A CONCEPTUAL FRAMEWORK FOR UNDERSTANDING THE ASSOCIATIONS BETWEEN EXPERIENCE OF VIOLENCE AND WOMEN’S BREASTFEEDING DECISIONS IN A SOUTH AFRICAN CONTEXT

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Approved by:

First Reader

Second Reader
Abstract

Breastfeeding initiation and exclusivity have been shown to have a myriad of benefits for both mother and infant; however, breastfeeding continuation in South Africa is relatively low. One possible contributor to this phenomenon could be the high incidence of violence against women within this context. A thorough review of the individual and combined literatures on violence against women and breastfeeding was carried out to identify potential pathways connecting women’s experiences of violence to their breastfeeding continuation decisions. Additional information about the social and historical context of these topics in South Africa was also gathered. The literature supports a conceptual framework in which major factors mediating the effect of violence on breastfeeding in South Africa include race, HIV status, mental health consequences of violence, and women’s support systems. This conceptual model will be useful for informing further research on the impact of violence on breastfeeding decisions in South Africa. It will also be helpful to inform programmatic work since research has shown that context-specific interventions have greater impact.

Introduction

Both early initiation and exclusivity of breastfeeding have been shown to be important factors in conferring the health benefits of breast milk to neonates and infants less than 6 months of age. Initiation within one hour of delivery and exclusive breastfeeding (EBF) for 6 months, and continued breastfeeding thereafter while
complementary food is introduced improves immunity, aids in appropriate growth and development and is known to decrease neonatal and infant mortality from diarrheal diseases and respiratory infection six-fold and two-fold, respectively (WHO 2001; WHO 2000).

Violence against women is a major global problem with between 23-38% of women worldwide experience physical or sexual violence from an intimate partner or non-partner, with the highest prevalence in Africa, the Middle East, and Southeast Asia. A variety of temporally spaced physical and psychological factors have been well documented in affecting a mother’s decision to breastfeed (Klingelhafer 2007), however, the effect of violence victimization, which is known to have adverse physical and psychological consequences in other contexts has not been thoroughly studied. While a review of the literature shows several studies in developed countries, only one study looked at the effect of violence on breastfeeding in an African context.

As a result of multi-country colonialism and brutal apartheid, a culture of violence has developed in South Africa that has become globally notorious. Violence against women is experienced by nearly a quarter of South African women, which intensifies the need to study the impacts of this phenomenon on various lifetime events, such as pregnancy and breastfeeding, in the country. This paper aims to use peer-reviewed literature, grey literature, and history to elucidate an appropriate, context-specific conceptual framework for studying the effect of violence against women on breastfeeding decisions in South Africa.
Current Literature on Associations between Violence and Breastfeeding

There are two major schools of thought with regard to the effect of violence on breastfeeding. The *deficit hypothesis* postulates that mothers who are exposed to violence have greater difficulty both initiating and continuing breastfeeding due to the consequences of the violence and fear of perpetrating similar abuses on the child (Kendall-Tackett 2007). Conversely, the *compensatory hypothesis* suggests that mothers who experience violence and are aware of the benefits of breastfeeding are more likely to initiate and/or continue breastfeeding as a means of self-validation as a mother (Yount et al. 2011). Neither hypothesis has been strongly corroborated with evidence.

Most of the research on this topic, both qualitative and quantitative, has been conducted in western countries (United States, Canada, Australia), where the culture of breastfeeding and nursing care differs greatly from African and Asian contexts. Breastfeeding initiation and duration have improved in sub-Saharan Africa from 1996 to 2006, but still varies greatly, ranging from approximately 8-63% rates of exclusive breastfeeding in the first six months and the rates of early initiation of breastfeeding after birth range between 23-72% (UNICEF Statistics n.d.). Further research is greatly needed in these contexts to determine the level of association between a variety of experiences of violence and breastfeeding decisions to inform appropriate measures for care in these populations.

A review of the literature was conducted using a multi-step process. A preliminary search of the literature from 1950 to 2014 using PubMed, Articles+ and other
University of North Carolina, Chapel Hill libraries database resources was conducted using combinations of keywords, “breastfeeding,” “violence,” “intimate partner violence,” “domestic violence,” “abuse,” and “childhood abuse.” This search was supplemented by review of bibliographies of preliminarily identified articles. Only articles with the full text available online, either originally in English or with an available English translation, were included. Articles that did not have violence as an input, breastfeeding decisions as the outcomes, or clear and substantive definitions of measures, as well as systematic reviews, were excluded. Articles from any country were included. A number of insightful publications identified physiological and psychological consequences of violence and described guidelines for nurses and lactation consultants for appropriately handling patients who had experienced violence. A total of 10 of the initially identified articles met all search and inclusion criteria discussed above. The characteristics of these studies are identified in Table 1.

