

PUTTING AN END TO HOMELESSNESS OF PREGNANT WOMEN: HOLISTIC  
INTERVENTIONS FOR ADDRESSING BIRTH OUTCOMES AND MATERNAL RISKS

By

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## **Abstract**

Homelessness is an epidemic in the United States, where over half a million people find themselves without housing nightly. This is especially concerning when considering those who are forced to bring in the next generation into an unstable home environment – those who find themselves in the unique situation of experiencing homelessness and pregnancy simultaneously. Children born to mothers who were homeless during pregnancy are at a higher risk for intergenerational poverty, homelessness, victimization, substance abuse, and chronic illness – many of which stem from the lasting health effects from disproportionately high rates of fetal birth defects, underdevelopment, and low birth weight in these babies. When the health of the mother and their child in gestation are understood as interconnected, we can focus on factors which contribute to the holistic picture of the mother’s health – and consequently their infant’s health. This involves a close look at the socioeconomic and environmental factors which contribute to the prevalence of poor birth outcomes in the unique population of homeless, pregnant women. With understanding the intersecting factors which shape their overall picture of health, the model of shelters as a novel intervention can then serve as a treatment which may address many of these concerns in a long term, effective, and comprehensive way. This intervention seeks to understand and eradicate the underlying socioeconomic burdens which underscore the prevalence of adverse birth outcomes among this population in the first place.

## **Introduction**

Imagine it’s a Sunday afternoon in November in Tucson, Arizona. Perhaps you’re a seventeen year old girl who just began her senior year of high school. You’ve worked extremely hard throughout your high school career in hopes to someday be able to go to the University of

Arizona between scholarships and financial aid, only under limited debt (since you do not have a college fund). Your parents did not go to college though have always inspired you to work hard and instilled the rhetoric that if you do this you will be able to provide a better life for yourself and your children than they had. Your parents are extremely hard workers, managing over 40 hours per week at blue collar jobs while raising you (their eldest), your 13 year old sister, and your 5-year old brother who has special needs. It has often fallen on you to care for your younger siblings while your parents are at work – you drive your little sister to school every day after dropping your brother off at grandma’s house. Grandma gave you her old car birthday present. It needs a lot of work but you are extremely grateful to have the opportunity for transportation to help out around the house and go to your part-time job as a receptionist at your uncle’s small business. You receive a letter in the mail about your college admission decision – congratulations! You’re in! You received a partial scholarship and meet with your high school counselor to discuss financial aid options and additional scholarships to apply for, as well as loans. This is an absolute dream and you can’t believe college is really at your fingertips.

The next day your period is late. You wait a couple more days, and still no period although you’re usually very regular. In confidence, you drive to the local (last) Planned Parenthood clinic in your city, pay the sliding scale fee and find out that yes, you are pregnant. Suddenly, the life you had imagined, all you had worked for, feels as if it is suddenly hopeless. Your case requires parental consent for abortion, though you do not have \$400 to cover the costs on your own, even if your parents would agree to the procedure. That night, you tell your parents and it becomes a huge fight. Your mom is crying, stating that the family cannot afford another child. You wonder who will care for your siblings and how you will be able to pull this off.

A couple weeks later, you and your family have become more realistic about this child and its future. Grandma and your extended family agrees to help pitch in with expenses, you have a car and health insurance to take yourself to visits, and your parent's savings will go into initial costs. You begin stocking up on baby food, diapers, and cribs. The father's family is now also involved and helping to support costs. You decide to take part-time classes at community college after graduation and then transferring to University after a few years. Your career coaches have connected you with family support systems and applying for AHCCCS for your child. You begin to feel excited and know you will already love them.

Now imagine this scenario as a *homeless* seventeen year old. You were in foster care for most of your childhood and do not see college as a feasible option. Prior to pregnancy, you were planning to work as a cook in the local restaurant, connected by your foster care family. However, due to this pregnancy, the boss feels that you can no longer handle these conditions. Your baby daddy was emotionally and occasionally physically abusive to you, and you fear informing him of your pregnancy. You have no health insurance or means to afford even a sliding scale fee for healthcare and prenatal costs. You are nearly 18, about to completely lose all access to housing under the foster program and relying on sleeping on friends couches most nights (though they smoke, drink, and are generally unsympathetic to your condition). All of this stress causes you to be sick often, you are often nauseous and unable to eat even small amounts of food that you manage to afford. Your belly grows larger as you grow weaker. You were able to attend an initial prenatal appointment to confirm pregnancy, though this is no longer an option for you. You have no significant social support structure and begin to feel extremely hopeless. You wonder if there is even a purpose for you on this planet, and if you cannot care for yourself, how would you care for a baby? All of this comes to a head when your baby daddy finds out

about your condition and appears compassionate at first. He invites you over for dinner, but when you get there he is drunk and violent. He punches you in the stomach, and you start to fear loss of your child.

