

Utah State University

DigitalCommons@USU

All Graduate Theses and Dissertations

Graduate Studies

5-2022

Maternal Education and Changes in Parenting Beliefs, Values, and Practices

Becca E. Richards
Utah State University

Follow this and additional works at: <https://digitalcommons.usu.edu/etd>



Part of the [Development Studies Commons](#), [Education Commons](#), and the [Family, Life Course, and Society Commons](#)

Recommended Citation

Richards, Becca E., "Maternal Education and Changes in Parenting Beliefs, Values, and Practices" (2022).
All Graduate Theses and Dissertations. 8484.
<https://digitalcommons.usu.edu/etd/8484>

This Thesis is brought to you for free and open access by the Graduate Studies at DigitalCommons@USU. It has been accepted for inclusion in All Graduate Theses and Dissertations by an authorized administrator of DigitalCommons@USU. For more information, please contact digitalcommons@usu.edu.



MATERNAL EDUCATION AND CHANGES IN PARENTING BELIEFS, VALUES,
AND PRACTICES

by

Becca E. Richards

A thesis submitted in partial fulfillment
of the requirements for the degree

of

MASTER OF SCIENCE

in

Human Development and Family Studies

Approved:

Aryn M. Dotterer, Ph.D.
Major Professor

Lisa Boyce, Ph.D.
Committee Member

Julia Yan, Ph.D.
Committee Member

D. Richard Cutler
Interim Vice Provost of
Graduate Studies

UTAH STATE UNIVERSITY
Logan, Utah

2022

Copyright © Becca E. Richards 2022

All Rights Reserved

ABSTRACT

Maternal Education and Changes in Parenting Beliefs, Values, and Practices

by

Becca E. Richards, Master of Science

Utah State University, 2022

Major Professor: Dr. Aryn Dotterer

Department: Human Development and Family Studies

Education level is an important predictor of many life outcomes including health and family functioning. Further, there is extensive literature on the connection between education level, parenting, and children's outcomes. Findings have suggested that maternal education level is correlated with favorable child outcomes such as higher literacy skills and decreased chances of grade repetition and researchers posit that these effects are connected in part via parenting. Despite the robust literature linking maternal education to individual and family well-being, there are gaps in the research. Much of the previous research has examined between-group differences, comparing parenting or child outcomes based on mothers' level of education. Thus, we have little information regarding within-person changes in education and parenting such as whether parenting improves when mothers return to school or obtain higher levels of education. This longitudinal study examined change over time in parental beliefs, practices, and warmth as a function of whether mothers returned to school after the birth of their child. Data were drawn from the NICHD Study of Early Childcare and Youth Development, a national study across 10 sites in the U.S. that began in 1991 with 1,364 women and their

newborn child. Parenting beliefs, values, and practices were assessed from maternal reports and observational assessments. Mothers also reported whether or not they were currently in school at each assessment (ever in school = 1; never in school = 0). Repeated measures analysis of covariance (ANCOVA) tested the within-person effect of time and time by school status and between-person effects of initial educational attainment, poverty, and race/ethnicity on the parenting beliefs, values, and practices. Results generally showed that parenting outcomes improved over time, but contrary to hypotheses, this was not a function of mothers' additional schooling. With the number of mothers who were not enrolled in school being so low, it would be imperative to examine these questions further, perhaps with a larger population that allows for groups of mothers with various levels of educational attainment.

(61 pages)

PUBLIC ABSTRACT

Maternal Education and Changes in Parenting Beliefs, Values, and Practices

Becca E. Richards

Mothers' education level has been an important predictor of life outcomes across many different areas. Higher education in mothers has been associated with outcomes such as higher reading levels and decreased chances grade repetition for their child. Due to gaps in the research, this study emphasizes the importance of mothers' beliefs about parenting, the practices they use, the amount of closeness they have with their child, and how they change when mothers return to school. This study used new mothers and their newborn children across time to understand whether mothers' beliefs, practices, and values change when mothers return to school. It is predicted that when a mother returns to school following the birth of a child, mothers' parenting beliefs, practices, and mother-child closeness will positively change because of increased resources, experiences, and new opportunities for mothers. The results indicate that there were changes, however, they were associated with race/ethnicity, poverty, and maternal education attainment rather than with maternal school status as predicted. Findings included a large difference in the number of mothers who were in school compared to those who were not which could have a large effect on the results and should be studied further in the future.

ACKNOWLEDGMENTS

I do not even know where to begin with saying my thanks to so many wonderful people who have helped me get to this point. I'd like to begin with giving a big thank you to my chair head, Dr. Aryn Dotterer and her continual patience in helping me throughout my graduate career. She is a brilliant soul who I have learned so much from. I'd also like to thank the rest of my committee members, Lisa Boyce and Julia Yan for their encouragement and continual feedback. Your time and effort did not go unnoticed.

Thank you to my sweet husband who was my biggest cheerleader and the heart of my support system in everything I do. I am not exaggerating when I say he told me he was proud of me every single day – it kept me going in the difficult moments and built my confidence. Thank you to my amazing parents who not only supported me but taught me to love learning. All through growing up they taught me the importance of education and how to thrive in it. I would not have gotten here without you. Thank you to my friends for your kind words and love when I felt overwhelmed, and for the many treats to cure my sweet tooth while I studied.

Lastly, thanks to my cats, Stella and Betty for keeping me company when I spend endless hours on my laptop. Your snuggles are unmatched.

CONTENTS

	Page
ABSTRACT.....	iii
PUBLIC ABSTRACT	v
ACKNOWLEDGMENTS	vi
LIST OF TABLES AND FIGURES	ix
CHAPTER I.....	1
INTRODUCTION	1
Background and Setting.....	1
Statement of the Problem.....	3
CHAPTER II.....	5
REVIEW OF LITERATURE	5
Introduction.....	5
Theoretical Ties	5
Socioeconomic Status.....	7
Student-Parents	9
Parenting Beliefs.....	11
Parenting Practices.....	12
Parental Warmth	14
Between-Group vs. Within Group	16
Current Study	17
CHAPTER III	19
METHODS	19
Participants.....	19

Procedures.....	19
Measures	20
Analysis.....	23
CHAPTER IV	24
RESULTS	24
Descriptive Statistics.....	24
Do Maternal Beliefs/Attitudes (Progressive and Traditional) Change Overtime as a Function of Mothers' School Status?.....	26
Do Maternal Practices Change Overtime as a Function of Mothers' School Status? ..	31
Does Mother-Child Closeness Change overtime as a Function of Mothers' School Status?	33
CHAPTER V	35
DISCUSSION.....	35
Overview.....	35
Research Question Findings	37
Progressive and Traditional Beliefs	37
Parenting Practices.....	38
Mother-Child Closeness.....	39
Limitations	40
Implications for Future Research.....	41
References.....	43

LIST OF TABLES AND FIGURES

Tables

	Page
1 Descriptive Statistics and Correlations for Mothers' Progressive Beliefs.....	28
2 Descriptive Statistics and Correlations for Mothers' Traditional Beliefs.....	30
3 Descriptive Statistics and Correlations for Mothers' Parenting Practices	32
4 Descriptive Statistics and Correlations for Mother-Child Closeness	34

Figures

1 Mothers Enrolled in School	25
------------------------------------	----

CHAPTER I

INTRODUCTION

Background and Setting

Various education levels include higher education and advanced degrees, vocational and trade, high school diplomas or GED's, and less than a high school education. Education level is important because it is a predictor of different life outcomes. Higher education and life outcome associations will range from personal healthy aging (Meeks & Murrell, 2001) to things more oriented with the family unit, such as parental education being a predictor of preterm infants thriving in cognitive, language, and motor development (Greene et al., 2016). Some have proposed that such differences in life outcomes may be explained in part by differences in childrearing practices among mothers with different levels of education (Davis-Kean, et al., 2021). When viewing educational attainment among mothers, research on different outcomes seems to be endless. In particular, the education of mothers plays a significant role in childrearing. Education is predictive of how a child is raised and what experiences may come of it. Whether a mother has earned up to a high school diploma or has gone as far as to receive an advanced degree, her education will display in her parenting in many ways. Despite the extensive body of research linking maternal education, parenting beliefs, and parenting practices with children's outcomes, less is known about whether changes in mothers' educational levels are connected to changes in their parenting beliefs and practices.

Previous research has investigated the effects that higher maternal education has on child and adult outcomes. A study done by Harding (2015) focused on the cognitive and behavioral outcomes of young children when their mother chooses to return to school. Sixteen percent of the sample included mothers who returned to school when their children were young, which ultimately led to increases in their children's cognitive scores. Mothers with a higher education were more engaged in their children's schooling (Harding, 2015), and other studies have found that higher levels of maternal education are associated with decreased grade repetition for children (Oreopoulos et al., 2006). The education level of mothers has also been seen to make impacts on their children's habits as they grow to be adults. Some common associations between maternal education level and their adult offspring outcomes include the child's behaviors or habits as well as education. Singhammer and Mittlemark (2006) found that both smoking and alcohol use were lower among the offspring whose mothers chose to pursue higher education (Singhammer & Mittlemark, 2006). In addition to these findings, maternal education level also has been seen to have intergenerational effects. When parents model and coach educational habits, children will have the desire to explore their own education (Monaghan, 2017).

