

# *International Journal of* Childbirth Education



## *Global Issues*

*The official publication of the International Childbirth Education Association*

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The International Childbirth Education Association, founded in 1960, unites individuals and groups who support family-centered maternity care (FCMC) and believe in freedom to make decisions based on knowledge of alternatives in family-centered maternity and newborn care. ICEA is a nonprofit, primarily volunteer organization that has no ties to the health care delivery system. ICEA memberships fees are \$95 for individual members (IM). Information available at [www.icea.org](http://www.icea.org), or write ICEA, 2501 Aerial Center Parkway, Suite 103, Morrisville, NC 27560.

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# International Journal of Childbirth Education

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# Thinking *Globally*

by Debra Rose Wilson, PhD MSN RN IBCLC AHN-BC CHT

Measures of mortality and morbidity are accurate reflections of a country's standard of living and state of development. Life expectancy and the illness rates are among the most commonly used demographic measures of public health. The World Health Organization indicates improvement in child mortality globally with rates down 30% from 1990, but this is not true for all countries. Health disparities for women are most relevant to global health. The health of communities and families is intimately tied to the health of their women. Illness or death of a mother influences the health, nutrition, and income of her children. Conditions related to maternal health are the leading cause of death in women globally, and sadly, nearly all of these deaths are preventable with proper prenatal and delivery care. Of those living in extreme poverty 70% of them are women.

Some of the top health issues globally for women, identified by the WHO (2016) are:

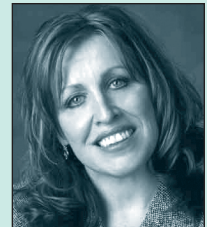
- Breast and cervical cancer, which if detected early by standard screening these women can survive.
- Poor reproductive health related to no access to contraception, care, and screening.
- Lack of prenatal and delivery care lead to preventable maternal death. Over 300,000 women died from preventable complications of pregnancy in 2013.
- New cases of HIV are highest in women and safe sex is not an option for many globally.
- Similar to HIV other untreated sexually transmitted diseases such as gonorrhea, chlamydia and syphilis lead to stillbirth and fetal death.
- Violence against women statistics remain alarmingly high at one in three women globally influencing physical and mental health.
- Mental health issues are more common in women than men

The World Health Organization and the United Nations are working on improving health systems and getting enough trained and motivated health care workers to develop a global strategy for the health of women and children. Women globally need access to birth control and education about their pregnancy and childbirth. We need to reduce maternal mortality and are still falling short of previous goals. The health of entire countries can be improved by education and

empowering mothers. Strategies include education, policy and legislation, surveillance, risk factor identification and reduction, assessing community development, program implementation targeting social and environmental supports, and evaluation of efforts. These strategies are targeted to changing health behaviors that influence communicable disease, acute and non-communicable disease, safety, violence, mental health, and environmental influences on health. On a global level, health promotion and education will influence the most positive change.

There are new and endless opportunities as well risks as the effects of globalization influence the health of all people. The poorest countries need to be assisted with access to knowledge, technology, and resources to improve health. It is more than a social responsibility to ensure these poor countries are not left behind and further marginalized; a health issue in one part of the world can rapidly influence the health of all people as we have learned from SARS, and most recently the Zika virus. For those of you who have gone overseas or to underserved areas to help educate and protect pregnant women, we at ICEA honor your work. Write it down and share your experiences to inspire other ICEA members to do the same, make a difference, create positive social change, send out a ripple of knowledge and healing, and meet the goals of ICEA. We want to educate and empower families to make the best decisions about their health. I hope this issue inspires you to step out of your own community and share your skills and knowledge.

Peace,  
Debra



Debra Rose Wilson

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# ICEA and the *Global Perspective of Birth*

*by Connie Livingston, RN BS FACCE LCCE ICCE*

The global perspective of birth is deeply ingrained in ICEA – even in our name: International Childbirth Education Association. For over 30 years, ICEA has had on the Board of Directors a Director of International Relations to identify our place in the global birthing community. Having just returned from the 2016 ICEA Strategic Planning Meeting, I can share with you the facts of our unique Global Initiative.

The ICEA Global Initiative is a combined effort of several on our Board of Directors. Leading this initiative is the Director of International Relations, Bonita Broughton. New to the Board, Bonita brings to this position a rich history of working with other 501(c)3 nonprofit organizations and developing outreach programs, relationships and partnerships. Under the leadership of our past Director of International Relations, Vonda Gates, we have developed the International Teaching Partner (ITP) Program. Currently, we have five ITPs: one in Costa Rica, two in Taipei, one in South Africa and one in Qatar. Working closely with a growing number of international members, Bonita together with Director of Education, Tamela Hatcher and President-Elect Debra Tolson are working on translations of our programs and exams. ICEA translations will first be in Chinese and Spanish, then progress to the other major international languages.

Taking these major steps to help Program candidates and ultimately expectant women themselves, ICEA will address the challenges for maternal and newborn health in developing nations where many of those women and babies are suffering. Several of our IATs have visited countries such as Guatemala and China, conducting ICEA workshops. They have served as ICEA ambassadors and developed new work-arounds and policies to forge new relationships. Working together, we can create an atmosphere of acceptance and

understanding, while assisting our international contacts with choosing how ICEA can help.

The International Relations Committee will be developing an ongoing communications plan, as well as a plan to increase the number of international members and IATs (ICEA Approved Trainers). The International Relations Committee welcomes new members. If you would like to volunteer a few hours each month as a member of the Committee, please contact Bonita Broughton at [bonita@embraceparenting.com](mailto:bonita@embraceparenting.com).

Serving the international community takes creativity and dedication as the situation is so different from the typical American situation to which many of us are accustomed. We can apply this same creativity and dedication to our work on reducing racial disparities here in the United States. In 2016, ICEA will continue to significantly strengthen our collaboration with the National Perinatal Task Force (<https://nationalperinataltaskforce.wordpress.com/>). The National Perinatal Task Force is made up of motivated lay persons and professionals who are aware of the racial disparities in maternity care and want to make a change - now! As members of this Task Force, ICEA joins with others to make a genuine difference in pregnancy outcomes for our most at risks mother and babies. I urge to read about the National Perinatal Task Force and learn how you might become an Ambassador for a Perinatal Safe Spot.



*Connie Livingston*

*In your service,*

*Connie Livingston RN, BS, FACCE, LCCE, ICCE*

*ICEA President*

*[President@icea.org](mailto:President@icea.org)*

# Zika: What Caused It?

## We Will Know When the Work is Done

by Stephanie B.C. Bailey, MD MSHSA

On February 1, 2016, the World Health Organization declared a public health emergency of international concern as a result of the possible link between Zika virus (ZIKV) infection during pregnancy and microcephaly. This outbreak is reported in the Caribbean and Latin America. Zika virus is a RNA flavivirus (*Aedes aegypti* and *Aedes albopictus*) related to West Nile, dengue, Japanese encephalitis viruses, and yellow fever and is transmitted by mosquitoes. Other routes of infection for ZIKV, including rare sexually transmitted cases, have been reported.

The virus was first isolated in a rhesus macaque caged in the Zika forest of Uganda in 1947 and described in humans in 1952. It was largely limited to equatorial areas of Africa and Asia until appearing on the island of Yap in Micronesia in 2007, and sparking an outbreak in French Polynesia in 2013-14. The population of Yap Island is only 7,391. The outbreak was a relatively mild disease characterized by rash, arthralgia, and conjunctivitis. The attack rate among residents was about 5.8 per 100 residents. The median age of infected patients was 34 years; patients ranged in age from newborns to 76 years (Duffy et al., 2009). There were no deaths or hospitalizations; no associated microcephaly reported.

In late spring 2015 Brazil began reporting an increased incidence of infants born with microcephaly coincident with an outbreak of the French Polynesian strain of ZIKV. In May 2015, the Pan American Health Organization (PAHO) issued an alert regarding the first confirmed ZIKV infection in Brazil. This outbreak has rapidly spread to over 24 countries and territories in the Americas, including Puerto Rico and the U. S. Virgin Islands with imported cases in travelers in several US states.

There are currently travel alert warnings issued to countries where the outbreak is occurring – something that was delayed nine months with the outbreak of Ebola. No such alerts were seen in the first carefully studied ZIKV outbreak, which was on Yap Island in Micronesia in 2007 with its fewer than 12,000 residents. The current outbreak is the first in which scientists have seen the virus invade a large continent where *no one is immune* and is spreading explosively. Why is this outbreak associated with microcephaly?

The history of the virus and its discovery according to WHO (World Health Organization): its historical home, since discovery in 1947, has been in a narrow equatorial belt stretching across Africa and into equatorial Asia. For decades, the disease, transmitted by the *Aedes* genus of mosquito affected mainly monkeys. In humans, ZIKV occasionally

caused a mild disease of low concern. In 2007, ZIKV expanded its geographical range to cause the first documented outbreak in the Pacific islands, in the Federated States of Micronesia. From 2013-2014, four additional Pacific island nations documented large ZIKV outbreaks. In French Polynesia, the outbreak was associated with neurological complications at a time when the virus was *co-circulating with dengue*. That was a unique feature, but difficult to interpret – but was not described as microcephaly (WHO, 2016).

The striking deformity of microcephaly has been at the center of the viral epidemic. Babies born with microcephaly have been reported among infants born to pregnant women infected with ZIKV. Microcephaly most often occurs because the brain fails to grow at a normal rate. Skull growth is determined by brain growth. Brain growth takes place while in the womb and during infancy. It has no clear prognosis, no treatment and no cure. The diagnosis comes halfway through pregnancy, if at all.

The most likely causes of microcephaly include infections, genetic disorders, and severe malnutrition (Kinsman and Johnston, 2011). The genetic conditions are:

- Cornelia de Lange Syndrome
- Cri du chat Syndrome
- Down syndrome
- Rubinstein-Taybi Syndrome
- Seckel Syndrome
- Smith-Lemli-Opitz Syndrome
- Trisomy 18
- Trisomy 21

Some indirect causes are:

- Uncontrolled phenylketonuria (PKU) in the mother
- Methylmercury poisoning
- Congenital rubella
- Congenital toxoplasmosis
- Congenital cytomegalovirus (CMV)
- Use of certain drugs during pregnancy, especially alcohol and phenytoin

There are many uncertainties about this virus, including whether it is directly responsible for the misshapen skulls



Stephanie Bailey

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## Zika: What Caused It? We Will Know When the Work Is Done

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of babies born to infected mothers – and there should be uncertainty. For example, there are four types of dengue virus, and the severity of infection can range from mild aches and pains all the way to an Ebola-like hemorrhagic death. For years, scientists tried to pinpoint which strain caused which symptoms, but it is now known that the worst outcomes arise when an *individual is infected sequentially with different strains*, triggering his immune system into a massive overreaction. With this, and other complicated examples of mosquito-carried viral diseases in mind, the WHO is very cautiously referring to an “association” between microcephaly and the Zika virus — not yet cause and effect. ZIKV has already gone from being an *epidemic* to an *endemic* disease in Brazil, meaning the virus may now be a permanent feature of the nation’s ecology and that of the western hemisphere. It is likely that ZIKV will return in seasonal cycles, as have other mosquito-carried viruses such as yellow fever, West Nile virus, chikungunya, and dengue; each of which have made permanent homes in ecologies ranging from the Amazon rainforest to posh Caribbean resorts to Andean villages to Mexico City.

*the WHO is very cautiously referring to an “association” between microcephaly and the Zika virus — not yet cause and effect*

So, what happened when the explosive disease hit the Brazilian country? What is the guidance, given the virus is like some we have known but yet much remains unknown? Why could there be an association with microcephaly? If ZIKV does cause microcephaly, it seems to be an extremely rare complication given the long history of the viruses’ existence and causes of outbreaks as shown above.

In Brazil, researchers say they are seeing a disproportionate number of microcephalic infants with what appear to be severe deformities, many with four striking malformations at once: a large degree of brain tissue loss; unusually smooth, wrinkleless brains; many calcium deposits; and smaller cerebellums, which play a role in motor control, according to Dr. Albert I. Ko, an infectious-diseases specialist at Yale School of Public Health who is helping Brazilian health officials (Stein, 2016). However, Brazil has had outbreaks of this virus before without such association. Do the answers come within the first wave of epidemiological discovery or later? Did the answer come within the first wave of discovery of Human-immunodeficiency Virus? What about initially when thousands of people were getting sick and dying from the ‘Broad Street pump’?

In 2014 the government added the chemical pyriproxyfen to water supplies. The aim was to lessen the mosquito population in Brazil. Soon after, birth defects in newborns began. Neighboring Colombia is also battling ZIKV where approximately 3000 pregnant Colombian women have been infected. But in that country there is no microcephaly outbreak. Pyriproxyfen has not been used on Colombia mosquitoes (Salerno, 2015).

Strategies for prevention and control of ZIKV disease included what is best known to do for any mosquito population carrying disease: promoting the use of insect repellent and interventions to reduce the abundance of potential mosquito vectors. It was so with West Nile Virus and it has been the case with the same *Aedes* species, carrying ZIKV, which can breed in the smallest pools of water and usually bite during the day.

Epidemiological principles include detection/surveillance, investigation, analytic study, evaluation, linkages, and policy development. The goals are to: track progress of a disease to determine cause and spread; mitigate/eliminate the source; educate the public; and establish prevention measures. The principles will not change despite what organism may be organizing with each moment to attack. As with any mosquito infestation, spraying is the first expected action; and was done in all outbreaks. Often the containment policy must come quicker than the definitive result of an epidemiological study.

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*Dr. Bailey is Interim Dean of the College of Health Sciences, Tennessee State University in Nashville. She served as the Chief for Public Health Practice at CDC prior to coming to TSU and the Director of Health for Metropolitan Nashville/Davidson County, Tennessee, prior to CDC. She is a lifetime champion for community health excellence.*

# Mother-to-Child HIV Transmission, Literacy, Ethnicity, Education, and Wealth in Kenya

by Eunice Kimunai, PhD MPH RN, Salome Kapella-Mshigeni, PhD MPH MPA, Peter Anderson, PhD, and Marilyn Keng-Nasang Mbi Feh, MD PhD

***Abstract: This study examined the relationship of literacy, ethnicity, education, and wealth to the receipt of care for mother-to-child HIV transmission (MTCT) in Kenya. The researchers analyzed secondary cross-sectional data from the 2008-2009 Kenya Demographic and Health Surveys (KDHS). The sample consisted of 167 postpartum Kenyan women ages 15 to 49 with an HIV/AIDS diagnosis. Literacy, ethnicity, education, and wealth were all contributing factors in the receipt of care for MTCT in Kenya. Additionally, low levels of education, knowledge, and literacy were related to less HIV/AIDS prevention efforts especially among persons living in low-income and/or poor communities.***

***Keywords: literacy, ethnicity, education, wealth, mother-to-child HIV transmission***

According to the World Health Organization (WHO, 2015), the HIV/AIDS epidemic is the greatest threat to the world's population, accounting for an estimated 34 million deaths to date, and an estimated 37 million people worldwide who are living with the HIV virus so far. Although there have been some achievements in HIV/AIDS prevention, public health communities need to apply evidence based prevention and risk reduction efforts before HIV/AIDS can be eradicated. Sub-Saharan Africa, with a population of approximately 1.1 billion people, including Kenya, is one of

the regions most heavily affected by the HIV epidemic. An estimated 26 million people in Sub-Saharan Africa were living with the virus as of 2014, which accounted for almost 70% of the global total of new HIV infections (WHO, 2015).

***the HIV/AIDS epidemic is the greatest threat to the world's population***

According to the Centers for Disease Control and Prevention (CDC) over 43% of the population in Kenya lives in poverty, and some of the well documented health challenges include high maternal/child mortality and a high burden of infectious diseases such as HIV, tuberculosis, and malaria (CDC, 2014). In 2014, the Kenya National Bureau of Statistics (KNBS, 2015) estimated that the population of Kenya was 43.0 million. In 2014, United Nations Program on HIV and AIDS (UNAIDS, 2014) estimated that, there were 1.2 to 1.6 million people living with HIV/AIDS (PLWHA) in Kenya. UNAIDS also estimated that in 2014 about 25,000-45,000 deaths occurred in Kenya due to AIDS and about 160,000 children between the age of 0 to 14 are living with HIV, with approximately 650,000 orphans between the age of 0 to 17 living with AIDS (UNAIDS, 2014).

