the extant literature focuses on PPD, this study extends the literature to a less common clinical presentation, PPP. Our hypotheses were as follows:

1. We expected that personal experience (i.e. self, family, friends) with PPD or PPP would be associated with an increased likelihood of screening.
2. We hypothesized that, similar to the findings of Williams and colleagues (1999) regarding non-postpartum depression, few (less than 25%) obstetrician-gynecologists have implemented routine screening for PPD or PPP.
3. We hypothesized that the barriers to screening for PPP would be similar to those that have been discussed previously in the PPD and general depression literature:
 - 3a. time constraints
 - 3b. self-identified lack of training
 - 3c. lack of knowledge

4. Specifically for PPP, we expect that the low prevalence of PPP would be cited as a deterrent from screening for this disorder.
5. Additionally, we hypothesized that physicians who provided lower estimates of PPP prevalence would be less likely to screen for PPP in patients, a further indication that rarity influences screening practices.
6. We also hypothesized that obstetrician-gynecologists underdiagnose PPD and PPP in the patient vignettes.
7. We hypothesized that physicians would demonstrate the availability heuristic:
 - 7a. Recency Effects: It was hypothesized that obstetrician-gynecologists with more recent experiences (within the past six months) with patients suffering from postpartum psychiatric disorders would have significantly higher prevalence estimates of these disorders than respondents with fewer recent experiences.
 - 7b. Frequency Effects: It was hypothesized that respondents with a greater number of experiences ever with patients with postpartum psychiatric disorders would have significantly higher prevalence estimates of these disorders than respondents with less frequent experience.

As mentioned above, the effects of a variety of physician factors will be assessed in the context of each hypothesis to determine whether clinician variables influence screening and diagnosis of postpartum psychiatric disorders. These six physician factors are age, gender, physician race, primary care status, early vs. late responders, and practice location. Again, when age is investigated, gender will be controlled for, and vice versa, given that younger physicians are more likely to be women (Anderson et al., 2008).

CHAPTER 8

METHODS

Participants

Participants were 400 ACOG Fellows and Junior Fellows. ACOG Fellows have completed their medical training and are board certified; Junior Fellows have completed training, but are not yet board certified.

Recipients were randomly sampled from 1,305 members of the Collaborative Ambulatory Research Network, ACOG Fellows and Junior Fellows who have volunteered to participate in survey research. CARN membership matches ACOG membership on all demographic variables. CARN response rates typically range from 60-80% (Coleman, et al., 2004).

The purpose, risks, and benefits of the study were outlined in an accompanying cover letter (see Appendix A). Return of the completed questionnaire indicated consent to participate in the study. Participation was voluntary, with no compensation offered.

Measures

Participants were administered a questionnaire on postpartum depression and psychosis, which was approved by the Institutional Review Board of American University. The survey clearly stated that it is to be completed by a physician, not any office personnel or assistants. Respondents were not provided with information on

diagnostic criteria, and were instructed not to look up any information in order to gauge physician knowledge, as opposed to research skills. The questionnaire was constructed to be completed in approximately 20 minutes. The survey was divided into the following sections: clinical practice (see Appendix B), case vignettes (see Appendix C), knowledge (see Appendix D), attitudes (see Appendix E), and demographic information (see Appendix F).

Four clinical case vignettes assessed diagnostic accuracy (Appendix C). These four vignettes were developed utilizing the DSM-IV-TR (APA, 2000). Two of the vignettes were “positive” descriptive case scenarios in which sufficient data is contained which meet DSM-IV diagnostic criteria for a postpartum specifier; specifically, one was PPD (Appendix C, item 3) and one was PPP (Appendix C, item 2). The remaining two vignettes were “negative” descriptive case scenarios in which symptoms of depression and/or psychosis were present, but did not qualify for the diagnosis of PPD or PPP (Appendix C, items 1 and 4). Specifically, the negative vignettes reflected onset after the required time period and symptoms that fit under another diagnosis.

Demographic questions included year of birth, number of years in practice, gender, practice structure and location, physician race, the racial distribution of active patient population, self-identification as primary care provider or specialist, and personal experience with postpartum mental illness (Appendix F).

Procedure

Pilot-testing of the vignettes was conducted in August 2009. Questionnaires were sent to a sample of 20 obstetrician-gynecologists at Georgetown University Department

of Obstetrics and Gynecologists. Their comments and feedback were used to clarify the questions and vignettes.

A cover letter and survey were sent via postage mail on September 4, 2009 (see Appendix A). Three weeks later, September 25, 2009, a reminder letter and survey was mailed to non-respondents. A second reminder was mailed on October 23, 2009, and the final reminder was sent out three weeks later, on November 13, 2009 (see Appendix G).

Each participant was assigned a unique identification number, which was used for tracking respondents anonymously and to guarantee that each participant only responded once. The key for the identification numbers and names was kept on a locked server and destroyed after the data were analyzed.

Data Analysis

Data were analyzed using a statistical software package, SPSS 16.0 (SPSS Inc., Chicago, IL). Findings were reported as significant at $p < .05$. We explored the possibility that groups differ by certain demographic variables (e.g. race/ethnicity of patients or physician, practice location). Additionally, all analyses accounted for age and gender, given that age/recency of training (e.g. Hill et al., 2001; Hailey et al., 1988) and gender (e.g. Roter and Hall, 1998; Hall et al, 1994; Williams et al., 1999) have been found to be associated with differential clinical practice, particularly regarding psychological symptoms. To control for age, physicians were divided into younger and older groups; the median birth year was calculated (1959.50) and physicians who were born 1960 and later were placed into the younger age group. Physicians born in 1959 and earlier were sorted into the older age group.

CHAPTER 9

RESULTS

Surveys received by December 13, 2009 were included in analysis. The response rate was 56%, with 223 physicians responding. Respondents and non-respondents did not differ in gender ($\chi^2 (1) = .50, p = .48$); among non-respondents, 85 (48%) were female and 92 (52%) were male, and among respondents 115 (52%) were female and 108 were male (48%). Respondents and non-respondents did not differ in the ACOG District in which they practice ($\chi^2 (9) = 5.9, p = .75$; see Table 2).

Table 2. Percent of Responders and Non-responders from Each ACOG District

ACOG District	Responders (%)	Non-Responders (%)
I	17	21
II	13	10
III	14	8
IV	49	34
V	20	14
VI	28	15
VII	21	20
VIII	24	20
IX	20	16
X	17	19

Appendix H depicts a map that depicts the ten geographic districts of ACOG. Finally, respondents and non-respondents did not differ in their age group ($\chi^2 (1) = 2.63, p = .11$). Of those who responded, 47 had either retired or did not treat postpartum women (i.e., gynecologic care only). The remaining 176 who were currently practicing and treating

Postpartum patients comprised the final sample used for analysis. Responding physicians had a mean age of 49.95 years (SD = 9.56 years), and an average of 18.02 years (SD = 9.41 years) of post-residency practice. Respondents were from 40 states and Guam.

Regions not represented include: Alaska, Arkansas, District of Columbia, Idaho, Montana, Nevada, New Mexico, Rhode Island, South Dakota, Vermont, and Wyoming.

Table 3 depicts additional demographic variables for this sample.