Among the dozens of constructs that contribute to successful parenting, the main variables under investigation in the current research study include parenting beliefs, practices, and warmth. Parenting beliefs can generally be described as what a parent sees as appropriate in teaching their children as they are raised. Beliefs refer to the ideas that parents hold, which then guide their behaviors or parenting practices. Parenting practices are what the parent actively does to rear their children. Practices refer to parenting

behaviors and approaches that lead to how the child develops (Thompson et al., 2017). Parental warmth or responsiveness describes the affective quality of parent-child relationships. Parental warmth (also referred to as sensitivity and responsiveness) includes parents' responses to their children's emotional needs and fosters healthy development. Together with parental control ("demandingness") these dimensions of parenting constitute various parenting styles mothers or fathers adopt and use throughout their childrearing experience (Baumrind, 1991). In this study, warmth will be important to examine as it allows understanding of the mother-child relationship and their closeness overtime.

There is much to consider when reviewing the benefits to having a higher degree. Higher education has the potential to include a greater income and perhaps a higher socioeconomic status leading to greater opportunities for parents and children to navigate their parent-child relationship. Additionally, it is important to look at how parenting practices and beliefs may be impacted and how parenting styles differ among education levels. In this particular case, it is important to know how these aspects of parenting are impacted when mothers return to school and receive additional education or a higher degree compared to mothers whose educational status remains stable.

Statement of the Problem

Much of the previous research on maternal education has informed our understanding of links to child and adult offspring outcomes. Additionally, other previous research on maternal education and changes in parenting emphasized between group differences, meaning the samples studied compared mothers with higher levels of

education to mothers with lower levels of education. As such, there is a need to understand more of the parenting processes that are impacted by changes (i.e., increases) in maternal education. The present study will examine the within-group effects of mothers obtaining higher education. Throughout this study, differences in parenting beliefs, practices and warmth will be explored among women who choose to begin or return to school in addition to their role as a mother.

The following research questions will be examined in this study:

1. Are changes in mothers' education associated with changes in their parenting?
2. Do mothers who increase their education engage in more effective parenting practices compared to mothers whose education remains stable?

CHAPTER II

REVIEW OF LITERATURE

Introduction

The need to understand maternal education and parenting together also requires the understanding of many different factors. These factors within parenthood may include socioeconomic status and parents as students, both of which have a large size of past literature to be reviewed here. Much of previous research recognizes that maternal education is a strong component of socioeconomic status (SES). Many studies investigate the effects that SES, and more specifically maternal education, have on different outcomes such as adverse birth experiences (Genereux et al., 2008), child malnutrition (Urke & Mittelmark, 2011) and more. The amount of knowledge and research surrounding maternal education and SES suggests how important it is and how prevalent mothers' education is to the societal ranking of a family unit. We then explore the experiences parents have as they return to school and add the role of being a student to their identity. However, in order to fully understand the relationship between parenting and maternal education, it is important to ground the concepts in theory.

Theoretical Ties

This study draws from theoretical perspectives rooted in human capital, and bioecological models. Human capital refers to any assets or resources that an individual gathers through any source of education or training (Becker, 2008). It is also stated to be the belief that one's learning capacities are of comparative value to other resources

(Lucas, 1988, 1990). In this case, the assets of a mother with higher levels of education include tools derived from those educational experiences such as problem solving and flexibility that guide parenting practices and behaviors. Davis-Kean et al (2021) developed a model that drew from past research suggesting that with additional years of educational attainment, mothers are more likely to have access to human, cultural, and social capital, allowing them a variety of resources to continually shape their parenting practices. Though the area of education mothers receive may not be directly related to their role as a parent, their experiences in learning to work with others, and having a curiosity mindset may strongly influence the parenting behaviors and values exhibited in the home.

Bronfenbrenner's Bioecological Model of Human Development (Bronfenbrenner & Morris, 2006) also guides this study. Bronfenbrenner posited that proximal processes including parent-child interactions that occur via parenting practices, will have a primary influence on an individual's development. Bronfenbrenner referred to proximal processes as the "engines of development" or the primary driver of development, which become more complex over time. As such, we would expect aspects of parenting to change over time. Further, Bronfenbrenner articulated person-process interactions, such that personal characteristics including maternal education, likely interact with the proximal processes such as parent-child interactions. Empirical support derived from these perspectives showed that pursuing additional schooling after the birth of a child was associated with improvements in the quality of the home environment (Magnuson, 2007). Further, the importance of parental education levels has been emphasized in research suggesting that it may underlie more proximal processes such as parent beliefs, socialization practices

(e.g., language use), and aspects of the home environment that in turn shape children's development (Davis-Kean & Sexton, 2009; Foster et al., 2005). The present study builds on this work and examines associations among increases in education and parenting practices, beliefs, and warmth.

Socioeconomic Status

Mueller and Parcel (1981) describe SES to be an individual's or family's ranking on a hierarchical level according to their wealth, power, and social status. Indicators of SES include a diverse array, including family income, family structure, and most importantly for this research, parental education. SES strongly predicts various dimensions of parenting as well as developmental outcomes in children (Bornstein & Bradley, 2002). In some research, income, education, and occupation are combined to reflect SES and in other research one indicator, such as education is used as a proxy for SES.

Crosnoe et al (2002) discussed how economic disadvantage in families is not only reliant on family income as many might suggest, but also the size of the family, the family structure, and education. Each of these aspects have the capacity to place a family unit in a lower SES and are important to have the research in order to fully understand the outcomes of SES (Harding, 2015). With higher income comes the flexibility in parents being able to better meet their children's material needs as well as getting them access to activities that may challenge and supplement their continuing development (Gardner et al., 2019). In Estes' (2011) study, qualitative findings revealed that some parents chose to pursue their college degrees because it would provide the finances that are needed to provide greater opportunities to their children. Further, they noted that their current time

away from their children would provide more time together in the future. Children, especially adolescents, belonging to a lower-income family also experience less encouragement to attend higher education. This may be due to a parent's attitudes and behaviors of being less optimistic and failing to map out any academic pathways that might lead to their children's developmental growth (Crosnoe et al., 2002).

Much like income, maternal education is a confounding factor in childrearing (Awada & Shelleby, 2021). For example, mothers with less than a college degree are more likely to have inconsistent and non-standard work hours (e.g., weekend hours, working more than forty hours a week; Pilkauskas et al., 2016), which may lead to additional stress and time constraints. The increased number of difficulties associated with lower levels of education that likely act as barriers to provide a stimulating learning environment or practicing positive parenting suggests that these mothers may have more to gain from educational attainment.

In recent decades, parental education, and particularly maternal education, has changed dramatically (Currie & Morettie, 2002). Higher education among mothers may lead to certain familial outcomes such as potential higher income and flexibility for the parents. Maternal education has been suggested to be the best predictor of parenting and child outcomes than other SES indicators because of its advantage in influencing the other components (Awada & Shelleby, 2021). For example, maternal education largely accounts for the effects SES has on child behavioral outcomes throughout development (Bornstein & Bradley, 2014). As such, the present study focused on maternal education as the primary SES construct rather than income because mothers with higher education are more likely to value shared book reading with its cognitively stimulating tendencies,

whereas mothers with higher incomes are more likely to have a large number of books, resources or experiences that are cognitively stimulating (Davis-Kean et al., 2021).

Income is more closely tied to the provision of resources rather than the engagement.

With income and maternal education discussed together, the research may lead us to understand that a higher income can be associated with a higher level of education. However, these findings have not been consistent among all studies. Some research has taken time to understand how some families still live in or near poverty though one or more of the parents attains a college education. It is important to fully understand the literature, even when higher education does not positively correlate with higher salary in some cases. Studies with outcomes that do not coincide with a hypothesis lead to an even greater need to investigate each construct. It was hypothesized as well as confirmed that some occupations requiring a college education did not compensate well in salary. These occupations include teaching, service industry, and managerial positions (Tighe & Davis-Kean, 2019). Tighe and Davis-Kean (2019) also suggest that other benefits to the job outweigh the salary when it comes to what is best for some families. Higher education levels are also associated with differences that parents might have with their parenting beliefs, values, and practices (Davis-Kean et al., 2019; Hoff-Ginsberg & Tardif, 1995).

Student-Parents

It is not uncommon for a mother's educational trajectory to be interrupted by childbearing. Before she is able to complete the schooling she has enrolled in, family planning as well as unplanned pregnancies may impede academic plans. Additionally, parents will generally face many different demands with their time. When adding the role

of a student, their identity makes the list much longer whether that education be through college, trade or vocational schooling, or other opportunities. The individual roles of being a student and being a parent are labor intensive and require a lot of emotional energy (Estes, 2011). Society places high expectations on each of these roles, and when placed together the task may seem daunting. With the intersection of the two, individuals may face a type of crisis when trying to identify with one or the other. They want to be the best parent they can be, but they also want to be their best possible version of a student at the same time. Estes (2011) suggests that some parents will mediate the problem by rejecting ideologies that go along with parent and student identities. Other parents will manage the conflict by adjusting to both roles as much as possible. While some student-parents are shown to struggle with identity, the study by Estes (2011) involved interviewing individuals experiencing this lifestyle to get to know why they chose the path they did and their perspectives on the process. To further confirm how difficult it is to simultaneously be a student and a parent, Choy (2002) stated that students with dependents are less likely to still be enrolled in their intended program three years after their initial enrollment. They also are more likely to be working full time while attending school, as well as not complete their desired program in the expected time frame (Choy, 2002).

