

WHAT MAKES A MOTHER? PREDICTORS OF (NON)MOTHERHOOD AMONG  
WOMEN SERVING LIFE SENTENCES

by

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## ABSTRACT

Being a non-mother is a unique experience for women with long sentences, especially life sentences, because it is likely that they will not be able to have children once released. What factors may have prevented them from having children before their incarceration, though? This quantitative study uses crosstabulations and binary logistic regression to determine what factors predict motherhood among a sample of 214 life-sentenced women in Georgia. The findings suggest that age at incarceration and marital status are the most important predictors of whether a woman serving a life sentence is a mother or non-mother. Women who were under 18 when first incarcerated and women who had never been married were less likely to have living children, our proxy for motherhood, compared to women who were older than 18 when first incarcerated and had ever been married. In addition, many of the non-mothers in a follow-up survey noted that their age at incarceration was a factor in them not having children, but only a few women felt that not being married was a reason they did not have children. Overall, while this research does contribute to the small amount of research on non-mothers and women serving life sentences, further research needs to look at the experiences of non-mothers serving life sentences. Questions remain as to how their experiences both inside prison and after their release are different than mothers. In addition, a deeper understanding of the experiences and emotions of non-mothers serving life sentences is missing from the literature.

## TABLE OF CONTENTS

LIST OF TABLES .....	iv
INTRODUCTION.....	1
LITERATURE REVIEW.....	2
Voluntary and Involuntary Childlessness.....	2
Being a Mother in Prison.....	5
Non-Mothers in Prison.....	9
Mothers and Non-Mothers Serving Life Sentences.....	12
METHODOLOGY.....	14
Data Source.....	14
Description of Sample.....	15
Variables.....	16
Analysis.....	18
RESULTS.....	19
Descriptive Statistics of Selected Variables.....	19
Bivariate Analyses.....	20
Binary Logistic Regression.....	23
DISCUSSION.....	28
CONCLUSION.....	33
REFERENCES.....	35
APPENDICES.....	40
Appendix A: Tables.....	41
Appendix B: Institutional Review Board Approval.....	48

LIST OF TABLES

Table 1: Demographics of The Sample..... 42

Table 2: Results of Bivariate Analyses Between Selected Variables and Having Any  
Living Children..... 43

Table 3a: Results of Binary Logistic Regression Predicting Motherhood Among Women  
Serving Life Sentences, Model 1-5 ..... 44

Table 3b: Results of Binary Logistic Regression Predicting Motherhood Among Women  
Serving Life Sentences, Models 6 and 7..... 45

Table 4: Results of Bivariate Analyses Between Selected Variables and Having Any  
Living Children by Age at Incarceration ..... 46

Table 5: Results of Bivariate Analyses Between Selected Variables and Having Any  
Living Children by Marital Status ..... 47

## INTRODUCTION

As the number of women in prison began to rise, an increasing amount of research began to focus on who these women were, what brought them to prison, and how they experienced prison (Belknap 2006; Dodge and Pogrebin 2001; Greenfield and Snell 1999; Huggins, Capeheart, and Newman 2006; Jones and Schmid 2003; Salisbury and Van Voorhis 2009; Sharp and Eriksen 2003; Solinger et al. 2010; Young and Reviere 2006; Webb and Hubbard 2006). One group of women in prison that has received a bulk of research attention is mothers. According to the most recent statistics available, in 2007, there were around 65,600 mothers with minor children in state and federal prisons, a population that grew 122% between 1991 and 2007 (Glaze and Maruschak 2008:2). Including women with both minor and adult children, it is estimated that anywhere from 60 to 80% of women in prison are mothers (Young and Reviere 2006:109). However, non-mothers<sup>1</sup> in prison are a group that has largely been ignored by researchers. Though they make up a smaller number of women in prison than mothers, non-mothers have a unique story that needs to be told, and they cannot continue to be ignored by researchers.

Another small group that has largely been ignored by researchers is women serving long sentences, specifically life sentences. Women serving life sentences are an important subgroup of the prison population, though, and since they serve longer sentences than the average prisoner, it is important to also look at their unique experiences as well. Though it

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<sup>1</sup>Here the term *non-mother* means a woman who does not have children. The researcher recognizes that the term *non-mother* has a negative connotation and implies that being a mother is the norm. However, the terminology of *mother* and *non-mother* is used here because they are brief and their contrast is easily understood.

varies between states, the number of years that women serving life sentences have to serve of their sentence before they are even eligible for parole has increased over time (Nellis 2013:14). For example, according to the Georgia State Board of Pardons and Paroles (n.d.), “parole-eligible offenders serving a life sentence for a serious violent felony...committed prior to July 1, 2006, are initially considered for parole after serving 14 years.” However, those who committed a serious violent felony on or after July 1, 2006 will have to serve at least 30 years before they are considered for parole (Georgia State Board of Pardons and Paroles n.d.). Therefore, it is most likely that non-mothers who are serving a life sentence in a state like Georgia will be at the end of their childbearing years when they are released.

But what factors may have prevented these women from having children before incarceration? As more women are incarcerated and sentences become longer, it is even more important to answer this question. The purpose of this research is to explore this question and bring attention to a forgotten group of women in prison. The contributions of this research include providing an understanding of the factors that may have contributed to women serving life sentences not having children before incarceration, the motherhood decisions of women serving life sentences, and the impact of punitive criminal justice policies on women’s ability to be mothers.

## LITERATURE REVIEW

### *Voluntary and Involuntary Childlessness*

According to the Center for Disease Control and Prevention (CDC), between 2011 and 2015, about 45% of women age 15-44 were childless (CDC 2018). There are many different reasons that women may not have any children, but these reasons are largely

broken down into three groups: temporary childlessness, voluntary childlessness, and involuntary childlessness. Temporary childlessness is when a woman does not currently have children but expects to have children in the future, involuntary childlessness is when a woman cannot have children often due to biomedical reasons, but situational factors may also contribute, and voluntary childlessness is when a woman consciously chooses not to have any children (Kelly 2009; McQuillan et al. 2012).

Since being a mother is often considered an important identity for a woman in our society, non-mothers are often looked down on whether they are involuntarily childless or voluntarily childless. However, women who are voluntarily childless are often viewed more negatively because it was their own choice not to have children, and this choice is often considered selfish, unfeminine, deviant, and something that the woman will later regret (Gillespie 2000; Gillespie 2003; Kelly 2009; Lampman and Dowling-Guyer 1995; McQuillan et al. 2012). For example, based on interviews with 33 voluntarily childless women, Gillespie found that other people often disbelieved that these women were voluntarily choosing not to have children. Since they could not believe a woman would choose not to have children, other people assumed that these women were infertile, or they wrote them off as “hard, ruthless, unfeminine, childless ‘career woman’” (Gillespie 2000:227-228). Some people also disregarded these women’s choice not to have children, believing that they would change their mind after they matured or when they “met the right man”. They also felt that the women who chose not have children would later regret that decision (Gillespie 2000:228-229). Their decision not to have children was also seen as deviant by other people because it was seen as “strange” and “selfish”, a decision that

goes against the feminine ideal (Gillespie 2000:229-230). Gillespie also found that some voluntarily childless women associated motherhood with a loss of identity and time instead of following along with the dominant idea that motherhood makes a woman whole and fulfils their lives (Gillespie 2003:132). On the other hand, by not having children they had “enhanced freedom, increased autonomy, wider opportunities, improved financial position, and closer intimate relationships” (Gillespie 2003:129).

