

**INFORMING MATERNAL MENTAL HEALTH POLICY,
PRACTICE, AND RESEARCH IN LATIN AMERICA:
THE IMPORTANCE OF CONTEXTUAL FACTORS IN THE
OPTIMAL TREATMENT OF POSTPARTUM DEPRESSION**

by

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B.Sc., University of British Columbia, 2008

PROJECT SUBMITTED IN PARTIAL FULFILLMENT OF
THE REQUIREMENTS FOR THE DEGREE OF
MASTER OF PUBLIC HEALTH (GLOBAL HEALTH)

In the
Faculty of Health Sciences

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SIMON FRASER UNIVERSITY

Summer 2010

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ABSTRACT

Postpartum depression (PPD) is an important public health issue in Latin America (LA). However, research on the optimal way to treat PPD in the region when viewed through a 'social and economic determinants of health' lens is limited. This paper reviews regional experiences with PPD treatment to determine the degree to which tailored approaches that are responsive to the local context affect the successful treatment of PPD. The principal contribution is a conceptual framework that elucidates: (i) the causal connections between a myriad of social and economic processes through which PPD develops and PPD treatment services are provided; and (ii) the potential strategies for intervening along those pathways to optimize outcomes. The recommendation premised on this contextual perspective is for health-supportive social policies, integration of PPD interventions with perinatal services at primary care, and research of the effect of strategies aimed at mothers' social and economic circumstances on treating PPD.

Keywords: Latin America; Postpartum Depression; Poverty; Social Exclusion; Treatment; Violence

DEDICATION

In loving memory of my father, Paul R. Carter, a man of great courage, faith, and love.

May 27 1950 – November 15 2009

You taught me many things in life, among them: the value of hard work, a love for learning, and an unwavering strength of mind and spirit at times of challenge. With these lessons, I have succeeded in all of my endeavours, including this degree. For this reason, this paper is dedicated to you. You are my source of inspiration. I love you.

ACKNOWLEDGEMENTS

This MPH degree and research project would not have been possible without the support of many people. I am particularly grateful to my advisor, Dr. Nicole Berry, for her constant guidance, support, and encouragement. She has helped and inspired me in all of my intellectual endeavours during my graduate study. Also, I thank Dr. Nicole Berry and Dr. Craig Janes, for their generous contribution of ideas, suggestions, and references that have been invaluable in the development of this paper. Special thanks are also extended to all of the other members of my examining committee, including Dr. Denise Zabkiewicz (for her insightful comments on this paper) and Dr. Ryan Allen (for his oversight of my defence). I would also like to thank Dr. Pablo Nepomnaschy, for hiring me as a TA, an experience which has strengthened my love for teaching as well as broadened my perspective on human health and disease. Lastly, I would like to extend my heartfelt gratitude to all of my family and friends, particularly: my parents, Paul R. Carter and Linda D. Carter, for their unconditional love, support, and selflessness from the moment of my conception; Michael Mubanga, for being my best friend and lover through good times and bad; Adina Houldin, for always being there to help me cope with difficult times; Kim Korf-Uzan, for her brilliant spirit, smiles, and laughter which are a joy for the soul; Rita Watterson, for being such a special friend who always adds sunshine to my days; Kiera Ishmael, for bringing joy to my life; and all of my other family members as well as girlfriends at SFU.

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GLOSSARY

Conditional Cash Transfer Programs (CCTs)	These programmes dominate the social protection sector in Latin America and the Caribbean. They involve linking short-term poverty alleviation with long-term human capital development, by making the provision of the cash transfer to mothers conditional on school attendance by and health-care checkups for children (Handa & Davis, 2006)
Determinants of Health	The determinants of health are the social, economic, and political conditions under which people live which are the root causes of health and illness (WHO 2008). The three most significant determinants of mental illness are: lack of access to economic resources, discrimination and violence, and social exclusion (Keleher & Armstrong, 2006).
EPDS	Edinburgh Postnatal Depression Scale
Gender-based Violence	This includes any physical, sexual, and/or emotional abuse that is directed against women because of their gender and is committed by either a family member, intimate partner, state authority figure (e.g. police officer), militant in conflict situations, or other people (Heise et al., 1999, United Nations, 1993, WHO, 2005).
Gini Coefficient	Gini Coefficient is a commonly used measure of inequality where an index of 0 is perfect equality and 100 is perfect inequality. The Gini coefficient is most commonly used to express inequalities in income.
IPV	Intimate partner violence
LA	Latin America (in reference to Latin America and the Caribbean)
LILACS	Literatura Técnico-Científica em Ciências de Saúde na América Latina e Caribe (A regional search engine entitled Latin American and Caribbean Center on Health

Sciences Information)

Mental Health	The World Health Organization defines positive mental health as “a state of well-being in which the individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community” (WHO, 2001, p.1).
PAHO	Pan American Health Organization
Postpartum blues	A transitory minor affective disorder that is extremely common, affecting 60-80% women after childbirth (Kendall-Tackett, 2005, Kruckman & Asmann-Finch, 1986)
Postpartum depression	A major depressive disorder that begins within four weeks after delivery and occurs in 10-50% of new mothers (American Psychiatric Association, 1994, Kendall-Tackett, 2005, Kruckman & Asmann-Finch, 1986).
Postpartum psychosis	The most serious form of maternal mental illness with an incidence of only 0.1-0.2% (Kendall-Tackett, 2005, Kruckman & Asmann-Finch, 1986).
Poverty	For the purposes of this paper, absolute poverty and relative poverty (or inequalities) refer to deprivation of income and material assets. See Section 2.3.1 for more details.
Primary Care	Primary care is a term used for the activities of health care professionals (usually general practitioners or family physicians, depending on locality) who acts as a first point of consultation for all patients within the medical system, before being referred elsewhere.
PROGRESA	Programa de Educación, Salud, y Alimentación (Mexico’s Education, Health, and Nutrition Program)
Social Exclusion	For the purposes of this paper, this term encompasses: (i) disconnection from civil society, political participation, and social institutions because of systematic forms of marginalization; (ii) exclusion by society of social goods

(e.g. income security, health care, health insurance, education, etc.); and (iii) social isolation and poor social supports/networks (Raphael 2004, Keleher & Armstrong, 2005).

WHO

World Health Organization

Violence

The World Health Organization (WHO) (2002) defines violence as “the intentional use of physical force or power, threatened or actual, against...another person...that either results in... injury, death, psychological harm, maldevelopment or deprivation” (pg. 5).

1: INTRODUCTION

1.1 Postpartum Depression

Childbirth represents a time of great joy for most mothers and their families (Brown et al., 1994, Green & Kafetsios, 1997). However, occasionally, it can also lead to serious health complications, with postpartum depression (PPD) representing the leading form of maternal morbidity following childbirth worldwide (Kendall-Tackett, 2005). According to the Diagnostic and Statistical Manual of Mental Disorders Fourth Edition (DSM-IV) (American Psychiatric Association, 1994), PPD is a major depressive disorder that begins within four weeks after delivery and is defined by five of the following symptoms (one of which must be depressed mood or decreased interest/pleasure): (i) depressed mood (usually accompanied by severe anxiety); (ii) decreased interest or pleasure in activities; (iii) appetite disturbance (usually loss of appetite with weight loss); (iv) sleep disturbance (usually insomnia and fragmented sleep, even when the baby sleeps); (v) physical agitation or psychomotor slowing; (vi) fatigue, decreased energy; (vii) feelings of worthlessness or excessive guilt; (viii) decreased concentration or ability to make decisions; and (ix) recurrent thoughts of death or suicidal ideation.¹

PPD and its associated symptoms have serious health, social, and economic consequences for the mother, child, and family (Kendall-Tackett, 2005, Vickery, 1979, WHO, 2005c). The health and social implications are numerous: mothers are at risk for suicide, recurrent depressive episodes, poorer cardiovascular health, and impaired immune system function; infants are at risk for infanticide, poorer cognitive development, greater negative emotionality, insecure attachment types, and negligent and abusive care; and fathers are more likely to experience depression (Kendall-Tackett, 2005, WHO, 2005c). The economic consequences are indisputable (Vickery, 1979).

¹ A three-part categorization of depression in the postpartum period (based on a continuum of severity of symptoms) is noteworthy: *postpartum blues* is a transitory minor affective disorder that is extremely common, affecting 60-80% of women after childbirth; *PPD* is a more debilitating major depressive disorder occurring in 10-50% of new mothers; and *postpartum psychosis* is the most serious form of maternal mental illness with an incidence of only 0.1-0.2% (Kendall-Tackett, 2005, Kruckman & Asmann-Finch, 1986). PPD is the focus of this paper.