A similar study done by Dotterer et al (2020) focused on the stressors student-parents face and the outcomes they see from their children as they choose to continue their schooling. Because the format of the study was a mixed-methods, themes were pulled from what their participants said about their experience; student-parents found value in time and personal expectations as they worked towards their degree while also

trying to be the best parent possible (Dotterer et al., 2020). Qualitative findings suggested that the experience of going to school seemed to change mothers' mindsets (i.e. beliefs) and felt that it would allow them to provide more or better opportunities for their children (Dotterer et al., 2020). Results from Dotterer et al (2020) guide the current study to predict that mothers will experience changes in their parenting because of their experience at school and their change in mindset.

On the contrary, quantitative findings also indicated that the parent-child relationships experience some strains due to the many stressors the parents face in their dual roles as well as the parents' reporting feelings of guilt when they spend more time doing schoolwork than they do spending time with their children (Dotterer et al., 2020). These findings are in line with Estes' (2011) regarding the bad-parent bad-student dilemma meaning that cultural expectations were taken into account when viewing themselves through the lens of each role. Overall, with the two competing roles of being a mother and a student, the many demands may cause stress levels may elevate (Carney-Crompton & Tan, 2002; Magnuson et al., 2009). With student parents as the population of this study, it is important to understand the previous literature on how they may navigate their roles as both students and parents.

Parenting Beliefs

Davis-Kean (2005) suggested that parents' beliefs can vary by their level of educational attainment and that more highly educated parents hold higher expectations, specifically to their children's success. Again, parenting beliefs refer to the ideas that parents hold, which then guide their behaviors or parenting practices. Educated mothers

are able to raise children with more perspectivistic beliefs rather than categorical. Perspectivistic views allow for multiple avenues in a decision or rearing strategy, whereas categorical beliefs are single causes to a child outcome (Horatçsu, 1995). This leads children to better understand their parent's ways of rearing them and their influences rather than believing that their parents are only being strict disciplinarians (Horatçsu, 1995). This can best be explained to children by supplying them with a "why" behind parental expectations. Horatçsu (1995) also describes what we call the "benefits" of further education on our children (e.g., financial opportunities, security, flexibility) as direct effects. They are seen to provide external outcomes in the child, whereas the indirect effects, which the researcher explains to be attributable to values and beliefs of parenting (Glatz & Buchanan, 2015), are seen in how the child is raised and what the parent views as appropriate for their family unit.

Parenting Practices

Parenting practices are the actions a parent takes in the child-rearing process. Appropriate parenting practices are attributable to increases in maternal education, and previous research has been done to show how child outcomes improve because of a change in parenting practices. Previously discussed, Harding (2015) focused on the cognitive and behavioral outcomes of young children when a mother chooses to return to school during the first-grade years. Mothers who returned to school were found to be more engaged in their children's schooling and were more willing to structure their children's environment to be more developmentally enriching (Harding, 2015). This study discusses the importance for higher maternal education because a mother will be

provided with the organizational skills that may allow them to structure a home and environment for the child that will promote learning, behavior regulation and additional positive child outcomes (Harding, 2015).

A large part of being a parent is to provide a learning environment for children within the home in addition to their formal schooling. This may look like doing homework together, practicing writing, learning new words, and reading aloud. It has been found that more educated parents find their children to be at a higher readiness for school settings because their literacy development has advanced due to the learning environment provided at home by their mothers. This may be because more educated parents are likely to have a higher awareness of what challenging oral language activities should be incorporated into the home (Rowe et al., 2016). Magnuson et al (2009) found similar results when studying the language skills among children and educated mothers. With mothers' advanced education there are seen to be more learning-related activities provided both in the home and outside of the home (e.g., extracurricular activities). Another study found that college-educated mothers were seen to talk more, ask more questions, and use more contingent responses with their children, providing them language and vocabulary development (Hoff-Ginsberg, 1998). Magnuson et al (2009) stated how educated mothers exhibit a higher order of thinking when rearing their children, meaning that their expectations are shaped and curated around education for their children as they have been educated themselves.

In addition to language skills is the importance of reading. Tracey and Young (2002) studied the impact maternal education level has on at-home reading practices. Many educators will stress the importance of this practice within the home and encourage

parents to make it a positive experience. In this study it was found that high school-educated mothers made more total error corrections or negative comments to the child while they were reading, which does not provide a lot of feedback to that supports children's learning. Comparatively, college-educated-mothers were found to make more positive comments that provided more thought-provoking questions to their child as they read aloud allowing the child to reflect on the words (Tracey & Young, 2002). This study provided the idea that education level is a key factor in influencing how mothers interact with their children (Tracey & Young, 2002) and provide them an effective learning environment in their home.

Parental Warmth

Parenting styles are the ways in which parents mold and shape their children through a collection of attitudes and behaviors (Darling, 1999). The practices and beliefs that parents adopt into their rearing techniques derive from their individual or dyadic parenting style. Diana Baumrind's influential model of parenting styles reflect the level of warmth/responsiveness and demandingness of a parent (Darling, 1999). The model would suggest that authoritative parenting is the most desirable of each style because it is high in demandingness as well as responsiveness or warmth, creating for a healthy environment for a child to thrive in as they develop. Authoritarian parenting is seen to have more focus on a child's obedience and is less warm to the child. Extensive research has supported the benefits of authoritative parenting and the adverse effects of authoritarian parenting styles among families (Lazelere et al., 2013). A permissive parenting style suggests that the parents are fairly responsive to their child but do not set

expectations for the child to meet. In later years, the style of neglect was added meaning that the parent was neither responsive nor demanding (Brenner & Fox, 1999). Baumrind (1978) suggested that active parenting that is lacking in either parental control, consistent monitoring or discipline, or affection will be associated with greater problems in child behavior.

Many previous findings have shown that mothers who have obtained higher levels of education are more responsive and warm and less correctional during general parent-child interactions (Hoff, 2003; Hoff-Ginsberg & Tardif, 1995; Neitzel & Stright, 2004), thus displaying more authoritative patterns in their parenting. For example, Carr and Pike (2011) examined the effects that parenting style and maternal education have on scaffolding behaviors in mothers using a sample of between-group mother-child dyads with various levels of education. The researchers found that maternal education was significantly and positively associated with positive parenting, and negatively associated with harsh parenting.

Parental sensitivity or warmth is a positive attribute for parents to include in their practices. This term is understood in research as the ability for a parent to receive and interpret a child's signals and respond to them appropriately (Neuhauser, 2016). This may look like a mother warmly welcoming a child to her comfort when they are upset or calmly validating a child's big emotions, reflective of an authoritative parenting style. Maternal warmth is important to a parent-child relationship as well as child development but overarching research has suggested how necessary of a factor sensitivity is of a secure maternal-child attachment (Belsky & Fearon, 2002). Neuhauser's (2016) cross sectional study found that lower maternal education was correlated with lower levels of sensitivity.

Similarly, an international study conducted by Wang et al (2019) investigated beliefs about sensitive parenting across Chinese parents. Meins et al (2013) also described parental sensitivity to be a mother's capacity to appropriately consider her child's desires, feelings, and thoughts as well as understanding the child's perspective on a situation. Their findings suggested that maternal educational level was positively associated with parenting beliefs that were similar to an expert's view of sensitivity (Wang et al., 2019).

An exception that was found among the literature pertained to the idea of positive parenting. Awanda and Shelleby (2021) hypothesized in their research that maternal education would be associated with higher positive parenting when the children are at the age of five. Results suggested that the two are not positively correlated and it cannot be determined that maternal education makes a large impact, if any impact at all, on positive parenting beliefs. Again, though these findings do not align with the majority of the literature, it allows for more reason to further research the topic.

Between-Group vs. Within Group

Previous studies have shown between-group differences in the relationship between mothers' level and the parenting practices they engage in. Consistent findings have discovered the positive familial outcomes from higher levels of maternal education, but fewer studies have spent time understanding the effects of increases in maternal education (Awada & Shelleby, 2021). For example, less-educated mothers have been found to use an average amount of punishment with only a moderate amount of time participating in activities that will allow their child to develop while also reporting the

most externalizing problem behaviors from their children (Brenner & Fox, 1999). Additionally, more-educated mothers tend to be more involved in their children's lives whether that be in their academics or activities that they participate in (Lareau, 2011; Pomerantz et al., 2007).

With the previous research done on mothers who have a higher education level compared to mothers who have had lower educational opportunities, the purpose of this study is to understand how mothers' parenting might change should they choose to pursue higher education in the midst of parenthood. Magnuson et al (2009) addressed a similar situation in which child developmental outcomes were investigated when maternal education was completed before the birth of children compared with after. Increases in maternal education were associated with improvements in some aspects of children's home environments, particularly mothers' responsiveness and provision of learning materials. Researching the timing in which mothers attain an education allows for an opportunity to estimate the association between parental practices and maternal education with fewer confounding factors (Magnuson et al., 2009).

Current Study

Previous research has examined the many between-group differences when looking at maternal education. There are outcomes pertaining to children and how their academic pursuits are being attended to, the behaviors they experience, as well as the lifestyle they are able to apply within the home. Maternal education levels have been found to follow children in their adulthood in similar ways. Studies have also been conducted to examine what Estes et al (2011) calls the student-parent and how they

navigate parenthood while also working towards a degree to better their children's lives. Overall, the differing levels of education have indeed been found to have an impact on maternal parenting beliefs, practices, and styles thus affecting their children. Following the numerous findings of parents with a higher education compared to those without, it would be of importance to understand the same question from a slightly different perspective, which would be to examine mothers who choose to further their education in parenthood. From here, analyzation may predict how the same individual's parenting attitudes and styles change over time. This examination will not analyze the level of maternal education as the main construct, rather, it will study whether mothers are currently enrolled in school or not at each point in time of data collection. Guided by Human Capital Theory, Bioecological Theory, and past empirical research, it is hypothesized that:

- Hypothesis 1: Over time, as mothers gain more experience through their education, mothers will have more progressive parenting beliefs, less traditional parenting beliefs, higher quality home environment, and higher levels of maternal warmth.
- Hypothesis 2: Mothers who return to school will have more progressive parenting beliefs, less traditional parenting beliefs, higher quality home environment, and higher levels of maternal warmth than mothers who do not return to school.