## Mother-to-Child HIV Transmission

Mother-to-child HIV transmission takes place when an HIV positive mother passes the virus to her unborn child either while in utero, during labor and delivery, or during breastfeeding (WHO, 2014a). Some of the well-known risk factors of mother-to-child HIV transmission include: vaginal birth, breastfeeding, high maternal HIV viral loads, and low maternal CD4 count (Stringer et al., 2008). In order to improve birth outcomes among HIV-infected mothers, it is necessary to provide adequate care during prenatal visits including blood testing, HIV prenatal counseling, and HIV

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## Mother-to-Child HIV Transmission . . . and Wealth in Kenya

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treatment (Mirkuzie, Hinderaker, & Mørkve, 2010). Some of the well-documented interventions include providing antiretroviral therapy (ART) to mothers during pregnancy, labor, and delivery; providing ART to newborns soon after delivery, cesarean section, antenatal HIV testing, and providing formula to newborns in lieu of breast milk (Shaffer, McConnell, Bolu, Mbori-Ngacha, Creek, Ntuny, & Mazhani, 2004; Zhou et al., 2010). In a recent national study of 3,310 women who reported having more than one (1) live birth between 2007 and 2012, 86.5% consented to HIV testing and 6.1% were positive. Of those infected, 93.1% received prenatal care (Sirengo et al., 2014).

### Cultural Factors Related to Receipt of HIV/AIDS Prevention Services

It was reported that Kenyan women are twice as likely to be infected with HIV/AIDS as compared to men (USAID, 2010), and there are many factors that put these women at a higher risk. Cultural factors such as female circumcision, coercion into sex and marriage, wife inheritance, sexual favors in return for money, and financial instability have contributed largely to an increased rate of HIV/AIDS transmission among women in Kenya (Mugambi, 2006). Some women who have had a positive HIV test result find that following up with treatment recommendations is daunting and overwhelming (Kuate, Mikolajczyk, Forgewei, Tih, Welty, & Kretzschmar, 2009; Mugambi, 2006). Further, if the family and spouse do not support the woman and understand the stigma that surrounds the AIDS epidemic, it is even harder for the HIV positive woman to take care of herself and her unborn child (Kuate et al., 2009; Mugambi, 2006). Thus, in order to successfully implement an effective mother to child transmission (MTCT) prevention program, public health practitioners need to be highly familiar with the cultural determinants of HIV transmission among Kenyan women (Kuate et al., 2009). Cultural competency training about different characteristics of individual groups in Kenya should be an ongoing part of the prevention efforts. The gap in the existing literature that this study addresses examined the relationship of literacy, ethnicity, education, and wealth to the receipt of care for MTCT.

### Literacy, Ethnicity, Education, and Wealth

In a study conducted in Kenya, authors found that a myriad of factors contributed to uptake of maternal health services in Kenya and countries with similar characteris-



Bianca Hubble, Axy's Design

tics. Factors included living in urban areas, being wealthy, increased education, lower parity, region where the mother resides, and ethnicity (Kitui, Lewis, & Davey, 2013). We incorporated three (3) of these variables and added basic literacy to our study to capture variables known to affect maternal health and to add to the literature by testing whether literacy was predictive of MTCT.

### Theoretical Framework

This research employed diffusion of innovation (DOI) theory by Rogers to elucidate how over time, an idea gains momentum and diffuses or increases through a specific population or social system (Rogers, 1983). The aim of this theory is to help people adopt a new healthy behavior as part of a social system. Diffusion is viable when an individual adopts or recognizes an idea or behavior as innovative or new (Rogers, 1983). This study tested the relationships of literacy, ethnicity, education, wealth, and receipt of care for MTCT in Kenya. The DOI theory has been utilized to gain an understanding of the components necessary to successfully achieve behavioral changes that may reduce the spread of HIV in underserved countries such as Kenya (Bertrand, 2004). A study by Bertrand used elements of DOI, specifically innovation, communication channels, opinion leaders, time and process (Bertrand, 2004; Washington State Department of Health, n.d.) and highlighted its successful implementation against the spread of HIV among the LGBT community in San Francisco, CA (Bertrand, 2004). Based on the DOI theory, we researched the receipt of care for MTCT relation to specific hypotheses involving the relationship between the four predictor variables namely literacy, ethnicity, education, and wealth in relation to health care professional workers' communication with the target audience.

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## Mother-to-Child HIV Transmission . . . and Wealth in Kenya

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*Innovation*, the first element of DOI theory, takes place when a new idea is presented to an audience for its acceptance in order to change behavioral patterns (Rogers, 2004). *Communication*, the second element of DOI theory, addresses the means by which information is transmitted from one source to another (Bertrand, 2004). The third element of DOI theory, utilized in this MTCT research study is the use of *opinion leaders* who are respected for their knowledge and reputation on specific topics (Bertrand, 2004). The fourth element of DOI theory, employed in this MTCT study, is *time and process*, a valuable assessment that can be used to determine the impact of educating pregnant women at different intervals in order to successfully deliver the key messages against mother-to-child HIV transmission.

The research question that guided this study is: *What is the relationship of literacy, ethnicity, education, and wealth to the receipt of care for MTCT in Kenya?* After an exhaustive literature review, the authors could not find recent studies that explore the relationship of maternal HIV transmission in relation to one's literacy, ethnic background, education level, and wealth in Kenya. The four independent variables that were a part of this study are related to the prevention of MTCT of HIV.

## Methodology

### Study Design

In this quantitative study, the researchers analyzed cross-sectional secondary data from the 2008-2009 Kenya Demographic and Health Surveys (KDHS), the most recent

nationally representative dataset with HIV information from Kenya. The data for this study is part of a larger data set obtained from Inner City Fund (ICF) International. This study received Institutional Review Board (IRB) approval from Walden University prior to retrieving the secondary dataset and conducting the analyses. The hypothesis for this research is:

$H_0$ : There is no relationship between literacy, ethnicity, education, and wealth and mother-to-child transmission of HIV in Kenya

$H_1$ : There is a relationship between literacy, ethnicity, education, and wealth and mother-to-child transmission of HIV in Kenya

To support the above hypothesis, the authors could not find any recent studies that explore the relationship of maternal HIV transmission in relation to one's literacy, ethnic background, education level, and wealth in Kenya.

### Participants

The original surveyors selected a representative probability sample of over 10,000 households for the KDHS through a two-stage cluster sampling technique whereby the female participants were oversampled (KNBS & ICF Macro, 2010). The survey yielded a 98% household response rate (KNBS & ICF Macro, 2010). Women who were unable to read at all or who could not read a complete sentence answered questions orally after they were read to the participants.

The population for this study was HIV positive postpartum women of childbearing age between ages 15-49 and 167 females in the data set met the criteria. The number of postpartum women aged 15-49 who knew their HIV status (negative or positive) was 1,224, and of these females, 167 knew that they were HIV positive. The 167 Kenyan women studied were a representative sample of the ethnicities manifest in Kenya (KNBS & ICF Macro, 2010).

### Measures

**Dependent variables.** All six (6) dependent variables in this study were categorical variables, with answers of "yes" or "no": (1) use of ART to avoid AIDS transmission to baby during pregnancy, (2) got results of AIDS test as part of an antenatal visit, (3) was tested for AIDS as part of an antenatal visit, (4) talked about mother-to-child HIV transmission with a health professional as part of an antenatal visit, (5) given any information/counseling about breastfeeding as part of antenatal care, and (6) discussed things to do to prevent AIDS as part of antenatal care. The KDHS protected the validity and reliability of the items by making sure that the questionnaires were translated into major local languages

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before they were given to the interviewers. Translation beforehand protected the validity and reliability of the original measures by ensuring that minimal errors could be introduced if the interviewers translated the information themselves while out in the field (KNBS & ICF Macro, 2010).

**Independent Variables.** Literacy, ethnicity, education, and wealth were the four (4) independent variables. Literacy was scaled in three (3) categories: unable to read, able to read partial sentences, or able to read complete sentences. Ethnicity was tested with three major tribes: Kikuyu, Luo, and Luhya. The fourth category for ethnicity composed of 10 other tribes that were placed into one group because of the very small frequencies in each tribe. For education there were three (3) groups, no education, primary (elementary) education only, and those with a secondary or higher education were combined into one group due to the small percentage of respondents who indicated they had higher than a secondary education (5.4%) . The wealth index is composed of a household's cumulative living standard. KDHS calculated the wealth index according to a household's ownership of selected assets, such as: televisions, materials used to build the house where members dwell, bicycles, and type of sanitation facility and water access. The wealth index placed the household on a continuous scale of relative wealth; Demographic and Health Survey (DHS) separated the entire household interviewed into five wealth categories (Poorest, Poorer, Middle, Richer, & Richest; Table 1) (Measure DHS, n.d.)

Analyses

A series of Pearson's chi-squared tests were run to examine relationships among the independent variables.

Results

Descriptive

The sample included 167 participants. Approximately two thirds of the participants in the sample had primary education (67.7%), followed by secondary education (19.2%). Wealth was relatively evenly distributed among the respondents with the largest proportion of the sample falling into the richest category (29.9%), followed by the poorer category (23.4%). Nearly half of the 167 respondents were of Luo ethnicity (48.5%), followed by Luhya (25.7%) and Kikuyu (9.0%). Most of the 167 respondents were able to read whole sentences (64.6%) or parts of sentences (22.0%).

Table 1. Categories of Descriptive Statistics  
(n=167)

	n	%
<b>Education</b>		
No Education	13	7.8
Primary Education	113	67.7
Secondary Education	32	19.2
Higher Education	9	5.4
<b>Wealth<sup>a</sup></b>		
Poorest	31	18.6
Poorer	39	23.4
Middle	23	13.8
Richer	24	14.4
Richest	50	29.9
<b>Ethnicity</b>		
Kikuyu	15	9.0
Luo	81	48.5
Luhya	28	16.8
Other	43	25.7
<b>Literacy</b>		
Unable to Read at All	22	13.4
Able to Read Only Parts of Sentence	36	22.0
Able to Read Whole Sentence	106	64.6

*Note: Frequencies not summing to 167 reflect missing data.*

*<sup>a</sup>The wealth index comprises of a household's cumulative living standard. DHS calculated the wealth index according to a household's ownership of selected assets, such as, televisions, materials used to building the house that the members of the household dwelled, bicycles, and type of sanitation facility and water access.*

Relationships between Independent Variables and Dependent Variables

Crosstab analysis using Pearson's  $\chi^2$  tests was conducted to examine the relationships among the independent and dependent variables. Table 2 (page 12) presents the chi square relationships between literacy and the dependent variables. As shown in Table 1 (above), literacy was significantly related to receiving the results of an AIDS test during an antenatal visit,  $\chi^2(2) = 7.15, p < .05, V = .21$ . A greater proportion of the 167 respondents who were able to read whole sentences of text issued by an interviewer, got the results of their HIV tests during an antenatal visit (71.7%) compared to those who could not read at all (45.5%), or those who were able to read only parts of sentences (55.6%). None of the other de-

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**Table 2. Categories of Literacy by Dependent Variables (n=167)**

	Unable to read at all		Able to read only part of sentence		Able to read whole sentence		$\chi^2$	p
	n	%	n	%	n	%		
<b>Drug Treatment for AIDS</b>							5.34	.069
No	9	40.9	7	19.4	20	18.9		
Yes	13	59.1	29	80.6	86	81.1		
<b>Got Results of AIDS During Antenatal Visit</b>							7.15	.028
No	12	54.5	16	44.4	30	28.3		
Yes	10	45.5	20	55.6	76	71.7		
<b>Tested for AIDS During Antenatal Visit</b>							3.88	.144
No	9	40.9	15	41.7	28	26.4		
Yes	13	59.1	21	58.3	78	73.6		
<b>Talk During Antenatal Visit Regarding AIDS Transmission From Mother to Child</b>							1.89	.389
No	12	54.5	15	41.7	41	38.7		
Yes	10	45.5	21	58.3	65	61.3		
<b>Counseling About Breastfeeding</b>							1.81	.404
No	10	45.5	17	47.2	38	35.8		
Yes	12	54.5	19	52.8	68	64.2		
<b>Things to Do to Prevent AIDS</b>							2.143	.342
No	12	54.5	15	41.7	40	37.7		
Yes	10	45.5	21	58.3	66	62.3		

**Table 3. Categories of Ethnicity by Dependent Variables (n= 167)**

	Kikuyu		Luo		Luhya		Other		$\chi^2$	p
	n	%	n	%	n	%	n	%		
<b>Drug Treatment for AIDS</b>									4.873	.181
No	3	20.0	15	18.5	5	17.9	15	34.5		
Yes	12	80.0	66	81.5	23	82.1	28	65.1		
<b>Got Results of AIDS During Antenatal Visit</b>									1.997	.573
No	5	33.3	26	32.1	9	32.1	19	44.2		
Yes	10	66.7	55	67.9	19	67.9	24	55.8		
<b>Tested for AIDS During Antenatal Visit</b>									2.626	.453
No	5	33.3	25	30.9	6	21.4	17	39.5		
Yes	10	66.7	56	69.1	22	78.6	26	60.5		
<b>Talk During Antenatal Visit Regarding AIDS Transmission From Mother to Child</b>									4.75	.191
No	7	46.7	32	39.5	8	28.6	23	53.5		
Yes	8	53.3	49	60.5	20	71.4	20	46.5		
<b>Counseling About Breastfeeding</b>									3.44	.329
No	3	20.0	36	44.4	10	35.7	18	41.9		
Yes	12	80.0	45	55.6	18	64.3	25	58.1		
<b>Things to Do to Prevent AIDS</b>									4.08	.253
No	7	46.7	31	38.3	8	28.6	22	51.2		
Yes	8	53.3	50	61.7	20	71.4	21	48.8		

pendent variables were significantly related to literacy among the 167 respondents (all  $p$ 's  $> .05$ ).

As shown in Table 3 (page 12), none of the dependent variables were significantly related to ethnicity (all  $p > .05$ ).

As shown in Table 4 (page 14), education was significantly related to all of the dependent variables such that among the 167 respondents, HIV-positive postpartum women aged 15-49 with more education were more likely to have received services around HIV/AIDS transmission and treatment. For example, a greater proportion of those who received a secondary education had drug treatment for AIDS (85.4%) compared to those with a primary education (77.9%) or no primary education (46.2%). Also, a greater proportion of participants who received secondary education engaged in antenatal discussions about things to do to prevent AIDS as part of antenatal care (80.5%) compared to those who received no education (38.5%) or primary education (54.0%).

As shown in Table 5 (page 14), among the 167 respondents, the relationship between wealth and receiving counseling about breast-feeding was significant for HIV-positive postpartum women aged 15-49,  $\chi^2(4) = 12.90$ ,  $p = .01$ ,  $V = .28$ . A greater proportion of participants who were in the richest category for wealth received counseling about breast-feeding (74.0%) compared to those who were in the poorest (35.5%), poorer (61.5%), middle (52.2%), or richer (66.7%) categories for wealth. None of the other dependent variables were significantly related to wealth for HIV-positive postpartum women aged 15-49 (all  $p$ 's  $> .05$ ).

## Discussion

Evidence is accumulating that it is important for public health prevention efforts against HIV/AIDS to target populations with low literacy levels (Hicks, Barragán, Franco-Paredes, Williams, & Del Rio, 2006) in an effort to improve testing rates. It is crucial for prevention efforts to apply the element of communication that will help HIV positive pregnant women in Kenya to receive timely education pertaining to the importance of prenatal HIV testing, the utilization of cesarean-sections versus vaginal birth, and taking precautions while breastfeeding their infants. For example, by using cultural competency approaches, Kenya's healthcare workers will provide maternal HIV/AIDS education to vulnerable populations in collaboration with opinion leaders specifically those who are passionate about public health preven-

tion work. Evidence based intervention methods should be utilized including theories that have worked to reduce the prevalence of specific diseases. For example, this study incorporates the DOI theory with a special emphasis on four elements. The use of opinion leaders in the fight against HIV/AIDS in Haiti demonstrates a good example of how a community can join forces to combat different types of public health epidemics in specific regions (Bertrand, 2004).