Examining literature on voluntarily childless women, Kelly (2009) found some predictors of being childless. Age was an important predictor with younger women being more likely to be childless. Though this is not necessarily because they do not want children; they may just have not had any yet. As for voluntarily choosing to be childless, the age when women chose to be childless varied with some women being young and others being older (Kelly 2009:160). Being unmarried was also a predictor of childlessness and a common reason people reported they were childless. Looking at married women who chose to be childless, many stated it was a joint decision with their partner, though women were often the “primary decision maker” (Kelly 2009:161). As for socioeconomic status, some studies found that women with higher education and higher income were more likely to be voluntarily childless, but other studies found that lacking financial resources was a reason for not having children due to the increased costs of caring for children (Kelly 2009:162).

Looking at involuntary childlessness, it appears to be a somewhat different experience than voluntary childlessness, though in both cases the women are viewed as “others” for not having any children (Letherby 2002:10). Infertility is often seen as a “life-crisis” both by the women experiencing it and by others (Bell 2013:289; Lampman And



Dowling-Guyer 1995:220). Since involuntarily childless women do not get to choose whether or not they have children, they are less likely to be seen as selfish. Instead, involuntarily childless women are often stereotyped as “desperate and unfulfilled” and given pity by others (Letherby 2002:10), though Lampman and Dowling-Guyer (1995:220) found that infertile couples may be “seen as more committed to family life because of their motivation to conceive.” Overall, though, this stereotype of involuntarily childless women as “desperate and unfulfilled” is stigmatizing and wrong. Involuntarily childless women do experience negative feelings such as despair, loss, or even failure, but their experiences are more complex than simply being desperate for a child (Bell 2013; Letherby 2002; Ulrich and Weatherall 2000).

### *Being A Mother in Prison*

Women in prison also face the societal pressures of motherhood, and although they are not stigmatized as “childless,” they do face stigma of being a mother in prison. They are often characterized as “bad mothers” for endangering their children, putting their wants and desires before their children, and abandoning their children. A tremendous amount of research has focused on what it is like to be a mother in prison, and this research gives us an idea of how being a non-mother in prison may come with both costs and benefits. One negative aspect of being a mother while in prison is dealing with separation from children. Mothers often experience negative emotions such as stress, depression, grief, and guilt related to leaving their children behind to be cared for by others (Young and Reviere 2006:118). They then have to find new ways to cope with this separation (Celinska and Seigel 2010).

Based on interviews with 37 incarcerated mothers and 37 women awaiting trial from home, Celinska and Seigel (2010:4523) identified 7 different ways in which women coped with actual or pending separation from their children. For example, engaging in “good mother” behaviors from inside prison such as worrying over the child’s care, making decisions related to the child’s future, and keeping in contact with the child were some ways these women coped with the separation from their children (Celinska and Seigel 2010:458, 461). Mothers also tried to separate themselves from their prison identity since it was incompatible with being a “good mother”, and some women even engaged in self-blaming, which may not be as detrimental a coping strategy as originally thought if it is coupled with “opportunities for self-transformation” (Celinska and Seigel 2010:465).

Mothers in prison also have to find new ways to construct their identity as a mother (Aiello & McQueeney 2016; Couvrette, Brochu, & Plourde 2016; Enos 2001). For example, Couvrette, Brochu, & Plourde (2016) found in their interviews with substance-abusing, incarcerated mothers that they had created a new identity of the “deviant good mother.” Since their substance using behavior did not fall in line with the traditional idea of a “good mother”, they constructed the identity of the “deviant good mother” to justify their behavior (Couvrette, Brochu, & Plourde 2016:300). While most of the women felt that “good” mothers did not use drugs, for other women, using drugs or alcohol was not seen as incompatible with being a “good” mother. Some even reported that their substance use made them more relaxed and open to their children (Couvrette, Brochu, & Plourde 2016:301).

Mothers in prison also have to worry about arranging care of their children and keeping in contact with their children. About 64% of mother lived with their children a month before arrest or just prior to incarceration, and they were more likely to be the primary caretaker of their children before incarceration than incarcerated fathers (Glaze and Maruschak 2008:4-5). Once incarcerated, they must arrange care for their children. Women in prison most often sent their children to live with the child's grandparents (Enos 2001; Mignon and Ransford 2012). However, Enos (2001) found that there were racial differences in determining caregivers with minority women being more likely to send their children to live with grandparents or other relatives and white women being more likely to send their children to live with the child's father or be put in foster care. Many mothers in prison reported worrying about the suitability of caregivers and about the caregiver's hostility towards them (Enos 2001; Mignon and Ransford 2012). If the caregivers are hostile towards the mother, they may discourage contact between the mother and her children. This can be especially concerning since there are three main ways to keep in contact with children (letters, telephone calls, or visits), and there are already problems with each type of contact without caregiver hostility.

Since women's prisons are often located long distance away from women's homes, it often requires a lot of travel, and caregivers may not be able to afford the travel expenses or meet the prison's schedule for visits (Young and Reviere 2006:124-125). Barriers to telephone calls with children include the high price of collect calls, which caregivers may not be able to afford (Young and Reviere 2006:133). Finally, with letters, some younger children may not be able to write letters, and even many children that can write letters still

need the caregiver to provide postage and mail it for them (Young and Reviere 2006:134-135). Migson and Ransford (2012) found that mail was the most common form of communication between mothers and their children with 79% out of the 80% who had some form of contact with children reporting sending letters; 42% exchanged letters once a week; 63% talked with children on the telephone, with 36% reporting daily calls. Visits were the least common form of contact with less than half the sample reporting receiving visits from children (Migson and Ransford 2012:80-81).

Incarcerated mothers also have to worry about losing custody of their children, especially if they are serving long sentences. The Adoption and Safe Families Act allows states to start termination of parental rights proceedings if the children have been in foster care for 15 of the last 22 months unless there is a compelling reason that it would be against the best interest of the child, if the state had not provided necessary services for reunification, or if the child was in the care of a relative (Young and Reviere 2006:111-112). Lee, Genty, and Laver (2010:81) looked over termination of parental rights case files involving incarcerated parents and found that “TPR was granted in 81.5% of the cases involving parents incarcerated due to drug-related offenses” and “TPR was granted in 92.9% of the cases in which the mother was incarcerated”. In addition to losing custody of their children, reunification with their children is another worry for incarcerated mothers. Once released, mothers often have to worry about finding suitable housing and a job that can support their children if they want to reunite with them; this can be hard because of their criminal history (Young and Reviere 2006:156).

However, there are also positive aspects of being a mother while in prison. If they have a good relationship with their children, then mothers may be able to receive financial and emotional support from them while in prison. When they are released, mothers may be able to live with their adult children instead of having to live alone. In addition, children may help keep women from recidivating. Using survey interviews with 100 formerly incarcerated women in New York, Michalsen (2011) explored what kept women from recidivating, specifically looking at if the mother-child relationship influenced women's desistance from crime. Overall, she found that motherhood was important in women's desistance from crime, as well as other variables such as bad prison experiences, religion, and a desire to "do good" and focus on bettering themselves (Michalsen 2011:358-359). The mothers in the study spoke very positively about their children, and over a quarter of respondents reported that their children did have a role in their desistance from crime. They also described the love they had for their children and the mutual love their children had for them. Their children helped support them through reentry and showed them "unconditional love" during a time when they were often rejected by others (Michalsen 2011:359-360). It is important to note that mothering was also found to be a stressor. When mothers were released, they often had to find housing and a job before they could reunite with their children, and even then, reunification and reacquainting with their children was a hard process (Michalsen 2011:361).

#### *Non-Mothers in Prison*

While non-mothers may not receive some of the same support that mothers do from their children, they also do not have to deal with financial or emotional strain that come

with the demands of motherhood. Looking at non-mothers regardless of their sentence, the amount of literature is extremely small. One study by Loper looked at the demographic differences between mothers and non-mothers, differences in their criminality, and differences in their prison adjustment (Loper 2006:85). Her sample consisted of 516 women incarcerated at a maximum-security prison. A “mother” was defined as a woman who had a child under 21 years old, and a “non-mothers” was defined as a woman who had never had children. About 70% of the sample were mothers and about 30% were non-mothers. She used surveys to conduct her research (Loper 2006:86). Overall, there was no significant difference between mothers and non-mothers on age, race, self-reported mental illness, official institutional misconduct, or prior convictions. However, there were statistically significant differences between mothers and non-mothers based on their length of sentence and type of crime. On average, non-mothers were more likely to have longer sentences than mothers. They were also more likely to have committed a violent offense while mothers were more likely to have committed a drug or property offense (Loper 2006:89).

