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Teachers' Experience of a Flood in Their School Community: Their Beliefs, Perceptions, and Thoughts About Practice

Caroline Tolentino

Louisiana State University and Agricultural and Mechanical College

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TEACHERS' EXPERIENCE OF A FLOOD IN THEIR SCHOOL COMMUNITY: THEIR
BELIEFS, PERCEPTIONS, AND THOUGHTS ABOUT PRACTICE

A Thesis

Submitted to the Graduate Faculty of the
Louisiana State University and
Agricultural and Mechanical College
in partial fulfillment of the
requirements for the degree of
Master of Education

in

The College of Human Sciences and Education

by
Caroline Tolentino
B.S., University of the Philippines, Diliman, 2008
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This work is lovingly dedicated to:

My Nanay Leny and my Daddy Vic, thank you for instilling the value of education and hard work in me.

My brother, Victor II, for always having my back and for teaching me how to be tech savvy.

You will always be loved and remembered.

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To God Almighty, for His guidance, wisdom, and direction. That in all things, God may be glorified!

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ABSTRACT

The increasing number of flooding incidences in Louisiana exposes a significant number of children to the possible traumatic effects of this natural disaster. Flooding takes a toll not only on families and children, but on teachers as well. While the effects of other types of disasters on children have been considered in previous studies, research has not thoroughly addressed the effects of flooding on children and on early childhood teachers. Teachers can be very instrumental in helping young children cope and making sure their needs are met after the experience of a traumatic event (Perry & Szalavitz, 2008; Le Brocque, et. al., 2017), thus it is important to explore their beliefs, practices, and perceived roles after the flooding. An increased awareness in this area may lead to improved professional development, teacher training, and teacher support to help children cope after the disaster. This qualitative research also allows for the initial discovery into this area of study which is hoped to elucidate other significant, related topics for future research.

CHAPTER 1. INTRODUCTION

Each year, naturally occurring floods disrupt communities and families. Flooding accounts for about 40% of natural disasters worldwide, making it the most common type of natural disaster in the world (Myers, 2016). In the year 2017, the states of Texas, Florida, and Georgia were ravaged by hurricanes Harvey and Irma, causing historic flooding in local areas affecting as many as 8.5million students (Gelles, 2017). In August 2016, the state of Louisiana had its share of the worst recorded flooding for that year, destroying roughly 60,000 buildings and costing around \$10 billion in damages. This flooding topped the record high of 19 incidences of flooding in the United States of America (USA) for year 2016, the nation’s most since records began in 1980 (Rice, 2017). The National Weather Service (2017) reported that in the same year, a total of 126 deaths were recorded in USA as a result of flash flooding and river flooding. Louisiana accounts for 15 of these casualties, the nation’s fourth largest number of deaths for 2016 (The National Weather Service, 2017). The catastrophic 2016 Louisiana flooding affected thousands of families, at least 22 of the 70 public school districts, and about 241,000 students (Dreilinger, 2016).

Statement of the Problem

With the high incidence of flooding in Louisiana, a significant number of children in the state are exposed to the possible traumatic effects of this natural disaster. The unique characteristics and the different developmental needs of young children make them vulnerable to the effects of natural disasters such as flooding (Baggerly & Exum, 2008; Overstreet, Salloum, Burch, & West, 2011). Because of this vulnerability, the effects of natural disasters on children has become a topic of interest in research (Peek, 2008; Weissbecker, Sephton, Martin, & Simpson, 2008; Fothergill, 2017), however, there are limited studies conducted specifically

about flooding (Convery, Carroll, & Barlogh, 2014). The exposure to flooding not only takes a toll on families and children, but on teachers as well. While a plethora of research is available about children and traumatic effects of other forms of natural disasters (Jordan, Perryman, & Anderson, 2013; Overstreet, Salloum, Burch, & West, 2011), research has not thoroughly addressed the effects of flooding on children (Convery, Carroll, & Barlogh, 2014) or early childhood teachers (Convery, Carroll, & Barlogh, 2014; Seyle, Widyatmoko, & Silver, 2013; Alisic, 2012). Although there is a research literature about the effect of flooding on elementary, middle, and high school teachers (Seyle, Widyatmoko, & Silver, 2013; Convery, Carroll, & Barlogh, 2014; Overstreet, Salloum, Burch, & West, 2011; Alisic, 2012), the results and findings of the studies may not be applicable to early childhood teachers because of the distinctive demands of their job working with young children who have very little control over how they respond to disasters (Plummer, 2008).

At the time of the study, the only known research that examined the effects of flooding on early childhood teachers in the United States was conducted by Paige, Buchanan, and Verbovaya (2016). In their research, one of the hypotheses that the researchers investigated was the relationship between the emotional well-being of the early childhood teachers and students' narrative representations of attachment following flooding from hurricane Katrina. It asked teachers to respond to two measures, a non-standardized survey and the Hopkins Symptoms Checklist to examine their exposure to the hurricanes and measure their symptoms for anxiety and depression. This study was a part of the larger study, that examined students' knowledge of hurricanes and teachers' classroom responses in four states following hurricanes Katrina and Rita (Buchanan, Casbergue, and Baumgartner, 2009). A total of 64 children aged 4- 9 years old living in south Louisiana, 57 parents, and 15 teachers participated in this study. Children were

invited to respond to Narrative Story-Stem Task (NSST) or structured story stems showing common family-related stressors using simple doll figures and props. The researchers found that teachers' psychological distress has no association with how students represent their attachments. Consequently, the researchers found that teachers' reports of loss of property was associated with NSST. This result may be due to teachers' preoccupation and detachment or distress to take care of their storm-related concerns, as reported in the study's anecdotal records. Furthermore, teachers may have directly communicated their property loss to students which may have increased children's instability and uncertainty. Paige, Buchanan, and Verbaboya's (2016) study is an indication that teachers' well-being affects their ability to interact with students.

The study by Paige, Buchanan, and Verbovaya (2016) offers some information about the experience of early childhood teachers following a flooding disaster. While it is important to study teachers' exposure to natural disasters and their anxiety and depression level, the study did not address teachers' beliefs on children's development and disasters, their reported practices, and perceived roles after the flooding; these topics are deemed important because teachers are expected to be one of the first responders after a crisis (Walker, Carlson, Monk, & Irons, 2010) and it is essential that a deep understanding of their perceptions about children's development, their teaching practices, and their roles are carefully studied with the assumption that their decisions and practices are shaped by their beliefs (Kowalski, Piotrkowski, & Johnson, 2001; Piotrkowski, et. al., 2000; Vartuli, 2005; Wen, 2011; Maxwell, et.al., 2001; Goldstein, 2007).

Purpose of the Study

There is an increasing evidence that flooding can leave life-long effects on children's physical, emotional, cognitive, and psychological development (Perry & Szalavitz, 2008; Kargillis, Kako, & Gilham, 2014; Buchanan, Casbergue, & Baumgartner, 2009). Because

teachers can be very instrumental in helping students cope and making sure their needs are met after the experience of a traumatic event (Perry & Szalavitz, 2008; Le Brocque, et. al., 2017), it is important to explore their beliefs about responding to children, appropriate curriculum and pedagogy, and their perceived roles after the flooding (Alisic, 2012). Teachers' perceptions and beliefs are assumed to influence their decisions and practices that shape the kind of classroom environment and interactions the children will have (Kowalski, Piotrkowski, & Johnson, 2001; Piotrkowski, et. al., 2000; Vartuli, 2005; Wen, 2011). Children's classroom environment and their daily interactions are crucial in the recovery process after experiencing a traumatic event (Perry & Szalavitz, 2008; Le Brocque, et. al., 2017), hence, it is noteworthy to study teachers' perceptions and reported classroom practices after the flood.

The present study explored early childhood education (ECE) teachers' understanding of children's development, their interpretation of what it means to use developmentally appropriate practice (DAP), and their perceived roles following the experience of a flood in Louisiana. It also explored and compared teachers' beliefs and practices before and after experiencing the flood. This study was based on the theoretical framework of Bandura's (2006) Social Cognitive Theory (SCT), which posits that teachers' beliefs influence their teaching practices and classroom environment, which are important factors in helping children manage the effects of experiencing the flood.

Areas of Inquiry

This research project investigated four areas of inquiry:

- What are teachers' insights regarding students' development and natural disasters?
- How do teachers describe their classroom performance after students' experience of a flood?

- What are teachers' perceptions of developmentally appropriate practice in the early childhood setting following students' experience of a flood?
- How do teachers describe their role in teaching students after the flooding?

These questions were formulated with the goal of understanding what teachers' perceptions are about children and their development, how they respond to children's needs, and to how they perceive their roles after the experience of a flood; all were believed to be essential in exploring teachers' beliefs and practices after the flooding.

Research Design

Four early childhood teachers, whose school community was affected by the 2016 Louisiana flooding, were chosen to participate in this study. The qualitative method of case study approach was used in this study to gain a deep understanding of teachers' perceptions following the experience of a flood. In-depth, semi-structured interviews were used to explore teachers' perceptions of children's development, DAP, and perceived roles after the experience of a flood. The interviews were audio-recorded and researcher took supplemental notes during the interviews. The audio-recordings were transcribed and analyzed to reveal the themes that were reported and discussed in the findings of this study.

Benefits

Exploring teachers' perceptions of children's development, DAP, and their roles after the experience of a flood will facilitate a deeper understanding of how teachers perceive the effects of flooding in relation to their beliefs and practices. An increased awareness of teachers' roles in helping children cope after experiencing the flood may lead to improved professional development, teacher training, and teacher support. Lastly, qualitative methods allow for the initial discovery into an area and as such will illuminate more questions for future research.

Limitations

This qualitative study presents the voices of four female, first year teachers after the experience of a flood that impacted their school community. While the results of qualitative research are never meant to be generalizable, the addition of more voices in future research would offer additional perspectives and more information about teachers' experience of disaster. The convenience sample is a limitation. All of the participants were known to the researcher and the answers provided may be compromised due to personal influences.

Definition of Terms

A few terms will be used throughout this paper and are defined below.

Beliefs: A state or habit of mind in which trust or confidence is placed in some person or thing; something that is accepted, considered to be true, or held as an opinion (Merriam-Webster, 2017).

Developmentally Appropriate Practice (DAP): DAP is a position statement about classroom practice that is informed by what is known from theory and literature and about how children develop and learn. It is grounded in research about child development and in the knowledge of effectiveness and best practices in early childhood education (Copple & Bredekamp, 2009).

Early Childhood Education (ECE): Sometimes referred to as early education as early childhood care and education (ECCE) by UNESCO, early child development (ECD) by the World Bank, early childhood development (ECD) by UNICEF, but more universally called early childhood education (ECE) by Education International and NAEYC. ECE is the education of young children, from birth to 8 years old. It is considered critical period of life when children's brain rapidly develops and their physical, emotional, social, and cognitive abilities are

strengthened (Early Childhood Education: A Global Scenario, 2010; Early Childhood Education from Birth to Age 8, 2013). Because of the unique characteristics of children's brain and other domains of development during this period, early childhood years are believed to be the optimal time for learning and development, which will be the foundation for later success in school, work, and in life (Early Childhood Education: A Global Scenario, 2010; US Department of Education, 2014).

Early Childhood Educator/ Teacher: The US Department of Education (n.d.) defines early childhood educator as any professional working in the early childhood setting including but not limited to center-based and family child care providers, infant and toddler specialists, early intervention specialists, early childhood special educators, home visitors, related service providers, administrators, Head Start teachers, Early Head Start teachers, preschool and other teachers, teacher assistants, family service staff, and health coordinators. In this study, the early childhood educators/ teachers refer to certified teachers who work with students from birth to 8 years of age.

Secondary Stress: Sometimes referred to as compassion fatigue; the feeling of being physically, mentally, or emotionally worn out, or feeling overwhelmed by students' trauma (Child Trauma Toolkit for Educators, 2008).

Stress: Sometimes referred to as primary stress, is defined in Merriam-Webster dictionary (n.d.) as a physical, chemical, or emotional factor that causes bodily or mental tension and may be a factor in disease causation. It is also defined as a state resulting from a stress; *especially* :one of bodily or mental tension resulting from factors that tend to alter an existent equilibrium. Lazarus and Folkman's (1984) transactional theory of stress suggests that stress results from a

dynamic transaction between demands in the environment and one's ability to cope using resources (McCarthy, Douglas, & Kulkarni, 2012).

Teacher's Beliefs: Beliefs that are closely related to teachers' thought processes and essential to establishing an emotional attitude (Cassidy & Lawrence, 2000; Clark & Peterson, 1986; Smith, 1997; Smith & Shepard, 1988 all in Kim, 2011).

Trauma: Perry & Szalavitz (2008) defines trauma as a deeply disturbing or distressing experience. Merriam-Webster defines it a disordered psychic or behavioral state resulting from severe mental or emotional stress or physical injury; an emotional upset.