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For those experiencing homelessness, this is not an abstract or far-off story. Homelessness is a public health epidemic affecting over half a million people in the United States alone. This is fundamentally tied to systems of oppression, where homelessness disproportionately impacts people of color, immigrants, queer/trans folks, disabled folks, and those with mental illness. This is a condition that greatly affects those on the fringes of society, who are often not provided social support, resources, or education. Homelessness is symptom of a societal failure to address human rights abuses and secure positive rights for those who are already at risk.

The homeless population is subject to extreme erasure, especially in terms of healthcare. I seek to dismantle the “not my problem” ideology that often accompanies this, and instead reframe the narrative to understanding that this is everyone’s problem, and the struggles of our brothers and sisters are of great consequence to all of us. We cannot simply stand by and watch innocent women and their babies dying in the streets without understanding what can be done to prevent this, especially since we have the tools to do so. Those of us who have the ability to do so, have a responsibility to understand *why*: *Why* homeless people have extremely large health disparities in all forms including high rates of mental illness, addiction, victimization, chronic illness, and adverse birth outcomes.

The children of homeless women experience disproportionate rates of fetal death, birth defects, and low birth weight. Current literature often cites poor prenatal care and nutrition in attempts to answer, though this is only part of the problem. The United States spends more money on healthcare than any other nation, yet we still has the worst birth outcomes of *any* developed nation. Attempting to understand the connection between socioeconomic and psychosocial influences into the holistic picture of health further illuminates how poor socioeconomic status can fundamentally detriment a person's health. There must be a model in place which guarantees the rights of all people to shelter, safety, health, and food – especially in the underserved and time-crucial population of homeless women. Therefore, I argue that placing women into shelters during gestation helps to remedy dozens of metrics that normally create an adverse picture of health.

We must first understand that this is not just a homogenous collective of people with single problems of health – rather these are human beings with complicated experiences who do not live single-issue lives, as none of us do. When I speak to *the homeless population*, general statistics are often applied, but the overarching intervention should be effective precisely because it will cater to the unique situation and life of the individual. Not everyone has the same experiences by any means, though protections should be offered to all to remedy a problem that is ultimately caused by institutions of oppression.

### **Current Research**

The disproportionately high rates of adverse birth outcomes in the population of homeless women is well documented by current areas of research (Cutts 2015, Gavin 2002, Nkansah-Amankra 2003, Richards & Merrill 2011, Teruya 2010, Yang 2008). Research demonstrates that

women who are homeless or otherwise of low socioeconomic status tend to have higher rates of fetal death, low birth weight, and birth defects (Cutts 2015, Gavin 2002, Nkansah-Amankra 2003, Richards & Merrill 2011, Yang 2008). It is necessary to first look at the underlying factors which may contribute to this disproportionality in order to find an intervention that treats the cyclical causes of health issues in the homeless population. Many of these burdens affect the population of homeless women in unique ways when compared to the general population (American Coll OBGYN 2013, Cheung & Hwang 2004, Baum 1993, Finfgeld-Connett 2010, Gavin 2002, Kennedy 2014, Nkansah-Amankra 2003, Teruya 2010), and these differences are important to understand how to best intervene at the root cause rather than simply the symptoms. White current research tends to cite lack of pre-natal care and nutrition as causes of adverse birth outcomes (American Coll OBGYN 2013, Richards & Merrill 2011, Gavin 2012, Cutts 2015) this tends to ignore the underlying socioeconomic burdens which contribute to the picture of overall health, though this is well-documented in non-pregnant homeless individuals (Baum 1993, Culhane 2008, Finfgeld-Connett 2010, Bandura 2006, Malos 1997, Nkansah-Amankra 2003, Nyamanthi 2000, Thompson 2004, Schnazer 2007, Teruya 2010, Weinred 2006). I aim to take a more nuanced approach with understanding underlying socioeconomic and psychosocial contributions to adverse birth outcomes as a consequence of health disparities.