1.2 Relevance to Public Health Policy, Practice, and Research in Latin America

PPD is an important public health issue in Latin America and the Caribbean,² a region beset by poverty, violence, and social exclusion. Studies across numerous different regional settings have noted that the prevalence of postpartum depressive symptoms range from 5.92% to 48%³ and the major risk factors include low socioeconomic status, low educational level, lack of social support, poor relationship with a partner, intimate partner violence (IPV), and history of depression (for a review, see Vega-Dienstmaier et al. 2007). Given the high prevalence of PPD, the macro-level social and economic challenges facing LA (e.g. poverty, inequality, violence, social exclusion, urbanization, etc.) that make the risk factors for PPD ubiquitous, and the serious health, social, and economic burden imposed by this condition, efficacious treatment in LA is of clear importance. However, despite this, research on the optimal way to treat PPD in diverse contexts in low- and middle-income countries in LA is limited (Rojas et al. 2007).⁴ Therefore, the objective of this paper is to help inform maternal mental health policy, practice, and research in the region by reviewing empirical evidence of the effectiveness of the main approaches to PPD treatment with a particular interest in the moderating effect of the social and economic complexities of the regional context.

² Henceforth, to be brief, Latin America and the Caribbean will be referred to by the shorthand Latin America or (LA).

³ The large variation in estimates is (in part) due to: (i) no distinction being made between postpartum “blues” and PPD; (ii) the application of different diagnostic criteria (e.g. DSM-IV versus EPDS (Edinburgh Postnatal Depression Scale)); (iii) the assessment of either unspecific, isolated symptoms that do not lead to functional impairment or specifically defined symptoms based on strict criteria that interfere with daily performance; (iv) the evaluation of women at different periods postpartum (e.g. early (1-10 days) versus late (1-3 months) puerperium); and (v) varying rates in different population groups (e.g. women across different socioeconomic levels, races/ethnicities, geographic regions (e.g. rural versus urban), etc.) (Jadresic et al., 2007, Vega-Dienstmaier & Zapata-Vega, 2007).

⁴ Research on the optimal way to treat PPD in low- and middle-income countries of LA remains scarce (Rojas et al. 2007) likely due to several reasons including (among others): (i) competing public health problems; (ii) lack of human and financial resources; and (iii) nihilistic beliefs that effective and affordable treatment options are not possible in poorer countries (Moloney, 2009, Patel et al., 2004, Saxena et al., 2007).

2: LITERATURE REVIEW

This literature review proceeds in four sections. The first section reviews the main treatment approaches to PPD, categorizing these treatments into three main paradigms. The second section presents a critical appraisal of these paradigms, concentrating on areas where they are falling short. The third section proposes a new contextual perspective on the optimal treatment of PPD, attempting to both make up for the shortcomings of the previous three views as well as take into account the social and economic context of LA. The final section concludes with the specific purpose of this research paper.

2.1 Main Treatment Paradigms

The optimal way to treat PPD in high-income countries in more developed regions has been the subject of much debate and analysis. A review of interventions suggests that researchers and practitioners tend to adopt one of three main paradigms for how to approach PPD treatment: (i) the biological paradigm; (ii) the non-biological paradigm; and (iii) the multicomponent paradigm. Importantly, each paradigm differs in its thinking on the aetiology of and (thus) optimal treatment modality for PPD.

The biological paradigm suggests that several physiological factors may play a role in the pathogenesis of PPD, including: neurotransmitter imbalances (Marshall, 1993), changes in reproductive hormone levels (Bloch et al., 2000, Harris et al., 1994, O'Hara et al., 1991, O'Hara, 1995), poor sleep quality (Bozoky & Corwin, 2002, Brown & Lumley, 2000, Chaudron et al., 2001, Wambach, 1998), and immune system malfunction (Miller, 1998). Thus, this school of thought contends that the most effective way to treat PPD usually involves biological interventions such as pharmacologic interventions (e.g. antidepressant medication) (Appleby et al., 1997, Cohen et al., 2001, Stowe et al., 2008, Suri et al., 2001), hormonal interventions (e.g. estrogen therapy) (Dalton, 1985, Ahokas et al., 2000, Ahokas et al., 2001, Gregoire et al., 1996), and other interventions (e.g. critically timed sleep deprivation, bright light therapy, and electroconvulsive therapy) (Corral et al., 2000, Oren et al., 2002, Parry et al., 2000, Hiscock & Wake, 2002)

The non-biological paradigm attributes PPD to: (i) psychological factors, including negative attribution style (Donovan & Leavitt, 1989, Donovan et al., 1990, Grazioli & Terry, 2000), low self-esteem and unrealistic expectations of motherhood (Affonso & Arizmendi, 1986, Beck, 2001, Ritter et al., 2000), previous psychiatric history (Campbell et al., 1992, Moline et al., 2001, O'Hara et al., 1984, Webster et al., 2008, Watson et al., 1984), and prior trauma and loss (Beck, 2002, Hughes et al., 1999, Kendall-Tackett, 2001); and (ii) social factors, including stressful life events (Beck 2001, Ritter et al., 2000), mothers at both ends of the age continuum (Chaudron et al., 2001, Webster et al., 2000), low socioeconomic status (Mandl et al., 1999, McGrath et al., 1990, Patel et al., 2001, Patel et al., 2002), lack of social support (Cutrona et al., 1984, Ritter et al., 2000, Webster et al., 2000), poor marital relationships (Cox et al., 1982, Stuart & O'Hara, 1995, Watson et al., 1984), and violence against women (Briere & Elliot, 1994, Buist & Janson, 2001). Thus, this view tends to prescribe non-biological interventions, including psychological interventions (e.g. interpersonal psychotherapy and cognitive behavioural therapy) (Antonuccio, 1995, Antonuccio et al., 1995, Clark et al., 2003, DeRubeis et al., 1999, Honey et al., 2002, Klier et al., 2001, O'Hara et al., 2000, Stuart & O'Hara, 1995), psychosocial interventions (e.g. peer support, partner support, and non-directive counselling) (Chen et al., 2000, Dennis, 2003, Fleming et al., 1992, Friedman, 2001, Holden et al., 1989, Misri et al., 2000, Wickberg & Hwang, 1996), and other interventions (e.g. relaxation/massage therapy, infant-mother relationship therapy, maternal exercise, and infant sleep interventions) (Armstrong & Edwards, 2002, Clark et al., 2003, Cooper et al., 2003, Field et al., 1996, Hiscock & Wake, 2002).

The multicomponent paradigm views the development of PPD as multifactorial in nature, resulting from a complex interplay of a range of both biological and non-biological factors (Halbreich 2005). Thus, advocates of this perspective contend that the optimal approach to PPD treatment is multicomponent in nature, combining the contributions of both the biological and non-biological treatment paradigms (Appleby et al., 1997, Rojas et al., 2007). In clinical settings, particularly in high resource countries, this approach is most commonly practiced (BC Women's Hospital, 2006).

2.2 Critical Appraisal of Main Treatment Paradigms

Juxtaposing these main paradigms with other evidence found in the literature highlights that, despite their respective strengths, all suffer from important weaknesses that compromise their usefulness. The first questionable aspect of all paradigms is the

quality of empirical data used to support their treatment recommendations. Definitive conclusions about the effectiveness of most treatments are severely constrained (albeit to different degrees) due to the serious methodological limitations of most intervention studies. Of the studies conducted, most lacked a randomized control trial, had small sample sizes, lacked a placebo control group, had no information on maternal evaluations of the treatments delivered, had high attrition rates, and/or used multicomponent interventions without appropriate comparison interventions (making it impossible to attribute the results to one particular component or both) (Boath and Henshaw 2001; Dennis 2004; Dennis and Stewart 2004; Kendall-Tackett 2005). Consequently, psychiatrists generally refer to consensus guidelines – or generic, manualized treatment protocols of proven effective treatments (e.g. antidepressant medications, cognitive behavioural therapy, and interpersonal therapy)^{5, 6} – developed by experts (Altshuler et al., 2001).

The second questionable aspect of the biological and non-biological paradigms is their common attribution of PPD to one particular biological or non-biological variable. However, the exact cause of PPD remains unclear (Cooper and Murray 1998), with extensive research suggesting a multifactorial aetiology wherein vulnerability to PPD is the result of a complex interplay of a range of both biological and non-biological factors that differ from woman to woman and setting to setting (Halbreich 2005). Thus, as there is no single etiologic pathway by which women develop PPD, it is improbable that a single biological or non-biological treatment modality will be the optimal way to treat PPD for all women in all contexts. Rather, the multifactorial nature of PPD implies that a multicomponent approach to treatment (advanced by the third paradigm) is likely to be more beneficial.

