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Latino Perspectives In Childhood Fever Management: A Focused Ethnography

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LATINO PERPSPECTIVES IN CHILDHOOD FEVER MANAGEMENT:

A FOCUSED ETHNOGRAPHY

A DISSERTATION

SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS

FOR THE DEGREE OF DOCTOR OF PHILOSOPHY IN NURSING

THE UNIVERSITY OF TEXAS HEALTH SCIENCE CENTER AT HOUSTON

CIZIK SCHOOL OF NURSING

BY

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MAY, 2020

UTHealth
The University of Texas Health Science Center at Houston

Cizik School of Nursing

Approval Form D-3

February 4, 2020
Date

To the Dean for the School of Nursing:

I am submitting a dissertation written by Darlene Acorda and entitled "Latino Perspectives in Childhood Fever Management: A Focused Ethnography." I have examined the final copy of this dissertation for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy in Nursing.

Cathy Rozmus, PhD, RN, FAAN
Committee Chair

We have read this dissertation
and recommend its acceptance:

Accepted

Dean for the School of Nursing

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"*In the latter years of your life, your happiness and your self-esteem will be determined by the mountains you surmounted, the valleys you climbed out of, and the life and/or career that you forged for yourself*."

– Maya Angelo

Latino Perspectives in Childhood Fever Management:
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Darlene E. Acorda, PhD(c), RN, APRN, CNE, CPNP-PC

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Background: Fever is the most common presenting complaint in the pediatric setting. Latino parents have greater misconceptions and are less knowledgeable of fever compared to other groups. They are more likely to believe that fever can cause serious harm and to present to the emergency department for non-emergent illness. Latino health practices are heavily influenced by cultural beliefs, yet few studies have focused on parental fever perception in this rapidly growing population. It is estimated that by 2050, 32% of the U.S. child population will be of Latino descent. Understanding the Latino perspective is a critical first step to formulating culturally sensitive interventions that increase knowledge and lessen morbidity risks in Latino children with fever.

Aims: The aims of this study were to 1) understand Latino parental beliefs and norms in children with fever, and 2) describe Latino parental practices in the management of fever.

Methods: A focused ethnography design was used to explore the cultural perspectives of 21 Latino parents related to management of child fever. Individual semi-structured interviews in English and Spanish along with observations and informal staff interviews were conducted at a primary care clinic in the greater Houston metropolitan area. Interview data, field notes, and analytic memos were analyzed according to Spradley's Developmental Research Sequence method.

Results: Four major themes emerged from the data: 1) attitudes about fever and

management practices, 2) social influences on fever beliefs and practices, 3) parental ability to manage fever, and 4) expectations of treatment. Parents engaged both folk and biomedical systems of care when assessing and treating fever. They received information from many sources, they valued their relationships with healthcare providers, and they were generally confident in their ability to carry out fever interventions. However, they lacked overall knowledge of the role of fever in illness, they lacked an understanding of antipyretic use, and believed that fever, if left untreated, resulted in febrile seizures and permanent brain damage.

Conclusions: Latino parents continue to have misconceptions and fears around fever. This study provides a more in-depth exploration of Latino beliefs and delivers a framework for understanding the relationship between fever beliefs and behaviors. Findings suggest that culturally sensitive, targeted education is needed to address the general lack of fever knowledge of Latino parents and to minimize fears that primarily drive their care decisions.

Keywords: Fever, Latino, Hispanic, parents, fever management, cultural beliefs

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Summary of Study

Disparities in fever knowledge continue to exist with Latino parents reporting greater misconceptions and fears of fever compared to other groups. The aims of this dissertation were to understand Latino parental fever beliefs and norms and to describe Latino practices in the management of childhood fever. This dissertation is comprised of the dissertation proposal, a manuscript presenting the primary findings of the research study, a systematic review of the literature informing the current study originally submitted for publication, and the supporting documents appended to this dissertation. The study was approved by the Institutional Review Board at the University of Texas Health Science Center at Houston and the Committee for the Protection of Human Subjects (Appendix A).

This study utilized a focused ethnographic approach to understand the lived experience of Latino parents in the management of child fever. The study was conducted with permission (Appendix B) at Clinica La Salud, LLC, a nurse practitioner owned pediatric clinic serving primarily low income, Medicaid patients. Semi-structured individual interviews of Latino parents were conducted along with field observations and informal staff interviews. Spradley's (1979) Developmental Research Sequence method was used for data analysis and rigor was established through reflexive journaling, analytic memos, and peer-debriefings. The study was conducted over an 8-week period and although data saturation was reached at 17, recruitment continued to include 21 participants to ensure that no new concepts emerged.