### **Defining Homelessness**

The Federal Government's McKinney Act of 1987 defines homelessness as "lacking a regular nighttime residence or having a primary nighttime residence that is a temporary shelter or other place not designed for sleeping" (American Coll OBGYN 2013). Estimates suggest that 7 percent of Americans will experience an episode of homelessness in their lifetime, and 2.5-3.5

million individuals experience an episode annually. Episodic homelessness is more common than nightly homelessness, which places around 554-700,000 people as homeless nightly (American Coll OBGYN 2013). Though extreme poverty is a clear risk factor for homelessness, other factors including unemployment, layoff, mortgage default, family crisis, substance abuse, and victimization, all of which can also contribute to novel and cyclical homelessness (Baum 1993).

### **Healthcare Disparities in the Homeless Population**

Healthcare disparities have a clear connection to health outcomes for the homeless. Although roughly .2 percent of the American population is homeless, this population collectively accounts for approximately 20-30 percent of all emergency room visits (Schnazer 2007, Weinred 2006). In addition to increased emergency room use in this population, they are also admitted to emergency departments at a 5 times higher rate and stay longer on average (Schnazer 2007). This increase in need for acute emergent care can be understood as a symptom of healthcare disparities experienced by the homeless population. Health care disparities refer to a higher burden of illness, injury, disability, or mortality experienced by one population group relative to another group (Teruya 2010). Those at risk for the largest healthcare disparities include the chronically/mentally ill, immigrants, refugees, substance users, victims of violence, high risk mothers/infants, and those living with homelessness (Schnazer 2007, Teruya 2010). However, many of these identities can intersect, particularly in the homeless population, which creates unique and complicated burdens for those facing multiple simultaneous challenges. For example, the homeless population has a higher rate of mental illness compared to the general population with 20-25 percent reportedly having a serious mental illness condition (Baum 2003, Finfgeld 2010, Schnazer 2007). This a much larger burden when compared to the 6 percent of individuals

who are non-homeless which experience a severe mental illness (Baum 2003, Finfgeld 2010). A person who struggles with mental illness on top of experiencing homelessness is at greater risk for a variety of health conditions due to the unique burden that each of these present. Therefore, when looking at the health of a homeless individual it is essential to understand how simply looking at their homelessness will not paint a complete picture of their experience, and attention must also be given to addressing additional burdens to wellness.

One way to understand the increased healthcare burden for the homeless population is to understand *conflicting needs*. This population has unique, constant, and ever-present needs which are typically thought of as basic and are largely already taken care of in the general population (Weinred 2004). This includes finding a place to sleep for the night, a place to use the restroom, to shower, or to eat. Addressing these constant needs is a large source of stress and is highly time consuming. In order to spend the time and energy to address these basic needs, less acute problems such as mounting health decline can become secondary, leading to worsening of conditions to the point where more intense care is then needed (Teruyra 2010, Weinred 2004). Often, these are from chronic health conditions which would not plague the typical individual that can manage their medications and healthcare on a routine basis. However, when a homeless person has diabetes or hypertension they cannot simply always afford the necessary constant healthcare and medications to control their disease. These conditions then go unchecked and worsened, particularly in the face of other more pressing conflicting needs (Schnazer 2007, Weinred 2004). It is clear to see the link then between homelessness and the phenomenon of increased emergent visits for these folks.

### **Healthcare for Homeless Women**

Health disparities become more apparent when considering the unique condition of homeless women and healthcare. Women who are homeless tend to have some of the highest rates of mortality (10 times the general population), poor health status, mental illness, substance abuse, and victimization compared to both the general population and housed populations (American Coll OBGYN 2013, Cheung 2004, Finfgeld-Connett 2010, Malos 1997, Nkansah-Amankra 2003, Nyamathi 2000, Teruya 2010, Weinred 2006). They are less likely to have a regular source of care, health insurance, cancer screening, adequate prenatal care, appropriate ambulatory care, and specialty care for specific disorders than the general population (American Coll OBGYN 2013, Richard & Merrill 2011, Yang 2008). In this group, pregnant women consequently have a uniquely perceived unmet need for care (up to 57 percent), which is especially prominent in the face of the gestational period (Teruya 2010). Lack of pre-natal care and proper nutrition are frequently cited as reasons for subsequently poor birth outcomes as a consequence of healthcare disparity (American Coll OBGYN 2013, Richards & Merrill 2011, Gavin 2012, Cutts 2015). These problems uniquely affect cisgender women in the homeless population, as they are often the ones undergoing gestational periods.