Table 3. Demographics of Physicians who are in Practice and see Postpartum Patients

Demographic Variables	Percent (%)
<u>Gender</u>	
Male	46
Female	54
<u>Ethnicity</u>	
Non-Hispanic/Latino	96
Hispanic/Latino	4
<u>Race</u>	
Caucasian	85
African American	7
Asian	7
<u>Practice Structure</u>	
Ob/Gyn Partnership or Group	56
Solo Private Practice	17
Multi-Specialty Group	11
University Full-Time	8
Other (e.g., Community Hospital)	3
HMO Staff Model	2
<u>Location</u>	
Urban – Non-Inner City	41
Rural	17
Military	16
Urban – Inner City	15
Suburban	8
Mid-Sized Town	6
<u>Consider Self</u>	
Both Primary Care and Specialist	52
Mostly Specialist	46
Mostly Primary Care	1

Only about one-third (34%) had taken a CME course on postpartum mental health; those who view themselves as primary care providers and specialists were more likely to have completed such a course, as compared to those who only see themselves as specialists ($\chi^2(1) = 4.54, p = .03$). Those physicians who had completed this sort of training indicated that they screen more frequently for PPP ($t(172) = 2.08, p = .04$), were less likely to rely on clinical judgment for diagnosis ($\chi^2(1) = 5.82, p < .02$), more likely to routinely use validated assessments ($\chi^2(2) = 6.13, p < .05$) and more likely to routinely ask about depressive and psychotic symptoms ($\chi^2(1) = 3.87, p < .05$). Physicians who had taken a postpartum mental health CME course also agreed less strongly that a lack of training (PPD: $t(171) = -2.86, p = .005$; PPP: $t(172) = -4.29, p < .001$), low knowledge of diagnostic criteria (PPD: $t(174) = -3.27, p = .001$; PPP: $t(173) = -3.16, p < .001$) inhibited their screening practices. There were no differences between those who had and had not taken a CME in regards to their agreement with being limited by time constraints (PPD: $t(174) = -0.87, p = .38$; PPP: $t(173) = -.56, p = 0.57$).

Hypothesis #1: Personal Experience (i.e., Self,
Family, Friends) with PPD or PPP Will be
Associated With and Increased
Likelihood of Screening

It was hypothesized that those who have personal experience (i.e., through a diagnosis of self, friend or family member) with a postpartum psychiatric illness would screen for these conditions more frequently. About 26% of our respondents indicated they had personal experience with PPD, and 3% reported personal experience with PPP.

As hypothesized, those who had personal experience with postpartum psychiatric disorders reported screening more frequently for them in their postpartum patients.

Those who reported having personal PPD experience had a median rank of 1, corresponding to always screening for this condition, compared to those without personal experience, who had a median rank of 2, indicating that they often screen for PPD (M-W $U = 2184.0$, $p = .005$). The same was true of PPP screening; those with personal experience reported a median rank of 1.5, roughly corresponding to often screening, compared with those without personal PPP experience, who screen for this condition occasionally (median rank of 3) (M-W $U = 266.0$, $p = .04$).

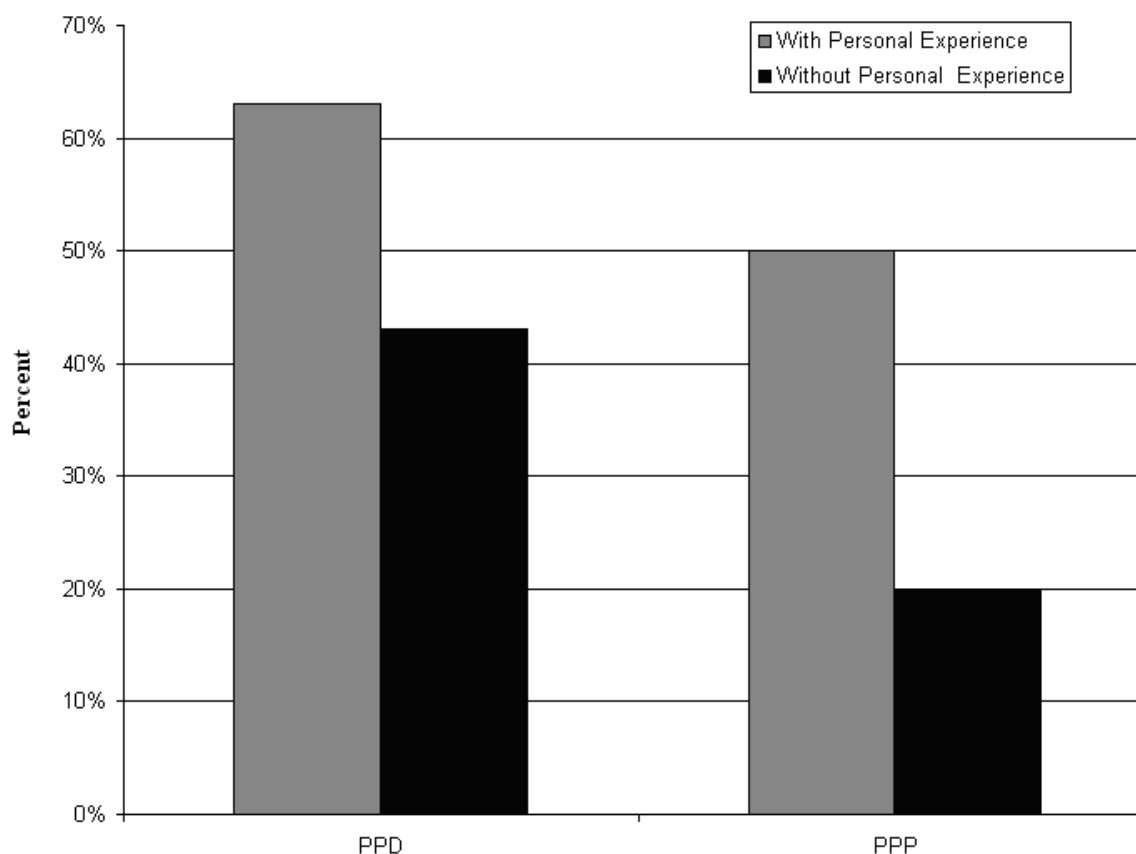


Figure 1. Percent of ob-gyns who always screen for PPD and PPP by personal experience

Women were more likely to report that they had personal experience (through self, friend, or family member) with PPD. Over one-third (35.8%) of female respondents

reported having personal experience with PPD, whereas only 14.8% of men reported this ($\chi^2 (1) = 9.96, p = .002$). There were no other demographic differences between those who did and did not report having had personal experience with PPD/PPP.

To assess for differences between physician variables, the data file was split based on each demographic factor, and the analysis was run. To determine whether the findings for the overall sample were specific to one demographic group, we split the full sample into subgroups defined by age, gender, race, primary care status (i.e. self-identification as primary care physician and specialist vs. only a specialist), practice location, and early vs. late response (response to first or second mailing vs. response to third or fourth mailing) and repeated the analyses in each subgroup. In every subgroup, these analyses paralleled the main analysis of the full sample; that is, those with personal experience screen for these disorders more frequently. For example, when running separate analyses for those who consider themselves a specialist and those who view themselves as both primary care and specialist, those with personal experience with PPD were still more likely to screen patients for this condition (Specialist: M-W $U = 428.0, p = .04$; Primary Care and Specialist: M-W $U = 634.0, p = .02$). As expected, personal experience with PPD/PPP is associated with increased frequency of screening for these conditions in patients.