Also, *time* and *process* appear to be crucial elements of the DOI theory when it comes to preventive care for mother-to-child HIV transmission efforts. For example, timely testing and medication adherence during prenatal care is necessary in the prevention against mother-to-child HIV transmission. Countries that lack enough medical resources, such as Kenya, ought to adhere to the CDC and WHO standards for HIV screening and prevention efforts in a timely manner (Dearing, 2009). Hence, this study advocates for the provision of timely education and streamlined process between healthcare workers and the target audience in order to ensure that HIV positive pregnant women receive ample care at all intervals to lower transmission rates. Wealth was related to receiving counseling about breast-feeding such that a greater proportion of the participants who were in the richest category for wealth received counseling about breast-feeding compared to all others. This research demonstrates that timely evidence-based mother-to-child HIV interventions are effective when important variables such as literacy, education, and wealth are included in the implementation process (Rychetnik, Frommer, Hawe, & Shiell, 2002).

These findings suggest that educational attainment may have influenced some participants to accept counseling and to learn more about recommended HIV/AIDS practices pertaining to pregnancy and caring of their infants. In Kenya, educating women will make a difference when it comes to HIV/AIDS prevention efforts. These findings show a correlation between education, economic status, and mother-to-child HIV transmission counseling thus indicating that education may be especially important among women living in low income and/or poor communities. As seen in many countries in sub-Saharan Africa, education is the key component in reducing the prevalence of HIV/AIDS and that the behavior change intervention approach can be successful in challenging populations. (Anderson, Ebrahim, & Sansom, 2004; Goswami, Chakraborty, & Mukhopadhyay, 2011). A focus on best practices guidelines recommended by WHO and the CDC may contribute to positive social change by helping Kenya substantially reduce the prevalence rate of HIV/AIDS in subsequent generations.

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**Table 4. Categories of Education by Dependent Variables (n= 167)**

	No education		Primary		Secondary/ Higher		$\chi^2$	p
	n	%	n	%	n	%		
<b>Drug Treatment for AIDS</b>							8.713	.013
No	7	53	25	22.1	6	14.5		
Yes	6	46.2	88	77.9	35	85.4		
<b>Got Results of AIDS During Antenatal Visit</b>							20.09	.000
No	10	76.9	44	38.9	5	12.2		
Yes	3	23.1	69	61.1	36	87.8		
<b>Tested for AIDS During Antenatal Visit</b>							11.24	.004
No	7	53.8	41	36.3	5	12.2		
Yes	6	46.2	72	63.7	36	87.8		
<b>Talk During Antenatal Visit Regarding AIDS Transmission From Mother to Child</b>							9.922	.007
No	8	61.5	53	46.9	9	22		
Yes	5	38.5	60	53.1	32	78		
<b>Counseling About Breastfeeding</b>							13.183	.001
No	8	61.5	52	46.0	7	17.1		
Yes	5	38.5	61	54.0	34	82.9		
<b>Things to Do to Prevent AIDS</b>							11.29	.004
No	8	61.5	52	46.0	8	19.5		
Yes	5	38.5	61	54.0	33	80.5		

**Table 5. Categories of Wealth by Dependent Variables (n= 167)**

	Poorest		Poorer		Middle		Richer		Richest		$\chi^2$	p
	n	%	n	%	n	%	n	%	n	%		
<b>Drug Treatment for AIDS</b>											2.781	.595
No	7	22.6	9	23.1	3	13	8	33.3	11	22.0		
Yes	24	77.4	30	76.9	20	87	16	66.7	39	78.0		
<b>Got Results of AIDS During Antenatal Visit</b>											5.95	.203
No	15	48.4	15	38.9	7	30.4	10	41.7	12	24		
Yes	16	51.6	24	61.5	16	69.6	14	58.3	38	76		
<b>Tested for AIDS During Antenatal Visit</b>											5.85	.211
No	12	38.7	15	38.5	5	21.7	10	41.7	11	22.0		
Yes	19	61.3	24	61.5	18	78.3	14	58.3	39	78.0		
<b>Talk During Antenatal Visit Regarding AIDS Transmission From Mother to Child</b>											6.63	.157
No	16	51.6	19	48.7	9	39.1	12	50.0	14	28.0		
Yes	15	48.4	20	51.3	14	60.9	12	50.0	36	72.0		
<b>Counseling About Breastfeeding</b>											12.9	.012
No	20	64.5	15	38.5	11	47.8	8	33.3	13	26.0		
Yes	11	35.5	24	61.5	12	52.2	16	66.7	37	74.0		
<b>Things to Do to Prevent AIDS</b>											7.25	.123
No	15	48.4	17	43.6	10	43.5	13	54.2	13	26.0		
Yes	16	51.6	22	56.4	13	56.6	11	45.8	37	74.0		



## Limitations

This study was conducted using secondary data from the 2008-2009 database; consequently more studies are needed that will utilize more recent data. This study only assessed three tribes individually in Kenya and so the results cannot be extrapolated to other tribes or groups. Also, this study utilized a correlation research method, and hence, the relationships found between independent and dependent variables demonstrate relationship between the variables and not causation. Also, there is the risk of recall bias since the secondary data from the KDHS was retrospectively collected by the original data collectors. In addition, cross-sectional studies allow for the collection of data at a given point in time which can be perceived as a limitation in this study since the results might have provided differing data if the survey was administered at a different time frame.

## Conclusion

Enhanced HIV prevention strategies for women of child-bearing age are continuously needed in order to reduce mother-to-child HIV transmission (CDC, 2006). According to the CDC, socioeconomic factors that are highly associated with poverty (i.e. access to care, education, and housing) may directly or indirectly increase the risk factors for HIV infection (CDC, 2006). In Kenya, 10% of all HIV transmission takes place through vertical transmission from mother-to-child (KNBS, 2011). The need to strengthen a support system for HIV positive women of child bearing age is essential in order to reduce the burden of transmission (Baek & Rutenberg, 2010). However, implementing evidence based interventions and constantly monitoring their performance has remained a public health challenge not only in third world countries but also around the world (Baek & Rutenberg, 2010).

The DOI theory was used as a framework to provide an insight into the implementation of behavioral health changes and the challenges of reducing the prevalence of HIV/AIDS in Kenya. This theory, with its elements is well documented in the literature as a successful social process that brings change in different public health issues such as HIV/AIDS prevention. For example, the use of opinion leaders is believed to bring about positive social change as most often many of them are embedded in social networks and perceived to be trustworthy (Dearing, 2009). Any interventions that are perceived to be sensitive in nature cannot be suc-

cessful with the use of workshops, presentations, dissemination of brochures, etc., alone and hence using opinion leaders in Kenya is essential in the fight against mother-to-child HIV transmission (Thompson, Estabrooks, & Degner, 2006). For the most part, these leaders provide a jump-start to a difficult task ahead as cultural barriers do exist in any given society. The inclusion of the DOI theory in this research may help create similar success among Kenyan women so that MTCT of HIV/AIDS can be prevented.

We found that literacy, ethnicity, education, and wealth are all related to the receipt of care for mother-to-child HIV transmission in Kenya. Future studies are needed in under developed countries to assess more elements that could be used to reduce the risk of MTCT HIV transmission. Future studies should assess how literacy, education levels, and HIV education can prevent messages from being received and how Kenya might move forward to remedy the lack of literacy and education in women and girls as a prevention mechanism against HIV transmission. A series of intervention methods that have been successful for developed countries such as the United Kingdom and Ireland have to be replicated in third world countries (Townsend et al., 2008). Findings from this study demonstrate that educating women about HIV/AIDS may improve their overall health outcomes as well as the health of their families.

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# Child-birthing Practices on a Global Level

by Barbara F. Turnage, PhD, Rebecca Smith, PhD, and Justin D. Bucchio, PhD

***Abstract: When a pregnant woman cannot make all of the decisions related to childbirth, support is needed. Helping these women make birthing decisions becomes an important role for childbirth educators. Discussed were factors that influence childbirth, with decision making, cultural beliefs, and birth issues as central points of focus. Suggestions for childbirth educators when working with these factors are provided.***

*Keywords: global childbirth issues, childbirth decision makers, cultural communication*

## Introduction

When considering childbirth delivery, there are many factors that come into play. “It is known that adequate prenatal care leads to improved perinatal outcomes for all mothers and infants, but particularly those considered high risk” (Sweet, et al., 2015, p. 332). As birth related complications can lead to death or disability for the pregnant woman (Lori & Boyle, 2011), it is important to understand and identify resolutions for factors that hinder healthy childbirths. Such factors include personal economics, the presence of suitable birthing staff, facility reputation, family and cultural practices, and spirituality (Blanchard, 2015; Cipolletta & Sperotto, 2012; Sweet, et al., 2015). For many pregnant women, an interdependent relationship between family, community, and their economic situation determine where they deliver their child, not their personal desires. The purpose of this paper is to contribute to the discussion on factors that affect childbirth. Although there are a number of factors that pregnant parents must consider, this paper will only discuss decision making, cultural beliefs, and birth issues.

## Decision Making

Birthing decisions may be made collectively by the future parents, in-laws, and community and depend on socio-cultural, economic, and community factors. For example, in Northern Karnataka, India, birth decisions may be a collective decision because of “household gender and power dynamics” (Blanchard, et al., 2015, p. 2074). Childbirth educators play a role in decision-making and often play integral parts in the team of healthcare professionals, providing support as the family begins to develop and transition through pregnancy into parenthood and promote the overall well-being of women as individual human beings (ICEA, 2016). Because of this childbirth educators need to know how to determine who’s making birth decisions especially when working with high-risk deliveries. Appealing to the true decision maker early on helps to ensure appropriate measures are taken to ward off childbirth problems. In situations where the pregnant woman may disagree with the birthing decisions made by family and community decision makers, it is important that the childbirth educator work with both the family and community dynamics to facilitate the best decision for the pregnant woman and the child.

Another factor which influences childbirth decision-making is the birth parent’s relationship with the service provider (Cipolletta & Sperotto, 2012). Whether the service provider is a midwife, physician, or facility, the pregnant parent must be able to discuss concerns and have a respectful conversation. The birthing experience can be negative when communication between the pregnant woman and the service providers is problematic. Well-meaning childbirth personnel who focus more on providing information than listening to concerns might remember that to adequately serve the pregnant and/or birthing parent, they must first have established a respectful relationship. Respect is built when both parties listen to each other. Finding respectful ways to dispel incorrect myths allow the childbirth educator to demonstrate their knowledge as well as their desire to learn from the pregnant woman. Allowing the pregnant woman

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to be the expert in her life/situation helps the childbirth educator understand how the pregnant woman thinks about her pregnancy. A major goal for the childbirth educator is to ensure maternity care throughout the pregnancy. Having a respectful relationship with the pregnant woman may increase compliance with treatment protocol.

### Cultural Beliefs

As culture shapes a person's worldview, it is imperative that childbirth educators understand and respect the pregnant woman's culture. The pregnant woman's cultural view shapes her self-view and how she sees interactions with medical and support staff (Lori & Boyle, 2011). Find helpful but limited ways to include cultural healers and/or cultural healing practices when developing service delivery material and/or educational products. For example, Lori and Boyle (2011) discussed the use of "black baggers" in Liberia. Black baggers were described as individuals who may have formal but limited medical training. According to Lori and Boyle (2011), these individuals dispensed medications, performed medical treatment, and provided overall medical advice. The childbirth educator is not expected to endorse black baggers' practices. The objective for childbirth educators is to understand their role in Liberian cultural medicine. The childbirth educator must find respectful ways to ensure the pregnant woman follows appropriate medical practices during her pregnancy and after the birth of her child without diminishing the pregnant woman's cultural beliefs.

Another cultural issue is communication. An example of how cultural communication influences the childbirth educator and the pregnant woman is language. Even in the same country, words can have both a global meaning and a cultural meaning (Choudhury, et al., 2012; Duncan & Gilbey, 2007). An example is the word "okay." In the United States, okay can globally mean "I understand and agree with you." This same word can culturally mean, "I understand but will do it my way. So stop talking to me about this issue." The task for the childbirth educator is to probe for consensus meaning without being rude, disrespectful, and/or challenging. Learning to listen to how words are used, the inference placed on a word, and the body language that accompanies a statement will help the childbirth educator fully understand the intent of the pregnant woman's message.



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### Birth Issues

Issues related to childbirth include vaginal vs. planned caesarean section births, and local vs. facility births. In high income countries, many women now have the choice of vaginal or caesarean section births (Cipolletta & sperotto, 2012; Miller & Shiver, 2012) and while this is alarming to those of us who strive for low intervention in the birth process, it is still a choice. Believing that unbearable pain is associated with a vaginal birth may lead women to choose a caesarean section. "Between 7 and 26% of women in high income countries fear childbirth with 6% reporting the fear as "disabling" (Richens, Hindley, & Lavender, 2015, p. 574). According to Richens, Hindley, and Lavender (2015), in the United Kingdom fear of a vaginal birth "is an accepted reason for caesarean section" (p. 578). Whether these fears are justifiable or not, the childbirth educator must develop an extensive knowledge of issues that lead to difficult childbirths and the verbal communication skills required to fully explore the pregnant woman's fears. It could be beneficial to provide educational information on the benefits of vaginal births. The goal is to ensure the pregnant woman knows how her birth decisions influence her child and her experience.

Finding a safe and quality birth site is an important issue for many pregnant women in developing countries and poor areas of developed countries. According to Sweet et al. (2015), "almost one quarter of all women residing in rural South Australia relocate to another area to give birth" (p. 332). Traveling away from her community and family changes the support these women have available to them during and after childbirth. By relocating for childbirth, pregnant women may unintentionally signal to area midwives and birthing centers that she views them inadequate. This unintended message may impede the medical care pregnant women receive once they return home.

There are additional concerns when pregnant women

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are forced to give birth away from their support system. Sweet et al. (2015) reported, "... for women forced to travel for their maternity care. Such adverse effects include suboptimal antenatal care, lack of continuity of care, financial burden and stress from family disruption, travel and isolation, as well as culturally, socially and emotionally inappropriate models of care" (p. 336).

When discussing giving birth outside of their home communities, the childbirth educator must discuss the short-term and the long-term consequences of making such a decision. These consequences must be weighed against the medical needs of both pregnant women and their child.

Although giving birth in larger medical communities may be beneficial for some pregnant women, their decision also has consequences for their home community. The number and quality of medical personnel depend on usage. For example, "In rural South Australia, there has been a steady decline in the number of rural hospitals providing maternity birthing services" (Sweet et al., 2015, p. 334). This decline directly relates to pregnant women choosing to deliver their children in larger medical centers. Therefore, if community members consistently choose medical services outside of their home communities, the community medical staff and facilities can choose to move where they will find users for their services. The widespread decision to not use community services may change the quality of life for community residents as well as the community's economic position as money for birthing services are spent outside of the community.

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## Conclusion

There are times when pregnant women cannot make all of the decisions related to childbirth. Before and during the birthing process, pregnant women need help to prioritize differing birthing perspectives. Pressure to make a particular childbirth decision may come from family, community, and cultural beliefs. Helping pregnant women make birthing decisions is part of the role of childbirth educators. Further study is needed to determine how this added task for child birth educators might be addressed through maternal health literacy.

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# Maternal Mortality in Chad

by Hadi Danawi, PhD, Shon Deen, and Tala Hasbini, MSPH

***Abstract: In Chad, one in 15 women die to complications of giving birth. This translates into 6.7% mortality, the highest in the world. Setting goals for achieving related millennium development goal (MDG) will have an enormous impact upon the global society. In Chad, performing trauma and surgical care intervention without enough trained staff is the norm. If there were enough trained staff the mortality rate would drop drastically and circumvent the need for increased emergent care. Maternal mortality has a noteworthy price tag in the Sub-Saharan region of Africa which necessitates international intervention to increase investment and coverage in these areas.***

*Keywords: Chad, maternal mortality, maternal morbidity, maternal and child health, MCH, antenatal care*

## Introduction

The maternal mortality ratio in developing regions is still 14 times higher than in the developed regions (“Goal 5,” n.d.). This is unsettling due to the development and abundance of equipment and materials available worldwide. This alarming rate usually stems from lack of personnel to attend high risk deliveries and lack of education. These deaths can be avoided. Almost the entire maternal morbidity is preventable by proper care and supervision of the mother during pregnancy. Health services provided to mothers after delivery comprise an essential component of the package of maternal and child health (MCH) services in any population (Naseem, 2015). The millennial goal of improving maternal health is important to addressing the global burden of disease because

these women are suffering from preventable scenarios for the most part and the children of these mothers also suffer greatly when these mothers die. In Bangladesh the mortality rate dropped by more than 40% in under 10 years when the government focused on providing core services for maternal and child health for the rural population through district hospitals, health complexes, union family welfare centers, and satellite clinics. The primary focus was to promote antenatal care, tetanus toxoid immunization, iron supplementation, clean delivery practices, and family planning (El Arifeen, 2014).