CHAPTER III

METHODS

Participants

All data for this study was drawn from the NICHD Study of Early Child Care and Youth Development (SECCYD), which is a longitudinal study that took place across 10 different sites. In 1991, participants were gathered directly after giving birth which included 1,364 women and their newborn child. Participants were recruited throughout the U.S. as mother-child dyads living in or near urban and suburban areas. Mothers who were not eligible to participate included those who had given birth to a child with a disability, the mother being under the age of 18, who lived in a potentially dangerous neighborhood, and those who did not fluently speak English. The participating mothers were a pool of women who were full-time employees or students, or part-time, as well as stay-at-home mothers. It was important for the researchers to gather participants who came from a variety of economic lifestyles, educational standpoints, and with a diversity of ethnicity. Researchers found diversity to be important among their participants in order to gather as much data as possible that would later be applicable to various populations.

Procedures

Data were collected and assessed using trained observers, interviews, questionnaires. Data collection was able to be conducted at a site that was most convenient for the family at that time; this included in their home, daycares, or in the laboratory. Between major assessments phone calls were made for any additional updates

such as changes in the family dynamics, a geographical change or move, etc. Four phases of this study took place, each phase's procedure being similar to the previous stage with minor changes to address the differing age groups. In Phase I, direct assessments took place at 6, 15, 24, and 36 months of age, Phase II at 54 months and in the first grade, Phase III through the third and fifth grade, and Phase IV taking place into the adolescent years up until the age of eighteen years old.

The following approaches were utilized to conduct the assessments; computer-assisted personal interview (CAPI), computer-assisted self-interview (CASI), computer-assisted telephone interview (CATI), coded on-site observation, cognitive assessment test, face-to face interviews, mail questionnaires, paper and pencil interview (PAPI), self-enumerated questionnaire, on-site questionnaire, and lastly telephone interviews.

Measures

Mother's education level. Mothers' education level was determined through the collection of demographics at the first data collection. Mothers indicated their highest grade or level of education at the baseline survey. Responses ranged from 7 (seventh grade) to 21 (doctoral degree).

Poverty. Poverty level was determined by an income to needs ratio created by the owners of the dataset. Those who were not poor were identified by an income to needs ration greater than or equal to 1.0; those who were poor were identified by an income to needs ration less than 1.0. This was collected at the one-month assessment based on income.

School status. Periodic telephone updates in each phase provided participants the opportunity to update researchers on mothers' current school status; mothers could report whether they were enrolled in any type of schooling or not. In phase one, telephone interviews were administered at five, 13, 23, and 34 months. In phase two, it was collected at 42, 46, 50, 53, and 60 months. In phase three, it was collected twice in each grade: third, fourth, and fifth. In the final phase, telephone interviews were used to ask maternal school status at seventh grade, and paper forms were used in eighth grade and at age 15. During analysis, a single variable was created that reflected whether or not mothers were currently enrolled in school at the time of data collection.

Parenting beliefs. Parenting beliefs were measured using the Parental Modernity Scale. The purpose of this measure was to compute two scores: Progressive beliefs and Traditional beliefs. This is a 30-item measure of traditional and authoritarian beliefs on parenting as well as the progressive and democratic beliefs. Each item in this measure consists of a four-point scale measuring from one = *strongly disagree* to four = *strongly agree*. Progressive Ideas About Raising Kids was also collected at 54 months, first grade (Chronbach's alpha = .64), and fourth grade (Chronbach's alpha = .62). The scores computed for first grade ranged from 8-40, and for fourth grade, 8-40. Higher scores indicated more progressive beliefs about raising children. A sample item includes, "*Children should be treated the same regardless of the differences among them*". Traditional Ideas About Raising Kids was collected at one month, first grade (Chronbach's alpha = .89), and fourth grade (Chronbach's alpha = .89). The scores computed for first grade ranged from 22-110, and for fourth grade, 22-110. Higher scores

indicated more traditional beliefs about raising children. A sample item includes, “*Children should be kept busy with work and study at home and at school*”.

Parenting practices. Parenting practices were measured using the Home Observation for Measurement of the Environment, otherwise known as the HOME Inventory. This inventory assists in identifying consistencies in relationships between the home environment and children’s development (Bradley, 1993). With this tool, a family’s social status as well as other ecological factors were gathered to reflect the quality of stimulation a child may be receiving in their home environment. However, this tool is not used to classify homes as ‘good’ or ‘bad’ homes (Caldwell & Bradley, 1978). The Early Childhood Home (EC-HOME) consists of 55 items divided into eight different subscales: 1) Learning Materials, 2) Language Stimulation, 3) Physical Environment, 4) Responsivity, 5) Academic Stimulation, 6) Modeling, 7) Variety, and 8) Acceptance. Each item on the subscales were scored yes or no and was collected through means of observation and semi-structured interview. The HOME Inventory was collected at six months (Chronbach’s alphas for the subscales ranged from .50 to .66), 15 months (Chronbach’s alpha = .89), 36 months (Chronbach’s alpha = .93), 54 months (Chronbach’s alpha = .82), 3rd grade (Chronbach’s alpha = .82), and 5th grade.

Note. Reliability for the fifth grade HOME score was unavailable in the instrument rationale.

Parental Warmth. Parental warmth was measured through the maternal self-report Child-Parent Relationship Scale (CPRS). This measure consists of 30 items which are rated on a five-point Likert scale. Participants selected the number that they find the most like their life; one = *definitely does not apply* and five = *definitely applies*. Sample

items include *“I share an affectionate, warm relationship with my child”* as well as *“My child is uncomfortable with physical affection or touch from me”*. Mother Closeness with Child was collected at 54 months (Chronbach’s alpha = .84), kindergarten (Chronbach’s alpha = .68), first grade (Chronbach’s alpha = .84), third grade (Chronbach’s alpha = .85), fourth grade (Chronbach’s alpha = .80), and fifth grade (Chronbach’s alpha = .86). The scores computed at 54 months fall in the possible range from 11 to 55, for kindergarten, 8 to 40, for first grade, 12 to 40, and for third, fourth, and fifth grade, 8 to 40. Higher scores in each range indicated more closeness between the mother and child.

Analysis

Maternal school status was examined across all phases of data collection and coded for whether or not mothers were enrolled in school (0 = no; 1 = yes). Poverty was also examined and coded as poor and not poor (0 = poor; 1 = not poor). Maternal education level was coded as the number of years of education (7 = seventh grade; 21 = doctoral degree, etc). Mixed model ANCOVAs were conducted to test between and within-group differences in school status on parenting outcomes with separate models conducted for parenting beliefs, parenting practices, and parental warmth. Repeated measures ANCOVA assessed the effect for time and school status as well as time by school status. Models controlled for initial maternal education attainment, poverty, and race/ethnicity.