Natural Disaster- Natural disaster is a sudden, calamitous event caused by nature that seriously disrupts the functioning of a community or society and causes human, material, and economic or environmental losses that exceed the community's or society's ability to cope using its own resources. These disasters can be geophysical (earthquakes, landslides, tsunamis and volcanic activity), hydrological (avalanches and floods), climatological (extreme temperatures, drought and wildfires), meteorological (cyclones and storms/wave surges) or biological (disease epidemics and insect/animal plagues) (International Federation of Red Cross and Red Crescent Societies, n.d.).

CHAPTER 2. REVIEW OF LITERATURE

In August 2016, the state of Louisiana experienced catastrophic flooding that cost the lives of 13 people, affected about 507,495 people, damaged 60,000 buildings, closed about 30% of the state's school districts, and disrupted the lives of about 258,100 students from public, charter, and private schools in Baton Rouge and surrounding areas (Dreilinger, 2016). School employees, including teachers, were not spared from the havoc that the flooding caused. In East Baton Rouge (EBR) parish alone, the second largest school district in Louisiana, there were about 6,000 school personnel that were affected and displaced by the flooding (Cusick, 2016). But as schools reopened a few weeks later, teachers were expected to provide the children with a safe, happy, and stable environment to help them achieve some normalcy in their everyday routines and to help them cope with the traumatic experience of the flood. Current literatures provide evidence that traumatic experience such as flooding can leave life-long effects on children's development and affect their physical, emotional, cognitive, and psychological development (Perry & Szalavitz, 2008; Kargillis, Kako, & Gilham, 2014; Buchanan, Casbergue, & Baumgartner, 2009). Because teachers can play a vital role in helping children cope and in making sure their needs are met after the experience of a traumatic event (Perry & Szalavitz, 2008; Le Brocque, et. al., 2017), it is essential to explore their beliefs about children's development, the appropriate curriculum and pedagogy, and their perceived roles after the flooding (Alisic, 2012). Teachers' perceptions and beliefs are presumed to influence their decisions and practices that shape the kind of classroom environment and interactions the children will have (Kowalski, Piotrkowski, & Johnson, 2001; Piotrkowski, et. al., 2000; Vartuli, 2005; Wen, 2011). The kind of environment and interactions the children have after the experience of traumatic event can be crucial in the recovery process (Perry & Szalavitz, 2008; Le

Brocque, et. al., 2017), thus, it is important to understand teachers' perceptions and reported classroom practices after the flood.

Theoretical Framework

The main theoretical foundation for this study was Bandura's (2006) social cognitive theory (SCT). Bandura's SCT represents a framework for understanding, predicting, and changing human behavior (Green & Piel, 2009). Bandura's (2006) SCT adopts a theory of human agency, which posits that people are "not simply onlookers of their behavior. They are contributors to their life circumstances, not just products of them" (Bandura, 2006, p. 164).

Bandura (2006, p. 164-165) presents the four core properties of human agency, they are:

- intentionality or the intentions formed by people that include action plans and strategies for realizing them
- forethought or the goals and anticipated outcomes that provide direction, coherence, and meaning to one's life
- self-reactiveness or self-regulation which is the ability to construct appropriate actions and to motivate and regulate the implementation of these actions
- self-reflectiveness or the ability to self-examine their own functioning through self-awareness which help them reflect on own efficacy, soundness of thoughts and actions, and to make adjustments when needed

Teachers' experience, especially of trauma can be described and presented within this framework. As professionals working toward a goal for their students, the experience of the disruption of a natural disaster can have impact on their human agency (intentionality, forethought, self-regulation and self-reflectiveness). Previous research in disaster and

educational contexts tends to focus on one aspect, without considering or exploring the teachers' human agency.

Bandura's SCT also subscribes to the triadic reciprocal causation (TRC) model that includes three components: the biological and psychological characteristics of the person (P), the person's behavior (B), and the environment (E) (Miller, 2016). It represents the dynamic association of individual factors, conduct, and environment (Bandura, 2012) which affect perceptions and actions (Dupuy, 2016). The TRC model can be used to understand teachers' beliefs and practices about the effects of flooding. For example, teachers experience the flooding and the effects it had on their students (E). Based on their understanding of the catastrophic event and their emotions, the teachers make a connection between their environmental influences and the beliefs they formed (P) and how they relate these with their practices in the classroom (B). After the experience of a flood, SCT posits that teachers' choices are influenced by their beliefs that shape their practices. These formed beliefs and practices are based on the assumption that flooding impacts children and their development, which in turn affects their roles in the classroom.

Teacher's Beliefs and Practices

Merriam-Webster (2017) defines belief as "a state or habit of mind in which trust or confidence is placed in some person or thing" or "something that is accepted, considered to be true, or held as an opinion". Teachers' beliefs are closely related to teachers' thought processes and essential to establishing an emotional attitude (Cassidy & Lawrence, 2000; Clark & Peterson, 1986; Smith, 1997; Smith & Shepard, 1988 all in Kim, 2011). Teachers acquire their beliefs during pre-service years through their coursework and internship, or during their in-service years through professional development trainings. Beliefs help teachers make sense of

the world they live in (Clark & Yinger in Cobanonglu & Capa-Aydin, 2015), guide how they conceptualize their work (Mansour, 2008), and have an important impact in the life of a teacher's classroom (Capa-Aydin, 2015; Lee, 2008). From their beliefs, early childhood teachers make multiple important decisions, impacting instruction, interactions with children, and ultimately influencing children's learning and development (Miller, 2016).

Teachers' beliefs about how to design curriculum and respond to children can be guided by frameworks. In early childhood education, DAP offers one such framework (Copple & Bredekamp, 2009). Research on early childhood teachers' beliefs about DAP has investigated the relationship between teacher beliefs and teacher practice. Early childhood teachers' beliefs can be shaped by their understanding of DAP. Kim (2011) studied 65 pre-service early childhood teachers using Teacher Beliefs Scale (TBS) and questionnaire and found that the length of teacher education and the amount of coursework have positive effects on teachers' beliefs about DAP. Both length of education and amount of coursework can be factors in teachers' better understanding of DAP (Kim, 2011). In the same study, Kim (2011) also reported that teachers believe in the importance of employing strategies and practices in their classrooms that are identified as developmentally appropriate. In a study conducted by Kim and Han (2015), with 51 pre-service and 35 in-service early childhood teachers, the researchers found that teachers who hold stronger belief about DAP use more varied instructional strategies than those teachers who possess a weaker belief about it.

The DAP position statement offers specific guidelines and examples of appropriate classroom but does not present a single universal approach or unique concept of what is appropriate (Kim, 2011; Copple & Bredekamp, 2009). And while DAP is frequently described as an influence on instruction and decision making in early childhood classrooms, the

interpretation and implementation of what teachers believe to be developmentally appropriate, remains a topic of debate (Lee, 2008; Kim & Han, 2015). Moreover, a number of empirical studies show negative correlation between teachers' beliefs and practices (Wen, Elicker, & McMullen, 2011; Song, 2015; Chan, 2016). Wen, Elicker, and McMullen (2011) studied 58 preschool teachers and found that the teachers' beliefs and observed classroom practices were weakly correlated. In Cambodia, Song (2015) examined 379 teachers by asking them to respond to a questionnaire and randomly interviewed 30 teachers from two districts. Song found that although the teachers have a strong support for belief statements that are child-centered, they still failed to adopt and practice the pedagogy in their classroom. The same result was observed in Chan's (2016) study of 35 kindergarten teachers, 3 principals, and 5 ECE specialists in Hong Kong. Chan used both quantitative and qualitative measures in the study and utilized questionnaires, interviews, and observations. The findings suggest that all of the teacher-participants advocated the early childhood teaching beliefs but showed discrepancy of their beliefs and practices. These studies imply that there are other factors that may affect teachers' classroom practice other than just their beliefs. It is important to examine these factors carefully to understand the decisions that teachers make in the classroom.

Even if teachers have a deep understanding of DAP, their teaching practices may not reflect their beliefs. There may be several factors affecting the relationship of teachers' beliefs and their practices, one of which can be the academic expectations in a high-stakes testing and accountability and school environment (Parker & Neuharth-Pritchett, 2008). In a study conducted by Parker and Neuharth-Pritchett (2008), 34 kindergarten teachers were observed and asked to respond to surveys and interviews to examine their beliefs in relation to DAP and the role of external factors in shaping their beliefs. The researchers found that regardless of teachers'

beliefs and instructional approaches, they perceived that kindergarten was becoming more academic and less developmentally appropriate. The high academic expectations for students and strict curriculum mandates, even in ECE, can be factors for the disconnect between teachers' beliefs and practices. In connection to Bandura's TRC, teachers' high-stakes and highly academic environment can cause them to consider that their beliefs about child development and DAP will not be enough to support the classroom expectations for students, therefore, they use strategies that they see fit, regardless if they are aligned with their beliefs about child development or DAP. After the flooding, this can mean that even if teachers have a strong belief about the impacts of flooding on children, it will not be a guarantee that they will utilize practices that are deemed appropriate to help children cope from the trauma. Consequently, it can work the opposite way with teachers knowing the academic expectations but their beliefs about children's needs after the flood may change their behavior and influence their practice.

Impacts of Disaster on Children

Flooding can be extremely stressful because of its potential physical damages to property, economic loss, community disruption and displacement, death, and injury to people of all ages and walks of life. In addition, these events leave life-long traumatic and profound effects on people's emotional and mental abilities (Peek, 2008). Children who experience natural disasters such as flooding, are considered one of the most vulnerable groups because of their partial or total dependency to adults, their inability to handle stressful and frightening experiences independently, and the lack of normalcy in their family and school routines (Peek, 2008 & Kousky, 2016).

Children may be particularly vulnerable to natural disasters because of their developmental characteristics and rapid brain development, which can be impeded as a result of

their experiences (Baggerly & Exum,2008). Children's exposure to natural disasters can indirectly affect their adaptation and can cause pathological symptoms (Weems & Overstreet, 2008). When left unresolved, traumatic experiences can have toxic effects on children, which can be harmful to their physical, social, emotional, and cognitive development (Goodyear-Brown, 2010).

A study done by the National Center for Posttraumatic Stress Disorder found that acute symptoms after natural disasters are 23% more likely to occur in school-age children than adults (Wolmer, Loar, Dedeoglu, Siev, & Yazgan, 2005). Wolmer, Loar, Dedeoglu, Siev, and Yazgan, (2005) studied 287 children aged from 9-17 who were studying in three schools that were affected by 1999 earthquake in Israel. They followed up with the students for three and a half years after their exposure to the earthquake. The researchers used the instruments Child Post-Traumatic Stress Disorder Reaction Index (CPTSD-RI) and the Traumatic Dissociation and Grief Scale (TDGS) with the help of teachers. In one of the findings of the study, the researchers found that in some cases, children who possess severe trauma symptoms which appeared six months after the earthquake had full blown symptoms after months or years. This is an indication that some children who experienced trauma do not manifest a decrease in traumatic symptoms even after several years have passed.

Stress can develop from children's traumatic experience such as flooding (NCTSN, n.d; Le Brocque, et. al., 2017). Because young children may not be able to express their feelings of fear and helplessness, their stress may be manifested in behavioral indicators such as regression in toileting and speech (Perry & Szalavitz, 2008). Furthermore, children who are suffering from stress associated with trauma have a difficult time regulating their emotions and behaviors (Le Brocque, et. al., 2017). Children who are exposed to natural disasters may exhibit typical,

temporary, or permanent symptoms during and after disasters which may include fear, depression, guilt, night terrors, separation anxiety, loss of interest in school and other activities, poor concentration, and aggressiveness. In some cases, children may exhibit clinical symptoms including Acute Stress Disorder (ASD), Post Traumatic Stress Disorder (PTSD), other anxiety disorders, or depression disorders (Baggerly & Exum, 2008).

Jordan, Perryman, and Anderson (2013) discussed how children can develop symptoms of trauma because of the significance of the traumatic events and the fear of “losing his or her parents during or after the event” (p. 220). Children who, at their young age, experience flooding and other traumatic events, may develop lifelong struggles with depression and anxiety which can turn into chronic illness (Baggerly & Exum, 2008; Jordan, Perryman, & Anderson, 2013). Additionally, children who have been exposed to previous traumatic experience may demonstrate higher levels of stress or PTSD symptoms because they fear the recurrence of the traumatic experience. Salloum, Carter, Burch, Garfinkel, & Overstreet (2011) conducted a study of 122 school-aged children in New Orleans and reported that children who have experienced trauma during hurricane Katrina showed higher level of PTSD symptoms during exposure to hurricane Gustav.