The U.S. enjoys many privileges the majority of the world does not; yet, those in the U.S. still have poor prenatal care. In fact, the U.S. ranks the worst among the developed countries (Creanga, 2014). With maternal health increased, the need for emergency procedures that are dangerous to the child in utero would be reduced. The health of children born would increase due to physical and psychological maternal support. There is a need for skilled personnel attending delivery suites and antenatal care. It is the ultimate goal to provide women with wealth status class, health insurance coverage, residence, and decreased history of previous birth complications (Amoakoh-Coleman, 2015).

## Health Indicators

Infant and maternal mortality rates are among the best indicators used to compare the health status of countries as well as the global burden of diseases in and within different countries. In the country of Chad, one in 15 women dies due to such complications, which is the highest maternal mortality in the world (World Health Organization (WHO), 2014). Every couple of minutes a woman dies due to complications in childbirth. The fifth Millennium developmental goal envisioned a 75% reduction in this number by the year 2015. Developed countries have made progress, but poorer countries have not fared as well. In fact, some of the poorer undeveloped countries have actually done worse since 1990. Chad is one of these countries, in fact it has seen a 10% increase in maternal mortality from 1980 to 2010 (Lawson, 2013).

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## *In Chad, one in 15 women dies, which is the highest maternal mortality in the world*

Maternal mortality is defined as the death of a woman during pregnancy, childbirth, or during the 42 days after childbirth (Hogan, 2010). The health indicators that lead to such deaths are generally due to lack of access to medical care, products, and/or personnel. Specific health indicators that lead to these shortcomings or outcomes include: preterm birth, lack of prenatal care, early pregnancy, limited facilities, inadequate equipment, and most importantly lack of skilled individuals to facilitate necessary care. Education, lack of basic services, minimal contraception use, and low-pregnancy age (12-15) are also indicators associated with high maternal mortality rates, which are very significant risk factors associated with maternal mortality in Chad.

In Chad, the numbers of girls under 15 years of age give birth at a rate of 47.8 in 1,000 individuals (Neal, 2012). Islam and Catholicism comprise the top two religious branches and cover over 73% of the entire population (Central Intelligence Agency (CIA), n.d.). This is relevant due to the structure of marriage and as we will see later some of the complications of early pregnancy. Catholicism discourages the use of contraceptives, which may also play a role in maternal mortality rates. As of 2011, contraception is only used by 5% of the populace. This is a major risk factor when coupled with the number of girls giving birth prior to 16 and the lack of education that is the national status quo (CIA, n.d.). As of 2006, there are 0.04 physicians per 1,000 individuals compared to 2.45 per 1,000 in the United States (CIA, n.d.). Bed spaces, while limited in Chad, are present for 0.4 per 1,000 people.

At most, half of the population has access to basic services. Running water is scarce in the country of Chad with 45% only in rural environments and 72% in urban environments (CIA, n.d.). Healthcare expenditures in Chad are only 4.3% of GDP in 2013 and education expenditure nationally was 2.3% of GDP as of 2011. As a reference point, the GDP noted in 2012 was about \$200/per person (CIA, n.d.). With a population of 11.4 million individuals, the GDP is very low, which is why Chad is reliant upon foreign aid. The literacy rate for the country is 40% and only 32% for females as of 2015. As of 2011 female school age expectancy was merely six years of age (CIA, n.d.). Education is an arena that can drastically be improved upon both in general population and in healthcare systems/scenarios.

Maternal mortality rates throughout most of the world have dropped over the last 30 years due to better medical infrastructure, more trained personnel, and improved family planning both before and after pregnancy. This is not the case for all countries and in particular those that are impoverished and without adequate outlets to attain the necessary infrastructure like Chad.

These worldwide improvements over two decades have been attributed to a number of factors: 1) increased use of contraception and a reduction in fertility rates, except in Africa; 2) increased prosperity, especially in Latin America and Asia, which improves women's nutritional status and their access to health care and contraception; 3) improvements in the educational status of women; and 4) an increased number of midwives and health care facilities. (Lawson, 2013). This is not the case for Chad as the country has little contraceptive use, no increase in prosperity, little access to healthcare, and minimal educational forums for the women giving birth. Shortages of health professionals reduce the number of facilities equipped to offer emergency obstetric care 24 hours a day, and are significantly related to quality of care and maternal mortality rates (Gerein, 2006). Many women are having children earlier than may be safe. In Chad nearly 14% of women (girls) have become mothers by age 15 (Neal, 2012).

Teenage pregnancies are regarded as high risk. Timely prenatal care is not often available and is often an unknown luxury (Omole-Ohonsi, 2010). In a society that is majority Muslim and Catholic, having children out of wedlock can be a shaming and sometimes culturally an unacceptable act. This can lead to relocation, forgoing available resources and not being completely forthright about a medical history. All of these things in turn can lead to complications during childbirth.

## *In Chad nearly 14% of girls have become mothers by age 15*

Preterm birth complications have risen in number (339 per 1,000) and percentage (3.9%) in the top 25 reasons for years of life lost (YLL) in Chad (Kassebaum, 2014). The maternal mortality numbers (per 100,000) individuals is 1500 as of 2010 (WHO, 2010). On the world stage approximately 45-50% of preterm births are from unknown causes, 30% related to premature rupture of the membrane (PROM) and another 15-20% are due to elective or medically indicated reasons (Beck, 2010). The case for more adequate facilities, equipment, and personnel can be made in light of these numbers. Even in the best of situations with the most ad-

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equate personnel and facilities, maternal and infant mortality are unavoidable. That number drastically increases when considering the absence of these services in impoverished countries like Chad.

Contraception use in Chad is at a low 4.8% as of 2010 (CIA, n.d.). Whereas in the developed world it is 67% and even in undeveloped countries 1 in 5 women (20%) use some form of family planning (Clifton, 2014). The numbers in Chad are staggeringly lower than even those poor, underdeveloped countries. Education seems the key to changing this statistic.

The healthcare system in Chad is one of minimalism and scarcity. There are hospitals in the larger urbanized areas, but these facilities are outdated, poor, understaffed, and limited in equipment. There is also a network of health centers set up by the WHO across the country but these are highly understaffed (WHO, n.d.). The Ministry of Health runs all health related inquiries and institutions as well as decisions in the country (Ministry, 2013). The health system is overburdened and focused on communicable diseases such as HIV, malaria, and tuberculosis, which further diverts the resources that are available for maternal care (Kassebaum, 2013). There is a health information system in use but it is only used to record specific diseases and report back to the Ministry of Health. The available data from that health information system point to a low frequency and utilization of curative and preventive services (Wyss, 2003). There is also a disconnection between health planners and physicians which results in poor organization and can be attributed to poor conceptual understanding of culture as well as available resources. The health services do not take sufficient account of the patient's environment and thus the patients are treated improperly, if at all (Wyss, 2003). An added problem is the nomadic nature of a large portion of the populace is at odds with the non-nomadic nature of the residential populace (Wyss, 2003). This compounds the issue of tracking as well. Those individuals who can travel do not trust the system and those who are stationary have inadequate systems to address their needs.

With foreign aid and government allotment, the amount of health dollars that can be spent on an individual averages out to \$4.20/person, the majority of which was spent upon necessary medications (Wyss, 2003). There is an enormous amount of infrastructure that needs to be built in Chad. Informational systems also need to be coordinated with physician desires/expectations. Health systems planners need to have more resources to bring physician ideas to



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fruition. More hospitals need to be built and those hospitals that are already built need to have adequate equipment. Tantamount to all of these infrastructure ideas is the simple need for more “boots on the ground.” More clinical and non-clinical personnel (nurses, doctors, respiratory therapists, unit clerks, surgeons, etc.) need to be in the country. It is estimated that the number of nurses would have to grow nine times the number available in 2006 by 2015 in order to meet the MDG goal number five (Gerein, 2015). As of yet no growth has been noted (CIA, n.d.). An organizational layout of nomadic journey routes should be studied and satellite facilities should be established in the determined areas.

Education remains the single most significant factor associated with decreased maternal mortality rates in Chad. There is a need to for health education at the general and public health level as well as to create the needed health care professionals and power at the national level. Community involvement and stakeholders' contributions towards any planning is a must. The latter should include heads or chiefs of tribes and religious figures who need to partake in any decision making and community intervention relating to any policy making or awareness campaign. Leaders need to be proactive in designing and implementing campaigns for reducing maternal mortality rates in Chad. Building schools with water access in different communities would be beneficial in addressing the inequities at the national level and help achieve the required goals. Young mothers, those with multiple children and those who live in rural environments would be the target population for any intervention. A secondary population, often overlooked, is that of the children born to mothers who die in childbirth or shortly after. These orphans will more likely grow to have younger births and perpetuate the cycle. As the older population continues to live longer lives they will support the generation having more

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babies, if not having them themselves. And as pregnancies increase, so does risk to those individuals having multiple pregnancies. Of mention is also the lack of skilled personnel will be stretched even more thinly should this forecasted scenario play out.

The magnitude of these vulnerable populations are quite large. Most developed and developing countries have been able to curb the maternal mortality rates but not in Chad. Chad still experiences a 980 per 100,000 individual maternal mortality rate. This is down quite a bit from 1990 (41%) and the rate is dropping by about 4.2% per year (WHO, 2014). When considering poverty, lack of resources, and rapid population growth, driving the mortality rate down is not an easy task and the reality makes it very unlikely that women in sub-Saharan Africa will have access to skilled birth attendants or emergency obstetric care in the foreseeable future (Potts, 2012).

## Discussion: Communicating Social Change

Chad has been labeled as one of the countries without sustained or rapid reduction in maternal mortality (Van Lerberghe, 2014). The policies outlined by the WHO are designed to drive global health to an optimum level. However, this is not the case in Chad with little to no policy outlined regarding maternal care and mortality. Much of the country is non-attentive to the existent healthcare situations. The non-realization of the right to health raises serious concerns about the political commitment of state officials to public health (Azetsop, 2015). Other than sweeping organizational money that is donated in humanitarian and fiscal efforts, the only real efforts being made in Chad are performed by non-governmental organizations (NGOs) providing gifts of goods and/or limited services. The only one of those performing maternal medical education and services is Islamic Relief (Miles, 2015).

Africa is the region with the largest remaining growth potential in the world and it is estimated that the market in telecom services will grow by 1.5 billion people (Rufai, 2014). Provided that cell towers and phones are easily accessible, it may be easier to transform healthcare information and social education to the populace and mothers-to-be by use of telemedicine and mobile health. Positive social change can be created by being proactive and by increasing the presence of NGO's. There are opportunities for childbirth educators to make a difference globally. Women of child bearing age should be targeted to be educated and empowered with the ultimate goal of reducing maternal mortality.

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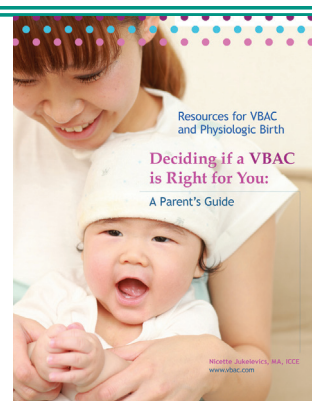
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# *Zika Virus in Brazil:*

## A New Challenge for the National Health System and Nursing Care

by Michele Rocha Kadri, MA

***Abstract: The appearance and rapid spread of the ZIKA virus in Brazil and elsewhere in the Americas has received increasing attention. The main vector for the Zika virus is the Aedes aegypti mosquito. There is mounting correlational evidence in support of this link between the Zika virus and microcephaly. The Zika virus epidemic has profound implications for mothers and their children in Brazil. Another issue affected by the ZIKA epidemic is pregnancy planning. Finally, there is the complex discussion of the effectiveness of control measures that are being taken to eliminate the Aedes aegypti mosquitoes. There are still many unanswered questions that will require long-term research efforts to resolve.***

*Keywords: Zika virus, Brazil*

The appearance and rapid spread of the ZIKA virus in Brazil and elsewhere in the Americas has received increasing attention in the popular media, and in authoritative publications and news updates of Brazilian and international health agencies. Currently, there is much information and disinformation on this new epidemic available to the public and healthcare professionals. To better inform healthcare providers, especially nurses involved in the area of maternal and child health, I have written this article which is based on the most recent information from the Ministry of Health

of Brazil and the Oswaldo Cruz Foundation which conducts public health research throughout Brazil.

The Zika virus (ZIKV) is one of several mosquito-borne illnesses that have infected many people in Brazil over the decades. Annually, there are recurring epidemics of dengue fever. Also, yellow fever and malaria occasionally occur in Brazil, but they are no longer classified as epidemics. The main vector for dengue, yellow fever, and now the Zika virus is the *Aedes aegypti* mosquito. The *Aedes aegypti* mosquito is now receiving great attention from scientists and public health professionals because it spreads ZIKV, which appears to have serious neurological complications, in particular, microcephaly in infants.

In October of 2015, the Brazilian Ministry of Health received the first reports from the Pernambuco Secretariat of Health in Northeastern Brazil that there was an increase in the incidence of microcephaly in infants. Although, at that time, and currently, there is no causal proof that pregnant women who are infected with the Zika virus consequently have microcephalic babies, there is mounting correlational evidence in support of this assertion. First, the mothers giving birth to the babies with microcephaly lived in a region where there had been a Zika virus outbreak; second, more than 60 women who delivered microcephalic infants had reported to their clinician that they experienced a rash (a symptom of Zika infection) during their pregnancy; third, two women whose fetuses were observed to have microcephaly had ZIKV detected in their amniotic fluid and lastly, examinations of infants who had died with malformed heads were similar to infants who had died with microcephaly of mothers who were reported to have the Zika virus. There is considerable ongoing clinical research to confirm the presumed neurological complication of ZIKV.

Other recent research has focused on Zika transmission. The work of Dr. Myra Bonaldo from Oswaldo Cruz Institute and Evando Chagas of the (Brazilian) National Institute of

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## Zika Virus in Brazil

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Infectious Diseases has found the Zika virus in urine and saliva (Agência Fiocruz de Notícia, 2016). Further studies are needed to assess the epidemiological relevance of these findings.

The most recent Zika virus update (February 13, 2016) of the Ministry of Health of Brazil suggests that there are many neurological outcomes associated with this growing epidemic. It was reported that nationwide there were 5280 cases of microcephaly and other neurological disorders associated with ZIKV infection. Responding to these findings, the Brazilian government has ordered mandatory PCR tests and made 250,000 test kits available in 23 Central Public Laboratories.

### *The Zika virus epidemic has profound implications for mothers and their children in Brazil.*

The Zika virus epidemic has profound implications for mothers and their children in Brazil. A large group of children, perhaps a generation, has been called “the children of Zika.” These are children with neurological complications of the infection – microcephaly being the most severe. Dr. Adriana Melo, a gynecologist, was one of the first health professionals to suspect the relationship between Zika and microcephaly (Melo, Malinger, Ximenes, Szejnfeld, Alves Sampaio, Bispo de Filippis, 2016). Two of her pregnant patients, who were diagnosed with fetal microcephaly and were part of the ‘microcephaly cluster,’ had suffered from symptoms related to ZIKV infection (Brasil Ministério da Saúde, 2016). Most likely these cases represented the first diagnoses of intra-uterine transmission of the virus (Melo, et al., 2016). In an interview for Radis Magazine (REVISTA RADIS, 2016), Dr. Melo said that the time of ultrasonography for her patients became a moment of tension because it was a “moment of sentence.” She and other health professionals are recommending that the children of mothers who are identified as potentially being infected by the Zika, should have special attention throughout the first year of their life. During this period, it is possible that other neurological symptoms, less severe than microcephaly, might appear. It is also recommended that these children be followed later by a multidisciplinary team for possible difficulties in speech and learning. This potential long-term monitoring by a healthcare team could be a challenge to the healthcare system. Therefore, the

impact of ZIKA virus infection on mothers, children, families and the healthcare system, including nurses, could be far greater than expected.