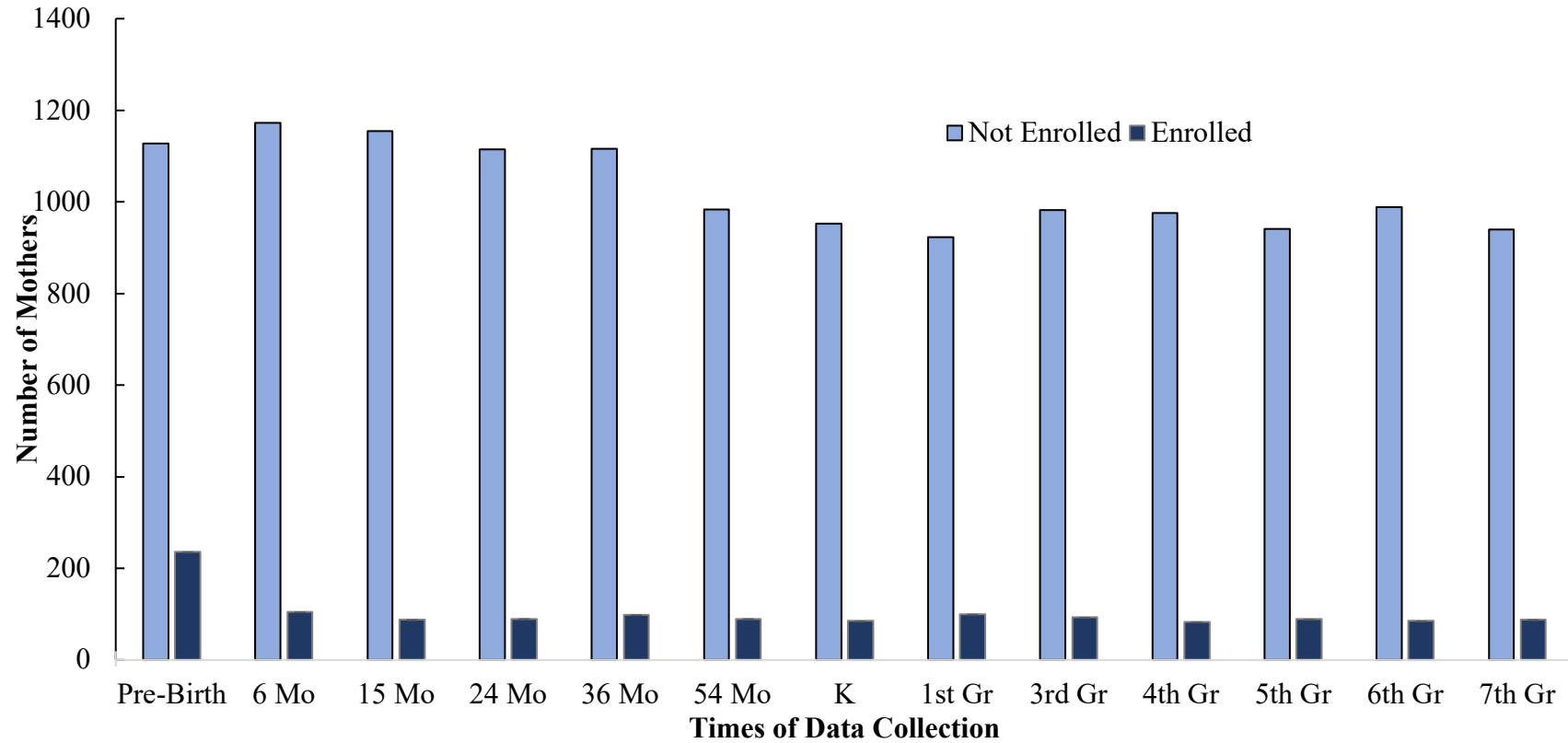
CHAPTER IV

RESULTS

Descriptive Statistics

The population for the current study included mothers with various backgrounds. The descriptive statistics will describe the population in terms of the covariates that were used. Mothers involved were of different races and ethnicities. This included American Indian, Eskimo, Aleutians (.6%), Asian or Pacific Islanders (2.2%), African American (12.8%), White (82.6%), and Other (1.8%). Mothers of different income were examined as poor and not poor. Approximately 73% of mothers were not poor and 20% were poor. The remaining 7% of the population did not have poverty level recorded.

On average, mothers attended two years of school beyond high school graduation, with a mean total of 14.23 years of education ($SD = 2.51$). Seventh grade is the lowest recorded education level with .2% of mothers having up to a seventh-grade education, and 17% of mothers completed high school or GED. Approximately 27% of mothers had attended some college but did not have a degree and 17% received a bachelor's degree from a college or university. Higher education included mothers who completed some graduate work, or a master's degree (10%), a law degree (.8%) and a doctoral degree such as an M.D., or Ph.D (1.5%). The following graph represents the school status of mothers at each time point of data collection.

Figure 1*Mothers Enrolled in School*

Note: Data collection for mothers' education level at one month is the pre-birth education level.

During each time of data collection, mothers reported their current school status. As shown in Figure 1, 1128 mothers were not in school and 236 reported to be currently enrolled pre-birth of their child. At six months, 1173 mothers were not enrolled in school and 105 were enrolled. At 15 months, 1155 mothers were not in school and 88 reported to be enrolled. At 24 months, 1115 mothers were not enrolled in school and 90 mothers were enrolled. At 36 months, 1116 mothers were not in school and 99 mothers were enrolled. At 54 months, 984 mothers were not in school and 90 were enrolled. When the child reached kindergarten, 952 mothers were not in school and 85 mothers reported they were enrolled. At first grade, 923 were not currently in school and 100 were enrolled. At third grade, 982 mothers were not in school and 93 were in school. At fourth grade, 976 mothers were not in school and 83 reported to be currently enrolled. At fifth grade, 941 mothers were not in school and 89 were enrolled. At sixth grade, 939 mothers were not in school and 85 were enrolled. Finally, at seventh grade, 940 mothers reported that they were not in school and 88 reported that they were currently enrolled.

It is important to note the significant difference in mothers who were in school compared to those who were not across all time points. Clearly, the majority of mothers were not enrolled in school with small fluctuations in numbers of those who were overtime.

Do Maternal Beliefs/Attitudes (Progressive and Traditional) Change Overtime as a Function of Mothers' School Status?

As shown in Table 1, mothers' progressive beliefs were significantly and positively correlated over time, which indicated strong stability in progressive beliefs

across assessments from when children were one month old to when children were in the fourth grade. Mothers' initial education level was significantly and positively associated with progressive beliefs such that mothers with higher levels of education also endorsed more progressive parenting beliefs. These patterns were observed across time when children were one month old to when children were in fourth grade. However, mothers' school status was not related to progressive parenting beliefs at any of the time points.

Repeated Measures ANCOVA controlling for maternal education at birth, poverty status, and mothers' race/ethnicity examined within-person change in progressive beliefs as a function of mothers' status in school. Results showed that the within-person effect of time was not significant, $F(2,1710) = .566, p = .568$ and the effect for time by school status was not significant, $F(2,1710) = .941, p = .39$. The between-person results showed a significant effect for poverty $F(1,855) = 5.82, p = .016$ and indicated that mothers in poverty had significantly lower mean scores on the progressive beliefs scale ($M = 31.43, SD = 4.31$) compared to mothers who were not in poverty ($M = 32.95, SD = 3.4$). A significant between-person effect for maternal education at birth, $F(1, 855) = 56.30, p < .001$ indicated that mothers with initially higher levels of education, had higher scores on the progressive beliefs scale compared to mothers with lower levels of education at birth. However, there were no significant differences in mothers' progressive beliefs based on whether or not she obtained additional school, $F(1, 855) = 2.7, p = .101$.

Table 1*Descriptive Statistics and Correlations for Mothers' Progressive Beliefs*

Variable	1	2	3	4	5	6
Prog1M	1					
Prog1G	.48**	1				
Prog4G	.44**	.64**	1			
Educ	.23**	.22**	.24**	1		
Poor	-.15**	-.16**	-.18**	-.36**	1	
School Stat	.004	-.03	.02	-.10**	.10**	1
<i>M</i>	32.73	32.67	32.45	14.23	.21	.45
<i>SD</i>	3.53	3.74	3.69	2.51	.41	.50

* $p < .05$, ** $p < .001$

As shown in Table 2, mothers' traditional beliefs were significantly and positively correlated over time, which indicated strong stability in traditional beliefs across assessments from when children were one month old to when children were in the fourth grade. Mothers' initial education level was significantly associated with traditional beliefs such that mothers with higher levels of education also endorsed less traditional parenting beliefs. These patterns were observed across time when children were one month old to when children were in fourth grade. Mothers' school status was also significantly correlated with traditional parenting beliefs.

Repeated Measures ANCOVA controlling for maternal education at birth, poverty status, and mothers' race/ethnicity examined within-person change in traditional beliefs as a function of mothers' status in school. Results from this analysis showed that the within-person effect of time was significant, $F(2,1728) = 10.38, p = .001$ and the effect for time by school status was not significant, $F(2,1728) = .79, p = .46$. Between-person results showed a significant effect for poverty $F(1,855) = 12.68, p = .001$ and indicated that mothers in poverty had significantly higher mean scores on the traditional beliefs scale ($M = 67.48, SD = 15.36$) compared to mothers who were not in poverty ($M = 56.05, SD = 14.02$). A significant between-person effect for maternal education at birth, $F(1,855) = 233.50, p < .001$ indicated that mothers with initially higher levels of education, had lower scores on the traditional beliefs scale compared to mothers with lower levels of education at birth. However, there were no significant differences in mothers' traditional beliefs based on whether or not she obtained additional school, $F(1,855) = .06, p = .808$.

Table 2*Descriptive Statistics and Correlations for Mothers' Traditional Beliefs*

Variable	1	2	3	4	5	6
Trad1M	1					
Trad1G	.75**	1				
Trad4G	.73**	.81**	1			
Educ	-.55**	-.46**	-.45**	1		
Poor	.33**	.29**	.28**	-.36**	1	
School Stat	.09**	.120**	.10**	-.10**	.10**	1
<i>M</i>	60.34	58.09	57.69	14.23	.21	.45
<i>SD</i>	15.21	14.93	15.21	2.51	.41	.50

* $p < .05$, ** $p < .001$

Do Maternal Practices Change Overtime as a Function of Mothers' School Status?

Table 3 suggests that mothers' parenting practices were significantly and positively correlated over time, which indicated stability in parenting practices across assessments from when children were six months old to when children were in the fifth grade. Mothers' initial education level was significantly and positively associated with parenting practices such that mothers with higher levels of education also had higher HOME scores. Mothers' school status was also significantly correlated to HOME at each time of data collection.

Repeated Measures ANCOVA controlling for maternal education at birth, poverty status, and mothers' race/ethnicity examined within-person change in parenting practices as a function of mothers' status in school. Results from this analysis showed that the within-person effect of time was significant, $F(5,3925) = 19.4, p = .001$ and the effect for time by school status was not significant, $F(5, 3925) = .84, p = .52$. Between-person results showed a significant effect for poverty $F(1,785) = 71.70, p = .001$ and indicated that mothers in poverty had significantly lower mean scores on the HOME scale ($M = 36.66, SD = 6.57$) compared to mothers who were not in poverty ($M = 41.94, SD = 4.73$). A significant between-person effect for maternal education at birth, $F(1,785) = 274.54, p < .001$ indicated that mothers with initially higher levels of education, had higher scores on the HOME scale compared to mothers with lower levels of education at birth. However, there were no significant differences in mothers' parenting practices based on whether or not she obtained additional school, $F(1,785) = .214, p = .64$.