Hypothesis #2: Few (less than 25%) Obstetrician-Gynecologists Have Implemented Routine Screening for PPD or PPP

Our second hypothesis was that less than one-quarter of our sample would routinely (i.e. always or often) screen new mothers for postpartum mental health conditions. A majority always (49%) or often (23%) assess (i.e. someone in office asks

patient about symptoms or patient completes questionnaire) patients for PPD (see Figure 2). With regards to PPP, 21% and 9% always or often screen for this disorder, respectively (see Figure 2). Of those who reported that they always or often screen for PPD, 46% reported using validated questionnaires to assess for postpartum mental health conditions.

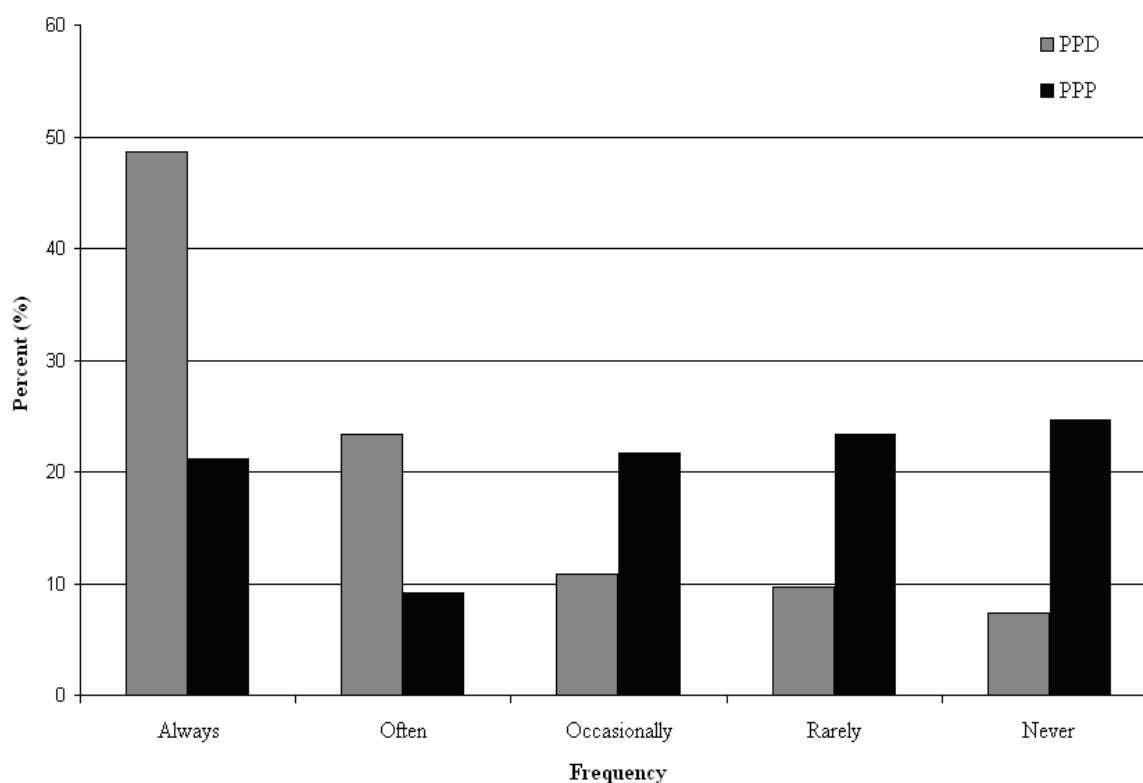


Figure 2. Screening Rates for PPD and PPP

Frequency of screening (always, often, sometimes, rarely, never) did not differ between physicians of different races (PPD: $F(2) = 1.94$, $p = .31$; PPP: $F(2) = .01$, $p = .99$), age group (PPD: $F(1) = .36$, $p = .55$; PPP: $F(1) = .28$, $p = .72$), primary care status (PPD: $F(2) = .77$, $p = .63$; PPP: $F(2) = .33$, $p = .86$), early vs. late responders (PPD: $F(1)$

= .97, $p = .33$; PPP: $F(1) = .05$, $p = .82$), or practice locations (PPD: $F(5) = 1.61$, $p = .43$; PPP: $F(5) = .64$, $p = .92$).

Physicians of different genders, when controlling for age, had significantly different screening rates. Female physicians screened more frequently for PPD ($F(1) = 5.27$, $p = .02$) than their male counterparts; this was not true for PPP ($F(1) = .01$, $p = .93$). However, this difference in frequency of PPD screening disappeared when accounting for women's greater likelihood of having reported personal experience with PPD (see Hypothesis 1; $F(1) = 2.34$, $p = .13$).

Contrary to our hypothesis, more than one-quarter of obstetrician-gynecologists are routinely screening newly delivered mothers for postpartum psychiatric disorders; however, it was shown that far more physicians are routinely screening for PPD (72%) than PPP (30%), and screening is far from universal practice.

Hypothesis #3: Barriers to Screening for PPP
are Similar to Those That Have Been
Discussed Previously in the
PPD Literature

The third hypothesis of this study was that the barriers previously demonstrated to impair physician ability/willingness to screen for PPD will also be found for PPP. It was proposed that over half would indicate that time constraints, lack of training, and a lack of knowledge of diagnostic criteria are barriers to PPP screening.

A majority (65%) of respondents agreed or strongly agreed that their ability and willingness to screen for PPP is limited by a lack of training, and 63% agreed or strongly agreed that their screening practices are limited by their knowledge of diagnostic criteria. Over half (57%) agreed or strongly agreed that time constraints act as a deterrent.

These three proposed factors (i.e. time constraints, lack of training, and a lack of knowledge of diagnostic criteria) were more strongly identified with by physicians than were the other possible deterrents included in our study: lack of knowledge of treatment options (47% agreed or strongly agreed), patient unwillingness to accept diagnosis (41% agreed or strongly agreed), patient unwillingness to receive counseling (39%), and patient unwillingness to accept medication (35%). Table 4 depicts the PPP screening practices of physicians based on how limited they feel by various factors.

Table 4. PPP Screening by Level of Agreement with Various Screening Barriers

PPP Screening Frequency	Agree or Strongly Agree	Disagree or Strongly Disagree
<u>Time Constraints Limit Screening</u>		
	(n = 99)	(n = 13)
Always	22%	23%
Often	8%	15%
Occasionally	25%	8%
Rarely	23%	23%
Never	21%	31%
<u>Lack of Training Limits Screening</u>		
	(n = 112)	(n = 11)
Always	20%	27%
Often	5%	27%
Occasionally	19%	27%
Rarely	26%	0%
Never	30%	18%
<u>Lack of Knowledge of Diagnostic Criteria Limits Screening</u>		
	(n = 53)	(n = 45)
Always	15%	24%
Often	6%	16%
Occasionally	26%	18%
Rarely	25%	20%
Never	28%	22%

Stronger agreement that lack of training and low knowledge of diagnostic criteria limits PPP screening was associated with lower screening rates (lack of training: $r = -.16$, $p = .03$; low knowledge of criteria: $r = -.18$, $p = .02$). However, it is important to note that although physicians are citing time constraints as a barrier, a bivariate correlation revealed that screening frequency is not associated with the level at which physicians reported being limited by time constraints ($r = -.03$, $p = .71$). Thus, though physicians report being limited by time constraints, this is not necessarily reflected in their reported practice.