The experience of flooding has also been found to provoke or worsen mental health problems, affecting people of all ages, including children, and can cause behavior problems. This traumatic event is not only extremely stressful but can also cause secondary stress because of the lengthy recovery period after flooding (Stanke, Murray, Amlot, Nurse, & Williams, 2012). Children can easily absorb the stress and develop fatigue by hearing about the trauma and seeing family members go through the ordeal (Motta, 2012). Secondary stress can be as harmful as primary stress and can lead to more serious conditions including depression, anxiety, and post-

traumatic stress disorder (PTSD) (Motta, 2012, Hydon, Wong, Langley, Stein, & Kataoka, 2015).

Children's ability to learn and develop is also affected by the experience of natural disasters. Children who have been exposed to these events showed a decrease in their ability to focus, decline interest in learning, less interest in participating in extra-curricular activities following the experience of a natural disaster, and an increase in challenging behaviors in the classrooms including fighting and disruptive behavior (Walker, Carlson, Monk, & Irons, 2010).

Teachers' Role in Children's Learning After the Flooding

Teachers play several important roles in the lives of the children, they can assume the role of a friend, a counselor, a caregiver, and in most cases, a parent to the children. Whatever role the teachers play, they need to form a positive relationship with the children built on trust and mutual respect (Marion, 2015). Their interactions with the children as well as the decisions that they have to make on an everyday basis, affect and influence what children learn and whether they learn at all (Miller, 2016; Copple & Bredekamp, 2009). It is through teachers' knowledge of children's characteristics, planning and organization, compassion and receptiveness, and their willingness to adapt and modify their teachings based on children's background and individual needs that children learn and develop (Hamre & Pianta, 2007).

Because the early childhood classroom relies heavily on teachers in ensuring that the appropriate curriculum is employed, teachers are required to deliver high quality and effective teaching strategies in teaching. To cope with the high standards set for ECE teachers, it is suggested to engage future teachers in excellent pre-service preparation, provide ongoing professional development for in-service teachers, and make on-the-ground support and mentoring available for them (Kim & Han, 2015; Copple & Bredekamp, 2009). Because children's needs

are constantly changing, teachers need to regularly assess their beliefs and practices to guarantee that they are aligned with the developmental needs of the children. To achieve this goal, teachers can utilize the framework of DAP in planning and decision-making by considering these important factors: their knowledge of child development and learning, their ability to recognize each child's uniqueness, and their understanding of the children's social and cultural contexts (Kim, 2011; Copple & Bredekamp, 2009).

When teachers understand children's development, traits, and characteristics, they are able to decide what learning environment and experiences will best support learning and development. Teachers will be able to set high but realistic expectations and choose the most appropriate activities and materials for the children, minimizing stress and frustrations in the classroom (Kostelnik, Sederman, & Whiren, 2007). Teachers' knowledge of child development also helps them in recognizing the sequences children learn the domain-specific skills and help them recognize the uniqueness of each child in class. When teachers accept that each child is unique and children's needs vary, they are able to plan developmentally appropriate activities and make adjustments if necessary to cater to the individual needs of the children and to foster growth and development. It is essential for teachers to respond to each child as an individual and to consider their respective interests, learning styles, strengths, and weaknesses (Miller, 2016; Copple & Bredekamp, 2009).

Teachers must also recognize the importance of the children's values, expectations, and behavioral and linguistic conventions outside the school to ensure that the learning experiences in the classroom are "meaningful, relevant, and respectful for each child and family" (Copple & Bredekamp, 2009, p. 10). Teachers who are familiar with the children's social and cultural

contexts use their knowledge to guarantee that the learning activities are not just developmentally appropriate, but will make an impact on children's learning and development.

Teachers are encouraged to meet the emotional needs of the children after the experience of a traumatic event (Wilson & Kershaw, 2008). The experience of traumatic event during the early childhood years can cause children to fear for their physical and emotional safety (Jordan, Perryman, and Anderson, 2013). The effects of trauma in young children can be life-long, but through the help of significant adults such as teachers, children can cope with the stress associated with the traumatic experience. While there is little research about how teachers can and should respond to disaster within early childhood settings, some work has been done in the elementary, middle, and high school. Alvarez (2010) conducted a two-year study involving 5 administrators and 10 high school teachers on the traumatic conditions and teaching after hurricane Katrina. The evidence in the study revealed that "disaster event required teachers to make specific changes in disciplinary content and instructional practice" (Alvarez, 2010, p. 28) to manage the unstable conditions brought about by the flooding. After the flooding, the teachers had to support children emotionally by tweaking the curriculum to allow for more opportunities for students to talk or write about their experiences. They also reported building positive classroom environment and finding ways to celebrate in the midst of their own trauma from Katrina. A study by Walker, Carlson, Monk, & Irons (2010) used online survey and qualitative reflections to examine 73 classroom teachers affected by hurricane Ike. Similar to Alvarez' study, & Walker, Carlson, Monk, & Irons (2010) supported the students' emotional needs by allowing them to talk with their peers to discuss their experiences. Additionally, the researchers found that teachers felt the need to help students acquire their basic needs. Teachers reported working with other professionals, such as counselors, to ensure that the students' basic

needs for food, water, clothing, and shelter are met. Teachers also assigned less homework to students in case they do not have ample space to work at home. Teachers are also expected to support students' psychological needs following the experience of a natural disaster (Le Brocque, et. al., 2017). These studies emphasize the importance of teachers' beliefs about children's development and appropriate practices in the classroom following the experience of a natural disaster, such as flood to respond to the varying needs of the students.

Research about teachers' responses to children following other traumatic events can provide some information in the absence of direct research about early childhood teachers' roles in the recovery process after the experience of a natural disaster. Because young children fall under the preoperational or concrete operational stages of Piaget's cognitive development, allowing them to play is the most appropriate way for young children to manage the stress associated with the traumatic experience (Baggerly & Exum, 2008). During the early years, children should be given the opportunity to play to express themselves and demonstrate their thoughts and feelings without directly talking about them (Landreth, 2012). Crenshaw and Hardy (2007) discussed how posttraumatic play allows children to engage in scenarios that resemble the traumatic experience while at a safe distance until they are physically and emotionally ready to face their fears.

A healthy human relationship with significant adults who are kind, loving, and understanding can help children change their negative world view and behavior towards the traumatic experience (Perry & Szalavitz, 2008). Adults who respond to the traumatized children through the neurosequential approach (by providing the developmental needs based on when the development was hampered) will promote the rebuilding of the neurosystems that were damaged because of the negative experience (Perry & Szalavitz, 2008). Because flooding recovery may

take several months or years to complete, children may not receive the kind of strong, consistent relationship they need from their parents who may be too busy dealing with flood-related issues and the recovery process. The school may be the only stable source of this relationship; hence, teachers can support children by fostering a warm, caring, and understanding relationship with them.

Aside from healthy relationships, cultivating a positive environment is vital in helping children cope from traumatic experience and help them feel safe, secure, and happy (Perry & Szalavitz, 2008). Allowing children to be in control of situations after their traumatic experience and lead without being humiliated will allow them to overcome the negative effects of trauma (Perry & Szalavitz, 2008). Teachers can promote a safe haven for children in the classroom and encourage them to explore and feel comfortable in the classroom environment (Jordan, Perryman, and Anderson, 2013).

DAP to Support Learning After the Flooding

Children in their early childhood years, from birth to 8, go through the most rapid phase of growth and development (Baggerly & Exxum, 2008; Brotherson, 2009; Copple & Bredekamp, 2009). During the early childhood years, the human brain cells make more connections and is twice as active as an adult's brain, making young children more capable of forming foundations for social skills, self-esteem, perception of the world, moral outlook, as well as cognitive skills (Brotherson, 2009). Numerous theorists believe not only in the importance of understanding brain development, but in the significance of early childhood interactions and experiences and their life-long effects in children's physical, social, emotional, and cognitive development (Miller, 2016). Whether the theories support development through nature (Darwin, Bowlby, & Chomsky), nurture (Skinner, Bandura, & Vygotsky), or combination of the two (Erickson, Piaget, & Gibson), all child

development theories include a consideration of children's distinct characteristics. For example, Vygotsky stressed the importance of social interactions in cognitive development and believed in the significance of a more knowledgeable other (MKO) who will guide children in their development. Bandura stated that people learn from each other through observation, imitation, and modeling and believed that children are able to develop self-efficacy once they feel competent with their environment. Erickson, in his psychosocial stages of development, expressed the importance of the people in the environment to help individuals successfully resolve the crisis for each life stage. Positive or negative outcomes as results of interactions with the people in the environment will later help shape children's personality (Miller, 2016). It is imperative that adults foster a constructive and healthy environment for the children to ensure their optimal development in all domains. Because of the importance of the environment during the early childhood years, the concept of developmentally appropriate practice (DAP) in the early childhood setting was developed (Copple & Bredekamp, 2009).

As children's brain changes after the experience of a traumatic event such as flooding, so do their developmental needs (Perry & Szalavitz, 2008). With the changes in children's developmental needs, teachers need to reevaluate their teaching practice to ensure that the needs of the students are met. In the studies conducted by Alvarez (2010) and Walker, Carlson, Monk, & Irons (2010), the teachers who participated in the study reported allowing students to talk and write about their experiences. The teachers must allow students to engage in voluntary play to help them cope with the traumatic experience (Landreth, 2012, Perry & Szalavitz, 2008). "Play involves physical, mental, and emotional self in creative expression and can involve social interaction" (Landreth, 2012, p. 11). By allowing children to play, children are able to play out their emotions and feelings in a natural, dynamic, and self-healing way (Landreth, 2012).

Conclusion of Literature Review

The current disaster literature in education does not answer critical questions about the impact of flooding disaster on teachers' beliefs. Specifically, we do not know how early childhood teachers perceive children's development, the appropriate curriculum and pedagogy, and their roles after the flooding. SCT posits that teachers' beliefs will influence their practices in the classroom, affecting the way children learn. Understanding early childhood teachers' experience and beliefs are particularly critical because of the vital role teachers have in recovery process after a traumatic event. The present study seeks to explore the under researched topic of teachers' beliefs about children's development, the appropriate curriculum and pedagogy, and their roles after the flooding and hopes to fill some of these deficits through a qualitative case study of teachers experiencing flooding in their school neighborhood.

The literature in this present study established that natural disasters like flooding can leave life-long effects to children's development. It is important that teachers' insights regarding this topic is explored to understand their beliefs and to gain an in-depth knowledge of how their beliefs relate to their practice after the flooding. Because children rely heavily on the teachers for support in coping after the flood, it is essential to study teachers' classroom performance and decision-making which ultimately affect children's coping and development. It is also imperative to obtain information regarding teachers' insights about DAP and how they view the appropriate curriculum and pedagogy to support children's needs. DAP provides a framework for ECE teachers to connect their knowledge with theories to create a classroom environment that is conducive to learning. It also allows teachers to develop a healthy relationship with the children which is important in promoting emotional stability after the experience of a flood. Finally, exploring teachers' perceptions of their role after the flooding will allow for better

understanding of how teachers in the early childhood setting view their important task in responding and supporting children in all domains of development after the traumatic experience of a flood.

Given the need to further understand the under researched topic of early childhood teachers' beliefs and practices after the flooding, the present project seeks to address this deficit with a qualitative study that addresses the following areas of inquiry:

- What are teachers' insights regarding students' development and natural disasters?
- How do teachers describe their classroom performance after students' experience of a flood?
- What are teachers' perceptions of developmentally appropriate practice in the early childhood setting following students' experience of a flood?
- How do teachers describe their role in teaching students after the flooding?

A better understanding of teachers' experiences would be meaningful to teachers and other professionals working with young children after a flooding disaster.

CHAPTER 3. METHODOLOGY

This study explored early childhood education (ECE) teachers' understanding of children's development, their interpretation of what it means to use developmentally appropriate practice (DAP), and their perceived roles following the experience of a flood in Louisiana. This study was based on the supposition that teachers' beliefs influence their teaching practices and classroom environment, which are important factors in helping children manage the effects of experiencing the flood.

This study sought to address four areas of inquiry:

- What are teachers' insights regarding students' development and natural disasters?
- How do teachers describe their classroom performance after students' experience of a flood?
- What are teachers' perceptions of developmentally appropriate practice in the early childhood setting following students' experience of a flood?
- How do teachers describe their role in teaching students after the flooding?

This chapter describes the study's research methodology, the sample selection for the study and explains the procedure used in gathering and collecting data and the process of analyzing the data collected.

Research Methodology

The central goals of the research required obtaining high quality information to gain an in-depth understanding of the topic. With this in mind, qualitative research methods were chosen for this study. Qualitative research has been widely used in the field of education to answer many questions in the educational setting. Qualitative methodology is especially effective when a researcher needs to explore a problem and developing a thorough understanding of a phenomenon (Creswell, 2015). Qualitative research uses words and sometimes images to

analyze data and does not rely on statistical analysis. “It is intended to produce information on a given setting in its full richness and complexity” (Slavin, 2007, p. 121).