This health disparity in the population of homeless women is reflected in their overall sexual health and autonomy. There is a higher rate for unintended pregnancy in the homeless population, likely due to lack of access to contraception and education surrounding sexual health (Kennedy 2014). This then compounds into often unintended pregnancy in a population that is more likely to be less educated, with lower access to healthcare, more likely to have an unhealthy body weight and preexisting physical and mental health conditions, with higher rates of victimization and substance use (Kennedy 2014). This population is less likely to receive prenatal care, screening, and professional healthcare visits surrounding gestation. Therefore, the

unique experience of pregnancy intersecting with homelessness demonstrates a profound health disparity with implications for the mother and their potential child.

### **Socioeconomics and Birth Outcomes**

The various socioeconomic factors compound into a high frequency of adverse birth outcomes in the homeless population including lower birth weights, congenital defects, and infant mortality (Richards & Merrill 2011). Similarly to their mothers, the children of homeless pregnant women are more likely to have longer hospital stays and increased need for intensive care following birth (Richards & Merrill 2011). There are higher incidences of birth defects including neural tube defects, orofacial clefts, and heart diseases for low income mothers. Those children with lower parental education, occupation, and household income were overall at the greatest risk for selected birth defects (Yang 2008). One study stated that homelessness during the gestational period is unique in its impact on fetal health and is independently in itself a social determinant that influences female reproductive health behaviors. Therefore, it is a “unique time-dependent risk factor for adverse birth outcomes” and should be focused on specifically in any intervention regarding fetal outcomes (Cutts 2015).

In general, homelessness provides unique socioeconomic and environmental hurdles to overall health and wellness. It is harder for these individuals to engage in healthy behaviors on a regular basis such as regular check-ups and obtaining adequate nutrition (Richards & Merrill 2011). Those living with homelessness are already at greater risk for chronic health conditions which is compounded by several socioeconomic factors which provide barriers to overall wellness. Pregnancy is a very specific and critical time period that affects the long-term health of

the subsequent child and is strongly influenced by maternal behaviors, which are shown to be riskier in the homeless population (Cutts 2015, Nyamathi 2000).

### **Shelter Models and Health**

Now that we understand the problem and understand the scope of research demonstrating socioeconomic influence on health, what can be done? Research suggests that housing is an effective strategy to fight multiple risk-factors associated with homelessness and disparate health for those experiencing it. Two foundational studies performed demonstrate the impact of long-term shelter housing on the health of the homeless individual, which was shown to significantly improve after placement (Nyamathi 2000, Schnazer 2007).

One such study looked at overall health of 445 newly homeless individuals entering into the New York City shelter system over the course of 18 months. During this time, they tracked the course of health status and healthcare resource utilization. Disease and illnesses in this population were higher than those of the general population control sample and over half of the men entering into the shelter system were uninsured at entry. After the course of sheltering for 18 months, many experienced significant improvements in health metrics looking at management of chronic conditions such as diabetes, asthma, substance use, and severe mental illness. Insurance rates for these individuals improved. One unique feature of this shelter includes the fact that it is opt-in only, meaning users will not be removed unless they choose to do so, providing more opportunity to maintain all of the benefits that sheltering provides to them (Schanzer 2007).

Another study looked at 1,051 sheltered versus non-sheltered homeless women across outcomes of health. They found that unsheltered women were at 3 times the risk for poorer

physical health and 12 times the risk for poor mental health than sheltered women. Additionally, unsheltered women were more likely to report increased pain, use of drugs and alcohol, multiple sexual partners, recent STDs, unwanted pregnancies, and victimization including physical assault and robbery. Sheltered women were more likely to attend dental and doctor visits, receive STD testing, pap smears, TB testing, and prophylactic care. The study concluded that the lower utilization of health services by unsheltered women could not be explained by their poorer mental health or increased substance use, but more likely was due to the fact that more competing needs when the basic necessities were not cared for by the shelter system. Additionally, shelters helped to provide organized living and social support, which adult homeless women tend to frequently lack. With more close contact and less emotional distress, women were more likely to be motivated to care for themselves and engage in healthy behaviors. The article suggested clinician attention to living arrangements when providing services to women would account for these differences in sheltered versus non sheltered women (Nyamathi 2000).