Analyses of variance demonstrated that physicians did not differ in their level of agreement with these screening barriers. For example, gender (even when controlling for age ($F(1) = 2.29$, $p = .13$), age ($F(1) = 1.19$, $p = .28$), race ($F(2) = 1.21$, $p = .30$), early vs. late responders ($F(1) = 0.69$, $p = .41$), and practice location ($F(5) = 0.81$, $p = .55$) did not influence how limited physicians felt by their lack of training.

As hypothesized, those factors that have previously been identified as barriers to PPD screening also inhibit PPP screening. A majority of physicians indicated that their willingness/ability to screen for PPP is limited by lack of training, lack of knowledge regarding diagnostic criteria, and time constraints; however, time constraints did not seem to truly influence screening behavior.

Hypothesis #4: Low Prevalence of PPP Will Deter Physicians From Screening for This Disorder

Given that PPP is not a common clinical presentation, it was hypothesized that a majority of respondents would cite PPP's low prevalence as a deterrent from screening

for this condition. It was also hypothesized that physicians would be more likely to cite low prevalence as a limiting factor in PPP screening than in PPD screening.

Just under half (42%) agreed or strongly agreed that their screening practices are limited by low PPP prevalence. However, in line with our hypothesis, a paired samples t-test revealed that physicians more strongly agreed (on a five-point, Likert-type scale) that low prevalence acts as a deterrent for PPP than for PPD. On a 1 (strongly agree) to 5 (strongly disagree) scale investigating how strongly they feel that low prevalence limits their screening practices, physicians rated low prevalence a 3.02, corresponding roughly to neutral, for PPD, and a 2.47, corresponding roughly to agree, for PPP ($t(175) = -7.61$, $p < .001$).

Again, physician variables did not influence the results; the same findings (i.e. physicians more strongly agreed that low prevalence acts as a deterrent for PPP than for PPD) were found when the file was split by age group, race, gender, primary care status, early vs. late response, and practice location and the test was run for each demographic group. For example, on the same 1 to 5 scale of how strongly physicians feel limited by low prevalence, those who view themselves as specialists rated low prevalence a 3.11 for PPD and a 2.51 for PPP ($t(81) = -5.26$, $p < .001$). Physicians who identified as both primary care providers and specialists rate low prevalence a 2.94 (neutral) for PPD and a 2.44 (agree) for PPP ($t(81) = -5.26$, $p < .001$).

Though we expected a majority to cite low prevalence rates as a barrier to PPP screening, this was not the case. However, as hypothesized, low prevalence rates were more of a barrier to PPP screening than they were PPD screening. .

Hypothesis #5: Physicians Who Provide Lower
Estimates of PPP Prevalence Will
Be Less Likely to Screen for
PPP in Patients

As a further investigation into the impact of low prevalence rates on screening practices, we also hypothesized that respondents who provided lower estimates of PPP prevalence would screen for PPP less frequently. The estimated prevalence of PPP is 1-2% (Kendell, Chalmers and Platz, 1987; Evins and Theofrastous, 1997). On average, respondents estimated PPP's prevalence to be 2%, with estimates ranging from 0% to 10%.

We hypothesized that those who provided lower prevalence estimates for PPP screen patients for this condition less frequently. Contrary to this hypothesis, there was not a significant correlation between physicians' screening frequency (always, often, sometimes, rarely, never) and their prevalence estimates of PPP ($r = -.05$ $p = .550$).

A partial correlation was conducted to control for age, and the results remained; the correlation between screening frequency and prevalence estimates of PPP were not significant. The analysis was repeated for subgroups of different genders, age groups, practice locations, response time, primary care identifications, and racial groups, and in no case was the correlation of screening frequency and prevalence estimate significant.

Contrary to our fifth hypothesis, physicians with lower prevalence estimates did not screen for PPP less frequently than those with higher prevalence estimates.

Hypothesis #6: Obstetrician-Gynecologists Will
Underdiagnose PPD and PPP in the
Patient Vignettes

It was hypothesized that physicians would underdiagnose cases of PPP and PPD; however, a majority of physicians were able to correctly identify the clinical vignettes that depicted PPD (82%) and PPP (81%). Table 5 depicts the responses to each vignette.

Table 5. Percent of Physicians who Assigned Various Diagnoses to Each Vignette

Vignette	Diagnosis	Percent
<u>1 (Liz)</u>	PPP	1
	Non-PPP	0
	*Does Not Meet Criteria	1
	PPD	47
	Non-PPD	47
	*Other (e.g., bereavement, adjustment disorder)	5
<u>2 (Jamie)</u>	*PPP	81
	Non-PPP	5
	Does Not Meet Criteria	10
	PPD	2
	Non-PPD	0
	Other (e.g., PTSD, anxiety)	2
<u>3 (Miranda)</u>	PPP	1
	Non-PPP	0
	Does Not Meet Criteria	7
	*PPD	82
	Non-PPD	0
	Other (e.g., thyroid condition, sleep deprivation)	11
<u>4 (Carrie)</u>	PPP	53
	*Non-PPP	36
	Does Not Meet Criteria	4
	PPD	4
	Non-PPD	1
	Other (e.g., PTSD)	2

Note: * indicates correct diagnosis. The first vignette had two correct diagnoses because the patient did not meet criteria for PPD or Non-PPD, but it was also acceptable for the respondent to fill in adjustment disorder or bereavement.

The average rate of hits plus false alarms (2.56) is greater than the number of positive vignettes presented (2). Thus, there is no indication of underdiagnosis of postpartum psychiatric disorders. To further investigate the hypothesis that physicians would be more likely miss, as opposed to overdiagnose, pathology, we calculated the average rate of misses (0.37) and the average rate of false alarms (0.97). A paired samples t-test demonstrated that, contrary to our hypothesis, the average false positive rate (.97) was significantly greater than the average miss rate (.37) ($t(175) = -9.47$, $p < .001$), indicating that physicians were not more likely to under-identify pathology.

These findings were demonstrated when the file was split to account for age, gender, race, primary care status, early vs. late response or practice location; paired samples t-tests still indicated that the average rate of false positives was significantly greater than the average miss rate for each group.

Our results show that, contrary to our hypothesis, obstetrician-gynecologists did not underdiagnose postpartum psychiatric disorders. Further, physicians were more likely to wrongly identify a case as having a postpartum psychiatric illness (false positive) than they were to miss such a diagnosis, indicating the possibility of overdiagnosis.

Hypothesis #7: Physicians Will Demonstrate the Availability Heuristic Via the Recency and Frequency Effects

It was hypothesized that obstetrician-gynecologists would demonstrate the recency and frequency effects. The recency effect is demonstrated when physicians with a greater amount of recent (i.e. in the past 6 months) cases/diagnoses provide higher prevalence estimates of those disorders. Similarly, the frequency effect is demonstrated

when those who have diagnosed more cases of postpartum psychiatric illnesses throughout their career provide higher prevalence estimates for the conditions.