Table 3*Descriptive Statistics and Correlations for Mothers' Parenting Practices*

Variable	1	2	3	4	5	6	7	8	9
HOME6M	1								
HOME15M	.58**	1							
HOME36M	.48**	.56**	1						
HOME54M	.49**	.54**	.70**	1					
HOME3G	.46**	.52**	.55**	.55*	1				
HOME5G	.50**	.50**	.57**	.62**	.66**	1			
Educ	.41**	.42**	.51**	.51**	.47**	.47**	1		
Poor	-.38**	-.37**	-.35**	-.38**	-.40**	-.38**	-.36**	1	
School Stat	-.15**	-.12**	-.13**	-.16**	-.15**	-.12**	-.10**	.10**	1
<i>M</i>	36.55	37.31	41.45	46.00	46.50	36.46	14.23	.21	.45
<i>SD</i>	4.65	4.68	7.41	5.46	6.34	5.37	2.51	.41	.50

* $p < .05$, ** $p < .001$

Does Mother-Child Closeness Change overtime as a Function of Mothers' School Status?

Table 4 suggests that mothers' closeness with her child were significantly and positively correlated over time, which indicated stability in mother-child closeness across assessments from when children were 54 months old to when children were in the fifth grade. Mothers' initial education level was significantly and positively associated with higher levels of closeness with her child such that mothers with higher levels of education also endorsed closer relationships with their children. Mothers' school status was also significantly associated with mother-child closeness at each time point.

Repeated Measures ANCOVA controlling for maternal education at birth, poverty status, and mothers' race/ethnicity examined within-person change in maternal closeness with their child as a function of mothers' status in school. Results from this analysis showed that the within-person effect of time is significant, $F(5, 3865) = 55.34, p = .001$ and the effect for time by school status was not significant, $F(5, 3865) = 1.18, p = .48$. Between-person results showed a significant effect for poverty $F(1,773) = 5.64, p = .018$ and indicated that mothers in poverty had lower mean scores on the maternal closeness scale ($M = 38.73, SD = 3.58$) compared to mothers who were not in poverty ($M = 39.65, SD = 3.58$). A significant between-person effect for maternal education at birth, $F(1,773) = 5.324, p < .021$ indicated that mothers with initially higher levels of education, had higher scores on the maternal closeness scale compared to mothers with lower levels of education at birth. However, there were no significant differences in mothers' closeness with their children based on whether or not she obtained additional school, $F(1,773) = 1.89 p = .1.69$.

Table 4*Descriptive Statistics and Correlations for Mother-Child Closeness*

Variable	1	2	3	4	5	6	7	8	9
CLSN54M	1								
CLSNK	.49**	1							
CLSN1G	.43**	.56**	1						
CLSN3G	.36**	.46**	.48**	1					
CLSN4G	.38**	.49**	.51**	.66**	1				
CLSN5G	.34**	.41**	.46**	.59**	.64**	1			
Educ	.18**	.12**	.05	.10**	.14*	.09**	1		
Poor	-.17**	-.09**	-.10**	-.12**	-.15**	-.08*	-.36**	1	
School Stat	.02	-.02	-.20	-.01	.10	-.004	-.10**	.10**	1
<i>M</i>	50.05	37.99	37.98	37.19	36.96	36.56	14.23	.21	.45
<i>SD</i>	3.67	2.63	2.50	2.82	3.33	3.25	2.51	.41	.50

* $p < .05$, ** $p < .001$

CHAPTER V

DISCUSSION

Overview

Throughout research, education has been an important variable when examining the behaviors and practices within families. More specifically, maternal education has been a common predictor of life outcomes for the mother herself as well as for her children (Meeks & Murrell, 2001; Greene et al., 2016). With many past significant findings pointing to different child and adult outcomes (i.e., cognitive, behavioral, etc.) in relation to changes in mothers' education, the current study aims to understand more of the parenting processes themselves and how they are related to those changes. Parenting beliefs, practices and closeness were important variables for this study for a variety of reasons and they each represent a different dimension of motherhood. Parenting beliefs are what drive the direction of child rearing; an ideation of how to navigate raising a child will then lead how it is acted upon, or the parenting practices. Maternal warmth represents the relationship the mother and child have. More warmth from the mother is typical to a closer, more trusting relationship with the child. Though these all represent different parts of motherhood, Davis-Kean et al (2021) posited that parenting beliefs are most notable when seeking change, and practices or warmth are thus influenced by the expectations set by the parents.

The current study's purpose was to identify whether changes in mothers' education were associated with changes in parenting beliefs, practices, and values. An additional purpose was to understand if mothers with increases in education experienced changes in more effective parenting strategies or practices compared with those whose

education remained stable. It was hypothesized that over time, mothers will have more progressive parenting beliefs, less traditional parenting beliefs, higher quality home environments, and higher levels of maternal warmth. The second hypothesis predicts that mothers who return to school will have more progressive parenting beliefs, less traditional parenting beliefs, higher quality home environments and higher levels of maternal warmth than mothers who do not return to school. An additional gap in the research included multiple uses of between-group examinations, and very limited within-group cases. Here, the study fills that gap by involving a population that included mothers over time and whether or not they enrolled in school following childbearing. The demographics included race/ethnicity, poverty, maternal education, and mothers' current school status. An overall strength of this study includes the analysis which was done to discover our results. Using ANCOVA, we found strong and reliable statistics to verify our findings.

Theoretical frameworks to ground the research included Human Capital theory as well as Bronfenbrenner's Bioecological Model of Human Development because of their focus on outside sources that impact families, in this case higher education. Human capital suggests that education acts as an asset or resource (Becker, 2008) that would allow mothers more access to human, cultural, and social capital (Davis-Kean et al., 2021). Resources in each of these areas allow parents room for growth in their parenting practices and role as a maternal figure. Bronfenbrenner's model suggests that proximal processes, such as parent-child interactions, explains how aspects of parenting change over time. With increases in education may come additional proximal processes to

positively shape children's development (Davis-Kean & Sexton, 2009; Foster et al., 2005) through the home environment (Magnuson, 2007).

Research Question Findings

For the first research question, the hypothesis was not supported. Some changes in parenting over time did change, however, they were not due to mothers returning to school. The changes that did take place in traditional parenting beliefs, practices, and values were more closely correlated with the covariates in this study, which included race, poverty, and maternal education rather than mothers' current school status.

For the second research question, the hypothesis was also not supported. There were no changes over time in progressive parenting beliefs, traditional parenting beliefs declined over time, quality of the home environment improved over time, and maternal warmth declined over time, however these changes in parenting beliefs and practices were not related to mothers' school status. Though the predictions of this study were incorrect, there are implications for why parenting did change, just not due to changes in education.

Progressive and Traditional Beliefs

In this study, parenting beliefs were examined through progressive and traditional ideations. Progressive parenting beliefs refer to encouraging children to think independently and verbalize ideas that they feel strongly about without interference (Okagaki & Frensch, 1998), whereas traditional beliefs refer to more authoritarian attitudes to childrearing (Dornbusch et al., 1987). Over time, progressive beliefs

experienced no change, and traditional beliefs decreased. However, these changes were positively associated with factors outside of the main focus; race/ethnicity, poverty, and education level showed differences in both progressive and traditional beliefs, but mothers' school status did not. The variables used to analyze parenting beliefs are a strength in the current study because of they represent two dimensions of parenting values. Progressive and traditional beliefs are quite opposite, allowing a full range of different beliefs to include.

A potential reason for change over time in traditional beliefs, but not progressive, could be the rise and fall of importance in certain values over time. For example, a mother might choose time-out for her child as a form of discipline, but with experience and practice, she might later opt for a teaching opportunity as she had discovered that time-out was not as effective in teaching her child right from wrong. Perhaps that mother at one time valued quiet time when her child did wrong, but later found more value in using that time as an opportunity to bond and help her child learn.

Parenting Practices

Parenting practices are the actions that parents take when guiding, disciplining, and interacting with their children. The results from this study suggest that general changes in parenting practices, as well as positive changes, were associated with race/ethnicity, poverty, and maternal education level and increased over time. However, these changes are not correlated with maternal school status. Some potential reasons for this outcome may be due to time itself. As years pass and time goes on, mothers will be growing alongside their children. It would be understandable to see how a mother parents

her second child different from the first, or the third child differently from the second and so on; there are areas in childrearing that the mother may have made mistakes and learned from them. Similar to mastering any other skill, parenting requires practice and mistakes along the way. The HOME variable used to represent parenting practices in this study acts as a strength because of the number of times it was collected over time. In total, it was collected ten times, allowing for an all-encompassing result for a longitudinal study.

Some additional potential reasons for this outcome may be due to an increase in resources over time. Some families are started when the parents are fairly young and at the forefront of their careers, thus lower salaries. As time passes, skills are built, and raises in salary are given. With increased income, changes in parenting may become apparent due to the newfound access to materials and time for the children and parents to engage (Gardner et al., 2019). Lastly, parenting strategies change over time in relation to developmental needs of the child in order to address specific behavioral development, experiences of family stress, and mothers' personal life circumstances (Greenley et al., 2006).