These two studies illustrate the significantly improved benefits to health that come with housing the homeless population. This is done on more than a purely physical and healthcare standard level, but rather in a way that gives attention to socioeconomic influences on health and wellness. The shelter model provides remedy to the problem of low social support networks and high levels of emotional distress by providing a safe environment with close contacts, which has been shown to have a net benefit on health and motivation for healthy behaviors (Baum 2003, Epel 2006, Nyamathi 2000, Weinred 2006). Competing needs are addressed and remedied within a shelter system, where food, housing, safety, and restrooms are provided to its users. By having this available, the person who is sheltered does not need to spend extra time or stress on

obtaining them, providing a way to address other concerns such as their health and wellness. Additionally, shelters often provide physical and mental health resources which have been shown to have a beneficial impact on holistic health, disease prevention, prophylactic care, screening, drug use, and victimization (Baum 1993, Culhane 2008, Epel 2006, Malos 1997, Nyamathi 2000, Thompson 2004). Sheltered individuals have been shown to have net benefit improvements to health by all of the above metrics and are more likely to prioritize their own health when in the system (Epel 2006, Nyamathi 2000, Schnazer 2007).

Currently, the United States lacks comprehensive law and policy which would create guaranteed housing-first shelter models for homeless, pregnant women. This leaves thousands of these women on the streets yearly and poses a large risk to their unborn child. While some states provide additional housing services to family units (those with young children), this does not address the evidential need for intervention during gestation itself. By the time the child has been born and the family unit receives housing, it may already be after the child has begun to develop delay or defect. The above studies have demonstrated the marked improvements in health outcomes for those undergoing sheltering, and this could be greatly useful to those during gestation though this is severely lacking in the current state of affairs.

### **Gestational Shelter Model**

Understanding that the sheltering system provides holistically better health and wellness to the individual, I propose to draw a link between the beneficial impact on health and its application to assisting homeless women during the gestational period. By understanding that this period is the most important and foundational for the overall birth outcome of the child (Cutts 2015), targeting maternal health during this stage is essential to ensure best health and

birth outcomes for the child. By placing homeless women directly into the shelter system at detection of pregnancy, a multifaceted approach toward remedying the entire host of socioeconomic health impacts faced during homelessness can be implemented in an all-encompassing way. This would allow the mother to be able to focus on her health and wellness during this gestational period in a way that she would be otherwise unable.

### **Birth Doula as Supplemental Support in Gestational Shelter**

Since gestational shelter and health support can be quite expensive, and the number of resources devoted to homelessness in the U.S. are limited, I began to consider the practicality of providing affordable healthcare to women. Birth doulas are alternatives to classic models of pre-natal care, where a woman is matched with a doula who assists in her holistic healthcare during the periods of gestation. This typically includes childbirth education classes, covering vitamins, nutrition, breast feeding, smoking, alcohol and drug use cessation, neonatal care and maternal health along with communication throughout the gestational period to provide social support. One study found that doula-assisted mothers were 4 times less likely to have a child with low birth weight, half as likely to have a birthing complication, and more likely to initiate breast feeding (Gruber & Cupito 2013). The authors cited communication and health education as two of the reasons for these improved outcomes, and additionally found that the effect of a doula were even more significant for the socially disadvantaged.

Another study published in 2013 specifically looked at the overall costs of Doulas for Medicaid recipients, who currently do not cover their practice but tend to cover the majority of child birthing costs (Kozhimannil 2013). They highlight the decreased prevalence of preterm births, birthing complications, and decreased use of caesarian section operations during

childbirth, all of which have extremely large costs associated with them. They additionally highlight that the money saved by Medicare by decreased prevalence of costly birthing procedures would far outweigh the low cost of providing reimbursement for birthing doulas through Doula Certification programs.

Incorporation of Doulas as a gestational support practitioner for homeless, pregnant women would prove to provide additional benefit to remedy the adverse birth outcomes typically experienced by this population. (Kozhimannil 2013, Cupito 2013). This could be incorporated into a shelter model which provides housing for women during their gestational period, which is also shown to improve health outcomes for recipients of this model. I propose that the demonstrated improved health in women in long-term housing would translate to the health of their child and consequently, birth outcomes which reflect that. Supportive doulas would be a low-cost option that can be afforded to several women at once within the shelter system to compound improved birth outcomes and maternal health.