The third and, perhaps, most important questionable aspect of all paradigms (including the stronger multicomponent paradigm) is their inattention to the macro-level context in which (i) PPD develops and (ii) PPD treatment services are provided. First, the development of PPD is robustly influenced by the context-specific social and economic determinants of health in which a mother resides, including poverty, social exclusion, violence, inequitable gender roles, stress, lack of access to perinatal health

⁵ Although studies show the effectiveness of antidepressants, concerns over side effects and medication use in pregnant and breastfeeding mothers nonetheless make antidepressants an unattractive option for some women (Dennis and Stewart 2004).

⁶ Interestingly, studies have shown that cognitive behavioural therapy and interpersonal therapy is as effective as medications at treating general (and thus perhaps postpartum) depression (Dennis 2004).

services, unemployment, urban slums, and so on (WHO 2008).⁷ Second, the efficacy of any particular treatment approach (even evidence-based, effective interventions) depends on numerous other context-specific variables, including macro-level social and economic processes, population demographics, organization of health care systems (e.g. decentralized vs. centralized and public vs. private systems), financial resources, facilities and referral systems, cost and availability of drugs, cultural acceptability of drugs, the stigma associated with a mental illness, expertise in reproductive mental health, and so on. The absence of an examination of the causal pathway along which these contextual factors can have effects on how PPD develops and how well interventions are delivered in the real world limits optimal treatment in LA.

2.3 A Contextual Perspective

In summary, although research in high-income countries has provided strong evidence on proven treatments, I argue that their efficacy in real-world contexts in LA is compromised due to the three weaknesses cited above, perhaps the most salient of which is the absence of a robust examination of contextual factors.⁸ Given this major shortcoming as well as a consideration of the Latin American context, this paper introduces a new, context-specific paradigm for the optimal treatment of PPD in diverse settings in LA.

Since numerous contextual influences play an important role in the development of PPD and the efficacy of a particular treatment approach, it is improbable that a generic, manualized treatment protocol – seemingly advanced by all paradigms under review as well as by the clinical guidelines developed by experts – will be effective for all women in all contexts in LA. In fact, I would argue that the optimal way to treat PPD in LA will be just the opposite of a one-size-fits-all approach. In particular, I suggest that tailored approaches to PPD treatment that are responsive to the local context (specifically, by intervening in the causal pathway along which contextual factors affect either the development of PPD and/or the efficacy of interventions) will likely be more beneficial for achieving optimal maternal mental health outcomes.

⁷ The determinants of health are the social, economic, and political conditions under which people live which are the root causes of health and illness (WHO 2008). The concept is broad and goes beyond ordinary health measures to include (for example) low income, unemployment, urban slums, lack of access to health services, and so on (WHO 2008).

⁸ To improve the applicability of PPD treatment approaches to the context of LA, this paper selectively concentrates on strengthening this particular shortcoming (among the three highlighted).

Importantly, I do not intend to suggest that there is an extreme level of variance, wherein each context requires a completely different type of treatment intervention. There are indeed certain types of treatment interventions that have been proven to be effective in treating PPD. However, I do intend to suggest that even evidence-based, effective interventions may work differently in different contexts (Green, 2006). Thus, it follows that a tailored approach to PPD treatment that is responsive to contextual factors may outperform a generic, manualized treatment protocol that ignores such complexities.

Here I present a conceptual framework to strengthen understanding on this complex issue that builds on a large body of public health evidence of the effects of an array of contextual factors – specifically, poverty, violence, and social exclusion – on mental health (and by extension PPD) and service delivery. Importantly, while many different variables could have been chosen (such as the numerous ones cited the preceding section), each of these contextual factors are considered for three main reasons: (i) they represent endemic problems in LA (Casas et al., 2001, Thorp, 1998); (ii) they have been described as the most significant social and economic determinants of mental health (Keleher & Armstrong, 2005, VicHealth, 1999, Walker et al., 2005, WHO 2005b); and (iii) they are contextual-level variables that are consistently shown in the Latin American literature to increase the risk of PPD for puerperal women (Vega-Dienstmaier & Zapata-Vega, 2007).

Importantly, poverty, violence, and social exclusion are not discrete problems. Rather, they are a group of interconnected social processes that are heavily shaped by gender at multiple levels (e.g., individual, familial, and societal levels) to contribute to the (ill)health of new mothers or the (in)efficacy of interventions. Principally, maternal mental health outcomes are grounded in the context of women's lives and status in Latin American society, making gender an important component of all health determinants in this case. For instance, women experience the arrangement of gender and social relationships simultaneously so that gender influences their experiences of education, income, employment, violence and crime, health services, class, politics, age, race/ethnicity, language, sexual orientation, geography, and other forms of social difference. All of these issues intersect to affect maternal mental health outcomes differently for different women in different contexts. Given the complex nature of these intersections, the three contextual-level health determinant of interest will be broken down in this paper for ease of analysis.

In each of the following sections, I provide a definition of the determinant, a description of the context of LA, and a causal model that illuminates the moderating effect of contextual influences on the epidemiological picture of PPD and the efficacy of PPD interventions (which, in turn, may lead to different approaches regarding the optimal way to treat PPD in different settings in LA (Section 5). The casual models are merged into one conceptual framework below (Figure 1).

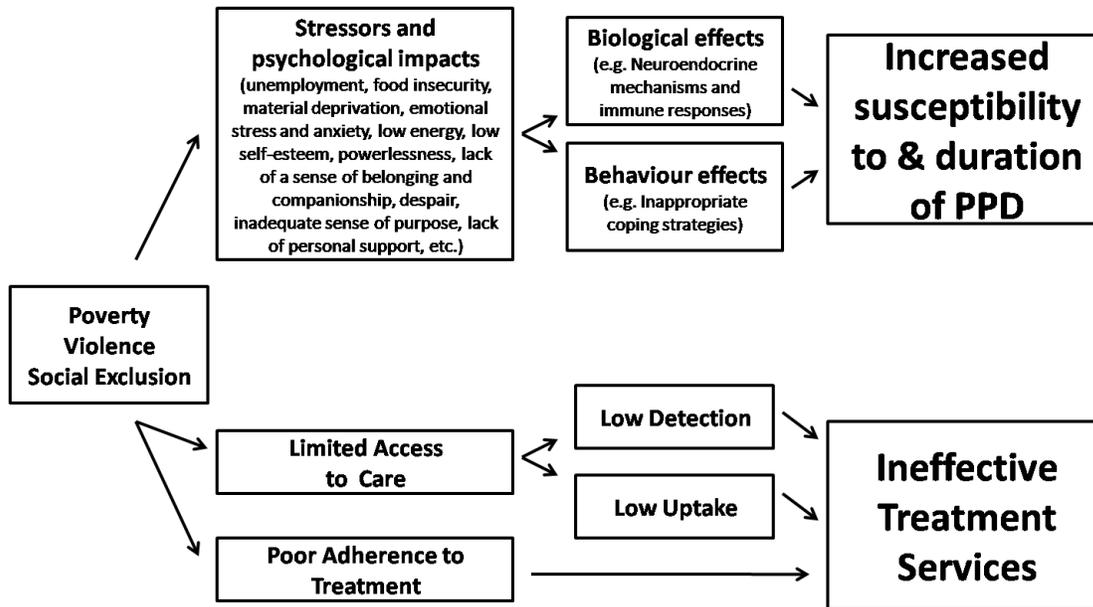


Figure 1. A conceptual framework of the effects of poverty, violence, and social exclusion on the development of PPD and the efficacy of treatment services.

2.3.1 Poverty

A detailed discussion of the meaning of poverty is beyond the scope of this research paper. Importantly, however, the concept of poverty is recognized as broad, extending beyond the traditional concepts of income and assets to include housing, education, work, and public health and clinical services (e.g. food, water, sanitation, health care, etc.) (Keleher & Armstrong, 2005, Laderchi et al., 2003, Marmot, 2006). However, for the purposes of this paper, since the latter dimensions are captured under the conceptualization of social exclusion (Section 2.3.3), absolute poverty and relative poverty (or inequality)^{9,10} refer to deprivation of income and material assets.

⁹Henceforth, to be brief, absolute poverty and relative poverty (or inequality) is referred to as 'poverty'.