Mother-Child Closeness

Mother-child closeness or warmth was found to have decreased over time in the present study. These changes in mother-child closeness are not in line with the findings of Magnuson et al (2009), who reported that mothers' responsiveness increased as a result of maternal education. Potential reasoning for differences in findings may be due to the different constructs used in each study; Magnuson et al (2009) included constructs

more aligned with child academic outcomes, whereas the current study focused on the parenting changes found in the mother herself. With the different constructs, parenting beliefs, practices, and maternal warmth added different avenues of change. The literature review discusses much of previous research and how it has navigated the changes in child outcomes whether they be academic or behavioral. Again, the current study has filled the gap in how parenting beliefs, practices, and maternal warmth changes with mothers' education. The study of these constructs allows understanding of the growth mothers experience as they attend school rather than just the effects it has on her family. Similar to the HOME variable, mother-child closeness was collected a preferable amount of times to fully capture the potential changes. In total, it was collected six times over the course of the study.

Limitations

There are some limitations that may be addressed in this study. One limitation may be the need for more specification in education types during the analysis. The current study examined the current school status of mothers at each data collection time point, but there was no analysis for types of education. Perhaps results would show to be different if the research question were posed more towards specific levels of education and how they correlate with changes in parenting. Similarly, so many of the mothers in this sample had a college education; perhaps a sample with even more educational diversity would better address school status.

Additionally, the proportion of mothers who were enrolled in school was fairly low and it is unknown if being in school lead to increase in attainment. Mothers who

indicated at one time that they were in school were in the same group as mothers who were in school many times throughout the data collection assessments, but that impact of education could then have been obscured by grouping these mothers together. However, the sample size of mothers in school was too small to break up into various categories based on the extent of their additional schooling

An additional limitation may be due to the time the data was collected, as the collection began in 1991. Though the data is not significantly old, more and more women are entering the work force as time progresses. Statistics have suggested that between 1988 and 1998, the percentage of working women with pre-school children dramatically jumped from 45 percent to 55 percent (Marks & Houston, 2002). With more than 20 years having passed since that 55 percent was collected, it is likely the percentage has increased. With an increasing amount of women working, it is also quite often that workforces require some form of education. For example, a woman may want to work out of her home as a hair stylist, but she will need to complete vocational schooling to become a cosmetologist. Using more recent data could also lead to differences in results.

Lastly, there were limitations in the population for the study that refused inclusion of those who were not fluent in the English language as well as those who lived in potentially dangerous neighborhood. Perhaps this could have added a selection effect on the population, and it was not taken into account various characteristics mothers would have that could contribute to their decision of returning to school.

Implications for Future Research

With this study and the surrounding research that was included in the literature review, the findings can be useful for researchers wanting to understand more about parenting and maternal school status. Future research should consider the effects of different education types on parenting and the initial education level, as previously discussed. This could identify barriers and gaps in the current study and can further identify the associations between school status and mothers' education. Additionally, as this study remained focused on maternal education and parenting, perhaps it would be of value to conduct something similar while including fathers to find more inclusive findings in families.

References

- Awada, S.R., Shelleby, E.C. (2021). Increases in maternal education and child behavioral and academic outcomes. *Journal of Child and Family Studies* 30, 1813–1830.
<https://doi.org/10.1007/s10826-021-01983-7>
- Baumrind, D. (1978). Parental disciplinary patterns and social competence in children. *Youth & Society*, 9(3), 239–267. <https://doi.org/10.1177/0044118x7800900302>
- Baumrind D. The Influence of Parenting Style on Adolescent Competence and Substance Use. *The Journal of Early Adolescence*. 1991;11(1):56-95.
 doi:10.1177/02724316911111004
- Becker, G. S. (2008). *Human capital: A theoretical and empirical analysis, with special reference to Education*. The Univ. of Chicago Press.
- Belsky, J., & Fearon, P. R. (2002). Early attachment security, subsequent maternal sensitivity, and later child development: Does continuity in development depend upon continuity of caregiving? *Attachment & Human Development*, 4(3), 361–387. doi:10.1080/14616730210167267
- Bradley, R. H., Caldwell, B. M. & Corwyn, R. F. (2003). The Child Care HOME inventories: Assessing the quality of family child care homes. *Early Childhood Research Quarterly*, 18, 294-309.
- Bradley, R. H. (1993). Children's home environments, health, behavior, and intervention efforts: A review using the HOME Inventory as a marker measure. *Genetic, Social, and General Psychology Monographs*, 119(4), 437–490.

- Brenner, V., & Fox, R. A. (1999). An Empirically Derived Classification of Parenting Practices. *The Journal of Genetic Psychology, 160*(3), 343-356.
doi:10.1080/00221329909595404
- Bornstein, M. H., & Bradley, R. H. (2014). *Socioeconomic status, parenting, and child development*. Taylor and Francis.
- Caldwell, B. M., & Bradley, R. H. (2014). *HOME Inventory (0-3) Home Observation for Measurement of the Environment* [PDF]. UW Milwaukee Child Welfare Partnership and WI Dept. of Children and Families.
- Carney-Crompton, S., & Tan, J. (2002). Support systems, psychological functioning, and academic performance of nontraditional female students. *Adult Education Quarterly, 52*(2), 140–154. <https://doi.org/10.1177/0741713602052002005>
- Carr, A., & Pike, A. (2012). Maternal scaffolding behavior: Links with parenting style and maternal education. *Developmental Psychology, 48*(2), 543-551.
doi:10.1037/a0025888
- Choy, S. (2002). *Nontraditional undergraduates: Findings from the condition of Education 2002. Nces 2002-012*. Distributed by ERIC Clearinghouse.
- Cooper, C. E., McLanahan, S. S., Meadows, S. O., & Brooks-Gunn, J. (2009). Family Structure Transitions and Maternal Parenting Stress. *Journal of Marriage and Family, 71*(3), 558-574. doi:10.1111/j.1741-3737.2009.00619.
- Crosnoe, R., Mistry, R. S., & Elder, G. H. Jr. (2002). Economic disadvantage, family dynamics, and adolescent enrollment in higher education. *Journal of Marriage and Family 64*(3), 690-702: <https://doi-org.dist.lib.usu.edu/10.1111/j.1741-3737.2002.00690>.

- Currie, J., & Moretti, E. (2002). Mothers Education and the Intergenerational Transmission of Human Capital: Evidence from College Openings and Longitudinal Data. doi:10.3386/w9360
- Darling, N. (1999). Parenting style and its correlates. Clearing house on Elementary and Early Childhood Education.
- Davis-Kean, P. E. (2005). The influence of parent education and family income on child achievement: The indirect role of parental expectations and the home environment. *Journal of Family Psychology, 19*(2), 294–304. doi.org10.10370893-3200.19.2.294
- Davis-Kean, P. E., & Sexton, H. R. (2009). Race differences in parental influences on child development. *Merrill Palmer Quarterly, 55*, 285-318. doi:10.1353/mpq.0.0023
- Davis-Kean, P. E., Tang, S., & Waters, N. E. (2019). Parent education attainment and parenting. In M. H. Bornstein (Ed.), *Handbook of parenting: Vol. 2. Biology and ecology of parenting* (3rd ed., pp. 400–420). Routledge. doi.org10.4324978042940145912
- Davis-Kean, P., Tighe, L. A., & Waters, N. E. (2021). The Role of Parent Educational Attainment in Parenting and Childrens Development. doi:10.31234/osf.io/ndmxb
- Dornbusch, S. M., Ritter, P. L., Leiderman, P. H., Roberts, D. F., & Fraleigh, M. J. (1987). The relation of parenting style to adolescent school performance. *Child Development, 58*(5), 1244. doi.org10.23071130618
- Dotterer, A. M., Juhasz, A. C., Murphy, K. N., Park, S., & Boyce, L. K. (2020). Stress and family relationships among college student parents: A mixed methods

study. *Journal of Social and Personal Relationships*, 026540752097519.
doi:10.1177/0265407520975198

Estes, D. K. (2011). Managing the student-parent dilemma: Mothers and fathers in higher education. *Symbolic Interaction*, 34(2), 198-219. <https://doi-org.dist.lib.usu.edu/10.1525/si.2011.34.2.198>

Foster, M. A., Lamber, T., Abbott-Shim, M., McCarty, F., & Franze, S. (2005). A model of home learning environment and social risk factors in relation to children's emergent literacy and social outcomes. *Early Childhood Research Quarterly*, 20, 13-36. doi:10.1016/j.ecresq.2005.01.006

Gardner, M., Martin, A., & Petitclerc, A. (2019). Mothers' postsecondary entry during early childhood: Short- and long-term effects on children. *Journal of Applied Developmental Psychology*, 62, 11-25. <https://doi-org.dist.lib.usu.edu/10.1016/j.appdev.2018.12.003>

Genereux, M., Auger, N., Goneau, M., & Daniel, M. (2008). Neighbourhood socioeconomic status, maternal education and adverse birth outcomes among mothers living near highways. *Journal of Epidemiology & Community Health*, 62(8), 695-700. doi:10.1136/jech.2007.066167

Glatz, T., Buchanan, C. M. (2015b). Overtime associations among parental self-efficacy, promotive parenting practices, and adolescents' externalizing behaviors. *Journal of Family Psychology*, 29, 427-437. doi:10.1037/fam0000076

Greene, M., Patel, A., Meier, P., & Patra, K. (2016). Maternal Education Level Predicts Cognitive, Language, and Motor Outcome in Preterm Infants in the Second Year

of Life. *American Journal of Perinatology*, 33(08), 738-744. doi:10.1055/s-0036-1572532

Greenley, R. N., Holmbeck, G. N., & Rose, B. M. (2006). Predictors of parenting behavior trajectories among families of young adolescents with and without spina bifida. *Journal of Pediatric Psychology*, 31(10), 1057–1071. doi:10.1093/jpepsy/jsj011

Harding, J. F. (2015). Increases in maternal education and low-income children's cognitive and behavioral outcomes. *Developmental Psychology*, 51(5), 583–599. <https://doi-org.dist.lib.usu.edu/10.1037/a0038920>

Harding, J. F., Morris, P. A., & Hughes, D. (2015). The relationship between maternal education and children's academic outcomes: *A theoretical framework*. *Journal of Marriage and Family*, 77(1), 60–76. <https://doi.org/10.1111/jomf.12156>

Hoff, E. (2003). The specificity of environmental influence: Socioeconomic status affects early vocabulary development via maternal speech. *Child Development*, 74, 1368–1378. doi:10.1111/1467-8624.00612

Hoff-Ginsberg, E. (1998). The relation of birth order and socioeconomic status to children's language experience and language development. *Applied Psycholinguistics*, 19(4), 603–629. <https://doi.org/10.1017/s0142716400010389>

Hoff-Ginsberg, E., & Tardif, T. (1995). Socioeconomic status and parenting. In M. H. Bornstein (Ed.), *Handbook of parenting: Vol. 2. Biology and ecology of parenting* (pp. 161–188). Hillsdale, NJ: Erlbaum.