Another issue affected by the ZIKA epidemic is pregnancy planning. In an interview for the O Estado de São Paulo newspaper on November 12, 2015, the director of the Department of Surveillance of Transmitted Disease in the Ministry of Health, Claudio Maierovitch, suggested that women in regions with high ZIKV prevalence should avoid getting pregnant (Formenti Ligia, 2015). His comments were severely criticized by people in the community and re-ignited a debate about public health programs violating individual rights. A more moderate recommendation is that women and their partners should wait until the second half of the year when there are less *Aedes aegypti* mosquitoes to try to become pregnant. Another practical recommendation is that Brazilians should use insect repellent and wear long-sleeved shirts and long pants to avoid mosquito bites. However, this is problematic in a largely tropical country with constantly high temperatures and humidity.

Finally, there is the complex discussion of the effectiveness of control measures that are being taken to eliminate the *Aedes aegypti* mosquitoes. Mosquito-fighting measures remain the main strategy in the short-term. The Brazilian Association of Public Health (ABRASCO, 2016) has opposed many government sponsored mosquito eradication efforts because after 40 years of these programs the mosquitoes remain. They argue that an investment in basic sanitation would be the best long-term solution. Overall, in Brazil only 55 percent of households are connected to sanitary sewer lines. Moreover, in the Northeast, the region with the highest number of recent births with microcephaly, more than one quarter (26 percent) of households have open sewers (Brasil. Instituto Brasileiro de Geografia e Estatística, 2010). This situation has been an historical challenge to Brazil. The irregular distribution of drinking water in rural areas, or the periphery of large cities, forces people to store water at home in a precarious way that ultimately creates a breeding area for *Aedes aegypti* mosquitoes.

This year Brazil will receive thousands of tourists for the Olympic and Paralympic games. In the July and August period, weather conditions are less favorable for mosquito proliferation, but ZIKA virus transmission remains a major concern. While Brazil will attempt to take effective measures to control the mosquito population at this time, there are still many unanswered questions that will require long-term research efforts to resolve.

What is the real risk of transmission through other body fluids? At what time period of a pregnancy is a ZIKA

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## Zika Virus in Brazil

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infection must dangerous? How long after an infection can someone still transmit the virus? After the first infection, is a person immune to the virus? In addition to neurological changes, could the virus cause problems with other tissues?

From a public health perspective, there are three essential actions that must be taken to control and eventually eradicate the Zika virus in Brazil: (1) improve social and environmental conditions to eliminate mosquito breeding sites, (2) fund research to expand knowledge about the disease and develop a vaccine, and (3) provide health care and social support for those families who have children with permanent special needs resulting from ZIKA infection. We must remember that even after a vaccine is developed and more effective mosquito control efforts are in place, those individuals (and their families) whose lives have been permanently altered by the ZIKA virus must not be left behind.

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# Parse's Nursing Theory and its Application to Families Experiencing Empty Arms

by Debra Rose Wilson, PhD MSN RN IBCLC AHN-BC CHT

***Abstract: The scope of the paper addresses Parse's theory without detailed exploration of the methodology of research, as that is an investigation in its own right. Parse's Human Becoming Theory might be applied to a family experiencing the loss of a pregnancy or neonate. A nurse or doula may only encourage a patient to follow the advice of the experts, but after embracing Parse's theory, can facilitate the family's exploration of their choices. This paper explores Parse's theory applied to those experiencing the trauma of the loss of a pregnancy or infant.***

*Keywords: grief, Parse, miscarriage, neonatal loss, maternal loss*

## Introduction

Nursing theories offer a structure to the vision of the human and health, and from that create a foundation for nursing practice. In nursing programs, students study nursing theory to assist with understanding practice from an abstract perspective, and to understand how research is supported with a theoretical framework. Since nursing was considered a profession, theory has been part of understanding nursing care, goals, and roles (Im & Ju Chang, 2012),

Nursing Science has been historically classified as a natural science. Natural Science posits methodologies that consider quantitative data from observable phenomenon. Data reveals cause and effect relationships. This approach deals with the reduction of a phenomenon to parts and the parts are examined using a theoretical framework. The human being is approached from the study of parts. We, as

humans, are more complex than parts; we are more than the sum of our parts. Parse's theory embraces the advantages of nursing viewed instead as a human science. Proficient understanding of Rosemarie Rizzo Parse's Theory of Human Becoming requires some comprehension of the philosophers and theorists that influenced her.

*The Human Becoming Theory emphasizes the patient perception of the experience and their wisdom to make choices in their own health.*

The Human Becoming Theory, considered a mid-range nursing theory developed by Rosemarie Rizzo Parse, emphasizes the patient perception of the experience and their wisdom to make choices in their own health care. This theory fits well into ICEA's vision of empowering the family to make their own informed choices during the childbearing years (ICEA, 2016).

Parse was led to the assumptions that underlie her theory through a combination of other nursing theory work and readings of philosophers such as Kierkegaard, Heidegger, Merleau-Ponty and Sartre (Wallace & Coberg, 1988). Nietzsche and Dilthey are also referred to as having influences (Parse, 1998; Wallace & Coberg, 1988). Origins of the theory were cultivated from a unique combination of existentialism/phenomenology and Rogerian science. Understanding of the theories and philosophies that evolved into Parse's theory of human becoming is essential to understanding the essence of her theory.

## The Evolution of Parse's Theory

René Descartes (17th century), the father of modern philosophy, was looking to construct a secure system of knowledge supported by certainty (Osborne, 1992). He postulated that true knowledge must come from true reason  
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alone, as the senses could not be trusted. Descartes is famous for his *cogito ergo sum*, "I think, therefore, I am" (Osborne, 1992). His strictly rational and systematic model of thought proposes to never accept anything except clear and distinct ideas. Descartes was influenced by Aristotle's strictly logical approach to scientific investigation of natural phenomena (Lavine, 1984). Natural science extracts quantitative data to reveal pure cause and effect relationships, and is adopted by physical sciences such as chemistry, biology, physics, and medicine (Lavine, 1984).

Nursing, under the umbrella of medicine, and as defined by Nightingale, was seen to be a natural science, but even Nightingale recognized that nursing was more comprehensive than medicine in both practice and theory (Charlie, 2015; Parse, 1992). She characterized nursing as caring for the patient regardless of state of health, rather than caring for illness. Nightingale perceived the patient as having both the ability and responsibility to care for themselves, and make changes. She altered the environment to improve health, and helped patients heal themselves. Nightingale abandoned Descartes idea that humans were parts to be examined, and recognized that humans were a blend of mind and body.

Soren Kierkegaard (1813-1855) was a Danish philosopher and a founder of the existentialist movement from which Parse's theory evolved (Lavine, 1984). The main underlying theme of Kierkegaard's works is the freedom of choice between the "aesthetic" life of living by only instincts and feelings, and the "ethical" life of choosing the good (Osborne, 1992). Kierkegaard felt that despair results from the failure to make choices and accept responsibility for how an individual is to live. The important point is not the choice between situational options, but rather the determination to make the choice itself.

Nietzsche (1844-1900), like Kierkegaard, also recognized that despair results from the individual's lack of taking charge of his life (Lavine, 1984). He believed in the supremacy of the human will in reaching self-actualization. In Nietzsche's *Genealogy of Morals* (1992), he writes:

*... in short, the man who has his own independent protracted will and the right to make promises .... how this mastery over himself also gives him mastery over circumstances, over nature. (p. 495)*

A related theme in Kierkegaard and Nietzsche is their focus on the individual, the free will, and the responsibility

for life choices. The power of will creates the situation. They had brought the psychology of the individual into philosophical inquiry.

Focus on the self emerged as the primary starting point of philosophical inquiry. This led to what is probably the most important concept in existentialism. Existentialist inquiry tends to focus on the characteristics of modes of being, or ontology. Only an analysis of consciousness can provide an understanding of the phenomena one experiences, and hence lead to understanding of the human condition (Lavine, 1984).

Husserl, considered the father of phenomenology, searched for a certainty in philosophy, such as that found in mathematics. He searched for absolute, certain truth. The dominance of the natural sciences in the modern world was viewed as insufficient in itself to explain the human condition (Lavine, 1984).

Martin Heidegger (1889-1976) began the integration of existentialism and phenomenology. Among his early writings were criticisms of Descartes (Cartesian duality) in philosophy. He opposed the use of reductionist logic to psychological processes. Heidegger was trying to find out the truth about being, a "science of being" that would explain existence. He believed one cannot reduce the essence of the human to predetermined parts. Rather freedom, choice and responsibility defines human essence (Osborne, 1992). Jean-Paul Sartre (1905-1980) is widely considered the most important of the modern existentialists (Lavine, 1984). Like Husserl and Heidegger, Sartre's philosophy developed from his rejection of strict empiricism and Cartesian reductionism as adequate methods to explain the human condition (Osborne, 1992). All investigations flow from the basic fact that one is a conscious, thinking being. Though Sartre covered a lot more ground, his concepts are grounded in these themes. He considered existentialism a "humanism" (Lavine, 1984). The lack of a standardized set of principles and values shouldn't detract from the essential humanistic flavor of existentialism, namely, that each individual is responsible for their own condition, and they have the freedom to change it. The patient, as an individual, must be considered a conscious being-for-itself, with ultimate responsibility for making health decisions and also responsible for their consequences. Meaning rises from the exchange of the human and the surroundings, and defines life's purpose. Humans are whole. They are interconnected with others and history.

This was a profound move away from nursing as a natural science to nursing as a human science. If nurses begin to embrace the human science paradigm, the philosophical perspective of nursing will change. Reviewing the past ten

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## Parse's Nursing Theory

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years of nursing science literature testifies that changes have already begun.

### The Essence of Parse's Theory

Mid-range theories are considered narrow of focus, less abstract, and are intended to reflect practice. The Human Becoming Theory represents an alternative to both the traditional medical approach of reductionism, and to the bio-psycho-social-spiritual approach of most other nursing theories. While it can be criticized as being abstruse it is also a breakthrough in nursing.

Health is described as a process of becoming (Parse, 1998), and is defined as what is perceived to be health, by the individual. It is the lived experience. The goal of using Parse's theory in practice is to examine quality of life from the client's perspective. Quality of life and health are defined by each individual, from their own perspective (Glauce Araújo Ideião, Kellermann, Moura, Ivone, Costa de, & Diniz dos, 2013). Meaning is found in what you create and perceive as real, that is also congruent with your values. Values are being re-examined with each new experience. The human becoming is structuring meaning on a multi-dimensional level while responding to the rhythms of the changing universe. We are moving towards what could be.

### Presence

True presence is the genuine connection between humans, where the nurse enters the client's perception of the world with openness, and in a non-judgmental, unconditional and therapeutic way (Parse, 1998; Shields & Wilson, 2016). The whole attention and being is with the client, focusing on the client's perception of the world. The nurse learns to set aside personal values. The dialogue is always client-led. The nurse is aware of the client's words, silences, stillness, and body language (Parse, 1998), while the client is aware of the nurse's genuine presence by expression of the shared feelings shown with facial expressions, touch, and words (Shields & Wilson, 2016). These actions confirm the shared meaning of the moment for both the client and the nurse. True presence is an intentional process and reflects the belief that the client knows their own way. The Parse nurse addresses spirituality with every dialogical engagement. Within the human becoming perspective, humans are unitary beings. The spirituality of an individual cannot be separated from what is the essence of the "self." With Parse nurses, by being truly open and non-judgmental, and



Bianca Hubble, Axy's Design

by being truly present, the client will explore the meaning of spirituality in their own life.

### Application of Parse's Theory

The grieving family who has experienced a pregnancy loss, still birth, or neonatal death will be considered in relation to Parse's Human Becoming theory. Grieving is the process the human becoming experiences when confronted with any loss and is expressed as paradoxes of absence and presence as well as a reluctance to let go and desire to move forward and be past the grief. The Parse nurse would not seek to change the feeling experienced, but by while being truly present with the client, seek clarity of the situation from the family's perspective. The nurse would listen for paradoxes to emerge as the family explored the experience. The nurse would not offer advice but would rather dwell on the paradoxes that are revealed in discussion, as the nurse-client relationship *becomes*. The nurse would ask questions to help the family explore the paradoxes identified.

An individual experiencing empty arms may express overwhelming disappointment over lost potential while hope and possibilities for the future are being considered. They may have feelings of being unable to go on (staying still), while making plans for the future (moving forward). They express loss of options while considering possibilities. They may recognize a need for help but a reluctance to accept help. They might reveal the paradox that they yearned for their child all while wanting to move on by forgetting the experience. Those living the experience defined hope as moving on, past barriers. The barriers were paradoxes of comfort and discomfort in moving towards and away from others. Hope existed concurrently with no hope. For transcendence to occur, the family moved through the paradox of anticipating the possibilities of the future while treasuring remembered moments.

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For the family experiencing empty arms, there are often very few treasured moments with the infant through the trauma of the event. Patterns common to this family are telling the story of the birth repeatedly when among supportive others. Families remember the trauma of the experience, combined with a few treasured moments. They consider the future with hope and experiencing disappointment in the present. The client might reveal reluctance to hold the baby at first (pushing away), then reluctance to let the deceased infant out of their arms (holding close). These paradoxes can be points of discussion with the family, giving them chance to further discuss their feelings and experience.

Many mothers have been under the care of the author while going through this experience, grieving even years later. The author assumed the role of a Parse nurse, adopted true presence, and sought to explore the meaning of the experience. The mothers were assisted to glimpse paradoxes revealed. For example, Susan (not her real name), who had an emergency caesarian section at seven months gestation 15 years ago for fetal distress delivered a baby girl. Susan is quoted below.

*"I never got too big, but the HMO I was going to never seemed too concerned until towards the end. Then they decided it was important, sent me down to the hospital in the city for an amniocentesis. They didn't get that far, as they realized the baby was in distress. Emergency C-section, and subsequent testing proved she had triploidy, three chromosomes instead of pairs".*

Susan reported that she did not hold her baby, though her husband did. Because of the emergency nature of the delivery and the use of general anesthesia, this mother did not feel emotionally up to holding the baby immediately postpartum. The opportunity was not offered again by nursing staff. This mother reported aching to hold her infant, and disappointment she did not take the opportunity to hold her when it was offered. Susan said her husband had described to her how difficult it was to hold the baby and then put her down. Paradoxically she later stated preference for not holding the baby.

*"I am probably better off for not holding her, as it wouldn't have changed the grief any. It may have hurt more. Besides, there is no going back."*

The family might reveal behaviors of others that had been supportive, but not supportive. The Parse nurse would

ask questions such as, *What do you see as supportive about that behavior?* and *What did that mean for you?*

For the family experiencing empty arms, there may be a desire to share intense moments of suffering, but instead they choose to keep quiet. One family experiencing empty arms expressed perceptions that significant others who were once supportive had changed behavior. They were now perceived as driving the client to move on from the grieving. The family reported feeling of resistance to that pushing, while simultaneously wanting to go on with life. The nurse will ask open-ended questions around what is important to the client now, at this moment in time. Questions such as, *What would help you most right now?* and *What is your first priority?* would be appropriate.

One mother experiencing empty arms reported feeling guilt over the loss but feeling powerless at the same time. The Parse nurse pointed out that this seemed two feelings that weren't harmonious, and could she expand on this further. When exploring the paradox, she said:

*"The feelings of guilt over the death were overwhelming, but there really wasn't anything in my power I could have done differently. It's funny that the guilt stuck even though I knew, in my head, that I it wasn't my fault. The guilt is much less than it used to be, because it just doesn't make sense does it, and I need to move on."*

Exploring the feelings with the mother, without trying to change the feelings may be a difficult experience for a nurse or doula who traditionally tries to make people feel better.

The Parse goal in practice is to enhance the quality of life and health as experienced and defined by those experiencing empty arms. Provide the opportunity for exploration of the paradoxes that are identified. By recognizing and exploring the paradoxes experienced those grieving will recognize choices available to them and choose in a manner that best fits their values. Glimpsing the paradoxical is a way of transcending the moment in changing patterns of health (Parse, 1998). The Parse nurse facilitates this process with true presence. It is with true presence that the nurse embraces who the client perceives the self to be and transcending that image of the self to become more.

The Human Becoming Theory of nursing in practice envisions a goal as assisting the client towards recognizing choices. The process makes explicit the thoughts and feelings, and that, in itself leads to a new light, a new perspective. The articulation through body language, reflection, quiet presence, and words leads the client to connect those feelings to their relevance in the present. The unfamiliar perception becomes familiar. Within there is transcendence.