### **Bringing the Model Together**

In my proposed model, at the end of the gestational and birth period there would be a transitional supportive period for the mother to physically recover and begin to re-join the workforce, similar to current models of transitional housing (Thompson 2004). One study found that the lack of social support and safety experienced on the streets further alienates the individual from re-assimilating with society. It is argued that this causes decreased willingness to persist in escaping cycles of poverty without an active support system. Respondents have cited feelings of loneliness and isolation to be primary factors for decreased motivation to seek pathways out of poverty (Thompson 2004). By providing a following transitional housing model

to support the women who have just given birth, a support network would be established which could effectively increase willingness and motivation to re-assimilate. The same study found that large life events, such as having a child, can be a huge factor in increasing motivation to successfully exit homelessness (Thompson 2004). This support network combined with resources, increased health, and transitional housing designed to assist with pathways out of poverty could prove to be a novel intervention to remedy problems of adverse maternal and fetal health frequently seen in the homeless population. This may also then have a secondary benefit of helping to exit the cycle of homelessness, which would have benefits for the mother and her child.

### **Legal Precedent**

International consideration of *women's rights as human rights* sets a legal and global precedent for establishment of institutions which could help ensure access to safe pregnancy, health, and shelter for all women. CEDAW is the *Convention on the Elimination of all Forms of Discrimination against Women* (Reilly 2013) which met in 1979 as an extension of the United Nation's General Assembly to help affirm gender-specific understanding of the need to redress the effects of sex-based discrimination or maternity-based protections. This document includes considerations for "marriage and family life" (Article 16), "access to healthcare and family planning" (Article 12) and "financial services" (Article 13) and comprehensively addresses the scope of women's rights within political, cultural, civil, economic, and social frameworks. Although this document has been ratified by 185 countries, the United States remains to be the only country in the Western Hemisphere and only industrialized democracy that has not ratified this treaty (Reilly 2009).

Although the United States provides limited support and recognition for social, cultural, and economic rights (which include rights to shelter, food, and health) the United Nations has set a precedent for these forms of protections (Reilly 2009). Additionally, the CEDAW affirms that these are fundamentally gender-based issues which should be given special attention and protection under human rights law. By understanding women's rights as human rights, we can by extension understand that reproductive rights are also human rights in their disproportionate impact and disparity for certain people-groups. That is to say that women (and especially women experiencing homelessness) experience greater hardship in terms of their reproductive autonomy, and more often have their reproductive rights threatened. I argue that by extension, not providing adequate housing, shelter, and prenatal care for homeless women is a human rights abuse based on international legal precedent set forth by the United Nations.

## **Conclusion**

My novel intervention would likely be highly beneficial in reducing the adverse birth outcomes in the homeless population and has not yet been studied or researched. The benefits of such programs can only be left to speculation at this point, as there is a stunning lack of housing programs for pregnant women currently, and no formal studies have been done to therefore illustrate direct improvement on birth outcomes and childhood mortality. The steps from here would include implementation and incorporation, likely into an existing or similar housing model for women. Currently there are some housing models for homeless women though many are particular to women with children, which is outside of the critical window for intervention (Cutts 2015). Many support structures in place for pregnant women in poverty come with stipulations and coercion into giving their child up for adoption (OC 2004). No current

interventions for this group of women include Doula or midwifery support during the gestational period. The benefits of this shelter model and possible financial savings for the healthcare system would need to be documented and researched. If significantly successful in improving maternal and fetal health, this model could be implemented nationally under grant and donor funding, as current shelter models tend to be. This could be at a net benefit to society financially, with less reliance and funding on government healthcare funding for larger healthcare problems and foreseeably higher acuity illnesses, which put higher financial burden on emergency resources (Culhane 2008).

This intervention is largely a thought project stemming from the need to think more *creatively and ambitiously* about problems surrounding health and healthcare in the United States, particularly for marginalized and disadvantaged groups such as the homeless. Their situation is highly unique and individual and takes careful attention to all the multifaceted aspects which contribute to overall health and wellness. Current research into causes of adverse birth outcomes primarily looks at physiological standards, such as lack of nutrition and healthcare access. This ignores many of the psychosocial and socioeconomic aspects to health which comprise the overall holistic experience of the individual. By addressing and taking these aspects into account for my intervention, I believe we can not only address adverse birth outcomes but the overarching factors which contribute to its prevalence in the first place, leading to comprehensive, effective, and long-term solutions to homeless health, and potentially eradicate the “homeless” from the equation by providing resources and support for pathways out of poverty by shelter staff.