The qualitative method of case study approach was used in this study. The case study approach was chosen because it provides an “in-depth exploration of a bounded system” (Creswell, 2015, p. 469) that can be an activity, an event, a process, or an individual separated in research by boundaries such as time, place, or physical boundaries. It allows researchers to study complex issues and when applied correctly, case study becomes a valuable method for developing theory, evaluating programs, and developing interventions (Baxter & Jack, 2008).

Sample Selection

The sample was conveniently selected from a pool of 6 teachers working at a school to which the researcher had easy access. To decrease the possibility of bias teachers least known to the researcher at the time of interview were selected. Four female ECE teachers who were teaching in kindergarten and 1st grade agreed to participate in the present study. Each participating teacher was currently teaching children who have experienced the 2016 Louisiana flooding. Although the community was greatly affected, the school site where the teachers work was not damaged by the flood. Majority of the students had to relocate or live in shelters for months after the flooding.

At the time of study, the teachers were in the process of obtaining their teaching certificate through alternative routes and just finished their internship. To protect their identities, the pseudonyms Hillary, Ericka, Brooke, and Sabrina were used in this study and their distinguishing information was altered. All teachers were teaching at the same school in a southern city in Louisiana. Their ages range from 26- 40 years old (mean= 30.5) and they have

varied educational background and professional experiences. Table 1 summarizes the participants' demographics.

Table 1. Participants' Demographics

Name	Age	Educational Background	Years of Teaching Experience
Brooke	26	Bachelor's Degree (Non-education)	1
Ericka	28	Bachelor's Degree (Non-education)	1
Hillary	40	Bachelor's Degree (Non-education)	1
Sabrina	28	Master's Degree (Non-education)	1

Context

The school year officially began on August 4, 2016. From this day until the first official day of school for students, teachers met with parents and administered assessments to students. Just two days after students started school, on August 12, 2016, southern cities in Louisiana experienced catastrophic flooding which interrupted school for students, teachers, and other school staff. For the participating teachers, the school was not flooded but the neighboring community was impacted. The teachers reported back to their campus on August 22, 2016 but because a lot of teachers and staff in the district were affected by the flooding, the district decided to move the reporting dates for teachers to September 1, 2016. The school was reopened for students on September 6, 2016. The school site in this present study was shared with

students and teachers from another school that was flooded and damaged. The present research project took place about eight months after the flooding.

Interview Protocol

Interviews provide a great amount of information, some of which cannot be directly observed, and they give the interviewer the opportunity to control the types of information received by asking specific questions (Creswell, 2015). Interviews are appropriate to use for small samples because they can provide a great amount of pertinent information for the study. They can be time-consuming and costly when the interviews take place in different sites, therefore, they are often used in studies with small sample (Burton, Brundrett, Jones, 2014).

The interview protocol included open-ended questions. The researcher sought to allow the participants to “best voice their experiences unconstrained by any perspectives of the researcher or past research findings” (Creswell, 2015, p.216). The questions used in this study were administered using a semi-structured interview strategy. In using a semi-structured interview, the interviewer has a guide to use, with questions and topics that are relevant to the study. “The interviewer has some discretion about the order in which questions are asked, but the questions are standardized, and probes may be provided to ensure that the researcher covers the correct material” (Harrell & Bradley, 2009, p. 27). By using a semi-structured interview for this study, the researcher was able to expound on topics, dig deeper to thoroughly understand the responses received, and clarify vague responses.

Before the teachers were asked to answer the interview questions, the researcher introduced herself and discussed the nature of the study. The teachers were then asked to tell something about themselves so the researcher can get to know them better and to allow the teachers the opportunity to become more comfortable. In this study, these major questions were

asked to explore identified areas of inquiry (a complete list of the interview questions can be found on page 77, Appendix A):

1. Many teachers subscribe to the framework of developmentally appropriate practice. What does this phrase: Developmentally Appropriate Practice (DAP)- mean to you in your teaching?
2. Did your ideas about DAP change after the flooding? If so, how? If not- why not?
3. What do you think it means to be appropriate for the individual child? How did this look in your teaching after the flooding?
4. Do age and developmental level of a child impact your teaching? If so, in what ways? Did these change after the flooding?
5. How do you strive to be appropriate to the needs and values of the community and culture? Was this impacted by the flooding? If so, in what ways?
6. What do you think are the developmentally appropriate ways to deal with your students following a flood?

Teachers' experiences before, during, and after the flooding and their classroom practices following the flood were explored in this study as well.

Procedures

Necessary permission was sought from the overseeing Institutional Review Board (IRB). The participants were informed of the purpose, benefits, and privacy protocols of the study and signed the consent form before interviews were scheduled. The teachers were separately interviewed at a local coffee shop. The duration of the interviews ranged from 60-100 minutes (mean: 80 minutes). After the interview data was collected, follow up questions were asked

from 3 of the 4 teachers, one through a phone call, and the other two through face-to-face meetings.

To provide a truthful and an accurate account of the face-to-face interviews, the most common interview approach, audio recording, was used (Burton, Brundrett, Jones, 2014). Audio recording the interview allows for the collection of large amount of permanent information that can be played back and transcribed for analysis (Slavin, 2007). The interviews for this study were audio recorded through an electronic tablet. Notes were also taken during the interview.

The audio recorded interviews were then transferred as an electronic document through transcription. “Transcription is the process of converting audiotape recordings or field notes into text data” (Creswell, 2015, p. 238). Transcribing the interviews took hours to complete to ensure that the process was done carefully to preserve the accuracy of the information. The transcriptions were later used to clarify the participants’ responses and analyze the data for this study.

Analyzing the Data

Data analysis is a complex and complicated process. Burton, Brundrett, Jones (2014) stressed that data analysis is not as simple as sorting or listing information. “It describes the transition from presenting information, to detecting patterns, identifying trends and establishing meaningful linkages between various categories of data” (Burton, Brundrett, Jones, 2014, p. 198). In this study, the interview data were analyzed using a combination of narrative analysis and thematic analysis. Narrative analysis enables the researcher to collect and present participants’ experiences through stories that include both the participants’ and the researcher’s voices (Bamberg, 2012; Hunter, 2010). While presenting the stories of teachers’ experiences was deemed important, it was also essential for the study to present themes that emerged through

the interviews. The stories were presented to depict teachers' experiences before, during, and after the flooding.

The thematic analysis was used to identify the themes in present study. The thematic analysis is a method used to identify, analyze, and reports patterns or themes within the collected data (Braun & Clarke, 2006). The interview data was initially analyzed through manual coding. Coding involves making sense of the text data by segmenting it into text or image, labeling the segments with codes, examining the codes for repetitions or overlaps, and breaking up the codes into bigger themes (Creswell, 2015). The researcher of the present study listed codes from data collected from each teacher. The most frequently occurring codes among the teachers' data were used to create bigger categories. The categories that were relevant to the topic became the themes for this study. After coding and narrowing the data into themes, the data were compared to various perspectives related to specific aspect or issue to ensure that there is adequate evidence to support the researcher's interpretation of data (Burton, Brundrett, Jones, 2014). The themes were reviewed and compared to the connected literature to support the researcher's analysis. The purpose of the study was also reviewed throughout the data analysis to make the connections with the areas of inquiry. The researcher's professional practice knowledge as well as personal experience were recognized as tools in the data analysis, and accessed to guarantee that the codes and themes used in the analysis of data are meaningful and valid (Burton, Brundrett, Jones, 2014), while preserving the insights from the teachers. In order to make certain that the data was speaking and not the researcher, a profile for each teacher was created. These profiles served as another resource for analysis. The use of narrative allows for the teachers' voice to remain paramount. In the narratives, the researcher used the exact same words from the

teachers for quotes, with the exception of removing oral speech characteristics and repetition of words.

CHAPTER 4. FINDINGS

Introduction

This study explored early childhood education (ECE) teachers' description of their teaching following students' experience of a flood in Louisiana. The following areas of inquiry guided this study: (1) What are teachers' insights regarding students' development and natural disasters? (2) How do teachers describe their classroom performance after the flood? (3) How do teachers talk about developmentally appropriate practice in the early childhood setting following students' experience of a flood? (4) How do teachers describe their role in teaching students after the flooding? During in-depth, semi-structured interviews, these teachers shared their perceptions. The research findings in this chapter were based on the analysis of the semi-structured interview data.

Background

There were four female ECE teachers who participated in this study. To protect their identities, the pseudonyms Hillary, Ericka, Brooke, and Sabrina we used in this study. All teachers were teaching at the same school in a southern city in Louisiana. The school is in a low to middle income neighborhood, serving students who are mostly from high poverty, low-income families. The school's enrollment consists of predominantly African American students (about 80%) with some Hispanic, Asian, and Caucasian students (greatschools.org, 2017).

Three themes emerged from analysis of the interviews: (1) stress (2) professional development and training (3) teachers' attributes. Each theme was represented by every teacher, though discussed at varying depth and degree. Narratives about the teachers' account of their teaching experience after a flood is presented in this chapter, followed by the discussion of the themes.

Hillary's Story

Hillary, a 40-year-old aspiring teacher just landed her first job for the school year 2016-2017. On her second week at her new job, on August 12, 2016 at around 6:30 in the morning, she recalled getting an automated phone call from the school district stating that school was cancelled for the day because of the possibility of heavy rain. She remembered how she felt lucky at first because she will get the Friday off “just because of the rain”. Later that day, Hillary shared how she became anxious watching the news and seeing social media posts about the flooding in the southern part of Louisiana caused by a low-pressure area. That was when she realized it was not an ordinary Friday.

Hillary's neighborhood was not flooded but she recalled how she “felt trapped and stuck at home just watching the news and seeing the other side of the river flooding”. To make herself productive despite her inability to go anywhere, while waiting for the opportunity to help those who were affected, Hillary collected some clothes and basic things to share with those who would need them. She stated how that made her feel a little better about the situation and “less guilty that while we are sleeping on our bed at night, unaffected by the flood, other people were greatly devastated and have nowhere to go”. Hillary admitted that somehow, she felt happy and relieved that her house was not affected by the flood but she was worried about her students and their family.

Hillary learned from a colleague living in the school neighborhood that the school was not flooded but the surrounding houses were. Before the flooding, Hillary was able to observe the neighborhood and met some people living there. She described her school community as an older community with “brick houses, single detached for middle to lower income families”. Hillary described the people as warm and accommodating, and she felt they were looking

forward to seeing the students back in the neighborhood. Hillary also met most of her students and their parents. She knew that majority of the families were impoverished and she was worried after the flooding because it seemed like “everyone lost everything”.

Hillary recalled “seeing piles of trash and furniture and all of everyone’s belongings everywhere around the neighborhood” when she first drove to her school after the flooding. She also talked about how the damp smell was all over the neighborhood, almost like the smell after Katrina. Hillary remembered how she felt somber driving in the neighborhood. After seeing the devastation to the neighborhood herself, she felt more worried about her students.

Teachers went back to work before the schools were reopened for the students. On their first day back to work, Hillary felt relieved that one of her administrators gave teachers time to make phone calls and reach out to parents to find out how the families were doing and if the school could help them in any way. She recalled only a few parents picked up the phone, possibly because they were preoccupied with other flood-related activities. A few days after the teachers reported back to work, school was back in session for the students.

When students returned to school, Hillary noticed that a lot of them were “really stressed out, even being so young they talked about staying in a hotel or with different family members”. She further believed that “the students’ stress level was much higher than those who were not impacted by a natural disaster”. She expressed how students were not bringing their basic school materials like their book-sacks or other school supplies. Hillary also described how some parents had issues getting materials for students or bringing them to school because they did not have cars to transport them around the town. She mentioned how it was making her sad to think that some children just do not have any adult supervision after the flooding because “the parents were too busy with flooding stuff that they can’t just be with them”. Although Hillary was

expecting that her first year teaching would be challenging for her, she was not expecting that it would be as difficult as teaching after the flood.

Hillary said that the flooding impacted the students' developmental needs and affected their learning and behavior. She stated how students seemed "stressed out about a lot of things going on at home". She shared how before the flooding she expected that students would be coming to her class with already "limited knowledge" of what is expected of their age but the flooding "made it a little bit harder to push passed that point and advance when we miss so many days of school and they were going through so many things at home". Hillary noticed that after the flood, "students were not paying attention to the instruction and were not focused". She remembered the students were also having a hard time remembering things and following simple directions. Hillary also described how her students' behavior was affected by the flooding. She felt "they were more needy and emotional and want things to be always about them". She recalled instances when students were being overly sensitive about things and not getting along with others, "they change their moods, they are irritable, whiny, or cry about little things or become mean to others for no apparent reason".