Four major themes emerged from the data: 1) attitudes about fever and management practices, 2) social influences on fever beliefs and practices, 3) parental

ability to manage fever, and 4) expectations of treatment. Parents engaged both folk and biomedical systems of care when assessing and treating fever. They received information from many sources including family, healthcare providers, and the media. They value their relationships with healthcare providers and are generally confident in their ability to carry out fever interventions. However, they lacked overall knowledge of the role of fever in illness and believed that fever, if left untreated, result in febrile seizures and permanent brain damage. There were no significant differences between younger versus older parents, those born in the U.S. versus those born in foreign countries, and those who were bilingual versus exclusively Spanish-speaking parents. Most of the parents in this study had a long-established relationship with the clinic.

Findings in this study are similar to studies conducted over five years ago suggesting that little has improved in how Latino parents understand fever and little has changed in how healthcare providers educate about fever in Latino children. More research is needed to better understand Latino perspectives on fever and to test interventions that improve knowledge. Findings from this study highlight that Latino parents continue to have misconceptions about fever that have the potential to impact overall child health.

LATINO PARENTAL BELIEFS AND PRACTICES IN CHILD FEVER:

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Specific Aims

Parental knowledge, beliefs, and practices for fever have important clinical ramifications that can impact overall child health. Fever is the most common chief complaint in the pediatric primary and emergency setting and accounts for approximately 20% of all pediatric emergency department (ED) visits (Rui & Kang, 2015). Despite medical advances that have significantly decreased bacteremia in children with fever, misconceptions about fever continue to impact parental management. A seminal study by Schmitt (1981) first noted the heightened parental anxiety around fever, reporting that 52% of parents surveyed believed that moderate fever could result in neurological damage. He termed this irrational fear of fever as "fever phobia" (Schmitt, 1981). In the 30 years following the Schmitt (1981) study, misconceptions about fever persist resulting in poor management such as overdosing of antipyretics, lack of knowledge of febrile temperatures, and misutilization of healthcare services (Bertille et al., 2016). The importance of parental knowledge in the care of febrile children is crucial to providing timely, safe, and effective care.

In recent years, little attention has been given to parental fever beliefs, and few studies have been conducted in ethnically diverse populations. In the few studies that included Latino parents, fever was addressed solely from the biomedical perspective and the cultural beliefs and practices were rarely explored (Crocetti et al., 2009; Cohee et al., 2010; Grigg et al., 2013; Taveras et al., 2004). Latino parents have been found to exhibit greater fears of fever, less knowledge of appropriate fever interventions, and are less likely to seek medical care compared to other groups (Cohee et al., 2010; Grigg et al., 2013; Taveras et al., 2014). One study reported Latino parents being 36.9 times more

likely to believe that temperatures could rise to greater than 110 F compared to Caucasian parents and though 76% reported owning a thermometer, the preferred method of temperature taking was through touch (Cohee et al., 2010). Other studies found similar findings when comparing Latino parental management with current fever guidelines and practices (Grigg et al., 2013; Taveras et al., 2004; Crocetti et al., 2009).

A strong cultural influence has been found in the Latino parents' approach to common childhood illnesses and symptoms. In studies exploring the general health beliefs and practices of Latino parents, fever was attributed to either a pathological or folk-related illness (Andrews et al., 2013; Mikhail, 1994; Risser & Mazur, 1995; Robledo et al., 1999). The belief that symptoms and illnesses were due to an imbalance in the hot and cold elements of the body was prominent, and treatment was aimed primarily at restoring balance (Crocetti et al., 2009; Pachter et al., 1998; Robledo et al., 1999). Management of childhood illness often involved the engagement of both folk and biomedical medicine (Colucciello & Woelfel, 1998; Foronda & Waite, 2008; Gordon, 1994). The use of herbal remedies and folk healers have been reported (Andrews et al., 2013; Colucciello & Woelfel, 1998). The importance of family in treatment decisions is a prominent cultural value (Gordon, 1994; Grigg et al., 2013; Harrison & Scarinci, 2007). Despite strong support in the literature of the impact of cultural beliefs on Latino beliefs of illness, to this author's knowledge, no qualitative studies have been conducted on parental fever beliefs and practices from a cultural perspective.