The studies included in this analysis fell roughly into three categories: studies focusing on mothers who experienced childhood sexual abuse, studies focusing on pre-pregnancy or during-pregnancy violence instigated by an intimate partner (IPV), and studies that aimed to convey clinical information and guidance. Sample size varied from less than 50 in qualitative studies to greater than 5000 respondents in the Silverman et al. 2006b study. Measures of breastfeeding varied between studies. Seven of the studies asked about ever-initiation of breastfeeding (Prentice et al., 2002; Silverman et al., 2006b; Coles, 2009; Klingelhafer, 2007; Wood & Esterik, 2010; Acheson, 1995; Bullock et al., 2001). Two studies (Misch et al., 2013; Zureick-Brown et al., 2013) asked about
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Table 1. Summary of studies assessing the association between experiences of violence and breastfeeding (n=10)
early breastfeeding initiation (defining this as within 1 hour of delivery). Nearly all of
the 11 studies assessed breastfeeding duration in some way, though time lengths used
varied from less than 4 weeks to less than 4 months. Finally, three of the studies assessed
the presence or absence of any complementary feeding within the past 24 hours up to 6
months (Misch et al., 2013; Zureick-Brown et al., 2013, Lau & Chan, 2007).

Of the four studies that focused on childhood experience of sexual abuse as the primary
exposure, three were qualitative (Coles, 2009; Klingelhofer, 2007; Wood & Esterik,
2010) and one (Prentice et al., 2002) was quantitative. Experience of violence in
childhood is linked with increase in risky behaviors, depression, post-traumatic stress
responses, and other long-term adverse health effects during adulthood, which could
mediate breastfeeding decision-making (Bair-Merritt et al. 2005, Kendall-Tacket
1998). In all articles, ever childhood sexual abuse (CSA) was self-reported, though one
study (Coles, 2009) limited the definition to only CSA perpetrated by a family member.
No information on severity, frequency, age at abuse, or current violence was
systematically obtained in any of the four studies. Prentice et al. found that CSA was a
significant predictor (aOR: 2.58, 95%CI: 1.1.4-5.85, p<0.05) for initiation of
breastfeeding, after adjustment for a relevant bank of confounders. This is somewhat
corroborated by the qualitative studies, but a noted concern in qualitative analysis
themes was difficulty with continuation of exclusive breastfeeding or mixed feeding
after initiation. Another common theme was the inability to separate the sexual role from
the maternal role of breasts, called the maternal-sexual split. Other themes that emerged
in qualitative analysis are shown in Table 2.
Table 2. Summary of themes from qualitative studies

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<tr>
<td>Klingelhafer, 2007</td>
<td>• Doubts around infants ability to consent to breast exposure as a projection of mother’s own inability to consent at the time of sexual violence</td>
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<td>• Blurring of maternal-sexual split in breast perception</td>
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<td>• Blurring of maternal-sexual split in breast perception, or as coping mechanism</td>
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<td>• Problems with exposure, power, and situational control</td>
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<tr>
<td>Wood &amp; Van Esterik, 2010</td>
<td>• Shame</td>
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<td>• Problematic perceptions of touch</td>
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<td></td>
<td>• Blurring of maternal-sexual split in breast perception, or as coping mechanism</td>
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<tr>
<td></td>
<td>• Problems with exposure, power, and situational control</td>
</tr>
<tr>
<td></td>
<td>• Healing experience of breastfeeding: Enhancement of mother-child relationship and validation of the maternal body</td>
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Six of the eleven identified articles looked at lifetime, immediately prior to pregnancy, or during-pregnancy IPV as exposures. All of these studies were quantitative and four controlled for demographic factors and confounders. Three of the studies occurred in the United States (Acheson, 1995; Bullock et al., 2001; Silverman et al., 2006b), two in Asia (Lau & Chan, 2007; Zureick-Brown et al., 2013), and one in Africa (Misch et al., 2013). The results of these studies were greatly mixed. Two papers (Bullock et al., 2001; Silverman et al., 2006b) found no significant association in any direction. Two studies (Misch et al., 2013; Zureick-Brown et al., 2013) found a positive
or mixed association between IPV and breastfeeding initiation and exclusivity. Finally, two studies (Acheson, 1995; Lau & Chan, 2007) suggested a negative association between violence and breastfeeding decisions, where women were significantly (OR: 1.84-7, p<0.01) less likely to breastfeed after the experience of violence.