To address the issues in her class after the flooding, Hillary expressed that she had to adjust her teaching but she was unsure of what she could do to help the students after a disaster. She was also worried that her class would fall "too far behind" with the grade level curriculum expectations. Hillary relied on what she thought was best for the students so they can cope with the experience of a flood and at the same time would academically get them ready for the next level. Hillary shared how she followed the curriculum but allowed opportunities for students "to stop and talk about their emotions and things they were going through at home". She also allowed her students to express their thoughts and emotions through drawing. She was happy

that the students were able to deal with their experiences by drawing “who they were staying with or by drawing water in their house”. Hillary hoped that what she did with her class was enough to support the students’ emotional needs after the flooding.

Hillary expressed that oftentimes she would feel inadequate and stressed out hearing about the students’ experiences. She hoped that she was “professionally trained on how to handle students after natural disasters” so she could offer more to them and they could live a normal life. She also shared how thinking about students “coming with no sleep, who may or may not have eaten, who did not have water or washer and dryer, just not having the basic necessities” sometimes gave her sleepless nights. Hillary was aware of the anxiety she was experiencing but she believed that her willingness to help the students, her patience, and perseverance helped her during this difficult time.

About eight months after the flooding, Hillary said she still saw a lot houses with uncollected debris in their front yard. She often would still smell the Katrina smell that reminded her of how the flooding changed a lot of lives, including hers. Hillary expressed how she could still feel the anxiety that teaching students after the flooding caused. For her, the beginning of the school year will always be a reminder of how an ordinary rainy Friday could turn into a completely different experience, something that would be remembered forever.

Ericka’s Story

Ericka, a 28-year-old new teacher was getting ready for work on Friday, August 12, 2016 when her phone got numerous alerts that “almost blew up” her phone. The alerts were for school closures in southern cities in Louisiana due to a slow-moving weather system. Ericka was expecting the situation would be better but by midday, she recalled seeing pictures on the news and on social media about, at that point, minor flooding in the city where she lives. By the end

of the day, she had numerous family and friends who were in different houses or shelters because their houses were flooded. Ericka recalled how that evening, she and her family had to evacuate and go to a hotel for fear of being flooded. She stated, “I can’t risk my family, my son, we just had to go”. Ericka described the first couple of days after that Friday as intense, stressful, and definitely unpredictable.

When Ericka and her family were able to go back to their house, she started volunteering at her local church to help in preparing food to distribute, driving people to buy necessities, making care bags for people, and she even volunteered to gut houses to help those who were flooded “alleviate their worse conditions”. Using her time to volunteer also got her mind off the flooding. She recalled that at some point, she “stopped watching the news and reading the newspaper” to keep her sanity because the news was making her feel upset and hopeless. Ericka expressed how she felt “blessed” that her house was spared from the flood so she would do anything she could to help, especially because she did not have work for three weeks. Although school was cancelled for several weeks, Ericka still worried about the school community and was thankful that she got information from one of her administrators about the school and neighborhood. When she learned that the surrounding houses in her school flooded, she already started thinking of ways to help her students and their families. Ericka admitted she felt “devastated that these people had to undergo this ordeal”.

Before the flooding, Ericka recalled seeing beautiful landscaping in the neighborhood, with most of the houses that have neat and organized carports. She stated that she knew the neighborhood “was not the best in town, but it’s not the worst either”. Ericka met some community members when the school sponsored a meet and greet earlier in August and she instantly felt good about being in that neighborhood. She described the people as caring and

welcoming, and she recalled seeing families living in the neighborhood. She was smiling when she said, “When I got the job here, I felt lucky that I will be working in a decent community, with parents who looked like they were excited to meet the teachers and begin the school year”. Upon hearing that the school neighborhood was flooding, she recalled feeling “heart-broken” because of the flood devastation.

Ericka met most of her students and their families before the flooding because the school year has officially started at the beginning of the month of August. After the flooding, Ericka recalled how depressing it was to see that “people’s lives were ruined and disrupted”. She remembered seeing trash in front yards, sheetrock and carpets, and people’s personal belongings piled up outside their houses and could not help but “worry that one of those houses belong to my students”. Ericka said she started calling parents of her students as soon as she reported back to work. She found out some of her students were “spared by the flooding, some took in just a little bit of water, while some were greatly affected”. After Ericka made her last phone call, she felt devastated, she stated she wanted the school to be back in session so students will be out of their ravaged houses.

The first day back to school after the flooding, Ericka recalled being very emotional, “my heart aches for our students, this flooding just affected them in many ways. Just not being able to sleep on their bed or have their favorite bear, I know it seems simple but to them, their world is falling apart”. Ericka noticed that her students were coming without school materials or uniform so she wrote letters to different organizations so they can sponsor these materials for them. She recalled how happy she was to see students smile when she handed them simple things. Ericka admitted that giving students school materials somehow made her feel relieved knowing she provided comfort to students during one of the most difficult times of their early

life. Ericka knew that not having school materials is just one of the challenges she would encounter as a result of the flooding. She expressed the bigger concern, which was the impact of the flooding on students' learning and behavior.

Ericka shared how she believed the students' behavior and learning were affected by the flooding, "my kids get so scared by little things, and it did distract them, they are more concerned with what's going on around them, like when it rains or if they hear a loud noise, as supposed to learning", she recalled. Ericka described how hard it was to teach in September when "it rained every other day, students got scared and cried and would not want to do anything". She noticed that the students who were directly affected by the flooding were having a hard time retaining information and could not follow instructions. She also remembered how some of her students exhibited negative behaviors such as getting frustrated easily, crying, screaming, not sharing, and being physically aggressive.

Ericka admitted that it was hard to teach after the flooding. As a first-year teacher, she stated she "would love to have been trained on how to handle the kids". Ericka stated how she knew what she signed up for teaching at a high poverty school but admitted she was not prepared to teach children who were affected by the flood. Despite the lack of training, Ericka said her perseverance and patience helped her in facing the challenges in her classroom. She recalled calling several school counselors to solicit for advice on how to respond to the students' needs. She also talked with other teachers who were facing the same situations to get ideas on how to teach after the flooding. After talking to other professionals, Ericka reported that she was torn between teaching the curriculum and allowing students to express their emotions. She decided that the best thing to do is to follow the curriculum while at the same time "providing periodic breaks to allow the students to draw, color, or share their thoughts with others". Ericka admitted

that she knew those activities helped students but hearing the horrid stories from the students made her feel extreme sadness to the point where sometimes she does not want to hear them anymore, “you almost just want the stories to stop”, she stated.

A few months after the flooding, Ericka said she started seeing improvements in the school neighborhood. Although there were still trash and trailer homes in some areas, the houses looked better than in the days after the flood. Ericka also started noticing improvements in students’ learning and behavior although things were not back to what they were before the flooding. Ericka shared that she was just happy that her students and their families “started picking up the pieces of their lives” hopefully on their way to creating a beautiful picture of their future.

Brooke’s Story

Brooke, 26 years old, was on her first teaching when the August 2016 flooding hit the southern cities in Louisiana. Brooke recalled that on August 12, 2016, when she heard about school cancellations, she thought it will be “another one of the days that will go down the drain because of false alarm”. Watching the news, Brooke learned that southern cities in Louisiana were beginning to flood by the middle of the day. She had to drive around her street multiple times for a couple of days to check if the water level was rising on the drainage canal near her house. Luckily, Brooke’s house was not flooded, nor were her family and friends. She said she did not recall hearing anything on the news days prior to Friday that the low-pressure area would create the havoc that it did. Brooke was devastated looking at pictures of the destruction caused by the flooding. She was convinced that she needed to volunteer to help in any way to make the effects of disaster lighter on everyone involved. She decided to volunteer in an animal shelter and spent most of the days she was off from work there.

Brooke also expressed her concern over her school community because she heard from one of her administrators that the community was flooded and that students were severely affected. Two weeks prior to the flooding, Brooke recalled meeting all her students and some parents. She also met some people from the community. She thought the people were nice and warm, and even if the community appeared to be on a lower-income side, “the houses are well-kept, and their yards are taken cared of”. As she drove to the neighborhood three weeks after the flooding, she noticed that the lively, positive feel in the neighborhood and around the city turned into “sadness, just great sadness”.

As Brooke welcomed her students back to school, she noticed that a lot of her students seemed tired and were not ready to learn. She also described how most of them seemed to have high levels of stress and anxiety. Brooke stated how most of the students who were affected by the flooding were becoming “behavior issues in the class and were fussy and temperamental”. Brooke also talked about how her students who were living in shelters were always sad and emotional. Brooke shared how difficult it was to teach after the flood, if before the flood her only problem was students not coming to class with the needed materials, “after the flood this was still a problem plus many more emotional problems”. To help students with their emotional needs, Brooke made it a point to give the students breaks in between lessons and allowed them to share their feelings with the class even if she was “condensing the lessons because of the missed days from the flooding”. She also gave them opportunities to draw pictures to express how they feel about the flooding. Brooke also discussed how she used their lessons in science to integrate discussion of flooding and its effects to the people. If she would have been professionally trained, Brooke felt she would have done a lot more for the students.

Brooke admitted that listening to the students share their stories about the flooding was a disheartening, painful experience. She stated, “when your students start sharing stories about getting wristbands to get food from the shelter, you know that is just heart-breaking, it makes me want to break down and cry”. Brooke also shared that at some point, she noticed certain signs of depression in herself and had to be mindful of her own well-being. Brooke, a new teacher admitted that the 2016- 2017 school year was tough. She started the school year ready to provide her students with materials like pencils, paper, and crayons because she knew most of them would not have school materials. She also expected that the students might come with some emotional issues, but she was “unprepared to teach students on how to handle stress”. Brooke wished teachers would have been supported so they could teach better after the flooding.

Brooke understood that recovery would take time. She shared how some days she would forget about the flooding but then she would find trailer homes or piles of trash in people’s yard, and all of a sudden remember the devastation. Just like in the classroom, some days Brooke admitted she would forget that some students need more support than others, then she would recall what happened to them in August, then she would realize that the students were still recovering. Brooke knew that in order for her to help the students, she would need “a lot of patience and perseverance and to accept that this school year would be different”.

Sabrina’s Story

The morning of August 12, 2016 seemed like a normal Friday recalled the 28-year-old first-year teacher, Sabrina. Her house was not flooded but her city was greatly affected. Sabrina shared how she spent most of the days she was off from work by volunteering in shelters and preparing food for those who were flooded. She also reached out to her administrator to ask what she could do to help colleagues who were flooded. That was when she found out that

although the school was spared, the surrounding houses were affected. Sabrina recalled that when she drove to the school neighborhood for the first time before the flooding, she noticed that even if the houses were old, it seemed to be a pretty and safe neighborhood for low to middle income families. She also shared how the people were “really nice and accommodating”. Sabrina met some of her students and their parents before the flooding, she talked about how excited they were to begin the school year and they had high hopes that the year would be a great one. When she learned that the neighborhood flooded, she shared how she could not help but be sad.

Sabrina immediately began thinking about her students and their families when she drove back to the school after the flood. She said the sight of trash at the end of driveways and people’s personal things all over the yards were reminders of how horrible the destruction was. Sabrina stated, “It’s very sad to see the devastation, it’s a surreal experience, I can’t imagine what our students are dealing with”. Before school started back, Sabrina called parents to ask if they were flooded and if the school could help them in any way. She learned that a number of her students were displaced, either living with relatives or in shelters. One of her students who lived with relatives about 45 minutes away from school had to drop from the roll in September and did not return until December. Most of the students who were affected came with no supplies, no uniforms, or shoes. Sabrina recalled how stressed and pressured she felt at the beginning of the school year. She stated, “It is a different story when you are expecting that poverty will be your main concern with the kids, but when they come and it is poverty and flooding, that just crushed my heart. The few things they have, they lost because of the flooding”. She hoped that could step up to the challenge and help students to cope after the flood and admitted that thinking about the situation gave her some sleepless nights.

As Sabrina received the students in her classroom, she said her main goal was to make the students feel safe and secure and to support them emotionally. She recalled worrying about the curriculum because of their missed days but at the same time, she wanted to make sure that the students had enough opportunities to share their thoughts and emotions either by group sharing or coloring. She recalled the students talking about water in their houses, living with relatives, in hotels, or shelters, missing parts of their houses such as doors or walls, and losing their favorite toys or gadgets. Sabrina shared how she feels sad that at their young age, the students were already going through a lot. She said that she willingly listened to the students' stories even if it affected her stress level. "I feel sad and helpless listening to them but I want to, I have to". Sabrina admitted that she was not sure how well her strategies would work because she was not trained on how to properly respond to students after a disaster but she was confident that what she was doing was the best for them.

Sabrina discussed how challenging teaching after the flooding was. She said students' behavior was affected by the flooding. She talked about how students were whining, crying, fighting, and complaining about everything, "like they don't want to try anything". She also thought their learning was affected. She recalled the students were working on slower pace and were having a hard time retaining information. Sabrina said the students seemed to be daydreaming every day but she had to work hard to get their attention and get them interested in learning.