Physicians reported that they had diagnosed an average of 5.41 (SD = 6.16; range = 0 to 50) cases of PPD and 0.12 (SD = .60; range = 0 to 7) cases of PPP in the past six months. Over the course of their careers, physicians estimated that they had diagnosed 63.05 (SD = 83.90; range = 2 to 560) and 2.16 (SD = 4.50; range = 0 to 48) cases of PPD and PPP, respectively. Those who were older (born 1959 and earlier) reported diagnosing 67.55 cases of PPD over their careers, compared with 59.03 cases reported by younger physicians (born 1960 and later); this was not a significant difference ($t(123) = .57, p = .57$). The older group reported 3.15 cases of PPP diagnosed ever, compared with 1.22 for younger physicians; this was a significant difference ($t(168) = 2.86, p = .005$). Respondents provided prevalence estimates of 15% (SD = 9.52; range = 1% to 66%) for PPD and 2% (SD = 2.36; range = 0% to 10%) for PPP (the correct prevalence estimates are 10-20% and 1-2%, respectively).

Contrary to our hypothesis, there was no evidence of the recency effect for PPD or PPP. The correlations between the estimated amount of patients physicians had diagnosed with each condition in the past 6 months and prevalence estimates were not significant (PPD: $r = .08, p = .277$; PPP: $r = .07, p = .36$).

We also failed to identify a frequency effect for PPP; there was no association between physicians' PPP prevalence estimates and the reported number of cases of PPP they had ever diagnosed ($r = -.01, p = .870$). However, there was evidence for a frequency effect with regard to PPD; the correlations between the amount of patients

physicians reported having had ever diagnosed with PPD and their PPD prevalence estimates were significant ($r = .21$, $p < .02$).

A partial correlation was run to control for length of career. There was no evidence of a PPP recency ($r = .07$, $p = .37$) or frequency ($r = -.01$, $p = .88$) effect when controlling for number of years in practice, nor was there a PPD recency effect ($r = .07$, $p = .35$). However, when controlling for career length there was, again, evidence for a PPD frequency effect; correlations between prevalence estimates and the amount of cases ever diagnosed was significant ($r = .22$, $p < .02$). This same pattern was demonstrated when the file was split to run separate analyses for various demographic subgroups: age, race, gender, primary care status, early vs. late response, and practice location.

The results of this study demonstrate that, contrary to our hypothesis, obstetrician-gynecologists did not consistently demonstrate the recency or frequency effects; only the frequency effect was demonstrated with regard to PPD.

CHAPTER 10

DISCUSSION

The aim of this study was to determine the knowledge, practices and attitudes of obstetrician-gynecologists with regards to the screening, and diagnosis of postpartum depression and psychosis. Additionally, this research sought to understand the decision making strategies utilized by obstetrician-gynecologists, errors made, and potential barriers to screening that may lead to underdiagnosis of postpartum psychiatric disorders.

The goal of this study was to examine obstetrician-gynecologists' knowledge of and screening patterns for postpartum psychiatric issues, and extend much of the existing literature of PPD to PPP. Our study found that 72% of our sample report always or often screening for PPD, and 30% screen for PPP at this frequency. This rate of screening was higher than anticipated and higher than screening rates for other psychiatric disorders (anxiety: Coleman et al, 2007; depression: Williams et al, 1999). This may be due to PPD and PPP's greater relevance to gynecological and obstetric practice; this is supported by Hill et al.'s (2005) finding that obstetrician-gynecologists indicated that they were more responsible for diagnosing and treating premenstrual dysphoric disorder than major depressive disorder. Their screening may also be related to the increased media and political attention provided to PPD and PPP. The Melanie Blocker-Stokes Act, an attempt to ensure that new mothers and their families are educated about postpartum depression, screened for symptoms, and provided with essential services, and to increase research

at the National Institutes of Health on postpartum depression, was passed in the new health care reform legislation. It is possible that this piece of legislation has increased physician awareness of the importance of screening and early identification of postpartum psychiatric illness, which may explain the higher than expected screening rates.

Female physicians were more likely to screen for postpartum psychiatric conditions; however, this difference was explained by the fact that women were more likely to have had personal experience with both PPD and PPP. Of the overall sample, about one-quarter had personal experience with PPD and few had personal experience with PPP. In addition to the evidence of differential screening by gender due to personal experience with the investigated conditions, in the full sample, again those who reported personal experience (through self, friend or family) with postpartum mental health conditions were more likely to report screening their patients for them. This extends the findings of Morgan and Schulkin (2006) regarding non-postpartum depression to both PPD and PPP. Perhaps understanding mental health conditions from a one's own or close family member's or friend's point of view allows physicians to gain insight into its detrimental effects more so than information provided by journal articles, practice bulletins or committee opinions; personal experience may increase the salience of consequences in one's mind. This perspective might then generalize to patient care.

About half of our respondents agreed or strongly agreed that their ability/willingness to screen for PPP is limited by low prevalence rates. Additionally, physicians who more strongly agreed that low prevalence rates act as a deterrent from PPP screening actually screen less frequently for this condition. However, it was found

that those with lower prevalence estimates of PPP did not more strongly agree that their screening practices are limited by PPP's low prevalence. This does not necessarily indicate that low prevalence is not a deterrent; it seems there are individuals who are aware of PPP's low prevalence, but do not feel limited by it. Physicians were also more likely to cite low prevalence rates as a deterrent from PPP screening than PPD screening. Thus, it is important for future research to investigate the efficacy, time burden and cost effectiveness of screening interventions, because universal screening (if it can be conducted quickly, accurately and without much financial burden) may be useful clinical practice, given the significant effects these conditions can have on mothers, children and spouses.

A majority agreed or strongly agreed that their ability and willingness to screen for PPP is limited by a lack of training, limited knowledge of diagnostic criteria, and time constraints. This is similar to the findings of Coleman and colleagues (2007) who demonstrated that physicians' reported level of training to recognize anxiety influenced anxiety screening practices. However, though physicians reported being limited by various factors (i.e. time constraints, lack of training, and lack of knowledge of diagnostic criteria), those who felt more strongly limited by time constraints did not actually screen any less frequently than those who reported being less limited. However, these factors may be seen as stressful by physicians and thus, additional training, distribution of brief questionnaires, and perhaps patient-administered questionnaires may assist in mitigating physician cognitive load and/or competing demands, and perhaps increase screening.

Despite past conjecture that the underdiagnosis of mental health problems by obstetrician-gynecologists is a problem (Coleman et al, 2006), respondents to the current

study did not underdiagnose postpartum psychiatric conditions in these vignettes, which was contrary to our hypothesis. In fact, physicians were more likely to wrongly identify a case as having a postpartum psychiatric illness than they were to miss such a diagnosis. However, these findings may have occurred due to priming. Both the cover letter and the survey explained that our study investigated postpartum depression and psychosis; as such, physicians likely knew that the vignettes were going to detail cases of women suffering from such disorders. This may explain why our findings do not parallel the typical pattern of underdiagnosis that has been reported in clinical practice. Future research might include a larger number of vignettes, including several depicting other non-mental health issues that confront obstetrician-gynecologists on a regular basis and mirror true clinical practice (such as sexually transmitted infections or even a patient without any condition who perhaps comes in for her annual exam). The inclusion of these vignettes would allow the survey to be a more representative study of actual practice.