A study by Michalsen and Flavin (2014) also looked at the characteristics of mothers and non-mothers and compared them to see how mothers and non-mothers were similar and different. They used data collected by the Women’s Prison Association in New York, and the sample consisted only of women who were not incarcerated at the time of the interview. Their sample consisted of 1,334 women. 9.6% were not mothers and 80.4% were mothers (Michalsen and Flavin 2014:334). There was a significant difference in age, race, ethnicity, marital status, education, mental health, alcohol use, crack cocaine use, type

of conviction, age when first in contact with police, age when first arrested, age when first in jail, and age when first in prison (Michalsen and Flavin 2014:336-339).

However, these results should be interpreted with caution because the researchers used an alpha level of  $p < .10$  instead of the standard  $p < .05$ . When looking at the results using the alpha level  $p < .05$ , only ethnicity, marital status, age, feeling sad for prolonged periods of time, alcohol use, type of offense, age when first in contact with police, age when first arrested, age when first in jail, and age when first in prison were statistically significant. Non-mothers were more likely to be non-Hispanic, younger than mothers, and single. They were also more likely to report feeling sad for a prolonged period of time, one of the indicators the researchers used for mental health. Finally, non-mothers were more likely to come in contact with police, get arrested, go to jail, and go to prison two years earlier than mothers (Michalsen and Flavin 2014:336-340). This was different from the findings in Loper's study where age, race, and mental health were not found to be statistically significant, so more research needs to be done to explain this variation.

Other research about non-mothers has focused on comparing mothers and non-mothers on non-demographic factors such as the types of crimes they commit (Barry, Johnson, Severson, and Postmus 2009), the effect of social supports on their substance use (Harp, Oser, and Leukefeld 2012), their sentence lengths (Cho and Tasca 2018), their suicide risk (Krüger, Priebe, Fritsch, and Mundt 2016), and their mental health and emotions (Fogel and Martin 1992; Roxburgh and Fitch 2014). For example, Roxburgh and Fitch (2014) looked at anger and distress among parents in prison. They not only compared mothers and fathers, but also mothers and non-mothers. Their regression analysis showed

that women, both mothers and non-mothers, were more likely to be depressed and angry than men, but mothers were angrier and more distressed than both non-mothers and fathers (Roxburgh and Fitch 2014:1404). Cho and Tasca (2018) examined the differences in sentence length between mothers and non-mothers. In their bivariate analysis, maternal status was a significant indicator of sentence length with mothers have shorter average sentences than non-mothers. However, when the regression analysis was performed, maternal status was no longer a significant predictor of sentence length (Cho and Tasca 2018:9).

#### *Mothers and Non-Mothers Serving Life Sentences*

Mothers and non-mothers serving life sentences are both similar and different from other mothers and non-mothers in prison. Like other incarcerated mothers, mothers serving life sentences also face the pains of separation from their children, but since they are serving a life sentence, it will be a long time before they will be reunited with their children, if ever. This can make it especially painful, and like other mothers, they may feel guilt and depression. For example, author and poet Erin George, a woman serving a 603-year sentence, noted that she was depressed and angry over the loss of contact with her children, even calling it a “soul killing loss” (Lempert 2016:10). In addition, for women serving life sentences who are pregnant when they are incarcerated, this separation can be especially hard to deal with because they will not get to be an active part of their child’s childhood.

For example, in her study of women serving life sentences in Michigan, Lempert (2016) writes about Crystal, a woman sentenced to life at 16 years old. Crystal was pregnant when she was imprisoned, and after she had the baby, he was immediately given



to her mother. Crystal stated that her son was “my world even though I’ve never been with him.” However, she also noted that she had not been able to do things that other incarcerated mothers had been able to do such as take her son to school, and she used to tell herself that she would “be home before he goes to school” or that she would “be home before he turns 10”. Later, she began to realize that she was serving a life sentence and may never get to go home. This was such a painful topic that Lempert noted that even during their interview Crystal was “shaken” (Lempert 2016:85-87).

Lempert (2016:23) also found that 22.2 % of the respondents in her study did not have children, and she noted that they considered this a “particularly acute and irredeemable loss of imprisonment.” She even wrote about a few non-mothers in her study. Lempert wrote that Ann, a woman who was sentenced to life as a juvenile, “has watched with interest as the children of her friends ‘grow up in the visitor’s room’” (Lempert 2016:86). However, this point is not expanded on, and there is no real discussion of Ann’s thoughts on not being a mother.

Lempert also discussed Bella, another woman who never had children and who will be too old to have children when released. Bella became involved in a pseudofamily, assumed the role of “mother” and was able to have a “daughter”. She talked about her pseudo-daughter in a similar way that any other mother would, describing her as sweet but also stubborn. Bella’s real family even acknowledged Bella’s “daughter”. So even though Bella did not have children on the outside, she was still able to find a way to assume a mothering identity while in prison (Lempert 2016:200). Finally, Lempert discussed Candace, a woman who was sentenced in her mid-30s and childless. Candace was now too

old to have children, though she had wanted children before her incarceration. She was emotional talking about it, but she used her faith in God to comfort her (Lempert 2016:228). What is missing from the literature on women serving life sentences is an examination of the predictors of (non)motherhood for this group and an understanding of the experiences and expectations of non-mothers who may have not options but to remain childless.

## METHODOLOGY

### *Data Sources*

To examine the predictors of (non)motherhood among life sentenced women, I relied on secondary data for the analysis. The data was collected by a research team between January and June 2010 at three women's prisons in a southeastern state. The data was collected using a survey. The survey had open-ended and close-ended questions and consisted of 42 questions for all of the participants and extra questions for participants with abuse histories. The unit of analysis was at the individual level. There were 303 women serving life sentences in that state in 2010, and the sample consisted of 214 women, a 71% response rate. The sample was representative of the larger population of life-sentenced women in that state.

A follow-up survey was then conducted by the same research team in June 2018 as part of a larger study about reentry. It was given to a subgroup of the original sample who had served at least 15 years of their sentence. A specific part of this subgroup that we followed-up with were women who did not have children, or non-mothers. Out of the 94 women who completed the survey, 27 women did not have living children, about 28 % of the sample. The follow-up survey had open-ended and close-ended questions. It consisted

of 44 questions for all the participants, and 5 questions specifically for non-mothers about why they did not have children, whether they were likely to have children after being released, how they felt their prison experience and reentry experience would compare to those of mothers, and what their thoughts and feelings were on being a mother.

### *Description of Sample*

Table 1 provides the demographics of this sample. The average current age of women in this sample was 41 years old with a range of ages from 19 to 78 years old at the time of the survey. The average age of the women when they were first incarcerated was 29 years old ( $SD = 11.3$ ). On average, the women in this sample had served nearly 12 years of their sentence. Looking at the racial composition of the sample, there was an even number of women who identified as black and women who identified as white (46.7% each). 4.2% of the women identified as Hispanic, 1.9% as other races, and 1 person (.5%) did not report their race. The majority of the women did not have a prior prison history (94.9%). Looking at their highest level of education, over one-third of the women (36%) reported having a high school education, 25.7% reported having some college education, and 10.7% reported having a college degree. About one-fourth of the sample (24.8%) had less than a high school education. Nearly half (49.9%) of the women had never been married, 24.3% had been divorced, 18.2% were widowed, and only 9.3% were currently married. Also, the majority of the women in the sample had some living family members: 68.7% had living parents, 86.4% had living siblings, 69.6% had living children, and 34.6% had living grandchildren.