Poverty and inequality represent some of the most important, long-standing central problems in LA (Ginding, 2005, Thorp, 1998), a region described as “the veritably eternal land of contrasts – of privilege and deprivation” (Gootenberg, n.d., pp. 3). Poverty assessments, as reported by the World Bank (2010b), provide a powerful illustration of the situation of the destitute majority in the region: the percentage of the general population living below the national poverty line reaches more than 50% in several countries (e.g. Guatemala, Haiti, Honduras, Peru, Venezuela) with moderate estimates of 20% or less found in only in a few countries (e.g. Chile, Costa Rica); the percentage of the urban population living in poverty ranges from 30 to 40% in many countries (e.g. Colombia, Dominican Republic, Mexico, Peru); and the percentage of the rural population living in poverty is largely above 60% (e.g. Bolivia, Colombia, Ecuador, Guatemala, Honduras, Peru, Venezuela). The income inequality in LA also challenges the imagination: while developed nations have an average Gini Coefficient of 33.8, the index for Latin America is 49.3 with wide variation across countries ranging from 42.3 in Uruguay to 60.7 in Brazil (Hoffman and Centeno, 2003);¹¹ and while the richest tenth and poorest tenth of people in developed nations receive 29% and 2.5% of total income, respectively, the corresponding estimates in Latin America are 48% and 1.6% (Deferranti et al., 2003). Importantly, this large burden of poverty and inequality varies by gender. Women (compared to men) have a higher incidence of poverty, are prone to experience more extreme poverty, and are more likely to suffer more longer-term poverty (Chant, 2007). This has serious consequences for their health.

The relationship between poverty and mental health and mental health services has been consistently demonstrated with real-life narratives, cross-sectional epidemiological evidence, and prospective longitudinal studies in the world as a whole (Kuruvilla & Jacob, 2007, Patel et al., 1999, Patel, 2001, Patel & Kleinman, 2003, Peters et al., 2008, Wilkinson & Pickett, 2006) and in LA in particular (Araya, 1994, Araya et al., 1994, Araya et al., 2003, Casas et al., 2001, Lima et al., 1996, Ludermir & Lewis, 2001). Importantly, the association reflects bidirectional causality, wherein poverty leads to ill

¹⁰Importantly, the basic facts about economic poverty and inequality in LA and the world remain contentious. The level of economic inequality reported varies greatly due to variation in survey questions, limitations of statistical techniques, and non-uniform definitions and measures of poverty and inequality (Deferranti et al., 2003, Hoffman and Centeno, 2003). In addition, most surveys concentrate solely on current income; however, income alone does not fully capture all degrees of economic poverty and inequality and other indicators (for example, land ownership) are needed (Dr. Hershberg, LAS 835 lecture, Oct 20, 2009).

¹¹The Gini Coefficient is a commonly used measure of inequality where an index of 0 is perfect equality and 100 is perfect inequality. It is most commonly used to express inequalities in income.

health and lack of access to services and ill health and lack of access to services leads to poverty (Wagstaff, 2002, Peters et al., 2008). In the context of maternal mental health, a review of these publications and others (Aidoo & Harpham, 2001, Patel et al., 1995, Patel et al., 1998) highlights the potential mechanisms by which impoverishment can lead to (i) PPD and (ii) ineffective PPD treatment services, as explicated below:

- i. Poverty is associated with many stressors (e.g. unemployment, food insecurity, material deprivation, emotional stress and anxiety, etc.) (Wilkinson & Marmot 2003, Raphael 2004). These stressors can make new mothers feel miserable and this can affect biology (e.g. neuroendocrine mechanisms and immune responses) and behaviour (e.g. inappropriate coping strategies), which, in turn, can increase their susceptibility to PPD or prolong the duration of their illness (Wilkinson & Marmot 2003, Raphael 2004).
- ii. Poverty, particularly within the Latin American context of rapid urbanization, economic volatility, and lifestyle changes, can increase life's demands on new mothers (Jadresic et al., 2007). Understandably, such demands can reduce mothers' control over their lives (Marmot 2004) and ultimately affect access to health services (and thus early detection) (Peters et al., 2008) and treatment adherence (Zayas, 2008). Since early detection and treatment adherence are common parameters on which PPD treatment outcomes depend (Patel et al., 2009, Pampallona et al., 2002), a context of poverty can clearly have a negative impact on the success of PPD treatment programs.

2.3.2 Violence

The World Health Organization (WHO) (2002) defines violence as “the intentional use of physical force or power, threatened or actual, against...another person...that either results in... injury, death, psychological harm, maldevelopment or deprivation” (pg. 5). The typology of violence encompasses self-directed violence, interpersonal violence (including IPV and random acts of community violence), and collective violence (including social violence (e.g. hate crimes), political violence (e.g. war, state violence, etc.), and economic violence (e.g. denial of essential resources)) (WHO 2002). In this paper, violence will refer to some form of gender-based violence. This includes any physical, sexual, and/or emotional abuse that is directed against women because of their gender and is committed by either a family member, intimate partner, state authority

figure (e.g. police officer), militant in conflict situations, or other people (Heise et al., 1999, United Nations, 1993, WHO, 2005).

Gender-based violence is a serious human rights and public health issue in LA. According to a recent multi-country study by WHO (Garcia-Moreno et al., 2006), the reported *lifetime* and *past year* prevalence of violence (either physical partner violence, sexual partner violence, or both) was 36.9% and 14.8% (respectively) in Brazil and 69.0% and 34.2% (respectively) in Peru. Reports from other countries reveal similar estimates: the prevalence of IPV in Chile is 26% (Heise et al., 1999); and 52% and 21% of ever-married women in Nicaragua have experienced physical abuse and physical, sexual, and emotional abuse, respectively (Ellsberg et al., 2000). This depiction of an epidemic of violence against women occurs against a background of gender-specific terror during war and/or state-sponsored violence in many other countries (e.g. Colombia, Guatemala, Haiti) (Lykes et al., 2006).

Importantly, that violence is labelled as gender-based makes understanding women's subordinate status in Latin American society important to this analysis (Guedes et al., 2002). Gender-based violence in LA is likely the result of an interplay of factors at individual, familial, and community/societal levels (WHO 2002). Studies worldwide have cited male control of wealth and decision-making within the family (Garcia-Moreno et al., 2006, Levinson, 1989), marital conflict (Hotelling & Sugarman, 1986), excessive masculinity linked to toughness, male honour, or dominance (Heise, 1998),¹² and patriarchal gender and social norms concerning the 'proper' roles and responsibilities of men and women as strong predictors of abuse (Heise et al., 1999). Many of these gender and social factors permeate the lives of women in several countries in LA (Chant & Craske, 2003).

There is a growing body of research evidence worldwide (Campbell 2002, Campbell et al 2004, Heise et al., 2002, WHO 2002, WHO 2009) and in LA (Ellsberg et al., 1999, Guedes et al., 2002, Lykes et al., 2006) to suggest that women who experience some form of violence are at a greater risk of experiencing physical, mental, and reproductive health problems. While the cross-sectional design of most studies precludes establishing a definitive casual link between violence and health, previous longitudinal studies suggest that women's adverse health outcomes are mainly the result (rather than precursor) of abuse (Campbell, 2002). In the context of maternal mental

¹² This type of male chauvinism described is commonly referred to as *machismo* in LA.

health, evidence suggests that gender-based violence may contribute to (i) PPD and (ii) ineffective PPD treatment services with the potential casual pathways outlined below:

- i. Gender-based violence is associated with serious stress and psychological impacts, “sapping women’s energy, compromising their physical health, and eroding their self-esteem” (Heise et al., 2002, pg. S5). These impacts can contribute to the development of maternal mental illness such as PPD (Campbell 2002, Campbell et al 2004,WHO 2005).
- ii. Research suggest that abuse survivors have higher utilization of health services (resulting in increasing health care costs) (Morrison & Orlando, 1999) due to the obvious health consequences of violence. However, at the same time, in contexts of conflict or patriarchy, affected women may also have limited access to health services due to insecurity (Ponsar et al., 2009) or restrictions in the way they are able to access health care information and services (WHO 2002). Clearly, for mothers experiencing PPD, gender-based violence may impact the efficacy of PPD interventions (e.g. through lack of access (and thus lack of detection) and/or low adherence).