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## Conclusion

Parse's theory is a dramatically different perspective than the traditional view of nursing. The view of the human is different. Health or disease is not cause and effect, rather cocreated in the process of experiencing the universe, from the individual's perspective. The use of Parse's theory in practice will lead to important changes in health of the individual becoming. The focus is on quality of life as experienced and perceived by the client as defined by their meaning of experiences. The nurse or doula can apply Parse by being truly present while being cognizant of paradoxes the client shares. The change of the nursing paradigm to recognizing paradox has been escalating, and Parse's work is destined to make a major advancement in nursing as a human science.

The road to understanding Parse is difficult and presents a barrier to those beginning to explore the theory. For the beginning Parse nurse, the barriers of obfuscation are overwhelming, especially without a strong philosophical background. Philosophy is not a required course for nursing or doula, or any caring profession. Parse integrates ideas of the great thinkers of the past two centuries and the reader develops an appreciation for her depth of knowledge and creativity. Parse is a complex theory to grasp, but well worth the effort of those in practice today.

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International Childbirth Education Association

# *Korean Traditional Taegyo Prenatal Education*

## *based on Sajudang Lee's 'Taegyo singi'*

*by Yuna Lee, PhD, Jiyoung Lee, EdD, and Ninez B. Tulo, EdD*

***Abstract:** This is a literature research on Taegyo, a traditional Korean form of prenatal education. The purpose of the paper is to share the prenatal education in Korean traditional society through 'Taegyo singi' and to help to understand fundamental principles of prenatal education and to find the significance of it in modern times. The composition and contents of 'Taegyo singi' are identified. Concrete methods of Taegyo can help the mind be calm and can make the person become more respectful. Taegyo can make people more caring for others in mind, words, and deeds. The pregnant woman is taught to be cautious of the food she eats (those that are allowed and those that are forbidden). Traditional prenatal education is based on the wisdom of ancestors who desired balanced life between human and human, and even human and nature, which could proceed from 'harmony' as Korean cultural traits.*

*Keywords:* Taegyo, Taegyo singi, prenatal education, Korean

Taegyo is a traditional Korean set of practices and beliefs about prenatal education for pregnant women. Asian cultures, including Korea, consider Taegyo important because the human being is considered to be already developed from the moment of conception.

According to Chung (2014) the principles of Taegyo presuppose parental influence on temperament formation, and that the emotional states of the mother in the prenatal and pre pregnancy periods are the most influential variable in a child's temperament formation. The methods of Taegyo presuppose that the human mind interacts with behavior. Emotional support from family members, promoting 'jon-sim' (serene mind) and 'chung-sim' (upright mind) are key methods of Taegyo. The Korean tradition of Taegyo is focused on the emotional domain of development, especially emotional regulation.

*the emotional states of the mother in prenatal and pre pregnancy periods influence a child's temperament*

Almost 200 years ago during the Joseon Dynasty, Sajudang Lee wrote 'Taegyo singi,' a book which opened new prospects in the field of prenatal development. Lee was a Confucian and Silhak (practical) scholar. She was 62 years old in 1800 when she finished writing the book. She was not a doctor, but a distinguished scholar who studied Chinese and Korean medicine. Women in the Joseon Dynasty typically were not socially independent and active, but she made a difference.

Even before Lee wrote her book, Korean Buddhist, Taoist, and Shamans were already knowledgeable about Taegyo. Lee states that proper practice of Taegyo will result in better fetal development, and increase chances that the baby in the

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womb will become a good person someday. Kweon (1972) was the first researcher of Taegyo singi, and published a commentary in Korean on the book's preface and postscript. Follow-up studies were made by Park, (1985), You, (1990), Jung, (2000), Ahn, (2005), Jang, (2005), and Lee, (2007), using various perspectives. But this research was not enough to effectively introduce traditional Taegyo singi into modern practice. Many people consider Taegyo practice as simple superstition, and unsuitable in modern times. The truth is that Taegyo singi is empirically based and grounded in philosophy (Chang, 2005; Ha, 1989; Lee, 2007; Yeo, 2005),



figure 1. Taegyo singi

education (Ahn, 2005; Ha, 1988; Kim, 2012; Kim, 2005; Lim, 2011; Ryoo, 1983), and medical science (Ahn, 2001; Kang, 2001).

Composition and Contents of Taegyo singi

Taegyo singi, a hanja (Chinese) text written by Sajugang Lee (1738~1821), is a theoretical treatise

and manual that deals with “Taegyo, a set of traditional beliefs and regulations regarding prenatal development.” The motive for writing was that there was not yet any detailed literature about Taegyo. Taegyo singi was a compiled book which included ideology and principles, as well as practical guidelines. Lee stated that Taegyo singi is useful for pregnant women and women planning to be pregnant. Lee’s son Yu hee translated the book from Chinese to the Korean language.

Chapters 1 through 3 are concerned with Taegyo theory, effect, and necessity. Chapter 4 discusses methods of Taegyo. Chapter 5 discusses details about Taegyo and chapter 6 explains the disadvantages to pregnant women who do not practice Taegyo. Chapter 7 discusses how to protect the fetus’s emotion and chapter 8 reveals the advantages of Taegyo. Chapter 9 cites the purpose of the practice and gives examples on how to execute the program for pregnant women. Chapter 10 emphasizes the essence of Taegyo, and explains the importance of the father and other family members to the development of the child in the womb.

Traditional Taegyo singi Methods

Lee explains methods of Taegyo in chapter 4. Practical methods of Taegyo are classified under three headings – calm and respectful mind, behaviors, and dietary practices. Actions are categorized as encouragement and avoidance. See Table 1.

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Table 1. Methods of Taegyo Examples

Category	Examples
1. Calm, respectful mind	<ul style="list-style-type: none"><li>• Pregnant women and their families need to be careful in their behavior</li><li>• Don't tell pregnant women about furious, terrible, embarrassing, or frantic events</li></ul>
2. Seeing, listening, and speaking	<ul style="list-style-type: none"><li>• Avoid exposure to the following:<ul style="list-style-type: none"><li>- clowns, dwarves monkeys, fighting</li></ul></li><li>• Always look at the following:<ul style="list-style-type: none"><li>- good-natured person, peacock, glittering objects</li></ul></li><li>• Avoid listening to the following:<ul style="list-style-type: none"><li>- obscenities, drunkenness, crying</li></ul></li><li>• Listen to the following:<ul style="list-style-type: none"><li>- reading the classics, sound of Korean mandolin</li></ul></li><li>• Avoid saying the following:<ul style="list-style-type: none"><li>- harsh speech, showing gums when laughing, teasing</li></ul></li><li>• Avoid doing the following:<ul style="list-style-type: none"><li>- sleeping with husband after pregnant, wearing dirty clothes, sitting on cold or hot place</li></ul></li><li>• Do the following:<ul style="list-style-type: none"><li>- exercise, calm mind and, divide food properlyo</li></ul></li></ul>
3. Eating	<ul style="list-style-type: none"><li>• Avoid eating the following:<ul style="list-style-type: none"><li>- rotten fruit, catfish, unripe fruit, cold food</li></ul></li><li>• Foods to eat:<ul style="list-style-type: none"><li>- carp, cow kidney, barley, sea cucumber, shrimp, seaweed, hot foods</li></ul></li></ul>

## Main subject of traditional fetal education in Taegyo singi

The mother is in charge of practical roles in Taegyo, because she is the one who influences the fetus when it is still in the womb. Prior to this, Sajudang emphasizes the father's role. Husband and wife have to respect each other and pick appropriate words in conversation. The father's good behavior and duty must be emphasized. The father's main focus in Taegyo is harmony and consistency. Sajudang also refers to the importance of family cooperation and support, rooted in principles of respect for life.

## Scientific evidence for Taegyo

Western research studies have supported the claim that Taegyo activities influence the fetus for many years. Alcohol consumption and smoking by pregnant women have been found to interfere with fetal brain development and significantly increase heart rate and blood pressure in the fetus (Guerri & Renau-Piqueras, 1997). Emotional distress in pregnant women is known to increase susceptibility to disease, and to cause low birth weight in the newborn (Nordstrom, Dallas, Morton, & Patel, 1988). Environmental noise and vibration also induce irregularity in the fetal heart rate, breathing, and movement (Petrikovsky, Schiffrin, & Diana, 1993; Sherer, Abramowicz, Damico, Allen, & Woods, 1991). On the other hand, when the mother listens to good music or natural sounds, alpha waves are produced in the brain, which subsequently increase the fetal heart rate and facilitate fetal maturation (Park et al., 1999). Verbal stimulation with a low voice has also been reported to help fetal brain development (Fifer & Moon, 1994). Provision of a secure and stable prenatal environment has been found to make a significant difference in the baby's IQ (Devlin, Daniel, & Roeder, 1997). Furthermore, good nutrition for the mother



affects the embryo in the early stage of pregnancy, and also promotes the structural and functional development of the fetus (Scrimshaw, 1997). These data illustrate that environmental stimulation of the fetus influences fetal growth and development.

## Conclusion

Korean traditional Taegyo starts with the concept that education starts in fetal age. Lee's Taegyo singi expresses the origin and traditional practices of Taegyo, and outlines a specific and systematic method of Taegyo. As those assisting mothers from the Korean culture an understanding of the traditions may be of benefit to providing culturally sensitive care.

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# Dermatologic Changes in Pregnancy

By Samantha J. Bartling, BS, and Patrick M. Zito, DO PharmD RPh FASCP FRSPH

**Abstract:** *The hormonal and physiologic changes that occur during pregnancy can manifest with various dermatologic changes. Some of these changes include striae gravidarum, hyperpigmentation, and spider angiomas. However, there are also dermatologic changes that are specific to pregnancy, including pemphigoid gestationis, polymorphic eruption of pregnancy, atopic eruption of pregnancy, and intrahepatic cholestasis of pregnancy. There are various treatments that may help alleviate the appearance and associated symptoms of these dermatologic changes, but many of these changes are temporary and will reverse after giving birth. Although most of these conditions are benign, it is important to note that two of these conditions – pemphigoid gestationis and intrahepatic cholestasis of pregnancy – are associated with significant risk to the fetus.*

**Keywords:** *Pemphigoid gestationis, PUPP, dermatology, urticaria, papules*

## Introduction

During pregnancy, the body undergoes a significant number of physiologic and hormonal changes. The effect of these changes on the body's collagen formation, pigment-producing cells, vasculature, immune system, bile acid excretion, and other normal processes of the body, leading to dermatologic manifestations. These skin changes can be stressful for some women, but fortunately many of them

resolve spontaneously after giving birth. However, two of the conditions discussed – pemphigoid gestationis and intrahepatic cholestasis of pregnancy – can cause negative effects on the fetus. This article seeks to explore some of the dermatologic changes associated with pregnancy, as well as provide an overview of some of the current treatment options.

*pemphigoid gestationis and intrahepatic cholestasis of pregnancy – can cause negative effects on the fetus*

## Striae gravidarum

More commonly known as “stretch marks,” these discolored striations of the skin affect up to 90% of pregnant women by the 3rd trimester (Kroumpouzou 2001). They most commonly occur on the abdomen, buttocks, breasts, thighs and arms. The cause of these stretch marks is multifactorial, but both physical stretching and hormonal changes play a part. Hormones such as relaxin, adrenocortical steroids, and estrogen are increased during pregnancy and can contribute to the formation of stretch marks by affecting collagen formation. (Thomas 2004). Although many women will use Vitamin E cream, cocoa butter, aloe vera lotion, or olive oil, these remedies have not been proven to prevent stretch marks. However, there are some post-partum treatment options available, including topical tretinoin and oral tretinoin (Kang 1998). In severe cases, laser treatment may also be used (McDaniel 2002).

## Hyperpigmentation

Darkening of the skin as well as existing moles and scars commonly occurs in pregnancy. The areolae, axillae, and genitals are most commonly affected, but linea nigra and melasma are well-known variations of hyperpigmentation as well. Linea nigra is the darkened vertical line that runs down the abdomen in the midline. Typically it will fade in the post-partum period. Melasma (also known as cholasma

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## Dermatologic Changes in Pregnancy

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or the mask of pregnancy) is noted by darkened gray-brown patches on the face, most commonly on the cheeks, bridge of the nose, forehead, chin, and above the upper lip. It is worsened by sunlight and UV radiation, and so the best way to treat and prevent worsening of melasma is by using broad spectrum UVA and UVB sunscreen as well as by avoiding excess sun exposure (Kroumpouzou 2001). Most cases resolve after birth, but the condition may recur with future pregnancies or with oral contraceptive use (Kroumpouzou 2001). For cases of melasma that are severe or fail to resolve, a combination of topical tretinoin, hydroquinone, and corticosteroids may be used (Torok et al 2005).

## Spider angiomas

Spider angiomas are vascular dermatologic conditions that appear as a superficial cluster of web-like vessels with a central spot. They may also be referred to as spider nevi or spider telangiectasias. Increased estrogen levels in pregnancy affect the vasculature, causing dilation, instability, proliferation, and increased permeability of vessels (Kroumpouzou 2001). They most commonly occur in the face, neck, and arms, and typically appear in the first and second trimesters (Kroumpouzou 2001). Treatment is often unnecessary as these lesions often resolve spontaneously after the birth of a child. However, it may take anywhere from 6 weeks to 9 months for resolution (Henry et al. 2006). Spider telangiectasias that fail to resolve may be treated with fine-needle electrocautery, pulsed dye laser or intense pulse light system.

## Dermatoses of Pregnancy

The most recent classification of these dermatoses of pregnancy proposed by Ambros-Rudolph, Müllegger, Vaughan-Jones, Kerl, and Black (2006) includes the following diseases:

### 1. Pemphigoid gestationis (PG) (herpes gestationis).

Also known as herpes gestationis, this is the rarest of the dermatoses of pregnancy, affecting only one out of every 2,000-60,000 women (Ambros 2011). It most commonly presents in the third trimester as pruritic red papules and plaques that progress to form bullae. It typically affects the umbilicus and may spread to the chest, back, and extremities (Warshauer et al. 2013). Pemphigoid gestationis is one of the two dermatoses of pregnancy that can have adverse effects on the fetus. The other (intrahepatic cholestasis of pregnancy) is discussed later in this article. PG is associated with an increased risk of prematurity and low birth weight, and

the incidence increases with increased severity of maternal disease, marked by onset of PG before the third trimester (Warshauer et al 2013 and Ambros 2011). Antibodies formed by the mother's immune system may cross the placenta and cause up to 10% of infants to develop transient bullae (Warshauer et al 2013 and Ambros 2011). In mild cases, oral antihistamines or topical corticosteroids may be used to treat PG. More severe cases may require oral corticosteroids (Warshauer et al. 2013). Women who develop PG are at increased risk of developing other autoimmune diseases later in life, such as Graves disease, and are at risk of developing flare-ups of PG with future pregnancies or use of oral contraceptive pills (Kroumpouzou 2001).

### 2. Polymorphic eruption of pregnancy (PEP)

Formerly known as pruritic urticarial papules and plaques of pregnancy (PUPP), polymorphic eruption of pregnancy describes a benign pruritic inflammatory disorder that first appears along the stretch marks of the abdomen and may spread to the buttocks and thighs (Ambros 2011). Unlike pemphigoid gestationis, the umbilicus is typically not affected. Approximately 1 in 160 pregnant women are affected (Ambros 2011), most commonly late in the third trimester or in the immediate post-partum period. PEP is typically self-limited, resolving spontaneously in 4-6 weeks from its initial appearance (Ambros 2011). The etiology is unclear, but the pruritus may be alleviated with oral antihistamines or topical corticosteroids. If the rash becomes more widespread or severe, a brief trial of corticosteroids may be used (Ambros-Rudolph 2011; Warshauer, et al. 2013).

### 3. Intrahepatic cholestasis of pregnancy (ICP)

Intrahepatic cholestasis of pregnancy (ICP), formerly known as pruritus gravidarum, is due to a defect in the excretion of bile salts, causing the excess to deposit on the skin. Patients may present with severe pruritus with or without jaundice, absence of rash, and with laboratory markers of cholestasis, the most specific of which is total serum bile acid (Palma et al. 1997). The pruritus typically starts in the soles of the feet and the palms of the hands and may progress to include the abdomen, back, and face. ICP is the second dermatosis of pregnancy associated with potentially harmful effects on the fetus. As a result, it is important to recognize and correctly diagnose ICP. The potential risks to the fetus include prematurity, intrauterine fetal distress, and intrauterine fetal demise (Ambros 2011). The pruritus can be treated with oral antihistamines; however severe cases may require Ursodeoxycholic acid to not only alleviate symptoms but also to reduce the harmful effects on the fetus.