Based on the Theory of Culture Care and Diversity (Leininger, 1988), the cultural views, norms, and beliefs of Latino parents will be explored in this study. The term "Latino" is preferred since it focuses on geographical location, referring to people of

Latin American origin, compared to Hispanic, which refers to a Spanish-speaking origin. The research question to be answered is, what are the fever beliefs of Latino parents, and how do these beliefs impact their management of fever in their children? A focused qualitative ethnographic study will be conducted for an in-depth exploration of these beliefs. The following specific aims will be pursued:

Aim 1: To understand Latino parental beliefs and norms around children with fever.

Aim 2: To describe Latino parental practices in the management of fever in children.

Significance

Latino children are the fastest growing minority group in the United States (U.S.), and currently, one-fourth of U.S. children under the age of 18 years are of Latino descent. At the current growth rate, it is expected that by 2050, Latino children will make up 32% of the total U.S. child population (U.S. Census Bureau, 2017; Mather & Foxen, 2016). Despite their growing numbers, Latino children continue to have the highest rate of being uninsured compared to other groups (Mather & Foxen, 2016). They are also the least likely to have a primary source of care or medical home, have fewer well-visits, are the most likely to report not having visited a primary provider over the past year. They are also among the highest users of ED services for non-emergent illness (Mather & Foxen, 2016). Latino children have poorer health outcomes, including the highest rates of obesity and diabetes compared to African American and Caucasian children (Mather & Foxen, 2016). Since fever is the most common chief complaint in the pediatric setting, interventions that target the Latino parent's knowledge of fever can have significant clinical and economic implications.

The decision to seek care for a child's illness is greatly impacted by previous parental experience of the healthcare system. Unfortunately, cultural differences between Latino individuals and healthcare providers have created barriers related to a lack of cultural understanding and unconscious racial and cultural biases that have negatively impacted care (Gonzalez et al., 2018). Latino individuals, especially those with limited proficiency in English, have reported difficulties in communicating concerns, thereby affecting their ability to deliver and receive health information (Hall et al., 2015). They have also reported feeling mistreated in the healthcare system because of their race or ethnicity (Hall et al., 2015). As a result, these barriers can have profound effects on the Latino parents' decision to seek care resulting in significant clinical consequences. Studies have postulated that the high rate of admission of Latino children from the ED may be attributed to delays in care that are related to the economic, cultural or linguistic barriers faced by parents (Flores & Vega, 1998). Therefore, understanding Latino parental cultural beliefs and practices is an important starting point for building meaningful and culturally competent parent-provider relationships.

Culturally sensitive parental education has been shown to result in improved outcomes compared to traditional education. In a systematic review investigating the effects of culturally-based asthma education on asthma exacerbation of children of minority families including Latino parents, those who received culturally-sensitive education had significantly better control of their child's asthma, had less severe exacerbations requiring hospitalizations, and were significantly more knowledgeable of their children's asthma condition and management (McCallum et al., 2017). Similar findings have been found in culturally sensitive diabetes, mental health, and weight

management intervention and prevention studies (Rangel & Valdez, 2017; Gonzalez, 2016; Wolff et al., 2016). However, no published studies have explored the use of culturally based education or interventions in Latino parents' management of fever.

To understand the impact of culture on care, Madeleine Leininger's (1988) Theory of Culture Care Diversity and Universality, also known as The Culture Care Theory, will be the guiding theoretical framework for this research proposal. Leininger's (1988) theory postulates that care decisions and actions that are culturally based lead to beneficial outcomes. The theory emphasizes the importance of providing care that fits with or has beneficial meaning and health outcomes for individuals of different or similar backgrounds (Leininger, 1988). The purpose is to utilize research findings to provide culturally congruent, safe, and meaningful care (Leininger & McFarland, 2006). Although not the theory itself, the Sunrise Enabler presented in figure 1 was created by Leininger to serve as a cognitive map for discovering factors, tenets, and assumptions related to The Culture Care Theory (Leininger & McFarland, 2006). The model has been extensively used in nursing research and clinical practice. The model is multidirectional emphasizing the complex interaction between an individual or groups' worldviews, cultural and social factors, and its influence on care patterns (Leininger, 1988). Healthcare providers equally influence these patterns and practices using the cultural care decisions and actions outlined in theory with the ultimate goal of providing culturally congruent care (Leininger, 1988).