Sabrina said teaching after the flooding entailed patience and perseverance to help her understand that her students need a little more caring and compassion and to be willing to try different ways to help them. She also said a little more compassion and love will never hurt, she

stated, “sometimes, you just have to step back and put yourself in their shoes to realize what they’re going through”.

Study Findings

Stress. The teachers expressed how the flooding stressed them by directly feeling the threat, by observing the environment and other people, and through listening to students’ stories.

Personal fear and anxiety. After the flooding, the teachers all talked about the stress and anxiety that worrying about their own and their family’s well-being brought them. Hillary recalled how scared she was because during the flooding and a few days after, she was not able to contact family and friends. She further shared how she felt guilty that she was sleeping on her bed at night, unaffected by the flood but had family and friends who were devastated. Ericka had to evacuate herself, because of the fear of being trapped if their house takes in water. Brooke described her anxiety when she realized that other places were still flooding a couple of days after one of the cities flooded, “I live close to a drainage canal, and it made me anxious when another city started flooding”, she stated. Sabrina had tears in her eyes when she recalled how most of the people she knew got flooded. She described how she was physically and emotionally drained from the experience and referred to the flooding as a “surreal experience”. The teachers described their experience with the flooding as intense, somber, and stressful.

Pressure. The teachers expressed how they felt pressured to meet the curriculum expectations and to fulfill their changed roles after the flooding. The teachers discussed how the curriculum expectations were stressing them out. All four teachers talked about wanting to help the students and support them with their emotional needs but they are faced with the dilemma of trying to fit everything in the curriculum in the school year and allowing students to, as Sabrina said, “breathe and let out their emotions”. Brooke recalled she had to “take into consideration

that so many days were already missed, so there's no room for slowing down that much". Ericka and Hillary both shared how they feel pressured and did not want the students to move on to the next grade not mastering the skills they needed during this school year but they also knew that the students needed to have a break and express their thoughts and emotions.

The teachers stated that they slightly changed their teaching practice after the flood to accommodate the needs of the students but admitted that they felt compelled to follow the curriculum and they were unsure of how to address the needs of the students correctly. The teachers also discussed how they wanted to allow more days for students to have less academic activities but they are worried because the students already missed so many days of instruction because of the flooding. "I felt we missed so much time at school that we almost had to rush to cram everything in because I wanted them to know everything that they need to know before they go to the next grade level" shared Ericka. Hillary stated that how difficult it was to teach students the academic expectations after the flooding because the students "were not coming to school ready to learn and they already came with a limited knowledge of what's expected of them. It made it a little harder to push passed that point and to advance when we missed so many days and they were going through so many things at home, but again we had to teach". Brooke admitted that the flooding made her condense some things in the curriculum a few times and that she felt rushed. Sabrina shared how she had to "readjust how and what I was going to teach to make up for the lost days and address their needs at the same time".

The teachers also stated they started teaching academic lessons as soon as the first day of school, although they included provisions for students to engage in less structured and free-choice activities to address their needs. Sabrina, Ericka, and Brooke recalled giving their students breaks in between lessons by allowing them to engage in non- academic activities such

as coloring or drawing. In addition to these, Brooke, just like Hillary and Ericka, also allowed the students to express their feelings through group sharing. She described how she used a little stuffed animal that served as the class' sharing buddy. She said they would pass the stuff animal around and whoever has it "can share anything under the sun". All the participants stated they welcome conversations from the students anytime they feel like having them, even if they interrupt the academic lessons.

Changes in roles also caused the teachers stress and anxiety. The teachers stated that being an early childhood educator entail many tasks and responsibilities, especially if the teachers are assigned to work with students from high-poverty families. Before the flooding, the teachers talked about their roles and stated the following to describe them:

To teach kids to read and teaching them the ability to learn and how to learn... to provide the students with an inviting, unthreatening, and respectful environment that that will help them love school and become successful in later in life (Brooke).

To help students feel loved, feel safe, and secure in my classroom, learn things like learn to share, learn to play with others, and the social part of it... to teach them the academic expectations for their grade level... to somewhat be caregivers, who need to take care of most of the students' needs when they are at school (Sabrina)

To provide a safe environment where they can express themselves and nourish their gifts... to be a mother at school, ready to care for the students and make them happy as they learn a few things along the way (Ericka)

To provide a safe, welcoming, and loving environment for the students... to help students build self-awareness and their emotions, and develop them socially and emotionally while teaching them basic skills they need academically (Hillary)

After the flooding, all the teachers said that their role as a teacher changed, but the degree to which they believe their role changed varied among the teachers. Brooke expressed that her role as a teacher changed just a little bit after the flooding because she had to factor in the students' emotional needs. She further stated that because her main role was to help the students learn, she still needed to do that even after the flooding; she went on and described how "the task

just became a little more challenging” as compared to before the flood. Ericka, Hillary, and Sabrina said that their role as a teacher changed a lot because they had to be more observant to the students and watch for signs of stress or other emotional or behavioral conditions. The teachers shared how they felt pressured in fulfilling their new roles because they were not prepared to take on these extra roles.

Poverty and disaster recovery. The school year has already formally started when it was interrupted by the flooding. All four of the participants expressed that they came to work on the first day of school knowing that most of the students are from high-poverty, low-income families. They felt they were prepared for the school year, and were expecting to provide the students with some materials so they can learn. It was not until after the catastrophic flooding that the teachers realized there was more to the school year than they have expected. “It is a different story when you are expecting that poverty will be your main concern with the kids, but when they come and it is poverty and flooding, that just crushed my heart. The few things they have, they lost because of the flooding” remarked Sabrina. Ericka described how “my heart aches for our students, this flooding just affected them in many ways. Just not being able to sleep on their bed or have their favorite bear, I know it seems simple but to them, their world is falling apart”. Hillary remembered how sad she was knowing that a lot of the students were stressed out, “being so young and all and talking about the devastation, it’s just sad”, she added.

Secondary stress. Brooke expressed how she was affected by her students’ stories, “when your students start sharing stories about getting wristbands to get food from the shelter, you know that is just heart-breaking, it makes me want to break down and cry”, she admitted. The teachers further described how hearing the horrid stories from students and their family make them feel sick and depressed. Ericka also expressed that she “stopped watching the news

and reading the newspaper or I'll go crazy” while Brooke said she “noticed a certain level of depression” in herself, and had to be mindful of her own well-being. Both Hillary and Sabrina recalled having sleepless nights, thinking about the students and their family.

Professional development and training. The teachers expressed that they wanted to help the students after the flooding to ensure that they were supporting their emotional needs but they admitted that the lack of professional development and training made it difficult.

Strategies, classroom practices, and materials. The teachers shared how they used strategies such as allowing students to share out in class or with them, drawing, and coloring. They admitted that although they thought they were doing what was best for the students, they were not sure how accurate and adequate their strategies were. All teachers expressed that they were aware of the shortcomings in their teaching practice after the flooding but they were confident that they taught the students the best possible way they could. Despite the lack of professional development and training, the teachers believed they were able to address most of the students' needs but all of them expressed that they were willing to give the students more if they were properly trained. The teachers also expressed that they would like to be provided with specific materials and trained on how to utilize these materials to help students in the recovery after the flooding.

The teachers also talked about how they felt the need for training to support the students with challenging behaviors and academic deficits. The teachers talked about how students who were affected by the flood were more irritable, short-tempered, and uninterested in learning. The teachers discussed how they tried to help the students but were unsure if they were doing what was best for the students.

Disaster preparedness and responding to students' needs after the flooding. The teachers expressed their willingness to attend future trainings so they could better respond to the needs of the students and be prepared in the future if they need to respond to the same situation. Ericka stated, "I know I gave my best, but my best might not be good enough. If I'd be trained how to respond to these kids, I know I'd do better". Sabrina said "I am willing to give more if I had to, I just need to know how". While both Hillary and Brooke stated that they would have been able to do more with the students to help them cope if they were professionally trained on how to respond to the students after the flooding.

Teachers' attributes. When the teachers were sharing their experiences about teaching after the flood, they talked about attributes that they believed helped them in responding to the students' needs. Some teachers shared how they had to be more understanding while others said they had to be more compassionate, empathic, and considerate, while all four teachers mentioned they had to be more patient and to be more persevering.

Hillary shared how she had to "have a lot more understanding and know what's going on when these kids leave the classroom or before they get to the classroom". Ericka spoke about her belief that teachers need to take on the role of counselor in the classroom following the flooding: "When I came back, I had to initially be more loving, more caring, and I had to give a little bit more of what I had to offer as a teacher". She stressed that teachers should take their time and listen to the students, give them advice as needed, and find other agencies that might be able to offer help to the students. Hillary, Brooke, and Sabrina all shared the importance of "being there" to listen and support the students after the flooding.

When the teachers talked about their teaching experiences, particularly when they described the challenges of teaching after the flood, they all named the traits patience and

perseverance helped them to fulfill their tasks. The teachers explained how these two attributes helped them in dealing with the demands of their job after the flooding.

Patience. All four early childhood teachers stated that in one way or another, they have exhibited more patience in working with students after the flooding. They all stated that teaching is more challenging because of their personal stress, students' stress, and the curriculum expectations despite losing several days of school. The teachers described how the flooding caused them to feel stressed out and over fatigued; they had to patiently regroup their thoughts and actions and assure themselves that, as Hillary stated, "little by little, things will get better". The teachers also expressed concern over students' behavior. Ericka recalled how some of her students "cry when it rains, or when they hear thunder, or freaks out when they see water puddles". She believed that being patient helped her in calming herself down and not think that the students are just "overacting or being overly dramatic". Her patience also helped her in remaining composed and collected, which she believed fostered a calming classroom environment. Brooke shared that her patience is a key factor to "help teach children during these trying times" and provide academic interventions to them. Hillary recalled how her patience allowed her to give more than what she can "to help students have a somewhat normal life". Her patience also helped in her search for different ways to address the varying needs of the students. In addition to managing challenging behaviors and finding different ways to help students, Sabrina also expressed that her patience allowed her to understand individual students in her class. She stated how "patience made me realize that there are some kids that will take longer than others to reach those ideals that you have in mind"

Perseverance. Brooke, Ericka, Hillary, and Sabrina all stated that they think they possess high level of perseverance. After the experience of flooding, two teachers, Sabrina and Brooke,

believed that their perseverance level did not change. Sabrina stated that no matter what adversities she faces, she strives hard to do her best to succeed. Brooke further said that even before the flooding, she knew what she signed up for, and expected that she needed to “put a lot of effort in working with our kids”. Contrary to what Sabrina and Brooke thought, Hillary and Ericka knew that they had to persevere more. Hillary jokingly said that she had to persevere, whether she liked it or not, “because there’s really no choice, you have to help those kids, they are depending on you”. Ericka expressed how perseverance kept her going despite the difficulties she faced during the school year. Although the teachers had a split opinion on whether or not their perseverance level changed after the flooding, they all believed that an early childhood teacher should have a high level of perseverance, especially after the experience of a flood.

The teachers’ stories highlighted their experiences prior and after the 2016 catastrophic flooding. Although none of the teachers were directly affected, their school community was devastated by the flood. The teachers shared how they used their time to help those who were in need, and expressed how lucky they felt that they were spared from the wrath of nature. In their accounts, the teachers also discussed their beliefs and classroom practices, and the effects of the flooding disaster to their well-being and professional practice.

CHAPTER 5. DISCUSSION

The present qualitative study sought to explore teachers' beliefs after the flooding with the assumption that teachers' practices are shaped by their beliefs. The quality of classroom environment and interactions provided by the teachers to the students are believed to be of utmost importance in the recovery process after the students' experience of a flood (Perry & Szalavitz, 2008; Le Brocque, et. al., 2017), hence it is an important area of study. As the teachers described their experiences following the flooding of their community and the school community, the three themes of stress, professional development and training, and teacher attributes emerged from the interview data. In this chapter, the results will be further described in the context of the extant literature as well as a discussion of the limitations of the present research, and directions for future inquiry.

The teachers in this study all used the word *stress*, or words associated with it such as depression, anxiety, great sadness, somber, and fatigue, to describe how they feel about the devastation of the 2016 flooding. Stress is a relationship between the person and the environment that creates physiological responses when the person's perceived resources are less than the demands (Lazarus & Folkman, 1984). People's reactions to stress can influence their ability to think and make decisions (Gokalp, 2012), therefore it is vital to discuss how teachers' stress affects their perceived demands and resources after the flooding.

Stress Models and Teachers' Experiences After the Flood

To help in the analysis of the teachers' responses and accounts of their stressful experiences after the flooding, it is important to understand how stress is conceptualized. Stress can be viewed in three different ways: as an external demand, as a transaction between the person and the environment, or as a threat to resources. (McCarthy, Douglas, & Kulkarni, 2012).

Understanding what causes teacher stress after the experience of the flood will help in identifying the resources needed to help them create a balance between the demands and the resources in teaching after the flood. As previously stated, it is believed that it is essential to address the issue with teacher stress to ensure that the teachers could plan for best practices and would be making sound decisions in their classroom, which in turn affect students' ability to cope with the traumatic experience.