### *Variables*

The dependent variable for this analysis was whether or not the respondent was a mother. This was determined by whether or not the respondent reported having any living children. The survey question was “Do you have any living children?”, and the responses were binary coded as 0 = “No” and 1 = “Yes”. However, using the question of whether respondents have any *living* children does present a problem because it was hard to separate women who have had a child that died from those who have never had children. Due to the limits of the available survey questions, though, this was the best measure available. Though motherhood has been used as an independent variable in other studies, it is used as a dependent variable here because I wanted to explain motherhood and see what factors explain why a woman serving a life sentence was or was not a mother before her incarceration.

The independent variables consisted of four groups: age at incarceration, abuse history, physical/mental health, and family satisfaction. There was also a group of control variables. First, there was the independent variable of age at incarceration. Age at incarceration measures the age that the respondents were when they were incarcerated for their life sentence. It was a continuous, scale variable, but for this analysis, it was recoded into three categories: Less than 18 years old when incarcerated, 18 to 30 years old when incarcerated, and over 30 years old when incarcerated. It was recoded into categories in order to see the difference between those who were incarcerated when they were juveniles, those who were incarcerated at the average age, and those who were older than average when they were incarcerated.

The abuse variables included whether the respondent had ever been sexually abused either as a child or as an adult, whether the respondent had ever been physically abused as a child or as an adult, and whether the respondent had ever been emotionally abused as a child or as an adult. All three variables were nominal and binary coded as 0 = “No” and 1 = “Yes”. The next independent variable measured the respondent’s satisfaction with her family relationships. It was an ordinal variable with three answers ranging from not very satisfied with family relationships to very satisfied with family relationships. It was coded as 1 = “Not Very Satisfied”, 2 = “Fairly Satisfied”, and 3 = “Very Satisfied”.

The last set of independent variables was related to the respondent’s health. One variable was related to the respondent’s mental health. It measured whether the respondent had ever received treatment for mental health problems. It was a binary coded, nominal variable where 0 = “No” and 1 = “Yes”. The other variable was related to the respondent’s physical health. It was a continuous scale variable that measured the number of health problems that the respondent had.

Finally, the respondent’s race and marital status were selected for control variables. The race variable was coded as 1 = “Black”, 2 = “White”, 3 = “Hispanic”, 4 = “Native American”, 5 = “Other”. Race was recoded into two categories, Black and Non-Black (which included white, Hispanic and other). Marital status was originally coded into six categories: 0 = “Never Married”, 1 = “Married”, 2 = “Divorced”, 3 = “Widowed”, 4 = “Separated”, and 5 = “Cohabiting with a Partner”. It was then recoded into two categories, “Never Married” and “Ever Married”. “Cohabiting with a Partner” was included in the “Ever Married” category. This was done because there was more interest

in seeing if ever having been married was a predictor of motherhood rather than the person's current marital status.

### *Analysis*

Frequencies were observed for all the variables to check for missing cases or outliers. For number of health problems, a scale variable, the mean and standard deviation were also observed. Crosstabulations and chi-square analyses were performed between the dependent variable of whether the respondent had any living children and all the categorical independent variables. A t-test was conducted between the dependent variable and number of health problems since number of health problems is a scale variable and the dependent variable only has two groups.

After the bivariate analyses were conducted, a binary logistic regression was performed. Model 1 consisted only of age at incarceration, Model 2 consisted of the three abuse variables, Model 3 consisted only of family satisfaction, Model 4 consisted of the health variables, and Model 5 consisted of the control variables. Model 6 consisted of all the independent variables together. Model 7 was the final, full model, and it consisted of all the key independent variables and the control variables. The file was then split into two groups based on whether the respondent was under 18 when first incarcerated or 18 and over. The binary logistic regression was then performed again with the full model, but the age at incarceration variable was removed. Next, the file was split based on whether the respondent had never been married or ever been married, and the regression was performed again with the full model, but the marital status variable was removed.

The non-mother specific questions on the follow-up survey were also examined. Frequencies were run on the close-ended questions, and the responses to the open-ended questions were examined and incorporated throughout the analyses to illustrate and add meaning to the statistical findings.

## RESULTS

### *Descriptive Statistics of Selected Variables*

Out of the 214 women in this sample, 29% did not have living children and 69.6% had living children. When age at incarceration was recoded into categories, 11.2% of women were under 18 at the time of their incarceration, 48.6% were between 18 and 30 at the time of their incarceration, and 39.3% were over 30 at the time of their incarceration.

Over 60% of the women lifers had been sexually abused either as a child or an adult, with similar percentages reporting being physically abused as either a child or an adult. A majority of women (73.8%) reported being emotionally abused either as a child or an adult. When asked how satisfied they were with their family relationships, 30.8% of the women reported being not very satisfied, 36% reported being fairly satisfied, and 32.2% reported being very satisfied.

The majority of cases (64.5%) had been treated for a mental health problem. For the number of health problems, 61.7% of the cases had two or less health problems. When marriage was recoded into two categories, 43.5% of the women had never been married, and 55.6% had been married. Finally, 46.7% of the women identified as black, 46.7% as white, 4.2% as Hispanic, and 1.9% as other races.

*Bivariate Analyses*

Bivariate analyses were also performed between the dependent variable of having any living children and all the independent and control variables. For all the categorical independent variables, crosstabulations and chi-square analysis were used. There were only two independent variables that were found to have a statistically significant association with whether or not the respondent had any living children. The relationship between age at incarceration and having any living children was statistically significant ( $X^2 = 36.663, p = .000$ ). For example, 75% of the women who were under 18 years old when they were incarcerated reported not having any living children compared to 32.4% of women who were 18 – 30 years old when they were first incarcerated and 12% of women who were over 30 years old when they were incarcerated. In addition, 88% of women who were over 30 when they were incarcerated had living children. The majority of women who were 18 – 30 years old when they were incarcerated (67.6%) also had living children. Women who were under 18 when they were incarcerated were least likely to report having living children with only 25% reporting that they had living children. With a Cramer's V value of .419 and a Lambda value of .095, this is a moderate, positive relationship.

The relationship between marital status and having any living children was also statistically significant ( $X^2 = 30.292, p = .000$ ). More than 48% of women who had never been married had no living children compared to only 13.7% of women who had ever been married. Likewise, 83.6% of women who had ever been married had living children while 51.6% of women who had never been married reported having living children. This



association was also moderate and positive with a Phi value of .380 and a Lambda value of .188.

Sexual abuse ( $X^2 = .031, p = .860$ ), physical abuse ( $X^2 = .597, p = .440$ ), and emotional abuse ( $X^2 = 2.791, p = .095$ ) were not statistically significant in their association with motherhood. There was roughly a 1% difference between those who had never been sexually abused and those who had been sexually abused when it came to not having living children (30.4% and 29.2, respectively) or having living children (69.6% and 70.8%, respectively). The difference in not having living children or having living children between those who had never been physically abused and those who had been physically abused was slightly larger, but it was not statistically significant: 32.9% of respondents who had never been physically abused and 27.8% of those who had been physically abused did not have living children; and 67.1% of those who had never been physically abused and 72.2% of those who had been physically abused had living children. When looking at emotional abuse, those who had been emotionally abused were slightly more likely to have living children (73.7%) than those who had never been emotionally abused (61.5%). Women who had never been emotionally abused were somewhat more likely to not have living children (38.5%) compared to those who had been emotionally abused (26.3%). However, these differences were not statistically significant.

Satisfaction with family relationships also did not have a statistically significant relationship with having or not having living children ( $X^2 = 4.045, p = .132$ ). More specifically, 25.8% of the women that were not very satisfied with their family relationships, 36.8% of the women who were fairly satisfied with their family relationships,

and 22.4% of those who were very satisfied with their family relationships reported having no living children. 74.2% of those who were not very satisfied with their family relationships, 63.2% of those who were fairly satisfied, and 77.6% of those who were very satisfied reported having living children.