2.3.3 Social Exclusion

There are many possible ways to define social exclusion. For the purposes of this paper, this term encompasses: (i) disconnection from civil society, political participation, and social institutions because of systematic forms of marginalization; (ii) exclusion by society of social goods (e.g. income security, health care, health insurance, education, etc.); and (iii) social isolation and poor social supports/networks (Raphael 2004, Keleher & Armstrong, 2005).

Several regional scholars (Behrman et al., 2002, Robinson, 2006, Smith, 2005, Thorp, 1998) have described this complex issue in LA. The intersection of all works is located in one empirical fact: a central component to all forms of rule in LA over the centuries (including colonial rule, monarchy, dictatorship, and even democracy) has been an either overt or covert system of political, social, and economic exclusion of the masses. The groups in LA recognized as particularly vulnerable populations to these forms of exclusion include the indigenous population, the population of African descent, and the poor majority regardless of their race or ethnicity (Behrman et al., 2002).

There is strong research evidence of the powerful effects of social exclusion on mental health and related health services worldwide (Morgan et al., 2007, Payne, 2006,

Raphael 2004, Sayce, 2001, Targosz et al., 2003). In the context of maternal mental health, the potential mechanisms by which social exclusion can lead to (i) PPD and (ii) ineffective PPD treatment services include the following:

- i. Individuals affected by social exclusion (e.g. through lack of social connectedness, support networks, community participation, etc.) suffer from various psychosocial stressors including powerlessness, lack of a sense of belonging and companionship, inadequate sense of purpose, low self-esteem, despair, lack of personal support and coping skills to deal with distress, and so on (VicHealth, 2005). This has numerous implications for the mental health of new mothers. In fact, research shows that puerperal women in LA experiencing some form of social exclusion are at a higher risk for PPD (Vega-Dienstmaier & Zapata-Vega, 2007).
- ii. The (implicit) social exclusion occurring in most Latin America health care systems (with exceptions, e.g. Cuba) can limit socially disadvantaged mothers from accessing PPD treatment services (e.g. by means of differential pricing and quality of services) (Behrman et al., 2002). Also, social exclusion among mothers with PPD may exacerbate the experience of stigma and discrimination, particularly given the shame and guilt associated with mental illness in LA (Alarcón, 2003); this can impact uptake and adherence to treatment. Thus, by preventing detection, uptake, and adherence, social exclusion can lead to suboptimal treatment outcomes.

2.4 Research Purpose

To my knowledge, no one has provided insight into the optimal way to treat PPD in different settings in LA guided by this contextual (or social and economic determinants of health) perspective. Therefore, the aim of this research was to critically analyze and compare regional experiences with the treatment of PPD to the extent possible to: (i) determine the degree to which tailored treatment approaches that are responsive to the local context of either poverty, gender-based violence, or social exclusion affect the successful reduction of PPD as compared with generic, manualized treatment approaches that are unresponsive to contextual issues; and (ii) provide a set of insights/recommendations from which policy makers, program planners, and researchers can draw information to optimize PPD treatment outcomes in diverse contexts in LA in the future.

3: METHODS

3.1 Study Design

The efficacy of tailored versus generic treatment approaches when subject to particular macro-level, context-specific variables was explored in LA using a case-study approach with the country as the unit of analysis.

3.2 Literature Search

Data were drawn from two main sources: (i) the peer-reviewed literature (e.g. intervention research); and (ii) the grey literature (e.g. reports, publications, and data sheets from National Health Ministries, the World Health Organization (WHO), the Pan American Health Organization (PAHO), and universities). Peer-reviewed literature was identified by searching in several mainstream databases (e.g. the Web of Science, JSTOR, Medline OVID, PubMed, PsychInfo, Global Health & CINAHL (EBSCO), Latin American Social Medicine, Cochrane Central Register of Controlled Trials, and Literatura Técnico-Científica em Ciências de Saúde na América Latina e Caribe (LILACS)) as well as Spanish Journals identified by a review of references (e.g. Rev Psiquiatr, Rev Chile Obstet Ginecol, Rev Chile Neuro-psiquiatr, Acta Psiquiatr Am La, Rev Med Chile, Actas Esp Psiquiatr, and Rev Panam Salud Publica). Grey literature was identified through a more general internet search.

Both search strategies employed the following keywords (either alone or in combination): postpartum depression, postnatal depression, maternal depression, treatment, therapy, poverty, violence, social exclusion, Latin America, South America, Central America, Caribbean, and names of all low- and middle-income Latin American countries (as listed in Appendix 1). Importantly, to ensure comprehensive identification of all relevant studies, both search strategies involved free-text searching as well as additional terms (including appropriate MeSH terms). General inclusion criteria were original articles (if from the peer-reviewed literature) published until April 2010, written in English or Spanish, and addressing the treatment of PPD in Latin American.

3.3 Case Study Selection

In an effort to achieve findings that could be used to inform maternal mental health policy, practice, and research in LA, the criteria and justifications that guided the specific selection of countries for case study included the following:

- (i) *Criterion:* Evidence must be gathered from low- or middle-income countries in LA listed in appendix 1 (Latin American Network Information Center, 2010, World Bank, 2010). *Justification:* Restricting my review to countries of relatively similar social and economic factors, political processes, and health systems (all of which influence how PPD and associated policies/practices develop) will likely maximize the generalizability of my findings and recommendations to the region (Patel, 2000).
- (ii) *Criterion:* Treatment interventions to reduce PPD must be evidence-based (ideally from controlled trials by random assignment) and conducted in a real-world health center. *Justification:* The use of evidence-based medicine in the ecologically layered circumstances of clinical practice will ensure both evidence- and practice-based quality trials that can inform and guide policy (Green, 2006).
- (iii) *Criterion:* Countries must have publications of both tailored treatment approaches that include measures to respond to at least one contextual-level variable (in addition to normal treatment protocols) as well as generic, manualized treatment approaches that do not.¹³ *Justification:* A comparison of tailored treatment approaches that are responsive to the context with generic, manualized treatment approaches that are not will allow determination of the extent to which tailored approaches (versus generic approaches) affect the successful reduction of PPD.
- (iv) *Criterion:* Countries ideally should have an adequate volume of data available. *Justification:* This will enable achievement of the depth required to understand the intricacies of this complex issue.

¹³ The criterion for deciding if a treatment approach is tailored (or not) was quite broad. Principally, an approach was considered tailored and responsive to the contextual issue of either poverty, violence, or social exclusion if measures were taken to intervene at some point in the casual pathway along which these social and economic determinants effect the development of PPD and/or the efficacy of treatment interventions (as outlined in Section 2.3).

3.4 Data Analysis

Analysis of the data focused on critically appraising regional experiences with the treatment of PPD. For each country found to meet all aforementioned inclusion criteria: (i) tailored and generic treatment approaches (both of which were carried out in a particular context of either poverty, violence against women, or social exclusion) were described (in Section 4); (ii) the impact of such efforts on treating PPD was compared (in Section 4); (iii) the successes, challenges, and lessons learned in implementing an optimal treatment intervention were described (in Section 5); and (iv) the implications and recommendations for maternal mental health policy, practice, and research were delineated (in Section 5).

4: FINDINGS

4.1 Regional Overview

Regional evidence for effectiveness of PPD treatment approaches is scarce. In the corpus of peer-reviewed and grey literature emanating from LA examined, publications were concentrated in six countries (Argentina, Brazil, Chile, Colombia, Mexico, and Peru), consistent with a recent review of the status of mental health research in the region (Razzouk et al., 2008). Moreover, there was a great scarcity of studies dealing with PPD treatment interventions, with most publications instead focused on the epidemiology (e.g. prevalence, risk factors) of the condition.

In total, evidence for PPD treatment interventions was found in three countries: Brazil (Arraes de Alencar et al., 2008, Magalhães et al., 2006), Chile (Rojas, 2007), and Mexico (Ramos, 2008). From this small list of countries, only Chile met all of the inclusion criteria stated in Sections 3.2 and 3.3 and was selected as a case study for this MPH research project. Appendix 2 shows information on the other countries that did not satisfy all of the criteria.

4.2 Case Study: Chile

4.2.1 Description of Generic and Tailored Treatment Approaches

Both treatment approaches described herein were delivered in a context of poverty, which Chilean research shows strongly affects (among other things) access to care (Jadresic et al., 2007, Rojas et al., 2007). In Chile, access to mental health specialists is difficult and waiting times for an initial consultation exceed 2 months (Rojas et al., 2007), with the poorest sectors of society burdened by the highest risk for mental disorders yet the lowest access to mental health specialists (Jadresic et al., 2007, Rojas et al., 2007). Consequently, the main source of general health care (including pre- and post-natal care) for socially disadvantaged populations is local primary care clinics (Rojas et al., 2007). Therefore, for the purposes of this particular case study, a PPD treatment approach is tailored and responsive to the local context of poverty if it is

delivered in a primary care setting since this strategy can alleviate the impact of poverty on access to care, which, in turn, can improve effective detection of the condition (thereby enhancing the success of programs to treat and reduce PPD in the population).