Our study also failed to find any evidence for the recency effect for PPD or PPP, and only found evidence for the frequency effect for PPD. This may be due to poor physician recall. Respondents may have inaccurately remembered the number of patients they have diagnosed with PPD and PPP. In fact, it was common for physicians to state they had diagnosed 5 or 10 patients with PPD or PPP; it is unlikely that so many had diagnosed such a round number, indicating that some estimation may have occurred. This is further supported by the large number of individuals who responded with “too many to count,” “many,” or “few.” Thus, a survey may not be the ideal method to evaluate if physicians are relying on heuristics.

There are several limitations to this study. Firstly, all surveys were completed retrospectively, subjecting them to possible recall bias. Additionally, there is the possibility that a social desirability effect influenced physicians' responses. Participants may have selected responses they believed to be socially acceptable or which presented them in a more favorable light (e.g. over-reporting the frequency with which they screen). There is conflicting evidence regarding the validity of survey research when compared to chart reviews. For example, O'Neil and colleagues (1998) and Merkin and colleagues (2007) found that physician reports of adverse events did not significantly differ from the amount identified via chart review. Conversely, Leaf and colleagues (1995) found that chart review of residents' rates of coronary artery disease risk factor assessment were significantly lower than that identified by self-report. These authors conclude that either self-report is a poor measure of physician practice, physicians' recording is insufficient to reflect actual care, or neither is an accurate measure of actual practice.

One review (Nederhof, 1985) provided methods by which social desirability bias can be avoided in survey research. The current study incorporated several of these techniques, including forced-choice items and self-administration of the questionnaire. Efforts were made to further minimize this effect by stressing confidentiality and anonymity, as well as excluding identifying information from the measures. Similarly, our study also adhered to recommendations made by Gregson and colleagues (2002), in that survey should be informal, confidential and use low-level technology to reduce social desirability effects. However, survey research is but the first step in identifying actual clinical practice patterns, and gaps; objective and prospective research is necessary to verify the findings of our current study.

As with all survey research, there is a concern regarding non-response bias. Physicians who responded to this survey may not be representative of nationwide clinical practice. This concern is mitigated by the fact that respondents and non-respondents did not differ on any demographic variables; however, it is important to note that while responding physicians and non-respondents did not differ demographically, this does not eliminate any concern that their practices do not differ. For example, these two groups may differ on variables such as their attitude towards psychiatry or personal experience with postpartum mental health problems, and as such, may differ in their practices.

An additional note is necessary regarding our sample. This study only utilized obstetrician-gynecologists who have volunteered to participate in survey research (i.e. Collaborative Ambulatory Research Network (CARN) members). As such, this group may be more conscientious or have different practice patterns than the nationwide sample of obstetrician-gynecologists. While this study is unable to address this concern directly, there is evidence from a wide range of recent studies that reported clinical practice patterns do not significantly differ between CARN and non-CARN samples (e.g. Anderson, Stumpf & Schulkin, 2009; Bettes et al, 2007; Morgan, Goldenberg and Schulkin, 2008a; Morgan, Goldenberg and Schulkin, 2008b; Morgan, et al, 2005; Power, Cogswell, Schulkin, 2006).

The use of clinical vignettes may have limited our study in that they do not assess diagnostic accuracy regarding actual patients. This is possibly very different from clinical practice in that physicians do not have knowledge of patient and family history, and, as mentioned, likely primed physicians to be aware of psychiatric symptoms. However, presenting symptoms in this way was necessary in order to standardize the process of

determining obstetrician-gynecologists' accuracy. In general, clinical vignettes are considered to be a valid tool for measuring the quality of practice; for example, one multi-city, multi-site study (Peabody et al, 2004) provided physicians with either computer-based clinical vignettes, standardized patients who entered the clinics unannounced and unidentified, or both. The researchers calculated scores for both the standardized patients and the clinical vignettes to determine whether the physician had determined the entire relevant history, performed relevant physical examination items, ordered the necessary follow-up tests, made an accurate diagnosis (including etiology), and prescribed a complete treatment plan. They calculated mean quality scores for each method and found that vignette scores more closely represented the actual practice by the gold standard of standardized patients than did a chart review. The authors conclude that vignettes are a valid tool for the assessment of quality of clinical practice. Similar conclusions were drawn in response to other studies conducted by the same research group (Peabody et al, 2000; Dresselhaus, 2004). Additionally, the small number of vignettes presented may not yield valid and reliable findings. While this is true, it was necessary to use a small number of vignettes so as not to overburden respondents. The few case scenarios function as a starting point, taking a quick assessment of current clinical practice patterns; this study should certainly be followed up by a more rigorous evaluation of physician practice, perhaps by using a larger number and greater variety of vignettes. The results of the current study should not be disregarded based on these limitations, however, as they may provide important information about possible education deficits that can be further explored.

Obstetrician-gynecologists are in a unique position to identify women in need of psychological care, and could incorporate this into their practice as part of well-woman care, as it can improve the functioning of mothers, children and spouses. However, screening is far from universal, and, unfortunately, respondents to the current study are not universally confident in their knowledge and training. Obstetrician-gynecologists reported the primary barriers to screening for postpartum mental illness were time constraints and inadequate training. Respondents' concern over their training is not surprising, given similar findings regarding other mental health issues (e.g. anxiety, Coleman et al, 2007). Similarly, with regards to non-postpartum major depression, obstetrician-gynecologist residents have been shown to feel responsible for diagnosing this condition (94%), but 88% doubted their ability to manage depression (Dietrich et al, 2003). Further research should examine the implications of inadequate training to screen for, diagnose, and manage postpartum mental health issues, and how training programs might be improved.

It is possible that liability concerns serve as a limiting factor; increased screening would likely increase the number of women identified with postpartum depression or psychosis, and without proper referral sources the onus would fall upon the obstetrician-gynecologists. In such a litigious society, physicians are likely practicing defensive medicine (i.e. medical practice based on fear of legal liability rather than on patients' best interests (Kessler, Summerton and Graham, 2006)) to avoid lawsuits, and future research should investigate the possibility that liability issues inhibit screening practices.

Only one-third of respondents had completed continuing medical education courses on postpartum mental health in the past five years, similar to the rate found by

Coleman (2008) regarding anxiety disorders screening. In the current study, it was those who had completed a CME that reported being less likely to rely on clinical judgment and more likely to use validated assessments for diagnosis, and being more likely to routinely ask about depressive and psychotic symptoms. Similarly, Seehusen and colleagues (2005) found that receiving training about PPD in residency and through medical literature were both associated with increased screening rates during postpartum visits. This suggests that further, more specific mental health training is associated with both increased screening and the use of validated assessment tools. Future research should investigate if CME training is a causal factor in increased screening and use of validated assessments, as all this study was able to identify was a correlation between the two. This might be done by conducting a randomized controlled trial where one group is assigned to complete a CME on postpartum mental health, and the other receives a CME on a different topic; screening practices could then be compared before and after the CME course to determine the impact of CME courses.