Looking at the mental health variable, there was about a 10% difference in not having living children and having living children between those who had never been treated for a mental health problem and those who had been treated for a mental health problem. More than 23% of those who had never been treated for a mental health problem and 33.1% of those who had been treated for a mental health problem reported not having living children compared with 77% of those who had never been treated for a mental health problem and 66.9% of those who had been treated for a mental health problem who reported having living children. However, this relationship was not statistically significant ( $X^2 = 2.357, p = .125$ ). Race was also not statistically significant ( $X^2 = .000, p = .984$ ). There was an almost equal distribution of those who had and did not have living children among the women who identified as black and the women who identified as non-black (70.4% of black women and 70.5% of non-black women had living children; 29.6% of black women and 29.5% of non-black women did not have living children.) All of these independent and control variables had a  $p$  value that was over .05, a Phi or Cramer's  $V$  value around .1 or under, and a Lambda value under .1. This shows that their relationships were very weak and not statistically significant at the acceptable alpha level of  $p < .05$ .

The only scale variable was the number of health problems the respondent had, so a t-test was run to compare the mean number of health problems between those who had

living children and those who did not have living children. The mean number of health problems was 1.79 ( $SD = 1.54$ ) among those who did not have living children and 2.74 ( $SD = 2.42$ ) among those who had living children. Since the results of the Levene's test were statistically significant, equal variance could not be assumed. With equal variance not assumed, there was found to be a statistically significant difference in the number of health problems among those who did not have living children and those who did have living children ( $t = -3.408$ ,  $df = 174.761$ ,  $p = .001$ ). See Table 2 for the results of all the bivariate analyses.

#### *Binary Logistic Regression*

Binary logistic regression was performed to see if the independent variables might be significant predictors of having living children, our proxy for motherhood. Model 1 consisted only of the age at incarceration variable. Model 1 did have statistically significant predicting power ( $X^2 = 33.379$ ,  $p = .000$ ). With a -2 Log likelihood of 213.787, it was a somewhat good fit for the data. With a Nagelkerke  $R^2$  of .215, age at incarceration by itself explained about 21.5% of the variance between having living children and not having living children. Using under 18 years old as the references group, it was found that women who were between 18 and 30 when first incarcerated were about 5.7 times more likely to have living children than women who were under 18 when first incarcerated ( $B = 1.750$ ,  $\text{Exp}(B) = 5.753$ ,  $p = .001$ ). With a B value of 3.002 and an odds ratio of 20.117, women who were 31 and over when first incarcerated were about 20 times more likely to have children than women who were under 18 when first incarcerated. This relationship was statistically significant ( $p = .000$ ).

Model 2 ( $X^2 = 2.818, p = .420$ ) and Model 3 ( $X^2 = 4.001, p = .135$ ) did not have statistically significant prediction power, meaning that the abuse variables and family satisfaction variable did not predict an occurrence better than chance. With a Nagelkerke  $R^2$  of .019 and .027, respectively, Model 2 only explained about 2% of the variance in the dependent variable, and Model 3 only explained about 2.7% of the variance.

Model 4, the model with the physical and mental health variables, was statistically significant ( $X^2 = 10.531, p = .005$ ). However, when looking at the variables, individually, only the number of health problems variable was statistically significant at the  $p < .05$  level with a  $p$  value of .008. With a  $B$  value of .225 and an odds ratio of 1.252, women who had more health problems were slightly more likely to have living children. Overall, though, the whole model only explained about 7% of the variance in the dependent variable with a Nagelkerke  $R^2$  of .070, and with a -2 Log likelihood of 244.314, it was not as good a fit for the data as the other statistically significant models.

The control variable only model was Model 5, and it was also statistically significant and a relatively good fit for the data ( $X^2 = 33.567, p = .000, -2$  Log likelihood = 218.828). Out of the two control variables, the relationship between marital status and having living children was statistically significant ( $p = .000$ ), but the relationship between race and having living children was not ( $p = .084$ ). With a  $B$  value of 1.961 and an odds ratio of 7.109, women who had ever been married were about 7 times more likely to have children than women who had never been married.

Model 6 consisted of all the key independent variables. Overall, Model 6 did have statistically significant predicting power ( $X^2 = 41.446, p = .000$ ). With a -2 log likelihood

of 197.599, this model was a better fit for the data than the previous models where the independent variables separated. With a Nagelkerke  $R^2$  of .268, it explained almost 27 % of the variance in the dependent variable. Looking at the variables individually though, only age at incarceration was statistically significant, though it's B value and odds ratios had lowered with the addition of the other independent variables. The less than 18 years old at incarceration group was still used as the reference group, and like Model 1, the results in this model show that women who were over 18 when they were incarcerated are more likely to be mothers than people who were under 18 when they were incarcerated. With a B value of 1.575 and an odds ratio of 4.830, women who were 18 – 30 years old when they were incarcerated were found to be about 4.8 times more likely to have living children than women who were under 18 when they were incarcerated. This relationship was statistically significant ( $p = .004$ ). With a B value of 2.840 and an odds ratio of 17.116, women who were over 30 when they were incarcerated were about 17 times more likely to have living children than women who were under 18 when they were incarcerated. This relationship was also statistically significant ( $p = .000$ ). None of the other variables, nor the constant, were statistically significant.

Model 7 was the fully specified model with both the independent variables and the control variables. Overall, Model 7 also had statistically significant predicting power ( $X^2 = 49.271$ ,  $p = .000$ ). It was an even better fit for the data than Model 6 with a -2 log likelihood of 189.774. With a Nagelkerke  $R^2$  of .313, it explained about 31% of the variance in the dependent variable. Looking at the variables individually though, only age at incarceration and marital status were statistically significant. With the addition of the

control variables, age at incarceration became slightly less powerful. However, the results still show that women who were over 18 when they were incarcerated are more likely to be mothers than women who were under 18 when they were incarcerated. With a B value of 1.191 and an odds ratio of 3.298, women who were 18 – 30 years old when they were incarcerated were found to be about 3.3 times more likely to have living children than women who were under 18 when they were incarcerated. This relationship was still statistically significant ( $p = .042$ ). With a B value of 1.981 and an odds ratio of 7.298, women who were over 30 when they were incarcerated were about 7 times more likely to have living children than women who were under 18 when they were incarcerated, and this relationship was still statistically significant ( $p = .006$ ).

Marital status was also a statistically significant predictor of motherhood ( $p = .006$ ). With a B value of 1.220 and an odds ratio of 3.387, people who have ever been married were about 3.4 times more likely to have living children than people who have never been married. None of the other variables in this model were statistically significant predictors of motherhood. With the addition of the control variables, the  $p$  value of most of the other variables increased, meaning that they became even less significant. Like Model 6, the constant in Model 7 was not statistically significant ( $B = -.704$ ,  $\text{Exp}(B) = .495$ ,  $p = .356$ ). See Table 3a and 3b for the full results of all seven models.

The file was then split based on age at incarceration. There were two age groups, under 18 years and over 18 years old. The regression was performed again with the full model to see if there were any predictors that might be significant based on whether the woman was a juvenile or not when first incarcerated. It was found that the overall model

was not statistically significant for women who were under 18 when first incarcerated ( $X^2 = 12.337, p = .195$ ), but it did have statistically significant predicting power for women who were over 18 when first incarcerated ( $X^2 = 18.864, p = .026$ ). Looking at the variables individually, there were no individual variables that were statistically significant for women who were under 18 when first incarcerated. However, it was found that marital status was a significant predictor for whether women who were over 18 when first incarcerated had living children. Women who were over 18 when first incarcerated and had ever been married were about 4 times more likely to have living children than women who were over 18 when first incarcerated and had never been married.