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## Dermatologic Changes in Pregnancy

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### 4. Atopic eruption of pregnancy (AEP)

Atopic eruption of pregnancy encompasses eczema, prurigo, and pruritic folliculitis. The clinical overlap of these conditions has caused them to be classified into a larger spectrum known as atopic eruption of pregnancy. This group of dermatologic disorders is the most common of the dermatoses of pregnancy, accounting for almost 50% of cases (Ambros 2011). Unlike the above dermatoses of pregnancy, these conditions typically manifest before the third trimester. Women may present with pruritic eczematous eruptions (commonly on neck and flexural surfaces) or with pruritic popular eruptions (typically on abdomen and extremities). While they do not affect the fetus, the child may have an increased risk for atopic dermatitis as an infant (Ambros 2011). While the cause of these lesions is not known, topical steroids and oral antihistamines may be used on a short-term basis to provide symptomatic relief. As with many of the other dermatologic changes in pregnancy, AEP may recur in future pregnancies (Ambros 2011).

### Tips for Parents

- Review pictures of dermatologic changes that occur in pregnancy early on
- Make note of pruritis (itchiness), examine the body for a rash
- Keep a journal of how far along in pregnancy a rash developed
- Make note of where a rash starts, if it is on the abdomen, trunk, limbs, and if the periumbilical region is involved
- Timing of onset is key in diagnosis and treatment

In pregnancy, the mother's body undergoes many changes; some are temporary while others are permanent. It is important to understand some of the dermatologic changes that occur as these are visible and the patient may be more aware. This topic is important for childbirth educators because understanding some of the physiologic changes in pregnancy can help make parents more aware and know when medical intervention may be necessary. A good idea of reviewing photos of some of the normal physiologic changes in pregnancy is a good start. One may try to treat rashes or lesions on their own without proper education on the effects of the medication used on the mother and child. Some dermatologic disorders put the child at risk for future atopic diseases where important education can help alleviate future visits to the provider. Women who develop some disorders such as PG are at a higher risk later in life of developing autoimmune disorders. Properly educating patients on some

of the dermatologic changes occurring in pregnancy will alleviate some concerns when these changes are benign and common.

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*Dr. Patrick M. Zito is both a practicing physician and pharmacist serving as contributing faculty member at Walden University School of Nursing as a clinical pharmacy/pharmacology specialist. He is also an executive advisory board member at the Center for Applied Health Sciences. His research interests are in infectious diseases, applied sports nutrition, hormone modulation to injury repair, and preventative pharmacological and nonpharmacological approaches to tissue damage and aging, reconstructive surgery, dermatology, skin cancer therapeutics.*



# The Law and Immunization in the United States

by Abbie Goldbas, MEd JD

***Abstract: In the United States, children ages 0-6 years are mandated to be vaccinated for a variety of diseases prior to being allowed to attend government-sponsored pre-schools, day care facilities, and public schools. This is because the diseases are considered harmful and preventable for the most part. The government, under the rationale of parens patriae, has a right to require the vaccinations for the greater public health. Families that do not abide by the laws face various consequences from the schools and through the court system.***

*Keywords: immunization, vaccination, parens patriae, civil and criminal liability, herd immunity, outbreak*

Since a months-long measles outbreak at Disney World in California beginning in December 2014, there has been a heightened interest in mandatory vaccinations of children in the United States (Centers for Disease Control and Prevention, 2015b). Disease flare-ups such as this are noteworthy, and to some people frightening, because it is generally assumed that there exists what is known as “herd immunity” (see discussion below) that should prevent such outbreaks. This article discusses the nomenclature, history, and current state of the laws regarding children’s vaccinations in the United States. It is assumed that vaccines are effective and that their use outweighs the relatively rare incidences of adverse effects, a position taken by the federal and state governments.

According to the Centers for Disease Control and Prevention (CDC), immunization is the means by which a person is protected against a disease. The terms immunization, vaccination, and inoculation are often used interchangeably (CDC, 2015a). A vaccine is a weakened form or passive form of the disease that is given for inoculation. It is

usually administered by injection, by mouth, or sprayed into the nose (CDC, 2015a).

Immunization is straightforward and it can occur two ways. The first way is the natural way, in which the body develops antibodies to the specific disease after exposure, and the immune system is thereafter able to respond to the disease and prevent infection. This was the only way one could be protected until controlled, active vaccinations were developed (CDC, 2015a). Vaccination is equally simple: a person is exposed to a disease such as polio by introducing a small amount of polio into the body. The body reacts to these foreign molecules (non-self) as though it has contracted the disease itself and creates antibodies to fight the polio vaccine. If this person is subsequently exposed to polio, the immune response once established will be triggered again and keep the body polio-free, theoretically forever (CDC, 2015a).

## History of immunization

While natural immunization has always existed, the first known vaccinations, for smallpox, are believed to have been used at least as far back as 1000 AD in China. A powder made from smallpox scabs was blown into a person’s nose. Another way it was administered was to scratch the matter from an open sore onto another’s skin. By the 1700’s, smallpox vaccines were encouraged in the United States (The College of Physicians of Philadelphia, 2015a). The modern smallpox vaccine, actually from cowpox, was originally developed in 1796 (The College of Physicians of Philadelphia, 2015a). Interestingly, smallpox is now considered eradicated – the last case in the United States was in 1948 and the last case in the world was in Somalia in 1977 (ProCon.org, 2015).

Another vaccine which is historically significant is the one for polio because it too has effectively controlled the disease. It was developed by Dr. Jonas Salk in 1951 and first administered to children in the United States in 1955. Prior to the vaccine, each year tens of thousands of children were afflicted with this terrifying and paralyzing disease that was often fatal. There have been no U. S. cases since 1993 (The College of Physicians of Philadelphia, 2015b).

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## The Law and Immunization in the United States

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Vaccine development continued at a fast pace in the 1800 and 1900s. Louis Pasteur, a chemist in France, developed the vaccines for avian cholera (1879) and rabies (1885). Vaccines for the following came shortly thereafter: typhoid (1899), cholera (1911), diphtheria (1914), tuberculosis (1921), and tetanus (1924). Vaccines for measles, mumps and rubella were developed from 1955-1969 (ProCon.org, 2015). Among the more recently developed vaccines are ones for human hookworm and other parasitic diseases, tuberculosis, Alzheimer's and HIV (Immunization Action Coalition, 2015).

Children in the United States no longer need to be inoculated against the smallpox disease because, as stated above, it is considered eradicated. Other diseases, however, such as polio, measles, and diphtheria, and which are considered contained in the U.S., still exist worldwide. Thus, it is necessary to inoculate for these diseases. For instance, in 2014, an Amish community in Ohio suffered a measles outbreak. It was believed that the measles may have come from the Philippines (CDC, 2015b). Additionally, in 2014-2015 in Pakistan there were approximately 341 cases of polio (Polio - Global Eradication Initiative, 2015).

The number and type of inoculations have steadily increased since the occurrence of a measles outbreak in the U.S. in the 1960's (Gostin, 2015). The 2015 recommended United States Immunization Schedule for children from 0-6 years includes the following vaccines (CDC, 2015c):

- Hepatitis B
- Rotavirus
- Diphtheria, Tetanus, and Pertussis (combined DTaP)
- Hib (Haemophilus influenza type b)
- Pneumococcal
- Polio (inactivated vaccine)
- Influenza
- Measles, Mumps, and Rubella (combined MMR)
- Varicella (chickenpox)
- Hepatitis A
- Meningococcal (certain high-risk groups only)

## Mandatory Immunization in the United States

All 50 states have laws that require children older than five years be vaccinated before entering state-licensed day care facilities or public schools (Gostin, 2015). School-aged children are specifically targeted because of the potentially high incidence of transmission in crowded elementary schools (Reiss, 2015). Further, many states require students to be inoculated before they enter college (Gostin, 2015).

The states' right to legislate mandatory vaccines stems from the old common law principle of *parens patriae*. This is the belief, codified in the law, in the government's responsi-

bility and right to take care of its most vulnerable members of society, including children – it has an obligation to take over control when parents cannot meet certain standards in protecting their children or neglect them (Reiss, 2015; see also the World Health Organization's (WHO) Global Vaccine Action Plan 2011-2020 that states that immunization is a part of everyone's right to optimal health and that government's must provide the vaccines [WHO, 2015]). Both state and federal courts have consistently upheld the government's right to intervene to protect children when necessary (Reiss, 2015). Specifically, intervention has evolved to include children who have the right to be protected "against preventable, potentially fatal diseases such as Haemophilus influenza type b (Hib), polio, measles, and diphtheria" (Reiss, 2015, p. 5). There are exceptions to the mandates: medical and religious exemptions have been held to be constitutional (Dall v. Board of Education, 267 NE2d 219 [Mass. 1971]).

*All 50 states have laws that require children older than five years be vaccinated before entering state-licensed day care facilities or public schools*

Massachusetts was the first state to mandate inoculations, requiring smallpox vaccinations for school attendance in 1855. This law was upheld in the United States Supreme Court case, *Jacobson v. Massachusetts*, 197 U.S. 11 (1905). The Court held that states had the constitutionally protected power to order smallpox vaccinations because they supported public health.

The rationale for mandatory vaccines includes not just disease prevention for individuals but includes the concept of herd immunity (Reiss, 2015). Herd immunity (herd protection) signifies reduced transmission. It does not mean no cases, but rather a limitation of cases (John and Samuel, 2000). Herd immunity means that if an outbreak does occur, it will be limited and not become an epidemic. Herd immunity has the effect of protecting children who have not been immunized (Reiss, 2015).

Whether or not herd immunity is possible depends upon how infectious the disease is and also how effective the vaccine is to prevent it. A highly contagious disease needs a greater number of vaccinated people in the population to obtain herd immunity; a relatively efficacious vaccine means fewer people need to be inoculated to achieve herd immunity (John and Samuel, 2000). The herd immunity as a result of mandatory immunization of children means that adults in the community are also protected (Gastanaduy, 2013). Ad-

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## The Law and Immunization in the United States

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ditionally, there are studies which have shown that there are greater incidences of disease outbreaks in communities with lower rates of immunization and in communities that allow more exemptions (Atwell, et al., 2010).

Consequences for families who do not vaccinate their child vary from state to state. Children are not allowed to register for school without proper immunizations records. Additionally, if for instance there is a disease outbreak, parents will often have to remove the unvaccinated child (if he or she has been exempted) from school and from sports. A federal court in New York in 2014 upheld the school district's right to ban unvaccinated children, who had been granted religious exemptions, during a chickenpox outbreak (Mueller, 2014). Also, during an outbreak, the family may be investigated by a state or local health department – perhaps to determine if their child is the cause of the outbreak (CDC, 2012).

Other consequences involve court intervention. In New York State for example, one Family Court found that parents who did not immunize their child during a measles outbreak were guilty of neglect (*In re Christine M.*, 595 NYS2d 606 [Fam. Ct. 1992]). Such a neglect finding often leads to social services intercession and if the neglect persists, can lead to possible removal of the child from the home into foster care.

Additionally, a consequence, which although not yet required but nevertheless propounded by zealous advocates of universal inoculation, is to make parents of an unvaccinated child liable for damages if it can be determined that their child is the source of an outbreak. The parents would be responsible not only for medical costs incurred by the victims but also for deaths. This is consistent with U. S. tort (civil) law, which was developed to “compensate those harmed because of another’s unreasonable choices” (Reiss, 2013, p. 1). Some want the parents of unvaccinated children to be prosecuted for criminally negligent homicide if it is established that their unvaccinated child is the cause of another’s death (Vara, 2014). The main drawback with these ideas is causation: it is very difficult to pinpoint just who is the original disease carrier (Reiss, 2013).

## Conclusion

Our laws reflect what we as a society believe is important; they indicate what we value. The fact that we have mandatory immunizations for children means that a majority of our people place so much importance on the containment and prevention of many common diseases that it cannot and should not be left to individual choice.

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*Abbie Goldbas, MEd, JD has been an attorney at law for 30 years. She used to specialize in Family Court Law and child advocacy. For the past ten years she has limited her practice to appellate law. Her interest in this topic stems from her experiences with children and families in Family Court. She is pursuing her doctoral degree in Health Psychology at Walden University.*

# Maternity Services and Policy in an International Context: Risk, Citizenship and Welfare Regimes

by Kennedy, P. & Kodate, N.

Routledge: Oxon OX  
2015; 282 pages; \$102.52

reviewed by Linda Gibson, DNP MSN RN

This book covers maternity healthcare services and payment plans for antenatal, intrapartum, and postnatal care for eleven countries. Newborn healthcare services were not a focus of this book however; some chapters did mention what services were paid for immediately after birth of the neonate. This book is a great resource detailing the coverage of insurance and government assistance for maternity care. Descriptions are given for the payments and roles of the physician, midwives, and others who assist with maternity care. The book will be helpful for those who wish to change or improve healthcare services for maternal care as it shows the strengths and weakness of each country discussed.

The first chapter covers maternity healthcare policies in general along with problems that still exist in healthcare in many countries. Each additional chapter focuses on one of eleven countries. Set-up of each chapter is the same making the book easy to compare and contrast services in each country. The first section of each chapter covers the country's history since inception of a government system including the financial status and ranking of healthcare quality. The next section discussed the definition of a welfare state. A welfare state is government payment for services given for all healthcare services whether the country has universal healthcare, insurance programs or both. Time lines are reviewed for government and/or private insurance from its beginning to current assistance with paying for or helping to pay for healthcare. Each healthcare system is then reviewed with a description of the provider's role and how providers are paid. Supply and demand of doctors, midwives and others

who assist with maternity care are discussed. Also included is the educational preparation of midwives including licensing and certification if required for each country. The role of the doctor in maternity care is then reviewed. Demographic information for women's healthcare concerns each country are given in detail. Of great interest are the maternal and infant mortality rates in comparison to who provides services to the maternal patient and what services are provided and paid for.

The second half of each chapter gives an overview of maternal services offered including very specific care that is paid for by each country. Each chapter has a section that discusses the pros and cons of care during the antenatal, intrapartum, and postnatal care. Focus again is on how the government or welfare system and/or insurance pays for services needed. Excellent details are provided for at-risk maternal clients and descriptions are given for clients who wish alternate types of delivery. Consumer group's roles in each country are addressed. This would be a good resource if you wanted ideas on how or what groups can do to improve maternal healthcare services. Risks and rights are covered from each country review including what is done well and what needs to be improved. This book is of interest how so many countries still have many women who have poor to no healthcare services when the health and safety of the baby are so vulnerable.

*Dr. Gibson currently is an Associate Professor of Nursing at Tennessee State University, has more than 25 years of teaching experience and has worked in many areas of nursing for more than 37 years.*

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# Essentials of Global Mental Health

edited by Samuel O. Okpaku, MD PhD

Cambridge University Press, New York, NY  
2014; 446 pages; \$135.00

reviewed by James G. Linn, PhD and Thabo T. Fako, PhD

Mental illness directly accounts for about 14 % of the global burden of disease. In human terms, over 450 million people – many of them mothers and infants – suffer from mental or behavioral disorders. While there is widespread suffering related to mental illness in developed and undeveloped countries, some of the poorest nations have fewer than ten psychiatrists. Growing awareness of the significant worldwide incidence of mental illness and the inequitable distribution of mental health services – particularly in low and middle income countries – led to the formation of the global mental health movement. It has emphasized research, study, improved practice, and greater equity in mental health services and well being. The major objective of *Essentials of Global Mental Health* is to better describe the domain of global mental health and to define the boundaries of the field. Professor Okpaku and his co-authors provide an invaluable text on global mental health and offer an original vision of the discipline which is to make cost-effective, evidence-based treatment services globally available, especially to potentially ill persons in low and middle income countries.

Excellent, well written, and data based chapters are included on the following topics: history and background of global mental health; advocacy and reduction of stigma; integration of mental health with modern systems of primary care and traditional healthcare; gender and equality; human resources and capacity building; depression, suicide and violence; research, and monitoring the progress of countries. The organization of the book follows five priorities of the global mental health movement – global advocacy, systems of development, research programs, capacity building, and program monitoring – and the barriers and challenges that must be overcome to complete these essential tasks.