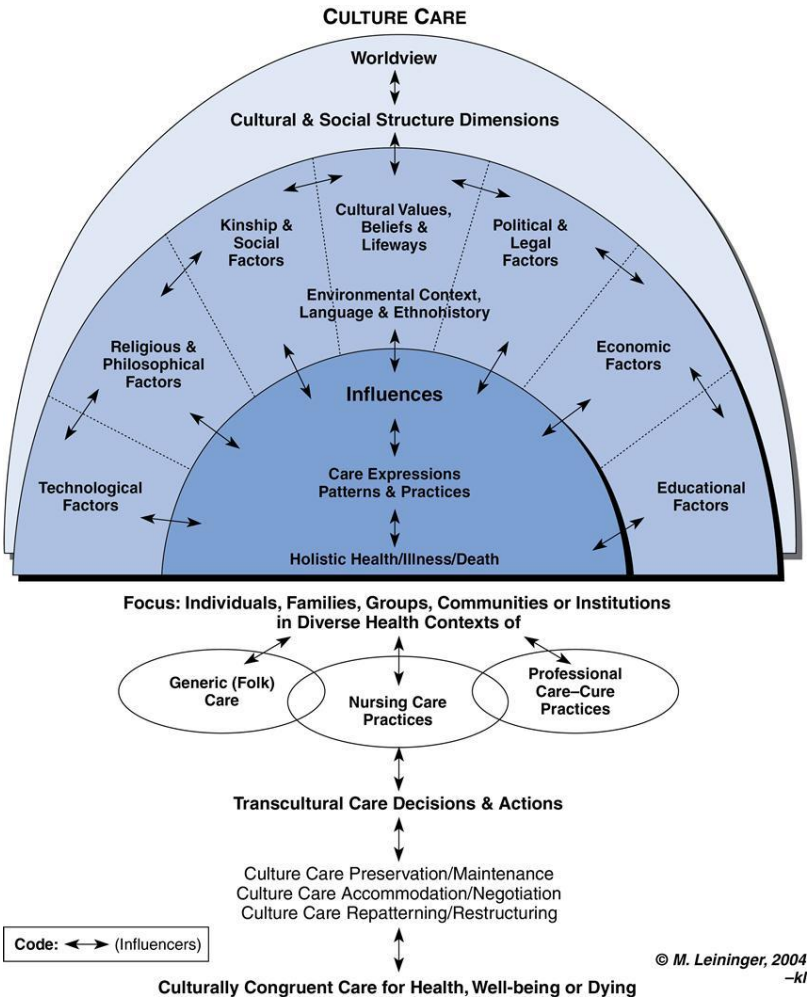

Figure 1. The Sunrise Enabler Model from The Culture Care Theory (Leininger & McFarland, 2006).

Innovation

The status quo as it pertains to parental fever education is a one size fits all model that provides similar, printable, education to all parents regardless of background. Education is primarily biomedical based, focusing on the definition of fever, cause of fever, and the use of antipyretics (Young, Watts, & Wilson, 2010). Although education programs that go beyond the status quo have been found to be effective in increasing parental fever knowledge, these studies were conducted in primarily Caucasian samples and very few

have been done in diverse populations (Crocetti et al., 2001). Educational interventions provided in the ED and primary care have not historically incorporated Latino beliefs and practices, and as a result have been unsuccessful in changing parent behaviors (Young et al., 2010). In that regard, the research proposed in this application is innovative, because it aims to highlight the unique perspectives of Latino parents on fever which can inform future fever education and interventions. The predominance of the medical model in understanding the fever experience of Latino parents rather than a lived experience limits our understanding of how Latino parents manage fever. Using a focused ethnography approach allows for an in-depth exploration of Latino beliefs thereby opening new insights that can change how providers educate and provide care for Latino children with fever.

Approach

Research Design

A focused ethnographic approach will be used to explore the beliefs and practices of Latino parents in childhood fever. Ethnography is an appropriate approach since the goal is to understand the beliefs and actions of a group from their point of view (Spradley, 1979).