There are three major stress models that are used to conceptualize stress. The stimulus perspective, the transactional model, and the theory of conservation of resources (COR). The stimulus perspective of stress posits that stress is an external demand. This model was mainly the product of Seyle's (1976) work; he defined stress "a state manifested by a syndrome which consists of all nonspecifically induced changes in biologic system". According to Seyle (1976) stress is mainly an event or circumstance that produces the physiological stress responses. When a person's well-being, relationship, or reputation is threatened, the body produces reactions to fight the stimulus or to avoid it (i.e. adrenalin rush or increased heart rate) (Seyle, 1976). Lazarus and Folkman's (1984) stress model, the transactional theory explains that stress results from a transaction between the demands in the environment and the person's ability to cope with the demands through resources. When the demands outweigh the resources, the person feels stressed out (Lazarus & Folkman, 1984). The key concept to Lazarus and Folkman's (1984) model is appraisal. According Lazarus and Folkman, appraisals can be primary or secondary. Primary appraisal takes place when a person assesses the situation either as a threat or not. Secondary appraisal is when a person blames or gives credit to self as a result of a person's assessment of the situation. Hobfoll's (1989) theory of conservation of resources (COR) states that stress occurs when people experience loss of resources, when resources are threatened, or

when there is a lack of gain after investing the resources. COR resources are categorized into four groups: object resources (i.e. physical objects like clothes, home, food), condition resources (i.e. relationships, job), personal resources (i.e. skills, traits) and energy resources (i.e. means to gain other resources like money, knowledge). Although two teachers reported physiological response of having sleepless nights which can be associated with the stimulus perspective of stress, for the present study, only two stress models were used to analyze teachers' stress, the transactional model and theory of COR.

Personal fear, anxiety, and the theory of conservation of resources. When asked to share what they remembered about the August 2016 flooding in Louisiana, the four teachers recalled the physical and emotional devastation that it caused them. They started off with the vivid discussions of their observations of the school neighborhood before and after the flooding then they went on and started sharing about the emotional effects of the experience. Based on their accounts, it was evident that the teachers made connections with students and their families prior to the flooding. Hobfoll's (1989) COR theory suggests that when resources are threatened or lost, stress can occur. The teachers considered their school community as a family and they have built relationships with students and parents, therefore, when the teachers' conditional resources were threatened, they felt stressed. Aside from conditional resources, the teachers had their own personal share of how their object resources were threatened due to the flood scare although all the teachers were not directly affected by the flooding. In an online survey conducted by Kuntz, Naswall, and Bocket (2013) with a sample of 125 primary, intermediate, and secondary Christchurch teachers who experienced the earthquake in 2010, the researchers found that personal disaster impact was positively and significantly related to emotional exhaustion. They also found that school's ineffective disaster responsiveness, impact of the

disaster on teaching and school facilities, and perceived role overload were all associated with increased levels of burnout. The personal resources of the teachers in the present study were also threatened after the flooding when they felt inadequate and untrained to respond to the students' needs. As expected, witnessing the devastation and destruction in their school neighborhood and their own personal experiences contributed to the teachers' stress level.

Pressure and transactional model. Consistent with the literature from Parker and Neuharth-Pritchett's (2008) study, the high expectations for testing and accountability is transforming US education even in the early grades, which caused the teachers in the present study to worry about teaching the curriculum after the flood. The demands of teaching multiple skills to the students within a limited time frame made the teachers feel stressed about missing several weeks of school. The teachers expressed worrying about the lost instruction time, students' ability to learn after the flood, and administering standardized tests at the end of the year. Teachers knew their responsibilities and they were aware that the disruption brought about by the flooding and the effects it had on students' learning and behavior would impact their teaching and the implementation of their mandated curriculum. Despite the teachers' beliefs that students' developmental needs changed after the flooding, the teachers may not always reflect their beliefs in their teaching practice to comply with the curriculum demands from the school, the district, or because of the pressure of academic achievement (Riojas-Cortez, Alanis, Flores, 2012; Kim & Han, 2015). Lazarus and Folkman's (1984) transactional model of stress explains that when the demands (teaching the required materials, addressing the needs of the students after the flood, testing at the end of the year) outweigh the resources (time and proper training on how to help students cope after the flooding), the teachers' stress responses can be triggered. When teachers have higher demands than resources, they are believed to be more reactive and

have less student engagement and more students who exhibit off-task behaviors (Lambert, Ullrich, & McCarthy, 2012). In a study conducted by Lambert, Ullrich, and McCarthy (2012) which involved 444 kindergarten to 4th grade teachers from four school districts in Germany, the teachers were asked to respond to two questionnaires, the Classroom Appraisal of Resources and Demands (CARD) and Preventative Resources Inventory (PRI), and for some to participate in qualitative interviews to address the topics of teacher stress and burnout. The researchers found that reactive teachers (those who reported higher demands than resources) were more focused with survival and had less control over the classroom environment. The teachers in the present study reported more demands than resources at the time of interview, which they admitted stressed them out. The teachers used terms like *clinical depression*, *anxiety*, and *fatigue* to describe their emotions about the situation. It is important that attention should be given to this to prevent student behavior issues and possible teacher burnout (Ullrich, et.al., 2012).

The teachers also felt that the changes in their role after the flooding were stressful and challenging. They felt that there was so much that needed to be done to help students to cope with the traumatic experience but they lack the ability, resources, and opportunity to do them. The demand for the job outweighed the resources that the teachers had to successfully teach the students. As a result, the teachers felt inadequate to fulfill their jobs after the flooding. Teachers also reported that one of the biggest challenges was to provide the students with their basic needs. Although the teachers knew it was not their responsibility to provide for the students, they somewhat felt that they were responsible over finding ways to help the students. The teachers felt devastated that the students lost most, or for others, all of their belongings. The teachers stated that they were prepared to teach in a high-poverty school and were willing to use

their own resources to help the students, but the flooding made it even more difficult because the demands were greater.

Poverty and disaster recovery. Although the teachers admitted that they were prepared to teach children from high-poverty and low-income families, they stated that poverty coupled with disaster recovery caused them to feel stressed. Shernoff, Mehta, Atkins, Torf, and Spencer (2011) conducted a qualitative study of 14 K-4 urban teachers and found that at least one-half of the cases presented in the study identified the following as sources of stress: lack of resources, excessive workload, school-level disorganization, managing behavior problems, and accountability policies. The teachers talked about how worried and stressed they were because of lack of resources to provide for the students like uniforms, book-bags, pencils, and other school materials (threat to their object resources) and the inability to provide for the students' basic learning needs (scarcity of resources to meet the high demands for basic needs of the students).

Secondary stress. Despite their own concerns, the teachers expressed their desire to help the students and to meet their needs. The teachers worked with the students tiringly and admitted to worrying excessively about them. Researchers (Motta, 2012; Hydon, Wong, Langley, Stein, & Kataoka, 2015; Caringi, Stanick, Trautman, Crosby, Devlin, & Adams, 2015) found that professionals who work directly with children who are traumatized may mirror the traumatic symptoms that the children exhibit. In a study conducted by Bride (2007), the author randomly selected 600 social workers who were licensed in a southern state in the US, and mailed them two surveys, the Demographic Information Questionnaire (DIQ) and Secondary Traumatic Stress Scale (STSS), to study the area of STS among social workers. Of the 600 surveys sent, 294 surveys were completed and analyzed. The author found that about 70%

(around 260 social workers) reported experiencing at least one symptom of PTSD and about 15% (around 44 social workers) met the core criteria for a diagnosis of PTSD after working with traumatized clients. In a qualitative study conducted by Alisic (2012), the author interviewed 17 teachers from 10 different schools to study teachers' perspectives on supporting children after trauma and found that among other concerns, teachers carry the emotional burden of working with traumatized children. They reported taking problems home and being reminded of their own traumatic experiences in the past. Because the teachers worked extensively with the students and listened to their stories after the flood, it was possible that teachers bore the emotional burden of working with students who were exposed to the flooding and may have acquired secondary traumatic stress (STS). The teachers in this study shared having sleepless nights, feeling sick, withdrawal from reality (i.e. watching the news), feeling depressed, and wanting to break down and cry, all of which are early signs of (STS) (Hydon, Wong, Langley, Stein, & Kataoka, 2015; Caringi, Stanick, Trautman, Crosby, Devlin, & Adams, 2015). After a disaster, teachers are faced with the burden of helping students cope and promoting resilience among them but it can easily be forgotten that teachers are victims, too and they need to take care of their emotional needs as well (Huggard, 2011; Sullivan & Wong, 2011).

Professional Development and Training

Teachers in the present study described the challenge of teaching students going through trauma and recovery after the flooding. The teachers expressed the need for professional development and training to help them with providing appropriate classroom strategies, classroom practices, and utilizing materials to help children to cope after the flooding. The teachers also stated that they were willing to train for disaster preparedness and responding to students in the event that their future students experience flooding or other similar natural

disasters. Ericka revealed that she talked with school counselors and seasoned teachers who were in the same predicament after the flooding to ask for advice. She also stated how she shared the information she got with her grade-level colleagues. Although Ericka believed she was able to obtain useful information from her conversations with other professionals, she still expressed the longing for in-depth training in responding to students after a disaster and would appreciate being provided with curriculum and materials to utilize in the classroom.

Strategies, classroom practices, and materials. The teachers reported an understanding of the change in students' developmental needs after the flooding, and shared how they want to respond to the needs of the students but were unsure exactly how to teach them. The teachers talked about their willingness to try strategies, change their practices, and utilize materials if they were provided the proper training for these. In a quasi- experimental study conducted by Baum, et. al. (2013) to assess the efficacy of teachers' school-based intervention to 563 students from grades 4 to 6 who were exposed to the traumatic experience of the Second Lebanon War, the researchers found there was a significant decrease in PTSD symptoms and anxiety levels among teachers who participated in the Building Resilience Intervention (BRI) program compared to those whose teachers were in the control group. BRI provides teachers with four objectives to inform their hands-on activities in the classroom to help students cope: self- awareness and regulation, support for feelings, strengths and personal resources for coping, and significance, meaning, and hope (Baum, et.al., 2013). The teachers in the present study can benefit from programs, such as BRI, to train them in helping students build resilience and support students' coping after the flood. Adopting an intervention plan would also allow the teachers to have a dedicated time for disaster interventions. In most cases, the teachers utilized activities that will

allow the students to express their thoughts and emotions but admitted that there were not a lot of opportunities to modify the day's schedule.

Also among the challenges that teachers faced were the change in students' behavior and the lack of interest to learn. Teachers were hoping to get support in managing these two areas. The manifestation of students' challenging behavior was consistent with the study conducted by Convery, Carroll, Balogh (2014) where they noted negative effects on students' behavior and attitudes after the experience of a flood. The same challenging behaviors are being experienced in public schools that serve high-poverty, low-income families which result in teachers' inability to teach (Allensworth, e.al., 2009; Ladd, 2011; Marinell & Coca, 2013) and affect their decisions to continue teaching in their schools (Allensworth, et. al., 2009). In a study of 186 early childhood teachers conducted in Germany by Ullrich, Lambert, McCarthy, & Zimber (2012), the researchers found that the high occurrence of disruptive and disrespectful behavior of students made teachers feel stressed, irritated, or exhausted, which affect the students' capability to learn and teachers' ability to teach. The teachers in this study admitted that oftentimes, they felt bad for the students who had challenging behaviors because they knew how tough it was to be impacted by the flood, and that they try their best to help the students the best way they could.

Aside from students exhibiting challenging behaviors, students who experienced the flood also showed other issues. The review of literature in this study indicated that natural disasters can be traumatic to students and can affect their development. When the students were affected by the flooding, they lost almost every possession that they had, which made it harder for them to concentrate and learn at school. It is also believed that students were emotionally impacted by the flooding and that their cognitive development was affected. After experiencing hurricanes Katrina and Rita, students had lower test scores and negative effects on academic

performance were reported (Davis, 2006; Weems, et. al., 2009). This association can be further understood by the belief that children's basic requirements for physical and emotional safety must be met first before learning and cognitive growth can take place (Honig, 2005; Janson & King, 2006, Wolfe & Bell, 2007). "Therefore, when young children are impacted emotionally by a disaster or crisis, it is likely that their cognitive development will also be impacted" (Buchanan, Casbergue, & Baumgartner, 2009, p. 6). Teachers were interested in learning ways to help the students academically after the flood.