Due to the wide-ranging detrimental effects that both PPD and PPP can have, it is important that efforts be made to support physicians and supplement what they describe as inadequate training. Conferences, peer-reviewed journal articles, and ACOG guidelines and other professional publications are means by which information regarding these conditions can be disseminated, as Coleman (2008) found that these were the most highly preferred methods of training. Other means of dissemination include webcasts and continuing medical education courses. Additionally, medical schools and residency programs could provide more comprehensive mental health training to emerging physicians.

ACOG's efforts could focus on supporting its Fellows by creating a more transparent opinion regarding the universal PPD and PPP screening of new mothers, determining how to best distribute its guidelines, as well as highlighting the brevity with which screening can be done, and the self-report assessment tools that are available to the physician. Mental health is an important aspect of women's health, and can have significant detrimental effects on mother, child and family. As an increasing number of ob-gyns incorporate primary care into their clinical practice, it is imperative that they are adequately supported and prepared to address such issues as postpartum mental health.

APPENDIX A
COVER LETTER

Dear Collaborative Ambulatory Research Network Member,

ACOG requests your participation in our questionnaire study, Postpartum Depression and Psychosis Practices and Knowledge. This study aims to assess practice patterns, knowledge, and beliefs regarding postpartum psychiatric illness. We ask that only you, and no other staff, complete this survey and answer all questions in order. Your response is important to us, and will aid the College in its efforts to provide clinical guidance to its Fellows. A high response rate is crucial to ensure the results accurately reflect our Fellows' clinical practices. We rely on you to make these surveys a success.

The survey should take 20 minutes to complete. It is not necessary to study extra materials prior to completing the questionnaire; please do not look up answers or diagnostic criteria, and be as candid as possible. If you complete the survey, this is an indication you have consented to participate. Our results will be reported in aggregate form; individual responses will remain confidential. To avoid reminder mailings, please return the survey by [Date]. We thank you in advance for your participation. Please contact Meaghan Leddy with questions at (202) 863-4997 or mleddy@acog.org.

Sincerely,

Jay Schulkin, Ph.D.
Director of Research

Meaghan Leddy, M.A.
Research Associate

APPENDIX B

CLINICAL PRACTICE-RELATED SURVEY QUESTIONS

1. In the past 5 years, have you completed any CME courses on mental health screening and/or diagnosis that encompassed postpartum psychosis or depression?

☐ No

☐ Yes HOW MANY? _____

2. What percent of cesarean delivery patients do you see within 4 weeks of delivery? __%

3. What percent of vaginal delivery patients do you see within 4 weeks of delivery? __%

4. How frequently do you assess (i.e. someone in your office asks patient or patient fills out questionnaire) recently-delivered mothers for postpartum depression? (Select One)

☐ Always (every patient)

☐ Often (most patients)

☐ Occasionally (some patients)

☐ Rarely (few patients)

☐ Never (no patients)

5. How frequently do you assess (i.e. someone in your office asks patient or patient fills out questionnaire) recently-delivered mothers for postpartum psychosis? (Select One)

☐ Always (every patient)

☐ Often (most patients)

☐ Occasionally (some patients)

☐ Rarely (few patients)

☐ Never (no patients)

6. Which of the following do you use to assess for or diagnose postpartum psychological disorders? (Check all that apply)

☐ DSM-IV ☐ Your own judgment ☐ Validated questionnaires Specify: _____

☐ Measure created by you or your practice/hospital ☐ Other: _____

7. In what cases of recently-delivered mothers do you assess for postpartum psychiatric disorders?

a. I routinely ask all recently-delivered mothers about depressive/psychotic symptoms ☐ Yes ☐ No

b. I routinely provide a mental health questionnaire to all recently-delivered mothers ☐ Yes ☐ No

c. I assess for postpartum mental illness if the patient appears depressed or psychotic ☐ Yes ☐ No

d. I assess for postpartum mental illness if the patient has a history of psychiatric illness ☐ Yes ☐ No

e. I assess for postpartum mental illness if the patient has a specific medical condition ☐ Yes ☐ No

If yes to 7e, which medical condition? _____

8. How many patients have you have ever diagnosed with postpartum depression? _____

9. How many patients have you ever diagnosed with postpartum psychosis? _____

10. How many patients have you diagnosed with postpartum depression in the past six months? _____

11. How many patients have you diagnosed with postpartum psychosis in the past six months? _____

12. Do you track/flag women with psychiatric histories in order to assess their postpartum mental health? ☐ Yes ☐ No

13. How often do you use a structured, validated assessment tool to diagnose postpartum depression? (Choose one)

☐ Routinely ☐ To rule out other diagnoses/To confirm diagnosis ☐ Never

APPENDIX C
CLINICAL CASE VIGNETTES

Read the scenarios below and respond as though each was your patient.

1. Liz's husband died a month before their daughter was born, and has come in 3 weeks postpartum. For the past 2 weeks she has felt "slow" and "blue." She reports crying periods and being easily upset. She reports exhaustion; she is often unable to get out of bed. She is functioning enough to keep house, care for her child and perform daily tasks. She reports having been unable to sleep 8 of the past 14 nights, even when her baby is quiet. She has thoughts about her husband, and blames herself that she did not say goodbye the day he died. Liz often forgets to eat and has lost several pounds in the past 2-3 weeks.

1a. What is your primary diagnosis in this case? (Check ONLY ONE)

☐ Postpartum Psychosis

☐ Postpartum Depression

☐ NON-Postpartum Psychosis

☐ NON-Postpartum Depression

☐ Does not meet criteria for any diagnosis ☐ Other (Specify): _____

1b. What is the probability that this is the correct diagnosis?

0 .1 .2 .3 .4 .5 .6 .7 .8 .9 1.0

2. Jamie gave birth 2 weeks ago. Since then she has repeatedly complained to her husband that she hears doors opening and someone walking around her home, though her husband has not heard the noises. Jamie also believes a neighbor is planning to kidnap

her newborn daughter. She has returned to your office because her husband is concerned that this is more than just an “overprotective new mother.” Her mood has been relatively stable, and she has had no impairment in caring for her child. She has an unremarkable medical record, and is not on medication. She denies drug/alcohol use.

2a. What is your primary diagnosis in this case? (Check ONLY ONE)

- ☐ Postpartum Psychosis
 ☐ Postpartum Depression
☐ NON-Postpartum Psychosis
 ☐ NON-Postpartum Depression
☐ Does not meet criteria for any diagnosis
 ☐ Other (Specify): _____

2b. What is the probability that this is the correct diagnosis?

0 .1 .2 .3 .4 .5 .6 .7 .8 .9 1.0

3. Miranda comes into your office 3 weeks after giving birth. Since 2 days after giving birth, she has been feeling “sad and empty,” has only slept 2-3 hours nightly, and is fatigued during the day. She says her reaction time has slowed and she feels she moves in slow motion. She reports decreased ability to concentrate; she cannot attend to television programs and has to re-read paragraphs in the newspaper. She has also lost a significant amount of weight (about 18 pounds in three weeks).