The Generic Treatment Approach

Importantly, a National Depression Treatment Program for adults with general depression was integrated into primary care nationwide in 2001 (Ministerio de Salud, 2001). Notably: (i) it is evidence-based, offering treatment protocols (specific to the severity of depression)¹⁴ similar to those tested in a trial (Araya et al., 2003); and (ii) it does not involve a psychiatrist (Patel et al., 2009) and instead is led by psychologists and general practitioners (Araya et al., 2009). Unfortunately, this program in primary care has no activities specifically designed to treat PPD (Rojas et al., 2007). Rather, a review of the above stated documentation as well as a recent report from the Chilean Ministry of Health (Ministerio de Salud, 2009) highlights that PPD is treated with a generic, manualized approach; specifically, the approach involves medical consultations and evidence-based interventions (including psychosocial interventions and/or antidepressant drugs) delivered by reproductive mental health specialists in specialized contexts (e.g. general hospitals). Consequently, by not offering PPD treatment activities in primary care clinics, low-income populations are denied access to care, which, in turn, precludes effective detection of their illness. Therefore, I would contend that this national-level approach to PPD is unresponsive to the context of poverty in which some mothers live.

The Tailored Treatment Approach

Graciela Rojas and colleagues (2007) recognized this situation as “a great missed opportunity” (pg. 1630) in view of the already established primary care program for general depression and the excellent coverage of pre- and post-natal primary care for low-income mothers. Accordingly, they conducted a randomized control trial to compare the effectiveness of various treatment interventions to reduce PPD in mothers delivered specifically in three primary care clinics in a low-income urban context of Santiago, Chile (Rojas et al., 2007). Clearly, this approach involved tailoring PPD treatment activities to match the realities faced by mothers living in poverty (Patel et al., 2009).

¹⁴ Patients with moderate depression receive an outpatient package, including antidepressant medications, psychosocial interventions, or both (Araya et al., 2009). Patients with more severe depression are seen by a specialist who prescribes more intensive services (Araya et al., 2009).

Participants were 230 new mothers with unrecognized and untreated depression (Rojas et al., 2007). Women were screened twice for depressive symptoms (using a Spanish version of the 10-item EPDS that was validated for use in Chile (Jadresic & Araya, 1995)) and clinically assessed for major depression (according to the DSM-IV criteria (American Psychiatric Association, 1994)) (Rojas et al., 2007). Those with PPD were randomly assigned to either: (i) a multicomponent intervention (n=114) involving antidepressant medication, adherence support from a trained mental health worker, 8 weekly 50-minute psycho-educational groups, and one 5-hour training session as well as weekly 1-hour psychiatric supervision for primary care physicians; or (ii) usual care (n=116) which potentially included all of the services available for general depression in the primary care clinics, including antidepressant drugs, medical consultations, brief psychotherapeutic interventions, and/or external referral for specialty treatment (Rojas et al., 2007).¹⁵ Both groups had the same baseline EPDS scores [17.7 (95% CI 16.8-18.7) vs 17.1 (95% CI 16.4-17.9)] (Rojas et al., 2007).¹⁶

4.2.2 Assessment of the Impact of Approaches on Treating PPD

The impact of the generic versus tailored approach on successfully treating PPD was compared through qualitative analysis of all available documentation. According to Patel et al. (2009), “a critical first step in the provision of treatments for any disorder [including PPD] is its effective recognition” (pg. 1). Also, I would add that, once recognition occurs and therapy begins, patient adherence to the intervention is a second critical component (Pampallona et al., 2002). These two parameters (namely, detection and adherence) are essential for the success of PPD treatment programs and constitute the salient points of divergence for both approaches.

The study by Rojas et al. (2007) uncovered “a large number of puerperal women whose depression had not been recognized or treated when recruiting for [their] trial, which accords with [their] previous studies (Jadresic & Araya, 1995b)” (pg. 1636). I would suggest that this finding highlights the fact that most low-income women are not assessed for PPD nor do they receive treatment under a generic approach. Logically, mandates requiring the delivery of PPD treatment activities by reproductive mental

¹⁵ However, in reality, antidepressant drugs and medical consultations are usually the main treatment methods; all other services are rarely offered (Rojas et al., 2007).

¹⁶ An EPDS score of 10 or more (out of 30 points) indicates postpartum depressive symptoms with a clinical assessment required for confirmation (Rojas et al., 2007).

health specialists in specialized contexts rather than by general health workers in primary care clinics (which are the main entry points for health services for low-income populations) preclude effective detection and (thus) treatment of PPD in low-income mothers. Moreover, Araya et al. (2003) notes that adherence to effective treatment of depression is usually very poor in Chile (Araya et al., 2001), as elsewhere (Schulberg et al., 1997, Tylee & Freeling, 1989, Ustun, 1995). I would suggest that this fact indicates that adherence to treatment is a challenge under a generic approach. Since poverty and other contextual issues (e.g., work obligations, lack of social support) can affect treatment adherence, it is likely that generic approaches that are unresponsive to such contextual issues may have challenges with promoting adherence.

In contrast, several positive assessments can be made about the tailored approach involving primary care management of PPD. First, integration of PPD treatment into primary care enabled effective recognition of numerous mothers whose PPD likely would have otherwise went undetected. Second, while treatment compliance after 3 months was a challenge for all participants, scholars contend that the structured monitoring and support delivered in primary care ensured overall better compliance with patients in the multicomponent intervention group versus the control group (Patel et al., 2007). Third, this trial in primary care was acknowledged as having produced the “highest recovery rates recorded in any depression treatment study” (Patel et al., 2009). In particular, the overall adjusted mean difference in EPDS scores significantly favoured mothers in the multicomponent intervention group versus the control group by 3 months [8.5 (95% CI 7.2-9.7) vs 12.8 (95% CI 11.3-14.1)] (Rojas et al., 2007). However, this difference was reduced by 6 months [10.9 (95% CI 9.6-12.2) vs 12.5 (95% CI 11.1-13.8)] likely owing (in part) to the greater proportion of antidepressant cessation and less frequent attendance at medical consultations in the intervention group than in the control group in the latter 3 months (Rojas et al., 2007).

In summary, a qualitative review of all available documentation on the treatment of PPD in Chile highlights that the multicomponent intervention delivered in primary care (compared with the generic approach of treatment activities in specialized settings) may facilitate better detection of PPD, adherence to treatment, and recovery rates from the condition – all of which are proxy measures for the success of PPD treatment programs. Therefore, this suggests that a tailored approach to treatment that is responsive to the local context (e.g., by delivering services in primary care) might work well at a national level in place of the current approach. In fact, the multicomponent intervention delivered

entirely in primary care clinics in the aforementioned randomized controlled trial is being advocated as an effective, affordable program for women with PPD in low-income settings over 6 months (Rojas et al., 2007) – a proposal which modelled their previous recommendation made for general depression for adults (which, interestingly, was later introduced at a national level) (Araya, 2003; Araya, 2006). Therefore, in conclusion, I offer this case study as support to the main contention of this paper – namely, that tailored treatment approaches that are responsive to the local context (of, in this case, poverty) (in addition to normal treatment protocols) are likely to be more successful at treating PPD as compared with generic, manualized treatment approaches that are unresponsive to contextual issues.

5: DISCUSSION

5.1 Successes, Challenges, and Lessons Learned

The example of Chile highlights several important successes, challenges, and lessons learned in achieving a successful PPD treatment intervention.

5.1.1 Relevance of Context

This case study in Chile is an important contribution to the understanding of the relevance of context (in this case, poverty) in the optimal treatment of PPD in LA. Commentators have aptly noted one important conclusion that can be safely made from this case study: “PPD is compounded by being poor in poor countries” (Zayas, 2008, pg. 80). First, poverty exacerbated women’s risk of suffering mental disorders after childbirth (Jadresic et al., 2007) as well as the persistence of the illness (Zelkowitz & Milet, 2001). Second, poverty severely affected access to treatment and (thus) recognition of PPD where services are concentrated in specialized settings (Jadresic et al., 2007, Rojas et al., 2007). Third, poverty impacted adherence to treatments (Zayas, 2008). Furthermore, the likelihood of occurrence of these three consequences of poverty were magnified by the broader socioeconomic context of Chile wherein an emerging market-economy, increasing work obligations, rapid urbanization, and the disappearance of traditional sources of informal support (e.g. the extended family) greatly increased the pressures and life demands faced by new mothers in poverty (Jadresic et al., 2007). Taken together, this case study highlights that understanding the broader social and economic context as well as its impact on the development of PPD and the efficacy of PPD treatment services is crucial to the success of treatment programs in Chile as well as other diverse settings in LA.