The file was then split based on whether the woman had never been married or ever been married. The full regression was performed again, and it was found that there were differences in the predictors of having living children based on one's marital status. Overall, the model did have statistically significant predicting power for women who had never been married ( $X^2 = 23.141, p = .010$ ), but it did not for women who had ever been married ( $X^2 = 6.441, p = .777$ ). Looking at the individual variables, for women who had never been married, age at incarceration was the only statistically significant predictor of whether women who had never been married had living children. Women who had never been married and were between 18-30 years old when first incarcerated were about 4.6 times more likely to have living children than women who were never married and under 18 when first incarcerated. Women who had never been married and were 31 years old and older when first incarcerated were about 12.5 times more likely to have living children than women who were never married and under 18 when first incarcerated. There were no

individual variables that were statistically significant predictors of motherhood for women who had ever been married. Table 4 shows the full results of the regression model split by age at incarceration and Table 5 shows the full regression model split by marital status.

## DISCUSSION

Overall, as seen from the results, being a juvenile when first incarcerated and having never been married appear to be the main predictors of not having any living children. There is also a relationship between these two variables as seen in the regression model that was split by marital status and the regression model that was split by age at incarceration. Women who had never been married and were juveniles when first incarcerated were less likely to have living children than those who had never been married and were older than 18 when first incarcerated. In addition, women who were older than 18 and had ever been married were more likely to have living children than women who were over 18 and had never been married. These findings are somewhat similar to what Michalsen and Flavin (2014) found in their study because they also found that non-mothers were more likely to be younger than mothers and they were more likely to be single. These findings are also similar to Kelly's (2009) examination of literature on childlessness among women in the general population, since being unmarried and being young were often found to be reasons that women were childless.

The results of the regression using the split file also reinforced the importance of age at incarceration and marital status. For the women who had ever been married, none of the other variables were statistically significant predictors of motherhood, so it can be assumed that marriage was the strongest predictor of motherhood for those women. In



addition, for the women who were under 18 at incarceration, none of the other variables were statistically significant predictors of motherhood, so it can be assumed that age at incarceration was the strongest predictor for those women.

These findings are not really surprising though, especially considering the culture of the time when these women would have been growing up. If in 2010, the average number of years served in prison for this sample was about 12 years and the average age when first incarcerated was 29, then these women would have been growing up during the 1970s-1990s. Though it did happen in some cases, it went against cultural norms for juveniles and unmarried women to have children, yet there was a cultural expectation that older women get married and have children. This may help explain why, among this sample of lifers, women over 18 when first incarcerated and women who had ever been married were more likely to have children than women who were under 18 when first incarcerated and women who had never been married. The non-mothers may have wanted children before their incarceration, but due to the cultural expectations of the time, this would have been later in life, usually after they were married. However, once they received their life sentence, that future was taken away from them, a consequence of our punitive criminal justice system.

Number of health problems was found to be statistically significant at the bivariate level and in Model 4 which contained only the health variables. Interestingly, though, it found that women with more health problems were slightly more likely to have children. Most of the literature on non-mothers in the general population focused on the biomedical problems that made women involuntarily childless, but here it was found that women with more health problems were likely to be mothers, not non-mothers. However, number of

health problems was no longer significant in Model 6 and Model 7, the independent variable model and the full model, respectively. Therefore, it can be assumed that number of health problems was working through another variable, possibly age at incarceration since women who were younger were likely to be non-mothers and younger women tend to have less health problems.

Though it was not a predictor of why these women did not have children before their incarceration, once these women are released, their health will most likely be a factor in whether or not they can have children. While these women are incarcerated, the main reason that they cannot have children is their incarceration. However, since they will be much older when they are released, it is possible that their involuntary childlessness will be due to a biomedical reason, much like involuntarily childless women in the general population. How detrimental is this deprivation if its due to biomedical reasons for women who were incarcerated compared to women in the general population? Since this involuntary childlessness due to biomedical reasons may have been a result of their long incarceration, could it be more detrimental to them since they essentially lost the opportunity to have children twice- once from incarceration and then once from their health? Future research will be needed to examine this.

Looking at the responses of the non-mothers who completed the follow-up survey, their age at incarceration was often given as a reason that they did not have living children. Out of the 20 non-mothers who did the follow-up survey, 11 reported that they wanted children but did not have any because of their age at incarceration. A 40-year-old woman, who had never been married and was 18 when she was first incarcerated, felt that her age

at incarceration and the length of her sentence played a role in her not having children. She stated, "I've never been out. Prison has been my life for more years than I was ever free."

However, even though marital status was statistically significant in whether or not a woman in this sample had living children, most of the non-mothers did not feel that not being married was a reason they did not have children. Only 3 of the 20 non-mothers reported that not being married was a reason that they did not have children even though they wanted children. In fact, one non-mother who had been married stated that her abusive husband was one of the reasons that she did not have children.

The responses to the follow-up questions specific to the non-mothers raised many questions that could not be answered in this analysis. When comparing their experiences as a non-mother to the experiences of mothers in prison, they noted that there was "less responsibility", that it was "less stressful not having to worry about what happening [sic]to my kids or who's gonna take care of them", and that they "have no need to explain my mistakes or make up for lost time with someone I have abandoned". However, while a few of the non-mothers stated that they were either too old to have children or simply did not want to have children when released, the majority of the non-mothers talked about having children once they were released. The same woman mentioned before, who was 18 when first incarcerated and never married, stated about becoming a mother: "It's like what was always supposed to be for me. Like breathing. Not having children or pets is like cutting off my air supply." Another woman, who was 25 when she was first incarcerated and had been married but was now divorced, echoed this sentiment when she wrote that "I want to very badly. I need to [very and need were underlined 3 times in the original]".

This raises the question of how non-mothers perceive motherhood. Is it a burden or a desired identity, and does their perception change based on whether they are talking about being in prison or out of prison? In addition, many of the non-mothers expressed anxiety and worry over not getting to be a mother and are afraid that due to their time in prison the opportunity to be a mother has been taken away. A 43-year-old woman, who was incarcerated at 17, had never been married, and is up for parole in 2019, stated, “I want to be one [a mother], period, and I could never forgive that being taken from me if it turns out that way.” Considering her age and the fact that she has been denied parole 3 times, it is unlikely that she will be able to have a biological child when she is released. However, a 37-year-old woman, who was incarcerated at 18, had never been married, and is up for parole in 2019, stated she “will refuse to be a mother. If possible I want to have a hysterectomy [sic].” This raises the questions about whether being a non-mother is an involuntary consequence of incarceration or a voluntary choice. Eight of the non-mothers reported that it was their choice not to have children, but has that always been a conscious choice or one that was influenced by their lengthy sentence?

It is possible that changing cultural expectations have made the choice of not having children more acceptable, but it may also be that this “choice” is constrained by their incarceration. While they are in prison, their childlessness may actually be involuntary instead of voluntary, yet they “choose” to not want children in order to exert some control in an environment where they have little control. However, it could simply be that they voluntarily changed their mind on having children and it just happened to occur while they were in prison, though it seems less likely that this “choice” had nothing to do with their

incarceration. This research cannot fully explain these “choices” though, so further research will be needed to examine these questions.

### CONCLUSION

Overall, this research helps us to understand who is likely to be a mother before their incarceration and who is not. It has also added to the relatively small amount of research on women serving life sentences by looking at the factors that predicted motherhood among this group. The findings show that age at incarceration and marital status are the most important predictors of motherhood among women serving life sentences. Women who were younger when they were incarcerated and women who had never been married being less likely to have any living children than women who were older when they were incarcerated or women who had ever been married. The older women and the married women were probably more likely to have children than the younger and unmarried women due to the cultural expectations of the time. Many of the women who were non-mothers noted that age at incarceration was an important factor in them not having any children. This is important to understand because with the system becoming more punitive, it is very likely that more women will end up serving life sentences. In addition, with sentences getting longer, it is likely that these women will be unable to have children once released, especially in states like Georgia, where women sentenced to life now will have to serve at least 30 years until they are eligible for parole.