With the proclamation of the Millennium Development goals, increasing global attention has been paid to the health and mental health of mothers and infants. Professor Okpaku and his co-authors have several chapters dedicated to maternal and child mental problems that are very informative for childbirth educators. In “Poverty and Perinatal Morbidity as Risk Factors for Mental Illness,” we learn that household poverty and low birth weight have been linked with higher levels of depression (and other mental disorders) in later life. These are implications for rising levels of inequality in the United States where 40 percent of births are now out of wedlock, in many cases to poor single women living on welfare.

The chapter on “Child Abuse as a Global Mental Health Problem” reports that child maltreatment of various kinds in the U.S. occurs to 10 percent of children and is much higher (over 50 percent) in many African countries. This data raises serious questions regarding the cause and management of abusive parental behavior in the home and institutional environment. Further, in immigrant families where physical punishment of children and their mothers is the norm, serious issues in cross-cultural communication and interpretation arise for the pediatric nurse and childbirth educator.

A third noteworthy essay, “Children’s Services,” discusses the importance of early identification of childhood mental health disorders. The authors report that in Western developed countries approximately 1 in 5 children are affected by mental problems, but few receive any professional treatment for them. They argue for more accessible mental health screening of young children so that problems can be addressed with treatment prior to the development of serious mental illness which is associated with suicide, substance abuse, academic failure, teenage pregnancy, and criminal behavior. Further, they note that in the absence of valid and reliable instruments for the assessment of psychopathology in many low and middle-income countries is a major obstacle to providing effective treatment of them.

*Essentials of Global Mental Health* is a path-breaking work of scholarship. It differs significantly from the typical textbook. The topic authors are experienced international researchers and/or clinicians. Many have academic appointments at outstanding universities in the U.S., Latin America, Europe, Asia or Africa. Each chapter is written like a journal research or review article. Key issues and problems in important sub-fields of Global Mental Health, e.g., maternal and child mental health, gender and equality, and child abuse are identified and presented with recent epidemiological data. This is followed with presentations of current interventions and documented mental health outcomes. The reference lists include citations from a wide array of prestigious international journals, government, and nonprofit reports. For each topic area, they cite the most important recent studies as well as classic articles and publications. To benefit the instructor and the student, the book concludes with action items for attaining greater equality of care globally. Finally, the time is right for *Essentials of Global Mental Health* because in 2013 almost 200 countries approved the WHO Mental Health Action Plan. This document calls for the global upgrading and expansion of mental health services by 2020.

*Essentials of Global Mental Health* should be in the library of all healthcare researchers, policy makers, and clinicians. It will serve as an important resource for childbirth educators. It should be on the required reading list of instructors for introductory courses in global health. Students who read it will learn the most important issues and findings in the field.

*James G. Linn, PhD is past President of Research Committee No.49 (Mental Health and Illness) of the International Sociological Association. As a Peace Corps volunteer, he worked in community and cooperative development in urban barrios and rural villages of the Dominican Republic and for over 25 years he has studied the behavioral and mental health dimensions of HIV/AIDS as they relate to public health initiatives in Africa and Latin America.*

*Thabo T. Fako, PhD is Vice Chancellor and Professor of Sociology at the University of Botswana. He has conducted research on family structure and the spread of HIV/AIDS in Botswana.*

# Working and Breastfeeding Made Simple

by Mohrbacher, N.

Praeclarus Press, LLC: Amarillo, Texas  
2015; 360 pages; \$18.95 paperback

reviewed by Windia Urquhart Wilbert, DNP RN NEA-BC

Breastfeeding can be a challenge for women who work. In *Working and Breast Feeding Made Simple*, Nancy Mohrbacher provides simplified breastfeeding guidance for working mothers. She clearly examines all aspects of breastfeeding that can be used as a guide to healthcare professionals and working mothers.

Many employed mothers need reliable information on breastfeeding. This book provides a practical, common sense approach and tips for mothers who plan to breastfeed upon their return to work. It delineates what the mother will need to know about breastfeeding at various times during their babies' first year of life.

The book is clearly written and simplifies breastfeeding strategies for working mothers. It offers detailed instructions to help mothers understand how breastfeeding works. It offers step by step examples of the difference between breastfeeding, bottle feeding and pumping.

Most mothers have difficulty in understanding the importance of a well-fitting pump and how to make the most of their pumping time. This book provides guidance to mothers on how to choose a pump that fits well in different situations. Instructions and examples are provided on storing and handling breast milk. This can be an overwhelming process for some mothers.

Mothers often experience different mood swings after birth. This book addresses different feelings mothers may have in returning to work, and coping strategies for them. It also provides strategies for mothers to keep milk production consistent. It also offers strategies on how to make weaning both comfortable and positive and offers specific tips for making bottle and cup feeding easier.

Mohrbacher includes breastfeeding research studies in each chapter to assist mothers and health care providers to make informed decisions about how breastfeeding affects lifelong health. She also includes a list of breastfeeding resources from websites, free online videos, books, smartphone app, and references.

This book provides significant contributions to the field of childbirth and lactation education. There is a place for this book in conventional childbirth preparation. The best fit for the book would be as a reference for mothers and others providing lactation education to working mothers.

The suggested audience for this book crosses several disciplines such as health sciences, pediatrics, and nursing and lactation specialties. This book can also be used by the graduate level student or students in their last year of undergraduate studies. This book would be best suited for mothers at all levels of education preparation. The book's language level would not challenge the undergraduate student. The book is written clearly. It is easy to read and comprehend.

Given the frame of reference that I have embraced as an educator and nurse clinician I would recommend this book as a resource for the lactation education arena. This book would most likely fit as a reference for International Board Certified Lactation Consultants, Fellows and counselors who need to reference lactation guidelines. The book would be a great resource for ongoing debates and conversations on how working mothers can breast feed effectively. This book illustrates that there is no clear pathway for how mothers breastfeed their babies.

*Wilbert has 41 years of experience as a registered nurse in various adult care and administrative settings. She has an educational background in Nursing Administration and Nursing Education. She currently serves as Interim Executive Director School of Nursing at Tennessee State University.*

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describe personal learning of readers, or describe a birth experience. Keep the content relevant to practitioners and make suggestions for best practice. Current references support evidence-based thinking or practice.

**Feature Articles** – Authors are asked to focus on the application of research findings to practice. Both original data-driven research and literature reviews (disseminating published research and providing suggestions for application) will be considered. Articles should be double spaced, four to twelve pages in length (not including title page, abstract, or references).

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# Dr. Jen's Guide to Breastfeeding: Meet Your Breastfeeding Goals by Understanding Your Body and Your Baby

by Dr. Jennifer Thomas

Hale Publishing, L.P.  
2012; 166 pages; \$13.46

reviewed by Amy V. Oaks, RN BSN CLC

Dr. Jen's guide covers a multitude of topics that empower mothers by giving them education to make informed decisions on breastfeeding, sleep patterns, parental rights, and many more issues. She does this in a three part process, part 1: breastfeeding success in 7 steps, part 2: common questions and problems with solutions, and part 3: advocating for breastfeeding mothers. This set up allows for the reader to enjoy the book from front to back but also organized where a busy or exhausted mom, parent, or professional could turn to a specific topic and get the immediate answer they need in that moment. This could help a mother worried about her baby getting enough milk, a mother returning to work needing pumping advice, or a professional researching Vitamin D supplementation. All topics are listed by both a table of contents, but also an index allowing for quick research into specific topics needing quick answers. The back includes tables and benchmarks for mom and baby for the first week of life and resources if those standards are not being met, leaving very little guesswork for mom and the professionals caring for them.

Dr. Jen does a fantastic job of taking the complexities of the mechanics of breastfeeding and providing them in laymen's terms to help the reader that may not be familiar with medical jargon understand the processes while maintaining the integrity of those who are. She not only empowers the mother but also the healthcare professional to understand their role in the process of birth to breastfeeding, to sleep patterns, warning signs that things may be going awry, and when to back up and not have an opinion that could be

detrimental to a mother's success. She cautions both mother and healthcare professionals of the number games many find themselves in. The number of feedings, the number of minutes at the breast, the number of bilirubin in the blood, the amount of sugar in the blood, the amount of weight baby has lost or gained. Dr. Jen goes into depth of these major scare factors that she calls, "The Three B's: Bilirubin, Blood Sugar, and Birthweight," for the healthcare professional and mom, giving guides of what to watch for and which to ignore. Dr. Jen encourages active participation in education from all parties involved in handling moms from those first delicate hours after delivery to the introduction of solids many months later and beyond in the journey of child-rearing. She challenges cultural practices and opinions including topics such as; self soothing, introduction of rice cereal, and the objectification of breasts.

The approach is light and fun enough for the non professional to read and also enticing and complex enough for professionals to learn as well! I recommend this book for moms wanting to understand the complex beauty that their bodies are capable of when breastfeeding, or for the healthcare professional wishing to extend their education or learn how to help advocate for this community.

*Amy is a RN with a passion for helping and advocating for breastfeeding mothers. She breastfed her two children with varying experiences and success and worked with underprivileged women and children through WIC as a breastfeeding peer counselor.*

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# Handbook of Father Involvement: Multidisciplinary Perspectives, 2nd Ed.

by Mohrbacher, N.

Routledge

2014; 488 pages; \$54.95/\$110.95

reviewed by Anika C. Thrower, PhD MPH CLC

This article is intended for family-based policy makers, researchers exploring fathers' roles, and, more specifically, childbirth educators who have a desire to broaden their knowledge and fold the male's role more seamlessly into a child's life. Readers will quickly recognize that the topic around males being viable parts of the parenting process can no longer be ignored; males are no longer only breadwinners but capable and efficient caregivers along with their female counterparts. Within their latest book entitled *Handbook of Father Involvement* (second edition), authors Cabrera and Tamis-Leminda dissected the anatomy of male involvement in a child's life.

Early in their book the authors provided an operational term for father types that include fathers who reside with their biological child; fathers who do not live with their child due to separation from the mother; stepfathers who reside with their non-biological child; and stepfathers who no longer reside with their non-biological child. Fathers' living arrangements with children are imbalanced among the races. Data showed 71% of White children, almost 66% of Hispanic children, and merely 33% of Black children resided with both biological parents. Single fatherhood is becoming more prevalent. It was asserted that men (biological fathers and non-biological fathers) who did not have a father in their youth and experienced disruptive family structures were more willing to take on the responsibilities of fatherhood.

A perspective of particular interest was the level of adjustment to parenthood that is experienced by both men and women. It has been well documented that women go through myriad physical, psychological, and behavioral changes both while pregnant and in caring for a new infant. Cabrera and Tamis-Leminda analyzed how fathers experience similar changes in preparation for the journey into and during fatherhood. Mothers are said to naturally have the skill to soothe a newborn; males mirror similar traits. Males have the ability to not only offer comfort and protection but are able to speak slow and tenderly and even adjust the pitch of their voice to be more inviting to a child. With such noteworthy attributes, childbirth educators should consider creative ways to enhance the male's role.

Cabrera and Tamis-Leminda delve into the importance of co-parenting to harmoniously raise a child. Co-parenting can be described in several ways which include fostering and promoting closeness with the child, remaining transparent with inter-partner relationship communication, and assuring amicable childrearing practices. In addition, their research highlighted occurrences where co-parenting success could have the potential to be negatively impacted by a mother

or the situation could even become hostile. These instances include when a father has never or briefly resided with the child and/or has not been financially responsible for a child. As one could surmise, disruptive inter-partner relationships between parents can potentially influence the non-residential parent's access to the child and undermine that parent's overall parental role.

The book provided readers with "cookie cutter" fathering styles within African American, African Caribbean, Latino, and Asian populations. The authors stated that some styles of parenting were distinctive among races. For example, within the African America and African Caribbean population, out-of-marriage births are ordinary, and it is common to have two or three "baby mothers." Cabrera and Tamis-Leminda stated that since having "baby mothers" was ordinary and commonplace, there was no need for programming to emphasize marriage. Rather, programming should focus on elevating economic stability, improving parenting skills, and cultivating interpersonal skills between parents. As a reviewer this assertion was alarming, as economic stability and exposure to the social connections that marriage provide could potentially increase successful childrearing outcomes. The book affirmed that African America and African Caribbean caregivers rely on relationship similar to extended families to assist with childrearing.

Latino fathers were highlighted next and in some respects their parenting styles were different from their counterparts. At a few points throughout the book, Latino fathers were mentioned as being highly involved in their children's lives from the prenatal period even more so than their White counterparts. Also, this involvement was regardless of White children being more prone to being raised in two-parent households. There were several contributing factors including being highly acculturated that may nurture more engagement among Latino fathers. The authors suggested that children who grew up in poverty with a father who invested time in their child had a higher probability of having better outcomes. They did not elaborate on the term "better outcomes," although one could surmise they meant socioeconomically. In conclusion of the section highlighting Latino fathers, emphasis was directed on improving the health status of the child. In addition, it stated that research points to unfavorable health outcomes compared to their White counterparts. As a reviewer, I believe this affirmation should have been similarly highlighted amongst African American and African Caribbean fathers. Current health-based literature and research show that African America and

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# For Those with Empty Arms: A Compassionate Voice for Those Experiencing Infertility

by Adams, E. H.

Sanger, CA: Familius  
2015; 239 pages; \$16.95

reviewed by Adrienne D. Wilk, MSN RN

A combination of essay and personal poetry, this book reaches the author's intended audience of those with "outstretched arms." The author of this book discusses a topic, infertility, commonly perceived as rare or even taboo. Unfortunately, the struggles eloquently detailed throughout this raw description of one couple's journey through an infertility diagnosis are not at all unique. While there may be numerous clinical resources available for those seeking information about infertility, there are very few well-written books on the topic of support and encouragement through the infertility process. This book helps to fill that gap.

The strength of the book is the combination of light-hearted moments and heart-wrenching moments that will resonate with many readers, as the infertility struggle is often a rollercoaster of emotions. Grounded in the belief of a higher power, the book and author grant permission to feel all emotions throughout the struggle with infertility. Themes such as grief, blame, envy, healing, hope, and womanhood are thread throughout the reading. The book provides a sense of validation while getting an up-close glimpse into the author's experiences and thoughts.

This book serves an audience greater than intended. The brilliantly written chapter titled What Not to Say is a must-read for everyone that has not experienced infertility. This chapter explains why certain well-meaning questions may not be appropriate to ask. Additionally, the chapter explains why

offering a personal story, or unsolicited advice is almost never a good idea. The author reminds us all that the last thing a couple experiencing infertility wants to hear is "just relax" or "have you tried..." Readers that have experienced these remarks will appreciate the playful tone of the chapter.

The book concludes with a chapter titled Hope. Most books with the focus of infertility end by discussing the author's resolution of the struggle through either conception or adoption. What is unique about this book is that is not how the book ends. The inspiration and encouragement that is found within this chapter stems from the author continuing to live her life in spite of her and her husband's struggle with infertility. The author describes hope as "moving forward, not arriving" at the intended destination of motherhood. It was refreshing to read that the author was all right despite not having conceived. The message was loud and clear that you can, and will survive infertility no matter the outcome. The chapter concludes with a poem titled Make No Mistake that leaves the reader feeling hopeful and encouraged. That is exactly why this book is recommended reading for both men and women struggling with infertility.

*Adrienne Wilk is an adjunct professor at Pikes Peak Community College and is currently working toward her PhD in Nursing Education at the University of Northern Colorado. She has an extensive background in cardiovascular nursing and has recently developed an interest in infertility and adoption after becoming an adoptive mother.*

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African Caribbean populations suffer the highest burden of poor health outcomes including higher mortality rates from cancer, cardiovascular disease, diabetes, and strokes.

This book has a few weaknesses. Some drawbacks were that the authors could have conveyed key emerging trends such as fathers becoming an integral part of the childrearing process after incarceration and gay males raising children. It would have been advantageous to make correlations between a father's health status outcomes and lifestyle behaviors and that of his child. Nevertheless, it would have been advantageous to make correlations between a father's health status and lifestyle behaviors and that of his child. Several strengths in the book include its readability and hence its ability to

keep readers engaged. Cabrera and Tamis-Leminda should be applauded on their ability to provide up-to-date references to literature as well as providing readers with policy implications for practices and future direction. Overall this book should be considered a mainstay among childbirth professionals looking to learn new ways to support inter-partner relationships.

*A Pittsburgh Pennsylvania native, Dr. Anika Thrower obtained her undergraduate degree in nutrition from Norfolk State University and was awarded both a master's and PhD in public health from Walden University. She has expertise in behavioral based holistic health and is an instructor with Springfield College in Springfield Massachusetts.*

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