The final group of papers were not analytical studies as much as informative and guiding papers and reviews for clinicians, nurses, and lactation consultants to consider when working with clients who have experienced or are experiencing violence. These papers (Cerulli et al., 2010; Averbuch & Spatz, 2009; Klaus, 2010; Yount et al., 2011; Bair-Merritt et al., 2006) summarized the other research on the topic, highlighted some important triggers for patients that clinicians could avoid, suggested ways to create a comfortable patient environment, and discussed gaps in the literature and in practice that needed to be filled. It is clearly evident in this review that data from an African context is sparse, and the one study that was identified compares a number of different countries, in which the contexts of both violence against women and breastfeeding could vary greatly.

**Violence Against Women and South Africa**

Violence against women is a highly problematic component of South African culture that has consistently posed difficult challenges for public health professionals. Intense, often violent, subjugation of large portions of the population during apartheid has created a culture of gender and race-based violence that has persisted past the introduction of the democracy in the country. Racism and sexism was highly prevalent
in apartheid-era South Africa and violence was often seen as the primary way to resolve conflict. After the country’s democratization, it remains a way to demonstrate power, especially within previously oppressed groups (Outwater 2005). Post-apartheid economic growth has seen an increasing divide among rich and poor, with the poorest populations still living in the apartheid-era townships (Coovadia et al. 2009).

The incidence of violence against women is hard to determine due to problems with underreporting as well as varied definitions of violence amongst studies, but it is estimated that in South Africa, one in four women experiences violence during her lifetime (St. Germain & Dewey 2012). Violence has been categorically studied in a number of combinations of time periods, types, and relationships of perpetrators, which also creates problems with generalizability of results (Dartnall & Jewkes 2013). Studies primarily focus on four time periods (during childhood, pre-/post-pregnancy, during pregnancy, and ever lifetime), four modes of violence (sexual, physical, emotional, or any combination), and several types of perpetrators (familial, parental, non-relative, or any combination). Interpersonal violence reportedly accounted for 6.7% of all deaths in South Africa in 2000, adjusted to account for long-term mental and reproductive health consequences, and an estimated 50% of women who were killed by a known perpetrator were killed by an intimate partner (Norman 2007).

Experience of violence during pregnancy puts mothers and infants at greater risk for adverse pregnancy outcomes and postpartum health outcomes (Silverman et al. 2006a). Sexual violence is notably higher during pregnancy, with a review of studies finding prevalence rates between 2.7 and 26.5% (Shamu et al. 2011). Experience of
interpersonal violence in South Africa, especially psychological violence during pregnancy is associated with high levels of lasting emotional distress, and all forms of violence during any time in a woman’s life are associated with symptoms of post-traumatic stress as well as higher incidence of depression (Peltzer et al. 2013b; Groves et al. 2012), estimated at about 41% during pregnancy in one study (Rochat et al. 2006). Emotional and psychological violence toward women is reported to remain high for several months postpartum as well (Peltzer 2013a). No evidence is available that suggests that experience of violence directly affects breast health, however, it is logical to assume that experience of physical abuse to the breasts temporally close to breastfeeding could exacerbate stress-related physical responses to breast contact, such as poor let down.

A number of factors have been known to exacerbate the incidence and consequences of violence against women. Alcohol use is notably high in South Africa, especially within townships and migrant laborers. An old imperialist custom in South Africa, known as the ‘dop’ system, allowed employers to pay their labor force in a mixture of money and goods, which often included wine or other alcoholic fare. This now-illegal practice created dependence on alcohol amongst workers but also began a culture of alcohol use that continues to manifest in the existence of shebeens, establishments that sell liquor illicitly or without license, and in the continued perpetration of violence under the influence of alcohol (Russell et al. 2013). Competent and prompt government support also affects experience of violence. Though South Africa’s constitution affords a number of protections to women who have experienced
violence, fear of humiliation or disregard from police or other authority figures, fear of further violence in the cases of known partners, and lack of shelters and resources for victims often leaves women unable to receive proper support after these experiences (Kim 2001). Finally, the HIV epidemic has also been shown to exacerbate experience of violence in South Africa. A meta-analysis of 5 reviews identified that there is a significantly greater risk of IPV amongst HIV positive women than their negative counterparts (Shamu et al. 2011).