Disaster preparedness and responding to students' needs. The teachers in the present study were aware that nothing could have prepared them for a flooding disaster, but they stated that they could use training in disaster preparedness to help them respond to students in the event that flooding or other similar disasters happen again in the future. Wright and Wordsworth (2013) studied 1,746 undergraduate's response to their instructor's behavior after a major earthquake. The student data were used to create a model of constructive practice for instructors responding to a disaster. The results of the study were presented to instructors to reflect on and a major area of concern that emerged was for instructors to have personal and institutional emergency preparedness and training so they could respond competently and confidently. During the interview, one of the teachers stated how her students feel scared every time the weather was bad or if it rained. She stated, "the students ask, is it going to flood again, and I honestly don't know what to answer". Training the teachers in this present study for emergencies should include how to prepare teachers to stay calm and to deal with students' fears and anxiety associated with the flooding.

In another study, Berger, Abu-Raiya, and Benatov (2016) evaluated the impact of a universal school-based intervention ERASE-Stress New Zealand (ES-NZ) on teachers who were

working with elementary aged children who were exposed to the earthquake after the 2011 Christchurch earthquake in New Zealand. A total of 69 teachers participated in the study. The researchers found that using ES- NZ intervention had “long-lasting, robust beneficial effects on its participants” (Berger, Abu-Raiya, & Benatov, 2016, p. 246) and that ES- NZ training showed efficacy in minimizing symptoms of primary and secondary traumatization among teachers (Berger, Abu-Raiya, & Benatov, 2016, p. 246). ES- NZ was a three-day (24 hours) intensive workshop geared toward enhancing students’ resiliency and coping strategies to deal with a traumatic experience. Unlike any other ES trainings, ES-NZ used the teachers’ own experiences with the earthquake and encouraged them to practice resiliency and coping strategies during the training before delivering them to the students (Berger, Abu-Raiya, & Benatov, 2016). ES- NZ aimed to boost not only teachers’ skills in dealing with students but their resiliency and coping skills as well. A similar program would have worked best for teachers in this present study because of the personal stress that they had during the flooding. It is also interesting to find out if programs like ES- NZ will influence teachers’ beliefs and practices after the flooding.

Despite the lack of proper training, teachers provided the students with opportunities to express their thoughts and emotions through non-academic activities in between lessons like sharing, drawing, and coloring to help them cope with the traumatic experience of a flood. The review of literature in this study presented best practices in dealing with young children after the experience of a traumatic event (Wilson & Kershaw, 2008; Alvarez, 2010; Walker, Carlson, Monk, & Irons, 2010). It was noted that although the teachers gave the students the opportunity to share out, draw and color, they failed to allow the students to use play as an avenue for students to work through their experiences and feelings to help them cope (Landreth, 2012; Buchanan, Casbergue, & Baumgartner, 2009). The teachers expressed how they wanted to do

more but they had to continue teaching to meet the demands of the curriculum. Schools have been subjected to rigid curriculum and standardized testing, early grades included. Teachers are expected to demonstrate students' achievement through skill-based standardized assessments, which prompt them to focus on the skills being assessed (Casbergue, 2011). Consequently, teachers are being held accountable for their students' test scores and their effectivity rating is affected by these scores (Smith, 2010). The teachers in the present study explained the need to teach academic lessons right after the flooding because the students take standardized tests periodically and they need to help the students be ready for them. The teachers also said they were worried that students would not be ready for the next grade level if the entire curriculum and all academic expectations for the year would be covered.

Teachers' Attributes

In order for teachers to successfully fulfill their role after the experience of a flood, "they should be armed with tremendous levels of strength, resilience, and relevant skills (Berger, Abu-Raiya, & Benatov, 2016, p. 237). Teacher attributes are important in dealing with students after experiencing a flood because teacher do not only teach students through words, but they model the behavior that they want the students to develop. Teaching following a natural disaster such as a flood requires teachers to make adjustments in their disciplinary, instructional, and curricular approaches (Alvarez, 2010). When teachers in the present study were asked to share their experiences teaching after the flood, they talked about the challenges they faced with the school requirements and students' academic level and challenging behaviors. The teachers discussed how their personal attributes helped them get through the difficult times during the school year. Some teachers named traits such as being understanding, compassionate, emphatic, and considerate, but all of them mentioned the importance of patience and perseverance.

Needless to say, these qualities were needed to help them overcome the stress that was associated with the experience of a flood, to rise above the difficult situation, and never give up despite the trials. The term resilience is a key concept after the experience of a traumatic event, not only for children, but for teachers as well. Bouillet, Ivanec, and Milijevic- Ridicki (2014) used two questionnaires, the Resilience Scale for Adults and Questionnaire on the Readiness of Preschool Teachers for Developing Children's Resilience, to analyze the resilience and the readiness to foster resilience among children of 191 preschool teachers in Croatia. The researchers found that the teachers who reported high level of resilience also noted that they were more competent in developing children's resilience. Although the teachers in this study did not use the term resilience as one of their attributes, it was evident that they tend to have positive self-image and optimism, and had the ability to encourage students to look at the positive side of life, all of which are attributes of a resilient person (Bouillet, Ivanec, and Milijevic- Ridicki, 2014). Despite expressing how they were stressed about the whole situation, the teachers still believed that they had to take charge and help their students have a happy and normal life.

The important role of the teachers in helping children cope with the negative experiences and learn after a disaster has been established in this present study (Perry & Szalavitz, 2008; Le Brocque, et. al., 2017). Although the researcher in this present study was not successful in finding literature that will correlate patience with teacher effectiveness, teacher perseverance has been studied and the result stated positive association between teachers with high level of perseverance and successful teaching. In a two-prospective study that Robertson-Kraft & Duckworth conducted with 154 and 307 novice teachers, respectively, in their first and second year of teaching in low-income districts, the researchers found that the teachers with high level of grit: passion and perseverance, outperformed their less grittier colleagues. The researchers

also found that teachers with high level of grit increased student achievement and academic performance.

The teachers realized the road to recovery after a flood was long and tedious, and they stated that they were ready to get the students the help they need so they could live a normal life despite the chaos that the flooding brought; this had been their driving force to be patient and to persevere despite the challenges. Throughout the school year, teachers need to sustain their perseverance and passion to keep up with the exceptional demands of teaching (Robertson-Kraft & Duckworth, 2015), and more so to keep up with the greater demands of teaching after the flood.

Opportunities for Future Research

The present study sought to explore a little-known topic and give voice to teachers that had experienced a natural disaster in their school community. The qualitative case study offered a suitable methodology for this purpose. The convenience sample resulted in a group of first year teachers, adding another layer to the story. Future research in this area may want to consider the experiences of other teachers with varying levels of teaching experience and exposure to disaster (type and intensity). Teachers play an instrumental part in helping students in the recovery process after the experience of a traumatic event (Perry & Szalavitz, 2008; Le Brocque, et. al., 2017), therefore, it is also important to recognize that teachers are also victims of the flooding and it is vital to ensure that they are physically, emotionally, and mentally capable of performing their tasks. It is only recently that the effects of disasters on teachers have begun to be addressed (Berger, Abu-Raiya, & Benatov, 2016) and further study will help teachers fulfill their responsibilities in the classroom and respond appropriately to the needs of the children. Further research might utilize different methodologies and explore the impact of disaster on teachers

from different regions. The reliance on self-report is a hallmark of stress research. Future work surrounding teacher stress and disaster response could benefit from observational methods to explore teachers' beliefs of self-efficacy teaching after the flood. Questions remain about teachers' stress evaluation, management, and methods for intervention and are all important for future studies. A few examples of future projects might include: (a) a comparison of teachers' reported stress level and teaching efficacy right after the flooding and a few months following; (b) a control/ experimental design to test the effect of professional development and stress intervention on teachers' classroom performance and student achievement and (c) an investigation of the association of teachers' stress after the flooding and students' achievement to further understand how flooding affects teachers and their instruction and interaction with students. In practice, efforts to increase administrator support to teachers and professional development on responding to students after the experience of natural disaster is of critical importance to the field.

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APPENDIX A: INTERVIEW QUESTIONS

A semi-structured interview will be conducted with the participants. The following protocol outlines the main questions. The interviewer will also ask follow-up and prompting questions as needed throughout the interview in order to engage the participant.

1. Can you tell me about yourself?
2. Can you tell me a little about your experience with the August 2016 flooding in Louisiana?
3. How would you describe your experiences during the flooding?
4. How would you describe your school community before the flooding?
5. How would you describe your school community during the flooding?
6. How would you describe your school community right after the flooding and now a few months after?
7. Do you think the flooding impacted how students learned? If so, in what ways?
8. Many teachers subscribe to the framework of developmentally appropriate practice. What does this phrase: Developmentally Appropriate Practice (DAP)- mean to you in your teaching?
9. Did your ideas about DAP change after the flooding? If so, how? If not- why not?
10. What do you think it means to be appropriate for the individual child? How did this look in your teaching after the flooding?
11. Do age and developmental level of a child impact your teaching? If so, in what ways? Did these change after the flooding?
12. How do you strive to be appropriate to the needs and values of the community and culture? Was this impacted by the flooding? If so, in what ways?

13. What do you think are the developmentally appropriate ways to deal with your students following a flood?
14. Do you think the flooding impacted your teaching? If so, in what ways?
15. Given a chance to start the school year over, even with the flood, would you teach differently? Why or why not?
16. What are the most important parts of your teaching philosophy? What do you think is most important in your work as a teacher? What do you think is your major role as an early childhood education teacher?
17. What parts of teaching are you most passionate about?
18. Do you consider yourself as a teacher with high level of perseverance with or without dealing with a natural disaster such as flooding?
19. Do you think teaching after the flooding affected your perseverance level? If so, in what ways?
20. Did you have to give up something in your teaching because of the flood? If so, what are they?
21. Can you describe how you worked to fulfill your professional ideals in the face of challenge?
22. Did the flooding change your teaching? If so, how? Why did it change your teaching? In what ways? How did you adapt? What caused you to change?
23. What resources helped you to do your job after the flooding?
24. What advice would you give to other professionals/teachers that might face a natural disaster?

APPENDIX B: IRB EXEMPTION APPROVAL

ACTION ON EXEMPTION APPROVAL REQUEST



Institutional Review Board
Dr. Dennis Landin, Chair
130 David Boyd Hall
Baton Rouge, LA 70803
P: 225.578.8692
F: 225.578.5983
irb@lsu.edu
lsu.edu/research

TO: Caroline Tolentino
Education
FROM: Dennis Landin
Chair, Institutional Review Board
DATE: November 10, 2017
RE: IRB# E10470
TITLE: TEACHERS' EXPERIENCE OF A FLOOD IN THEIR SCHOOL COMMUNITY: THEIR BELIEFS, PERCEPTIONS, AND THOUGHTS ABOUT PRACTICE

New Protocol/Modification/Continuation: Modification

Brief Modification Description: Change title

Review date: 11/9/2017

Approved [X] Disapproved

Approval Date: 11/9/2017 Approval Expiration Date: 4/23/2020

Re-review frequency: (three years unless otherwise stated)

LSU Proposal Number (if applicable):

Protocol Matches Scope of Work in Grant proposal: (if applicable)

By: Dennis Landin, Chairman [Signature]

PRINCIPAL INVESTIGATOR: PLEASE READ THE FOLLOWING - Continuing approval is CONDITIONAL on:

- 1. Adherence to the approved protocol, familiarity with, and adherence to the ethical standards of the Belmont Report, and LSU's Assurance of Compliance with DHHS regulations for the protection of human subjects*
2. Prior approval of a change in protocol, including revision of the consent documents or an increase in the number of subjects over that approved.
3. Obtaining renewed approval (or submittal of a termination report), prior to the approval expiration date, upon request by the IRB office (irrespective of when the project actually begins); notification of project termination.
4. Retention of documentation of informed consent and study records for at least 3 years after the study ends.
5. Continuing attention to the physical and psychological well-being and informed consent of the individual participants including notification of new information that might affect consent.
6. A prompt report to the IRB of any adverse event affecting a participant potentially arising from the study.
7. Notification of the IRB of a serious compliance failure.
8. SPECIAL NOTE: Make sure you use bcc when emailing more than one recipient. Approvals will automatically be closed by the IRB on the expiration date unless the PI requests a continuation.

*All investigators and support staff have access to copies of the Belmont Report, LSU's Assurance with DHHS, DHHS (45 CFR 46) and FDA regulations governing use of human subjects, and other relevant documents in print in this office or on our World Wide Web site at http://www.lsu.edu/irb

Vita

Caroline Tolentino was born in Manila, Philippines. She earned her Bachelor of Science in Family Life and Child Development from the University of the Philippines, Diliman in 2004. She worked as a primary school teacher at San Beda College, Philippines for 4 years before moving to Baton Rouge, Louisiana in 2008. Since moving to Louisiana, Caroline has been working as a kindergarten teacher at Villa del Rey Elementary Creative Sciences and Arts Magnet School in Baton Rouge. Her passion for teaching and working with young children and her willingness to improve her craft inspired her to pursue her graduate studies at Louisiana State University in 2015. She plans to graduate in December 2017 with the degree of Master of Education in Curriculum and Instruction.