3a. What is your primary diagnosis in this case? (Check ONLY ONE)

- ☐ Postpartum Psychosis
 ☐ Postpartum Depression
☐ NON-Postpartum Psychosis
 ☐ NON-Postpartum Depression
☐ Does not meet criteria for any diagnosis
 ☐ Other (Specify): _____

3b. What is the probability that this is the correct diagnosis?

0 .1 .2 .3 .4 .5 .6 .7 .8 .9 1.0

4. Carrie returns for a check-up 6 months after delivering her daughter. She reports having difficulty attaching with her child. She feels the child is not hers, and feels no connection to her. Carrie had previously called you concerned that her baby was switched at birth. Her fear about having the wrong child began three weeks ago, though her mood has been stable. She has turned over all childcare responsibility to her husband. Carrie also had a DNA test done, which indicated the child is hers. She now says if her daughter was not switched at birth, her child has become possessed. She has no psychiatric history.

4a. What is your primary diagnosis in this case? (Check ONLY ONE)

☐ Postpartum Psychosis

☐ Postpartum Depression

☐ NON-Postpartum Psychosis

☐ NON-Postpartum Depression

☐ Does not meet criteria for any diagnosis

☐ Other (Specify): _____

4b. What is the probability that this is the correct diagnosis?

0 .1 .2 .3 .4 .5 .6 .7 .8 .9 1.0

APPENDIX D

KNOWLEDGE-RELATED SURVEY QUESTIONS

1. A postpartum mental illness can be diagnosed as long as its onset is within (Choose the BEST answer):
☐ 1 week after delivery ☐ 2 weeks after delivery ☐ 4 weeks after delivery
☐ 6 months after delivery ☐ 1 year after delivery
2. According to DSM-IV, which of the following disorders can be considered a postpartum diagnosis? (Choose all that apply)
☐ Adjustment Disorder ☐ Major Depressive Disorder ☐ Panic Disorder
☐ Bipolar I Disorder ☐ Bipolar II disorder ☐ Schizophrenia
☐ Brief Psychotic Disorder ☐ Generalized Anxiety Disorder
3. Estimate the prevalence of postpartum depression in the US: _____%.
4. Estimate the prevalence of postpartum psychosis in the US: _____%.

APPENDIX E

BELIEFS AND ATTITUDES SURVEY QUESTIONS

1. How would you rate your residency training in recognizing and diagnosing PPD?

☐Comprehensive ☐Adequate ☐Barely Adequate ☐Inadequate ☐Nonexistent

2. How would you rate your residency training in recognizing and diagnosing PPP?

☐Comprehensive ☐Adequate ☐Barely Adequate ☐Inadequate ☐Nonexistent

3. Please identify how strongly you feel regarding each of the statements below.

	Strongly Agree		Neutral		Strongly Disagree
	1	2	3	4	5
Diagnosing postpartum psychiatric illness is my responsibility	1	2	3	4	5
Treating postpartum psychiatric illness is my responsibility	1	2	3	4	5
I can accurately diagnose postpartum psychiatric illness	1	2	3	4	5
Postpartum psychiatric illness can negatively impact children	1	2	3	4	5
Postpartum psychiatric illness can negatively impact spouses	1	2	3	4	5

4. Identify how strongly each of the following LIMIT your ability/willingness to screen for postpartum psychosis.

	Strongly Agree		Neutral		Strongly Disagree
	1	2	3	4	5
Low prevalence rates	1	2	3	4	5
Lack of training in mental health	1	2	3	4	5

My knowledge of diagnostic criteria	1	2	3	4	5
My knowledge of treatment options	1	2	3	4	5
Time constraints	1	2	3	4	5
Patient level of willingness to accept diagnosis	1	2	3	4	5
Patient level of willingness to take medication	1	2	3	4	5
Patient level of willingness to receive counseling	1	2	3	4	5

5. Identify how strongly each of the following LIMIT your ability/willingness to screen for postpartum depression.

	Strongly Agree		Neutral		Strongly Disagree
Low prevalence rates	1	2	3	4	5
Lack of training in mental health	1	2	3	4	5
My knowledge of diagnostic criteria	1	2	3	4	5
My knowledge of treatment options	1	2	3	4	5
Time constraints	1	2	3	4	5
Patient level of willingness to accept diagnosis	1	2	3	4	5
Patient level of willingness to take medication	1	2	3	4	5
Patient level of willingness to receive counseling	1	2	3	4	5

APPENDIX F
DEMOGRAPHIC SURVEY QUESTIONS

1. Year of birth: _____
2. Number of years in practice post-residency: _____
3. Sex: ☐ Male ☐ Female
4. With which ethnicity do you identify? (Choose one)
☐ non-Hispanic/Latino ☐ Hispanic/Latino
5. With which race do you identify? (Check all that apply)
☐ White ☐ Black/African-American ☐ Asian
☐ Native American/Alaska Native ☐ Native Hawaiian/Pacific Islander
6. Which of the following do you PRIMARILY practice (Choose one):
☐ Obstetrics and Gynecology ☐ Obstetrics only ☐ Gynecology only
☐ Maternal/Fetal Medicine ☐ Urogynecology ☐ Gynecologic Oncology
☐ Reproductive Endocrinology ☐ Other: _____
7. Choose the category that best describes your practice structure (check ONE):
☐ Solo private practice ☐ University full-time faculty and practice
☐ HMO (staff model) ☐ Multi-specialty group ☐ Military/Government
☐ Ob/Gyn partnership/group ☐ Other (please specify): _____
8. In which state is your practice primarily located? _____

9. What is the approximate racial distribution of your active patient population? (Give % for each, total should equal 100%).

___ White ___ Asian ___ Black or African-American
___ Native American/Alaska Native ___ Native Hawaiian/Pacific Islander

10. Which of the following best describes your practice location? (check ONE):

☐ Urban, inner city ☐ Suburban ☐ Rural ☐ Military
☐ Urban, non-inner city ☐ Mid-sized town (10,000-50,000 residents)

11. I consider myself (Choose one):

☐ Mostly primary care provider
☐ Mostly specialist
☐ Both primary care provider and specialist

12. Have you or anyone close to you ever been diagnosed with or treated for postpartum depression? ☐ Yes ☐ No

13. Have you or anyone close to you ever been diagnosed with or treated for postpartum psychosis? ☐ Yes ☐ No

APPENDIX G

FINAL REMINDER COVER LETTER

Dear Collaborative Ambulatory Research Network Member:

ACOG requests your participation in our study, Postpartum Depression and Psychosis Practices and Knowledge. This study aims to assess practice patterns, knowledge, and beliefs regarding postpartum mental health. We ask that only you, and no other staff, complete this survey. Additionally, please answer all questions in order.

Your response will aid ACOG in its efforts to provide effective clinical guidance. A high response rate is crucial for ensuring that results accurately reflect the clinical practices of our Fellows. This will be our final mailing for this survey. The survey should take about 20 minutes to complete. It is not necessary to study extra materials prior to completing the questionnaire; please do not look up information or diagnostic criteria, and be as candid as possible. If you complete the survey, this will indicate your consent to participate.

Please return the survey by November 27, 2009. We appreciate your participation. For questions, contact Meaghan Leddy at (202) 863-4997 or mleddy@acog.org.

Sincerely,

Jay Schulkin, Ph.D.

Director of Research

Meaghan Leddy, M.A.

Research Associate

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