**Breastfeeding and South Africa**

According to recent UNICEF and South African Demographic and Health Survey statistics, approximately 83% of South African women initiate breastfeeding, a decrease from 87% in 1998, and only 8% exclusively breastfeed during the first six months, increasing by only 1% since 1998 (UNICEF Statistics n.d.; SADHS 1998). Additionally, infant mortality in South Africa increased from 60 per 1000 live births to 95 per 1000 live births from 2000 to 2003 (Bourne et al. 2007). Though exclusive breastfeeding has been shown to decrease infant deaths due to common childhood illnesses (including diarrheal diseases, respiratory infections, etc.), the 2011 PROMISE-EBF multi-country randomized control trial on effects of peer-counseling on EBF noted that South Africa had a significantly lower baseline rate of EBF than any other country in the study (Tylleskär et al. 2011; Meyer et al. 2007; Rollins et al. 2013). In addition, a significant percentage of women cease breastfeeding completely before 3 months (35-50%) and it is culturally widespread practice to introduce a variety of complementary
food and drink to infants before 6 months of age, sometimes as early as within the first week (Thornton 1984; Sibeko et al. 2005).

Policy aimed toward curbing the HIV epidemic in the 1980s initially facilitated declines in breastfeeding in South Africa. Formula feeding was recommended as effective antiretroviral medicines were not yet widely available and the risk of transmission was estimated to be 25-48% in untreated mothers who breastfed (De Cock et al. 2010). In 1993, upon recommendation by the WHO to improve under-5 mortality, South Africa adopted the Baby-Friendly Hospital Initiative to promote breastfeeding in hospitals, which had been implemented in 176 hospitals as of 2005 (Bourne et al. 2007, UNICEF/WHO 2003). In 2001, guidelines for prevention of mother-to-child transmission (PMTCT) prescribed exclusive breastfeeding then cessation of all breastfeeding at 4 months for HIV-positive mothers on antiretroviral therapy and free formula was often given to HIV-positive mothers who chose not to breastfeed. Formula promotion is a practice that has continued due to lax enforcement of International Code of Marketing of Breastmilk Substitutes (Chopra et al. 2008; Tylleskär et al. 2011).

Recent improvements in delivery of PMTCT therapies and an increase in under-5 morbidity and mortality rates post-apartheid has reverted the focus of healthcare providers to educating women on the benefits of exclusive breastfeeding for 6 months and continued breastfeeding up to 2 years or longer.

Various social and cultural influences on breastfeeding in South Africa affect the way breastfeeding is practiced in the country. The first milk is often discarded at each feeding to ensure there is no contamination from outside exposures (Thornton 1984).
Introduction of complementary foods during the first 6 months is common, likely due to a common belief among mothers that breastfeeding is not sufficient to satisfy the baby. The most common foods that are introduced are commercially available infant cereal, alternative fluids including water, and herbal mixtures believed to have additional nutritional value, though concerns have been raised about access to clean water, fuel, and refrigeration in parts of South Africa (Sibeko et al. 2005, Bland et al. 2007) Additionally, larger babies are socially desirable, and because bottle-feeding produces larger infants after the first 3-4 months, women may seek formula over breastfeeding (Thornton 1984).

Research in South Africa has identified a number of barriers to successful breastfeeding. HIV was a common theme among studies on breastfeeding. Despite recommendations, HIV-positive women stop breastfeeding almost twice as often at any time interval as their HIV-negative counterparts (Doherty et al. 2012). Though breast health problems were noted as one of the most prominent barriers to breastfeeding, with approximately 11-13% of women in several studies reporting experiencing them, HIV did not exacerbate the experience of breast health problems (Sibeko et al. 2005; Bland et al. 2007). Exclusive breastfeeding is known to decrease the presence of breast health problems (Marais et al. 2010).