Further research needs to address the questions raised by the open-ended responses provided by the non-mothers. It should look at the experiences of non-mothers who are serving life sentences to see how their experiences both inside and outside of prison are

different than mothers. Since the majority of the research on non-mothers in prison is quantitative, future research should also include qualitative methods to gain a deeper understanding of the experiences and emotions of non-mothers serving life sentences. We need to understand the unique experiences of these women in order to address the needs and worries of non-mothers serving life sentences.

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APPENDICES

APPENDIX A – TABLES

**Table 1. Demographics of The Sample (N = 214)**

<b>Variable</b>	<b>Percent or Mean (SD)</b>
Current Age (years)	41.4 (11.9)
Age When First Incarcerated (years)	29.3 (11.3)
Under 18 years old	11.2%
18 – 30 years old	48.6%
Over 30 years old	39.3%
Time Served (years)	11.9 (6.7)
Respondent's Race (%)	
Black	46.7
White	46.7
Hispanic	4.2
Other	1.9
Prior Prison History (% no)	94.
Education- Highest Completed (%)	
Eighth Grade or Less	6.1
Some High School	18.7
High School Graduate	36.0
Some College	25.7
College Graduate	10.7
Marital Status (%)	
Never Married	43.5
Married	9.3
Divorced	24.3
Widowed	18.2
Separated	1.9
Cohabiting	1.9
Living Family (% with):	
Parents	68.7
Siblings	86.4
Children	69.6
Grandchildren	34.6
Ever Been Sexually Abused	61.9
Ever Been Physically Abused	63.1
Ever Been Emotionally Abused	73.8
Satisfaction with Family Relationships	
Not Very Satisfied	30.8
Fairly Satisfied	36.0
Very Satisfied	32.2
Ever Been Treated for Any Mental Health Problem	64.5
Number of Health Problems	2.47 (2.24)

**Table 2. Results of Bivariate Analyses Between Selected Variables and Having Any Living Children**

<b>Variable</b>	<b>Has No Living Children % or Mean (SD)</b>	<b>Has Living Children % or Mean (SD)</b>	<b>X<sup>2</sup> or t</b>
Age at Incarceration			36.663***
Under 18 years old	75.0	25.0	
18 – 30 years old	32.4	67.6	
Over 30 years old	12.0	88.0	
Total	29.2	70.8	
Ever Been Sexually Abused			.031
No	30.4	69.6	
Yes	29.2	70.8	
Total	29.7	70.3	
Ever Been Physically Abused			.597
No	32.9	67.1	
Yes	27.8	72.2	
Total	29.7	70.3	
Ever Been Emotionally Abused			2.791
No	38.5	61.5	
Yes	26.3	73.7	
Total	29.3	70.7	
Satisfaction with Family Relationships			4.045
Not Very Satisfied	25.8	74.2	
Fairly Satisfied	36.8	63.2	
Very Satisfied	22.4	77.6	
Total	28.7	71.3	
Ever Been Treated for Any Mental Health Problem			2.357
No	23.0	77.0	
Yes	33.1	66.9	
Total	29.5	70.5	
Number of Health Problems	1.79 (1.54)	2.74 (2.42)	-3.408**
Marital Status			30.292***
Never Married	48.4	51.6	
Ever Married	13.7	86.3	
Total	29.0	71.0	
Respondent's Race			.000
Black	29.6	70.4	
Non-black	29.5	70.5	
Total	29.5	70.5	

\* p &lt; .05, \*\* p &lt; .01, \*\*\* p &lt; .001

**Table 3a. Results of Binary Logistic Regression Predicting Motherhood Among Women Serving Life Sentences, Models 1-5**

Variable	<u>Model 1</u>	<u>Model 2</u>	<u>Model 3</u>	<u>Model 4</u>	<u>Model 5</u>
	B (SE) Exp(B)	B (SE) Exp(B)	B (SE) Exp(B)	B (SE) Exp(B)	B (SE) Exp(B)
Age at Incarceration (Ref = < 18 years old)					
18 – 30 years old	1.750 ** (.520) 5.753				
Over 30 years old	3.002***(.583) 20.117				
Has Been Sexually Abused		-.097 (.373) .908			
Has Been Physically Abused		-.140 (.438) .870			
Has Been Emotionally Abused		.672 (.429) 1.958			
Satisfaction with Family Relationships (Ref = Not Very)					
Fairly Satisfied			-.520 (.368) .595		
Very Satisfied			.185 (.406) 1.203		
Has Been Treated for a Mental Health Problem				-.500 (.337) .607	
Number of Health Problems				.225** (.085) 1.252	
Ever Married					1.961*** (.366) 7.109
Non-Black					-.612 (.355) .542
Constant	-1.041* (.475) .353	.526 (.310) 1.692	1.059*** (.281) 2.882	.712* (.325) 2.037	.302 (.251) 1.352
X <sup>2</sup>	33.379***	2.818	4.001	10.531**	33.567***
- 2 log likelihood	213.787	247.487	246.597	244.314	218.828
Nagelkerke R <sup>2</sup>	.215	.019	.027	.070	.212



**Table 3b. Results of Binary Logistic Regression Predicting Motherhood Among Women Serving Life Sentences, Models 6 and 7**

Variable	<u>Model 6</u>	<u>Model 7</u>
	B (SE) Exp(B)	B (SE) Exp(B)
Age at Incarceration (Ref = < 18 years old)		
18 – 30 years old	1.575**(.550) 4.830	1.191* (.585) 3.289
Over 30 years old	2.840***(.650) 17.116	1.981** (.727) 7.248
Has Been Sexually Abused	.261 (.445) 1.298	.296 (.454) 1.345
Has Been Physically Abused	-.023 (.491) .977	-.042 (.498) .959
Has Been Emotionally Abused	.739 (.511) 2.094	.594 (.518) 1.810
Satisfaction with Family Relationships (Ref = Not Very)		
Fairly Satisfied	-.600 (.430) .549	-.515 (.439) .597
Very Satisfied	.167 (.470) 1.182	.251 (.486) 1.286
Has Been Treated for a Mental Health Problem	-.841 (.440) .431	-.880 (.455) .415
Number of Health Problems	.055 (.102) 1.057	.026 (.104) 1.026
Ever Married		1.220**(.446) 3.387
Non-Black		-.296 (.399) .744
Constant	-.897 (.716) .408	-.704 (.762) .495
X <sup>2</sup>	41.446***	49.271***
- 2 log likelihood	197.599	189.774
Nagelkerke R <sup>2</sup>	.268	.313

**Table 4. Results of Bivariate Analyses Between Selected Variables and Having Any Living Children by Age at Incarceration**

Variable	<u>&lt; 18 years at Sentence</u> B (SE) Exp(B)	<u>18+ years at Sentence</u> B (SE) Exp(B)
Age at Incarceration (Ref = < 18 years old)	--	--
18 – 30 years old		
Over 30 years old		
Has Been Sexually Abused	2.006 (2.387) 7.430	.214 (.486) 1.239
Has Been Physically Abused	-3.871 (2.368) .021	.064 (.530) 1.066
Has Been Emotionally Abused	3.730 (2.634) 41.689	.553 (.548) 1.739
Satisfaction with Family Relationships (Ref = Not Very)		
Fairly Satisfied	-4.339 (2.673) .013	-.307 (.466) .735
Very Satisfied	-1.001 (2.220) .367	.409 (.512) 1.505
Has Been Treated for a Mental Health Problem	-1.906 (2.156) .149	-.812 (.474) .444
Number of Health Problems	1.392 (1.340) 4.024	.062 (.101) 1.064
Ever Married	24.774 (21482.384) 57187467862.228	1.433** (.430) 4.191
Non-Black	1.766 (2.114) 5.846	-.377 (.421) .686
Constant	-2.206 (2.938) .110	.446 (.605) 1.561
X <sup>2</sup>	12.337	18.864*
- 2 log likelihood	14.065	170.308
Nagelkerke R <sup>2</sup>	.608	.154