- Hortaçsu, N. (1995). Parents' education levels, parents' beliefs, and child outcomes. *The Journal of Genetic Psychology: Research and Theory on Human Development*, 156(3), 273-383. <https://doi-org.dist.lib.usu.edu/10.1080/00221325.1995.9914830>
- Kotchick, B.A., Forehand, R. Putting Parenting in Perspective: A Discussion of the Contextual Factors That Shape Parenting Practices. *Journal of Child and Family Studies* 11, 255–269 (2002). <https://doi.org/10.1023/A:1016863921662>
- Lareau, A. (2011). *Unequal childhoods: Class race, and family life*. Berkeley, CA: University of California Press.
- Lazelere, R. E., Morris, A. S. & Harrist, A. W. (Ed.) (2013). Authoritative parenting: Synthesizing nurturance and discipline for the optimal child development. Washington, DC: *American Psychological Association*.
- Lucas, R. E. (1988). *On the mechanics of Economic Development*. s.n.
- Lucas, R. E. (1990) 'Why doesn't capital flow from rich to poor countries?', *American Economic Review: Papers and Proceedings*: 92 – 6.
- Magnuson, K. A., Sexton, H. R., Davis-Kean, P. E., & Huston, A. C. (2009). Increases in maternal education and young children's language skills. *Merrill-Palmer Quarterly*, 55(3), 319–350. <https://doi.org/10.1353/mpq.0.0024>
- Marks, G., & Houston, D. M. (2002). Attitudes towards work and motherhood held by working and non-working mothers. *Work, Employment and Society*, 16(3), 523-536. doi:10.1177/095001702762217470
- McLanahan, S. S., & Sørensen, A. B. (1984). Life events and psychological well-being: A reexamination of theoretical and methodological issues. *Social Science Research*, 13(2), 111–128. [https://doi.org/10.1016/0049-089x\(84\)90017-6](https://doi.org/10.1016/0049-089x(84)90017-6)

- Meeks, S., & Murrell, S. A. (2001). Contribution of Education to Health and Life Satisfaction in Older Adults Mediated by Negative Affect. *Journal of Aging and Health, 13*(1), 92-119. doi:10.1177/089826430101300105
- Meins, E., Fernyhough, C., Fradley, E., & Tuckey, M. (2001). Rethinking maternal sensitivity: Mothers' comments on infants' mental processes predict security of attachment at 12 months. *Journal of Child Psychology and Psychiatry, 42*, 637–648. doi:10.1111/1469-7610.00759
- Monaghan, D. (2017). Does college enrollment and bachelor's completion by mothers impact children's educational outcomes? *Sociology of Education, 90*(1), 3–24. <https://doi-org.dist.lib.usu.edu/10.1177/0038040716681054>
- Mueller, C.W., & Parcel, T.L. (1981). Measures of socioeconomic status: Alternatives and recommendations. *Child Development, 52*, 13–30.
- Neuhauser, A. (2016). Predictors of maternal sensitivity in at-risk families. *Early Child Development and Care, 188*(2), 126-142. doi:10.1080/03004430.2016.1207065
- Okagaki, L., & Frensch, P. A. (1998). Parenting and Children's School Achievement: A Multiethnic Perspective. *American Educational Research Journal, 35*(1), 123–144. <https://doi.org/10.3102/00028312035001123>
- Oreopoulos, P., Page, M. E., & Stevens, A. H. (2006). The intergenerational effects of compulsory schooling. *Journal of Labor Economics, 24*, 729–760. <http://dx.doi.org/10.1086/506484>
- Pilkauskas, N., Waldfogel, J., & Brooks-Gunn, J. (2016). Maternal labor force participation and differences by education in an urban birth cohort study - 1998-2010. *Demographic Research, 34*, 407-420. doi:10.4054/demres.2016.34.14

- Pomerantz, E. M., Moorman, E. A., & Litwack, S. D. (2007). The how, whom, and why of parents' involvement in children's academic lives: More is not always better. *Review of Educational Research, 77*, 373–410.
<http://dx.doi.org/10.3102/003465430305567>
- Prince-Embury, S. (2009). The resiliency scales for children and adolescents as related to parent education level and race/ethnicity in children. *Canadian Journal of School Psychology, 24*(2), 167–182. <https://doi.org/10.1177/0829573509335475>
- Rowe, M. L., Denmark, N., Harden, B. J., & Stapleton, L. M. (2016). The role of parent education and parenting knowledge in children's language and literacy skills among White, Black, and Latino families. *Infant and Child Development, 25*(2), 198–220. <https://doi-org.dist.lib.usu.edu/10.1002/icd.1924>
- Sheikh, M. A., Abelsen, B., & Olsen, J. A. (2014). Role of respondents' education as a mediator and moderator in the association between childhood socio-economic status and later health and wellbeing. *BMC Public Health, 14*(1).
[doi:10.1186/1471-2458-14-1172](https://doi.org/10.1186/1471-2458-14-1172)
- Singhammer, J., & Mittelmark, M. B. (2006). Associations between mother's level of education and offspring's smoking and alcohol use in adulthood: A 28-year longitudinal follow-up study. *Journal of Public Health, 14*(3), 132–138.
<https://doi-org.dist.lib.usu.edu/10.1007/s10389-006-0022-z>
- Sirin, S. R. (2005). Socioeconomic status and academic achievement: A Meta-analytic review of Research. *Review of Educational Research, 75*(3), 417–453.
<https://doi.org/10.3102/00346543075003417>

- Suizzo, M.-A., & Stapleton, L. M. (2007). Home-based parental involvement in young children's education: Examining the effects of maternal education across U.S. ethnic groups. *Educational Psychology, 27*(4), 533–556. <https://doi.org/10.1080/01443410601159936>
- Sun, X., McHale, S. M., & Updegraff, K. A. (2017). Maternal and paternal resources across childhood and adolescence as predictors of young adult achievement. *Journal of Vocational Behavior, 100*, 111-123. <https://doi-org.dist.lib.usu.edu/10.1016/j.jvb.2017.03.003>
- Swartz, J. R., Knodt, A. R., Radtke, S. R., & Hariri, A. R. (2018). Post-secondary maternal education buffers against neural risk for psychological vulnerability to future life stress. *Neuropsychologia, 109*, 134-139. [doi:10.1016/j.neuropsychologia.2017.12.019](https://doi.org/10.1016/j.neuropsychologia.2017.12.019)
- Thompson, H. M. (2017). V. L. Gadsen, M. Ford, & H. Breiner (eds.): Parenting matters: Supporting parents of children ages 0–8. *Child and Adolescent Social Work Journal, 34*(4), 397–398. <https://doi.org/10.1007/s10560-017-0504-6>
- Tighe, L., & Davis-Kean, P. (2019). The Influence of College Education on Children and Parents in Low-Income Families. [doi:10.31234/osf.io/wa8ze](https://doi.org/10.31234/osf.io/wa8ze)
- Tracey, D. H., & Young, J. W. (2002). Mothers' helping behaviors during children's at-home oral-reading practice: Effects of children's reading ability, children's gender, and mothers' educational level. *Journal of Educational Psychology, 94*(4), 729-737. <https://doi-org.dist.lib.usu.edu/10.1037/0022-0663.94.4.729>
- Urke, H. B., Bull, T., & Mittelmark, M. B. (2011). Socioeconomic status and chronic child malnutrition: Wealth and maternal education matter more in the Peruvian

Andes than nationally. *Nutrition Research*, 31(10), 741-747.

doi:10.1016/j.nutres.2011.09.007

van Ansem, W. J. C., Schrijvers, C. T. M., Rodenburg, G., & van de Mheen, D. (2014).

Maternal educational level and children's healthy eating behaviour: Role of the Home Food Environment (cross-sectional results from the INPACT study).

International Journal of Behavioral Nutrition and Physical Activity, 11(1).

<https://doi.org/10.1186/s12966-014-0113-0>

Wang, L., Emmen, R. A. G., & Mesman, J. (2020). Beliefs about sensitive parenting among Chinese cross-generational caregivers: The mediating role of education.

The International Journal of Aging and Human Development, 90(4), 385-402.

<https://doi-org.dist.lib.usu.edu/10.1177/0091416019836103>