Breastfeeding, while a natural process, is also a learned practice, and therefore requires social, psychological, and health system support. This was another common theme in the South African literature on breastfeeding decisions. Partner and familial support was a strong determinant of both choices to continue and to stop breastfeeding;
the latter despite pressure among HIV-positive women to avoid accidental disclosure of
their HIV status (Morgan et al. 2010). In one study, women reported having trouble with
support from family members and emotional and physical abuse from male
relations/partners for “trying to look young” by not breastfeeding (Seidel et al. 2000).
Other often-noted persons that women reported as having influence in their
breastfeeding decisions included nurses, peer-counselors, and support groups (Sibeko et
al. 2005; Tylleskär et al. 2011). However, several studies also noted problems with
healthcare-affiliated support systems. Referral to support groups in public clinics in one
study was reported to be one-fourth as frequent as in private clinics or hospitals and sub-
optimal training of clinic and hospital staff often led to inconsistent or confusing
information being given to mothers (Marais et al. 2010).

Other factors that play a role in women’s breastfeeding decisions include hospital
support for formula use and acceptability of breastfeeding at work. Though fewer
hospitals are distributing free formula, women still find it difficult to cope with demands
of working and continuing exclusive breastfeeding. Intentions to not breastfeed,
mother’s economic independence, and low cost of formula have been cited as significant
predictors of early cessation of breastfeeding (Doherty et al. 2012). A study among 115
Xhosa women indicated that the key reason for choosing to breastfeed was the
understanding that breast milk conferred greater nutritional and health value to babies
than formula feeding (Sibeko et al. 2005).
Pathways Linking Violence Against Women and Breastfeeding

This conceptual framework is adapted from the CDC Group’s framework to guide strategies for future research on violence occurring around the time of pregnancy and modified to include factors that specifically affect South Africa (Peterson et al. 1997). The CDC Group’s model defines violence as only inflicted around the time of pregnancy, however, due to a significant amount of literature indicating long-lasting trauma and psychological effects in victims of childhood abuse, violence in this model is defined as lifetime experience of psychological, sexual, and/or physical violence (Coles, 2009; Klingelhafer, 2007; Wood & Esterik, 2010; Prentice et al., 2002). Breastfeeding decisions are defined as any maternal decision on initiation, early cessation, exclusivity, and duration.

The primary pathway identified from the literature on violence against women and the breastfeeding literature in a South African context indicates adverse mental health effects of violence and individual support systems play a strong role in determining women’s breastfeeding decisions. These factors are confounded primarily by HIV status and availability and coordination of healthcare services, and secondarily by community level social influences and individual characteristics. A model for understanding connections between violence against women and breastfeeding is presented in Figure 1.
Figure 1. Important pathways for understanding associations between violence and breastfeeding (Earp & Ennett 1991, Paradies & Stevens 2005).

In addition to the previously discussed evidence showing the relationship between experience of violence and adverse mental health outcomes, poor mental health is associated with breastfeeding decisions. Summarily, experience of violence leads to a variety of adverse mental health outcomes, including but not limited to post-traumatic stress, depression, anxiety, shame, and body negativity. Mothers who experience poorer mental health postpartum are nearly 1.5 times as likely to cease exclusive breastfeeding within the first month (Falceto et al. 2004; Hasselmann et al. 2008). In addition to psychological problems with breastfeeding, poor mental health can have physical manifestations in individuals during breastfeeding, such as sore nipples and difficulty relaxing enough for adequate let down, making it difficult for mothers to be comfortable
and continue with the practice. These factors affect both physical and emotional aspects of breastfeeding negatively and may cause mothers to either fail to initiate breastfeeding or cease breastfeeding early.

As much of the violence against women in South Africa is culturally engrained and perpetrated within relationships, social and financial support systems for survivors of interpersonal violence may become weak. Most women reported female relatives, partners, and nurses as their primary sources of social support, and support played a significant role in decisions of mothers to breastfeed. A qualitative study among HIV-positive and HIV-negative women in Durban, South Africa suggested great variation in support from male partners during pregnancy and postpartum. Though both HIV-positive and negative women reported that their husbands financially supported their clinic trips and encouraged breastfeeding, other women reported that they or their partner thought pregnancy was a woman’s responsibility and had limited involvement (Maman et al. 2011). Social support can be jeopardized further if a woman develops mental health symptoms or becomes HIV-positive as a result of or concurrently to violence, triggering a potential mental health and social support feedback loop.