5.1.2 Importance of Mode of Delivery & Key Components

The example of Chile represents rare evidence for the feasibility and effectiveness of PPD treatment services when integrated into routine primary care in a middle-income country (Cohen et al., 2002). As such, the case principally underscores

the importance of mode of delivery of PPD treatment services in resource-constrained settings. Services delivered in primary care clinics (compared with those in specialized settings) offer an opportunity to intervene in the pathway along which poverty affects the efficacy of interventions. In particular, in Chile, this strategy greatly improved access to treatment and (thus) recognition of PPD.

Furthermore, the case highlights several components that may be essential to any successful PPD treatment program. First, a successful service requires both biological and non-biological interventions (with the exact formula changing in relation to local needs and resources) given the research evidence presented, the multifactorial nature of the condition, and the variability of women's treatment preferences. Second, structured monitoring and support both in the clinic and at home is important to maximize adherence to treatments as one can surmise that poverty, practical issues (e.g. time, transport), and childbearing responsibilities were barriers to compliance in this case study. Lastly, successes are achieved through sensible tailoring of simple, cost-effective activities led by a multidisciplinary team of health professionals to the local context.

5.2 Recommendations for Policy, Practice, and Research

A number of implications can be drawn from this analysis to strengthen maternal mental health policy, practice, and research in diverse contexts in LA in the future. Principally, according to the contextual perspective illuminated in this paper, I advocate for a social and economic determinants of health approach to the treatment of PPD that is more closely related to the actual plight of the destitute majority in LA. Under this approach, I advance three main practice- and evidence-based recommendations that may be useful for policy makers, program planners, and researchers interested in optimizing maternal mental health outcomes in the region: (i) adoption of health supportive social policies; (ii) integration with perinatal services in primary care; and (iii) practical research. These strategies are outlined in the following sections. Importantly, these strategies may help optimize outcomes by intervening along the casual pathway connecting poverty, violence, and social exclusion to the development of PPD and the efficacy of treatment services, as illustrated in the conceptual framework in Figure 2.

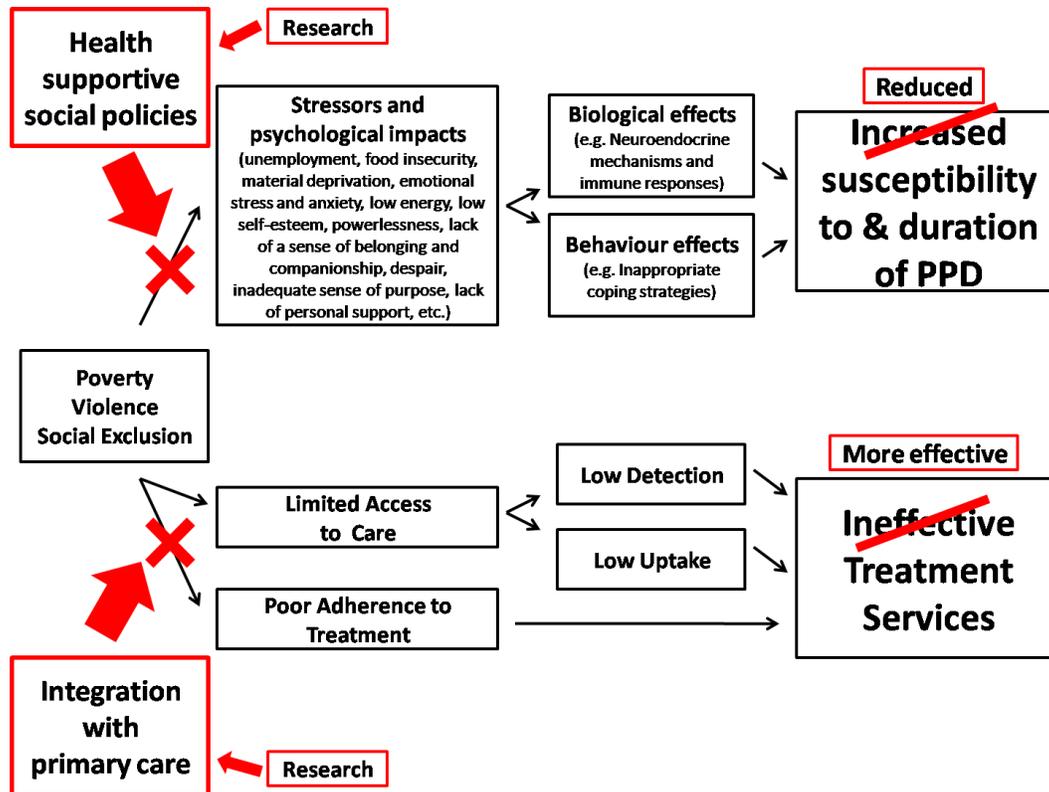


Figure 2. A conceptual framework of the strategies to intervene along casual pathways to optimize maternal mental health outcomes.

5.2.1 Adoption of Health-supportive Social Policies

Since poverty, violence, and social exclusion are endemic problems in many contexts in LA as well as robust upstream factors in the casual pathway leading to the development of PPD, I contend that efforts to optimize maternal mental health outcomes should include health-supportive social policies that aim to reduce the impact of these contextual issues on the lives of depressed mothers.¹⁷

In a context of poverty, several policy options are available. In the immediate postpartum period, policy options could (for example) assure that income supports are available to new mothers for a specified period, similar to the conditional cash transfer programs (CCTs) already in place in LA such as PROGRESA in Mexico, Bolsa Escola in Brazil, and Chile Joven in Chile (Handa & Davis, 2006, Rawlings, 2004, Sewall et al.,

¹⁷ Importantly, prior to implementations of these policy recommendations, I advocate for additional research on this subject to support whether this strategy to reduce the impact of social and economic determinants on PPD is indeed an effective approach to treating the condition (compared with generic treatment protocols). See section 5.2.3 for further discussion.

2008)¹⁸. In the long term, other maternal mental health promotion policies could include legislation to raise the minimum wage to living wage, protection through guaranteed minimum income, and removal of barriers to affordable maternal health care (Raphael 2004).

In settings where exposure to gender-based violence may be more common (e.g. during war where violence is ubiquitous, in societies with patriarchal gender norms, and in families plagued by male dominance and marital conflicts), the optimal treatment of PPD may involve measures to reduce violence and respond to the physical, emotional, and security needs of abused women (Heise et al., 1999). For example, specific programmatic activities may include promoting gender equality and empowerment of women, improving partner relationships, strengthening social supports, health provider recognition of the signs of violence, and establishment of referral systems that ensure the availability of appropriate care, follow-up, and support services (Heise et al., 1999, WHO 2005).

In populations experiencing some form of social exclusion, important policy objectives could include improving social relations and increasing supportive networks. Also, treating physicians could consider a family-centered approach which draws on community networks to give mothers the emotional and practical resources they need to regain mental health and well-being. Broader policies for social inclusion could include minimum health and health care guarantees (e.g. AUGE in Chile) (Bastías et al., 2008), welfare supports, and so on.