## Bibliography

American College of Obstetricians and Gynecologists Committee Opinion No. 576. Health care for homeless women. *Obstet Gynecol.* 2013;122:936–940.

Angela M. Cheung and Stephen W. Hwang. Risk of death among homeless women: a cohort study and review of the literature, *Canadian Medical Association.* 2004;8:1243-1247.  
DOI: <https://doi.org/10.1503/cmaj.1031167>

Baum, A. S., & Burnes, D. W. (1993). *A nation in denial: The truth about homelessness.* Boulder, CO, US: Westview Press.

Culhane, D. *The Cost of Homelessness: A Perspective from the United States.* *European Journal of Homelessness.* 2008: 97-114.

Cutts DB, Coleman S, & Black MM, et al. Homelessness during pregnancy: a unique, time-dependent risk factor of birth outcomes. *Matern Child Health J.* 2015;19:1276–1283.

Deborah Finfgeld-Connett (2010) *Becoming Homeless, Being Homeless, and Resolving Homelessness Among Women,* *Issues in Mental Health Nursing,* 31:7, 461-469, DOI: 10.3109/01612840903586404

Epel E, Bandura A, Zimbardo P. Escaping Homelessness: The Influences of Self-Efficacy and Time Perspective on Coping With Homelessness. *Journal of Applied Social Psychology*. 2006;29, 579-596.

Gavin AR. Mediators of adverse birth outcomes among socially disadvantaged women. *J Women's health (Larchmont, NY 2002)*. 2012; 21(6): 634–642.

Gruber, K. Cupito, S. Impact of Doulas on Healthy Birth Outcomes. *Journal of Perinatal Education*. 2013; 22(1): 49-58.

Kennedy S, Grewal M, Roberts EM, et al. A qualitative study of pregnancy intention and the use of contraception among homeless women with children. *J Health Care Poor Underserved*. 2014;25:757–770.

Kozhimannil, K. Hardeman, R. Doula Care, Birth Outcomes, and Costs Among Medicaid Beneficiaries. *American Journal of Public Health*. 2013; 103(4): 113-121.

Malos E, Hague G. Women, housing, homelessness and domestic violence, Domestic Violence Research Group. 1997;20:397-409.

Nkansah-Amankra S, Luchok K, Hussey J, & Watkins K. Effects of Maternal Stress on Low Birth Weight and Preterm Birth Outcomes Across Neighborhoods of South Carolina, 2000–2003. *Maternal and Child Health*. 2003; 14(2): 215-226

Nyamathi, A.M., Leake, B. & Gelberg, L. Sheltered versus nonsheltered homeless women, J GEN INTERN MED (2000) 15: 565. <https://doi.org/10.1046/j.1525-1497.2000.07007.x>

Origins Canada. Common Coercion Tactics Used on Unwed Mothers. Baby Scoop Era Research Initiative. 2004. Web.

Richards R, Merrill RM, Baksh L. Health behaviors and infant health outcomes in homeless pregnant women in the United States. Pediatrics. 2011; 128(3): 438–446.

Reilly, Niamh. Women's Human Rights. Cambridge UK: Polity, 2009.

S.J. Thompson, D.E. Pollio, K. Eyrych, E. Bradbury, C.S. North Successfully exiting homelessness: Experiences of formerly homeless mentally ill individuals. Evaluation and Program Planning, 27 (2004), pp. 423-431, 10.1016/j.evalprogplan.2004.07.005

Schnazer, Bella. Dominguez, B. Homelessness, Health Status, and Health Care Use. American Journal of Public Health. 2007; 97(3): 464-469.

Teruya, C. Longshore, D. Health and Health Care Disparities Among Homeless Women. Women & Health. 2010; 50(8): 719-736.

Weinred, L. Perloff J. Factors Associated With Health Service Utilization Patterns in Low-

Income Women. *Journal of Healthcare for the Poor and Underserved*. 2006; 17(1): 180-199.

Yang J, Carmichael M, Canfield M, Song J, & Shaw M. Socioeconomic Status in Relation to Selected Birth Defects in a Large Multicentered US Case-Control Study. *American Journal of Epidemiology*. 2008; 167(2): 145-154.