The history of violence, oppression, and racism has affected healthcare services in South Africa. Funding for hospitals located in townships and poorer areas has been historically low and mental health services in most hospitals are nearly non-existent (Coovadia et al. 2009). As such coordination of the many faculties of services necessary for adequate treatment after experience of violence as difficult and expensive to acquire. Thus, a major barrier to breastfeeding for women who have experienced violence is
simply lack of availability of appropriate services for victims. Additionally, inconsistencies exist in training of staff and standardization of services between health facilities, which, in combination with continued promotion of formula, may cause confusion and a breakdown of the support system women require to breastfeed successfully (Tylleskär et al. 2011).

The HIV epidemic plays an extremely strong confounding role in addressing the effect of violence on breastfeeding decisions. Women with HIV experience depressive episodes and other psychiatric problems more frequently than non-infected women and HIV-positive pregnant women are at even greater risk of experiencing mental health problems (Brandt 2010). Though HIV-positive women do not necessarily experience breast health complications more often, those who experience them do so more severely, and increased severity of breast health problems such as cracked nipples and mastitis have been shown to increase risk of HIV transmission through breast milk (Kasonka et al. 2006; Bland et al. 2007). In conjunction with inconsistent dissemination of breastfeeding information and the increased likelihood of women with HIV to experience IPV, it is critical to address the contribution of HIV to the effect of violence on breastfeeding decisions.

Additional confounders are community level social influences and individual characteristics. Community level influences include promotion of formula in certain areas or hospitals and stigma against HIV and its implications for women who do not breastfeed. Individual level characteristics include race, education level of the woman, age, financial stability/socioeconomic status, relationship status, and employment status.
Discussion

In summary, South Africa’s history of violence against women and apartheid make the context of violence research in the country fairly unique. The impact of violence against women on breastfeeding decisions has been poorly studied in South Africa. This framework uses contextual evidence to inform pathways along which to continue research on this topic in this area. Several recommendations also arise from the review of literature and development of this model. For one, coordination of breastfeeding counseling and support efforts need to be improved between health facilities in the country, in conjunction with stricter limitations on advertising and free distribution of formula. Another area for improvement is the closer involvement of men in breastfeeding counseling, especially in cases where the mother is taking antiretroviral medication for HIV.

The literature on the topic of associations between experience of violence and breastfeeding is both sparse and non-definitive. The studies reviewed above and the literature-at-large have elucidated a number of future topics for study within this field. Many of the current studies have been treating some mediating factors (such as depression, maternal autonomy, previous knowledge of breastfeeding recommendations, etc.) as confounding factors. More clear pathways must be determined between potential mediators and the outcomes to ensure that the effects of analysis are not being masked. Other studies only looked at demographic or individual characteristics. Furthermore, some studies selected participants who were already seeking aid for their violence...
exposure. This population may have increased awareness of personal symptoms as well as been self-selecting. Due to the sensitive nature of the study exposures, self-reported data may be biased and the phenomenon may be underreported, especially in the cases of violence (where stigma and psychological consequences are experienced) and breastfeeding (where women may not understand underlying psychological barriers, and both have the potential to attract social desirability bias in responses (Hector et al. 2005).

As mentioned above, the primary regions that have been studied are in westernized countries, and the only article looking at the effect of violence on breastfeeding decisions from Africa has a wide berth across 8 countries. Future study must encompass a number of different research strategies to more comprehensively assess this association in South Africa and other unique contexts. These studies need to look at both individual and combinations of types of violence experienced and a variety of breastfeeding outcomes. Additional study variables need to be identified through validated diagnostics for several mental health problems (e.g. depression, PTSD, anxiety, etc.), breast health problems (e.g. mastitis, poor let down, insufficient milk production, etc.), and social support. Other factors that will be important to consider are availability/cost of formula, HIV prevalence and disclosure status of individuals (primarily to intimate partners), maternal financial independence, and availability of breastfeeding counseling/services. Qualitative studies are useful in developing additional context and informing continued intervention improvement and quantitative analysis using a large, nationally representative sample is necessary to confirm the pathways described in this model. Though randomized control trials would not be ethical
appropriate or feasible for the study of this topic, inclusion of breastfeeding outcomes in longitudinal studies on the lifetime impacts of violence and attempts to more clearly substantiate either the deficit or compensatory hypotheses would go a long way toward informing treatment in the future.
References


http://www.unicef.org/infobycountry/southafrica_statistics.html