5.2.2 Integration with Perinatal Services in Primary Care

In addition to health-supportive social policies, I would suggest that the efficacy of PPD treatment programs (as evidenced by access, illness recognition, and therapy adherence) can be improved by integrating the diagnosis and management of PPD into

¹⁸ CCTs dominate the social protection sector in Latin America and the Caribbean. They involve linking short-term poverty alleviation with long-term human capital development, by making the provision of the cash transfer to mothers conditional on school attendance by and health-care checkups for children (Handa & Davis, 2006). While CCTs are somewhat controversial (due to concerns about cost-effectiveness, sustainability, and an almost exclusive focus on human capital accumulation for children rather than adults), preliminary evaluations show increased school enrolment, increased health check-ups for growth monitoring and vaccinations, greater food purchases and/or caloric availability, and overall better child health outcomes (Handa & Davis, 2006). In the context of PPD, CCTs may operate to: (i) reduce the stressors of poverty that make mothers depressed and in need of medical care in the first place; and (ii) improve the efficacy of treatments via increased access to medical consultations, illness detection, uptake of interventions, and treatment adherence (provided that the transfer is conditional on meeting such criteria).

routine pre- and post-natal care at primary care clinics with referrals to speciality providers as needed. Importantly, integration of maternal mental health interventions with perinatal services in primary care is a well-reasoned proposal for four main reasons: (i) almost universally, pregnant and puerperal women attend primary care clinics (Small & Lumley, 2007), which also serve as the main (or only) source of health care for many socially disadvantaged populations (Rojas et al., 2007); (ii) PPD lies on the interface between mental health and reproductive health (WHO, 2009b); (iii) there is some provision of perinatal health services in primary care even in the poorest of countries (WHO, 2009b); and (iv) there is widespread support (Alarcón, 2003, Institute of Medicine, 2000, Patel et al., 2007) and a small but growing evidence base (Cohen, 2001, Henderson et al., 2005, Ministerio de Salud, 2001, Mooren et al., 2003, Peterson, 2000, Qureshi et al., 2006) for decentralized policies that use primary care as a vehicle in the provision of general mental health services in low- and middle-income countries, with integration already established in some countries and a call for scaling-up publicized (Chisholm, 2007). Potential strategies of successful integration of PPD treatment services into primary care may include¹⁹:

- (i) universal screening for depressive symptoms at the first pre-natal visit and the first post-natal visit using a brief, validated screening tool such as the EPDS;
- (ii) universal assessment of women's social and economic circumstances using structured, self-report questionnaires;
- (iii) development of clear treatment pathways with lines of responsibility and referral, with the exact formula changing in relation to the severity of depressive symptoms and the social and economic circumstances experienced by women;
- (iv) provision of extra community-based support to mothers through the development and/or harnessing of local initiatives based on the community's own resources (e.g. community social support networks);
- (v) recruitment of a multidisciplinary team of health professionals, including primary care physicians, psychologists, community health workers, and volunteers;
- (vi) training of health professionals on the relevance of universal screening for both pregnant and puerperal women, the diagnosis and treatment of PPD, positive,

¹⁹ Proposed strategies to integrate general mental health conditions into the primary care system in several countries worldwide served as examples (WHO, 2008b).

compassionate attitudes toward maternal mental illness, and supportive listening;

- (vii) establishment of specialist mental health professionals and facilities to support primary care; and
- (viii) development of national social policy guarantees that ensure the necessary funds, staff, and supplies at all participating primary care clinics.

5.2.3 Practical Research

The policy and practice recommendations cited above are well reasoned given that the development of PPD and the efficacy of PPD treatment programs are strongly influenced by many interconnecting social and economic determinants. However, the prospects for success hinges on finding additional empirical evidence to several difficult research questions: Should policies center on community-based or practice-based care? Could micro-credit schemes help successfully treat PPD? (Patel, 2001) Could interventions to improve gender equity more quickly facilitate the recovery of mothers with PPD? Could informal community social support networks help improve treatment outcomes? (Patel, 2001) I advocate for more practical research on this subject in order to provide further support to the two main policy and practice recommendations put forth.

5.3 Potential Challenges of Recommendations

Implementation of these recommendations may be challenging in practice, as corroborated by recent reviews of the barriers to improving mental health services in low- and middle-income countries (Knapp et al., 2006, Saraceno et al., 2007). First, mental health still has a low position on many national political and public health agendas in LA (Alarcón, 2003, Saraceno et al., 2007). Second, financial, human, and material resources for mental health services and research in LA are very scarce (Alarcón, 2003, Knapp et al., 2006, Saraceno et al., 2007). Third, there are several complexities involved in integrating mental health services into primary care (e.g. lack of supervision, lack of drug supply, an already overburdened workforce, etc.) (Saraceno et al., 2007). Fourth, resources are often inflexibly organized with budgets being highly centralized and concentrated on institutionalized services in urban areas (Alarcón, 2003, Knapp et al., 2006). Lastly, stigma, shame, and guilt are deeply rooted characteristics associated with mental illness in LA (Alarcón, 2003). Understandably, these challenges (and

others) may make it difficult to successfully implement the aforementioned recommendations.

6: LIMITATIONS AND STRENGTHS

There are several limitations to this research. The primary constraint of this analysis is the unavailability of intervention research on the effectiveness of different treatment regimes in LA. Secondly, comparability of approaches was limited to qualitative (rather than quantitative) analysis of multiple publications since the generic and tailored treatment programs were not studied in the same trial, making it difficult to definitively conclude whether one approach outperformed the other. Finally, this analysis may not apply to all countries (and regions within countries) in LA given the heterogeneity of populations in terms of social and economic circumstances. Consequently, further studies on the effects of tailored (versus generic) treatment approaches on the reduction of PPD are needed in multiple diverse contexts in LA to substantiate the above hypotheses, findings, and recommendations. Despite these limitations, to my knowledge, this study represents the first analysis of regional experiences with the treatment of PPD to determine the extent to which a contextually responsive approach effects the successful reduction of PPD.

7: CONCLUSION

Maternal mental health is influenced by many interconnecting contextual factors in LA, particularly poverty, violence, and social exclusion. Recognizing the social and economic determinants ignored by mainstream approaches to PPD treatment, the contextual approach outlined in this paper thus recasts focus on factors that are more upstream in the casual pathway along which PPD develops and PPD treatment services are provided. Regional evidence for the effectiveness of contextual (versus generic) PPD treatment approaches was scarce, with Chile serving as the only appropriate case for in-depth analysis. In this case study, I found evidence suggesting that: (i) poverty exacerbates PPD by increasing women's risk and prolonging the duration of the illness; (ii) poverty severely affects service delivery by inhibiting access to treatment, illness recognition, and treatment adherence; and (iii) the efficacy of treatment programs in resource-constrained settings can be improved by way of a contextually responsive approach that integrates feasible and effective PPD treatment services into routine primary care. Taken together, this research paper highlights the importance of a robust examination of contextual factors to the successful treatment of PPD in Chile as well as other diverse settings in LA. Importantly, embracing this contextual perspective to treatment has clear implications for maternal mental health policy, practice, and research in the region. The main call for action is for: (i) health-supportive social policies; (ii) integration of PPD treatment services with pre- and post-natal care at primary care clinics; and (iii) practical research to further support the main contention of this paper. Although the process of strengthening maternal mental health care may not be easy, it may be argued that PPD will remain one of the most important public health challenges in LA until a social and economic determinants approach to treatment is employed.

8: APPENDICES

Appendix 1: List of Countries in Latin America and the Caribbean

Antigua & Barbuda	Guyana*
Argentina*	Haiti*
Aruba	Honduras*
Bahamas	Jamaica*
Barbados	Martinique
Belize*	Mexico*
Bolivia*	Nicaragua*
Brazil*	Panama*
Cayman Islands	Paraguay*
Chile*	Peru*
Colombia*	Puerto Rico
Costa Rica*	Saint Barthélemy
Cuba*	Suriname*
Dominica*	St. Kitts & Nevis*
Dominican Republic*	St. Lucia*
Ecuador*	St. Vincent and the Grenadines*
El Salvador*	Trinidad & Tobago
French Guiana	Turks & Caicos Islands
Grenada*	Uruguay*
Guatemala*	Virgin Islands
Guadeloupe	Venezuela*

-All countries listed are within Latin America and the Caribbean (Latin American Network Information Center, 2010)

-Countries with asterisks represent low- and middle-income economies only, according to the World Bank Country Classification Scheme (World Bank, 2010)

Appendix 2: Case Studies Excluded

The following is the small list of countries that were excluded from case study analysis as well as justification for their exclusion (specifically pinpointing which criteria from Sections 3.2 and 3.3 were not met):

Brazil (Arraes de Alencar et al., 2008, Magalhães et al., 2006):

1. Did not have an adequate volume of supporting data/publications available
2. Did not include both a tailored, contextual treatment approach as well as a generic, manualized treatment approach
3. Did not conduct an evidence-based treatment intervention in a real-world center (review article only) (*APPLIES ONLY TO ARRAES DE ALENCAR ET AL., 2008*)
4. Was not written in English or Spanish (in Portuguese) (*APPLIES ONLY TO MAGALHÃES ET AL., 2006*)

Mexico (Ramos, 2008):

1. Did not have an adequate volume of supporting data/publications available
2. Did not include both a tailored, contextual treatment approach as well as a generic, manualized treatment approach
3. Did not conduct an evidence-based treatment intervention in a real-world center (review article only)

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