**Table 5. Results of Bivariate Analyses Between Selected Variables and Having Any Living Children by Marital Status**

Variable	<u>Never Married</u>	<u>Ever Married</u>
	B (SE) Exp(B)	B (SE) Exp(B)
Age at Incarceration (Ref = < 18 years old)		
18 – 30 years old	1.528* (.713) 4.607	-19.970 (28203.608) .000
Over 30 years old	2.522* (1.126) 12.448	-19.081 (28203.608) .000
Has Been Sexually Abused	.155 (.597) 1.167	.826 (.759) 2.284
Has Been Physically Abused	-.165 (.648) .848	.252 (.821) 1.286
Has Been Emotionally Abused	1.163 (.661) 3.201	-.896 (1.087) .408
Satisfaction with Family Relationships (Ref = Not Very)		
Fairly Satisfied	-.197 (.619) .821	-.938 (.741) .392
Very Satisfied	.747 (.672) 2.111	-.083 (.823) .920
Has Been Treated for a Mental Health Problem	-.987 (.647) .373	-.349 (.702) .705
Number of Health Problems	-.034 (.180) .967	.037 (.140) 1.038
Ever Married	--	--
Non-Black	-.508 (.537) .602	.288 (.612) 1.334
Constant	-1.256 (1.013) .285	21.720 (28203.608) 2709114458.155
X <sup>2</sup>	23.141*	6.441
- 2 log likelihood	99.958	81.479
Nagelkerke R <sup>2</sup>	.306	.103

APPENDIX B – INSTITUTIONAL REVIEW BOARD APPROVAL

**IRB**  
**INSTITUTIONAL REVIEW BOARD**  
 Office of Research Compliance,  
 010A Sam Ingram Building,  
 2269 Middle Tennessee Blvd  
 Murfreesboro, TN 37129



### IRBN008 - PROTOCOL APPROVAL NOTICE

Thursday, March 22, 2018

Principal Investigator **Meredith H. Dye AND Ronald Aday (Faculty)**  
 Faculty Advisor **NONE**  
 Co-Investigators **Nicole Cook and Mary De Latorre**  
 Investigator Email(s) **meredith.dye@mtsu.edu; ronaldaday@mtsu.edu**  
 Department **Sociology**

Protocol Title ***Life after serving life: Experiences of women serving a life sentence***  
 Protocol ID **18-3019**

Dear Investigator(s),

The above identified research proposal has been reviewed by the MTSU Institutional Review Board (IRB) through the **FULL COMMITTEE REVIEW** mechanism under 45 CFR part 46 and 21 CFR part 56. This protocol was reviewed by the IRB at a convened meeting which was conducted in accordance with the HHS requirements on 3/14/18. The IRB has determined that this study poses minimal risk to the participants or that you have satisfactorily worked to minimize the risks, and you have satisfactorily addressed all of the concerns brought up during the review. A summary of the IRB action and other particulars in regard to this protocol is tabulated below:

IRB Action(s)	APPROVED for one year from the date of this notification Continuing Review – Approved to use EXPEDITED mechanism if the protocol is in good standing with no violations
Date of expiration	3/31/2019
Participant Size	150 (ONE HUNDRED AND FIFTY)
Participant Pool	Special Population Identified - Female Adult Prisoners
Exceptions	Continuing Review (CR) can be done via the Expedited Review mechanism
Restrictions	1. Mandatory active informed consent; The participants must be clearly notified that enrollment is voluntary with ability to withdraw at anytime without retribution and provide a copy of the informed consent to each participating subject signed by the PI and FA. 2. A correction officer must be present during research activities 3. Data collection must be administered by the research with all completed surveys gathered by researcher prior to leaving the facility. 4. Completed surveys may not be returned through the prison mail system.
Comments	NONE

During its convened meeting on 3/14/18, the IRB also determined, through a majority vote, that the continuing review (CR) can be approved through the EXPEDITED process as this study meets the requirement criteria.

This protocol can be continued for up to THREE years (3/31/2021) by obtaining a continuation approval prior to 3/31/2019. Refer to the following schedule to plan your annual project reports and be aware that you may not receive a separate reminder to complete your continuing reviews. Failure in obtaining an approval for continuation will automatically result in cancellation of this protocol. Moreover, the completion of this study MUST be notified to the Office of Compliance by filing a final report in order to close-out the protocol.

Continuing Review Schedule:

Reporting Period	Requisition Deadline	IRB Comments
First year report	2/28/2019	NOT COMPLETED
Second year report	2/28/2020	NOT COMPLETED
Final report	2/28/2021	NOT COMPLETED

Post-approval Protocol Amendments:

*Only two procedural amendment requests will be entertained per year in addition to changes allowed during continuing review. This amendment restriction does not apply to minor changes such as language usage and addition/removal of research personnel.*

Date	Amendment(s)	IRB Comments
NONE	NONE.	NONE

The investigator(s) indicated in this notification should read and abide by all of the post-approval conditions imposed with this approval. [Refer to the post-approval guidelines posted in the MTSU IRB's website.](#) Any unanticipated harms to participants or adverse events must be reported to the Office of Compliance at (615) 494-8918 within 48 hours of the incident. Amendments to this protocol must be approved by the IRB. Inclusion of new researchers must also be approved by the Office of Compliance before they begin to work on the project.

All of the research-related records, which include signed consent forms, investigator information and other documents related to the study, must be retained by the PI or the faculty advisor (if the PI is a student) at the secure location mentioned in the protocol application. The data storage must be maintained for at least three (3) years after study completion. Subsequently, the researcher may destroy the data in a manner that maintains confidentiality and anonymity. IRB reserves the right to modify, change or cancel the terms of this letter without prior notice. Be advised that IRB also reserves the right to inspect or audit your records if needed.

Sincerely,

Institutional Review Board  
Middle Tennessee State University

Quick Links:

[Click here](#) for a detailed list of the post-approval responsibilities.  
More information on expedited procedures can be found [here](#).

5/8/09

Dr. Ron Aday, Dr. Meredith Dye, Geri Lamb, and Amanda Kaiser  
Protocol Title: Exploring the effects of victimization on the social, emotional, and health characteristics of incarcerated women  
Protocol Number: 09-268

Dear Investigator(s),

The MTSU Institutional Review Board (IRB) has reviewed the research proposal identified above. The MTSU IRB has determined that the study meets the criteria for approval.

Approval is granted for one (1) year from the date of this letter for **300** participants.

According to MTSU Policy, a researcher is defined as anyone who works with data or has contact with participants. Anyone meeting this definition needs to be listed on the protocol and needs to provide a certificate of training to the Office of Compliance. **If you add researchers to an approved project, please forward an updated list of researchers and their certificates of training to the Office of Compliance (c/o Tara Prairie, Box 134) before they begin to work on the project.** Any change to the protocol must be submitted to the IRB before implementing this change.

Please note that any unanticipated harms to participants or adverse events must be reported to the Office of Compliance at (615) 494-8918.

You will need to submit an end-of-project report to the Office of Compliance upon completion of your research. Complete research means that you have finished collecting and analyzing data. **Should you not finish your research within the one (1) year period, you must submit a Progress Report and request a continuation prior to the expiration date.** Please allow time for review and requested revisions.

Also, all research materials must be retained by the PI or faculty advisor (if the PI is a student) for at least three (3) years after study completion. Should you have any questions or need additional information, please do not hesitate to contact me.

Sincerely,

William Langston  
Chair  
MTSU Institutional Review Board