Setting

Participants will be recruited from Clinica La Salud, LLC, a pediatric clinic located in the greater metropolitan Houston area. Most of the clinic's patient population is of Latino descent. The primary language spoken in the clinic is Spanish. The walk-in clinic treats an average of 80 to 90 pediatric patients per day. The average wait time to be

seen is between 60 to 90 minutes. All staff members and three providers are fluent in Spanish while the other providers are proficient in Spanish. The clinic is owned by a nurse practitioner and employs five pediatric nurse practitioners and has served the area for more than 20 years. A physician medical director serves as the delegating physician, sees patients on an as needed basis, and is available for consult.

Sample

Purposive sampling will be utilized to ensure maximum variation of parental attributes including, but not limited to age, gender, and nationality or ethnicity. Participants will be recruited at Clinica La Salud, LLC during clinic hours. Flyers in both English and Spanish will be posted in the restrooms, waiting room, and patient care areas with permission from the clinic director. An anticipated sample size of 30 participants is expected to achieve maximum variation (Crabtree & Miller, 1999). However, recruitment will continue until data saturation is reached (Crabtree & Miller, 1999). The clinic sees an average of 80 patients per day and the primary investigator will be screening for subjects once a week over the course of the year until data saturation is reached. An anticipated 4,000 subjects will be screened to reach the enrollment goal.

Inclusion criteria. English or Spanish-speaking, Latino parents or guardians 18 years and older who identify themselves as the primary caregivers of children less than 18 years of age. Latino is defined by the U.S. Census (2010) as a person of Cuban, Mexican, Puerto Rican, South or Central American origin regardless of race.

Exclusion criteria. Non-Latino individuals or those who are not the primary caregivers of children in their family. Since children with chronic conditions are at a

higher risk for developing complications that may initially present as fever, parents of chronically ill children will be excluded in this study. Chronic conditions include children with asthma, hematological/oncological disorders, cardiac disorders, chronic lung disease, renal disease, or children who are immunosuppressed.

Data Collection Procedures

A variety of data collection methods will be utilized in this study. Along with in-depth individual interviews, group interviews, field notes, and participant observation, a demographic survey will also be administered. Informal interviews with participants, providers, and staff may also be conducted.

Demographic data. Demographics will include participant's age, sex, education level, ethnicity, country of origin, relationship to the child, number of children, number of years in the U.S., and language spoken at home. See Appendix A for demographic survey.

In-depth interviews. Semi-structured long interviews will be conducted in English or Spanish with each interview designed to last 45 to 60 minutes. Along with the interview guide (Appendix B) questions, probing questions may be asked to further explore or clarify concepts. The interview guide will be piloted on the clinic staff prior to submitting for IRB review. Interviews will be audio recorded with the participants' permission. If at any point in the interview, the participant requests not to be recorded, the audio recording will be stopped until the participant consents to be recorded again.

Group interviews. Group interviews will be conducted with 6 to 8 participants, who are different from those participating in individual interviews, to generate rich

discussion between participants and to gather information of participant interactions (Crabtree & Miller, 1999). Group interviews will also be utilized to clarify concepts identified in the individual interviews and vice versa, to elicit if a shared experience is present. An anticipated 3-4 focus group interviews will be conducted (Crabtree & Miller, 1999).

Field notes. Observation of sick visits for fever may also be conducted noting on the interactions between parents, medical assistants, front staff, and providers. Informal interviews with other parents, providers, and clinic staff will also be conducted. Notes on the education provided to the parents in the form of handouts or brochures will be done. Field notes and analytic memos will also be included in the analysis.

Participant observations. Participant observations at community or clinic events, in-services, or lectures may also be conducted to further explore the social influences and sources of information of Latino parents.

Procedure for Data Collection

The primary investigator (PI), who is proficient in Spanish, will inform parents of the study when checking into the clinic. Flyers in both English and Spanish will be distributed with an explanation of the goals of the study. If a parent is willing to participate, and with their permission, the clinic will be informed of the parent and patient's participation in the study and their location for the interview. Interviews may be conducted before or after the clinic visit based on participant preference. A quiet room located at the back of the clinic will be reserved. If the patient is called by the clinic before the end of the interview, the clinic has agreed to hold the participant's place in the

queue and room participants immediately after the interview to avoid delays in care. Before obtaining consent, a clinic staff member who is a fluent Spanish speaker, is well-versed in the study protocol, and has completed CITI training will be introduced to the participant as an interpreter for the interview. The interpreter is familiar to families in the clinic and can assist with vernacular terms, folk terms, slang, and language variations of different countries. The role of the clinic staff member and the PI will be clearly explained to the participant to ensure that there is no confusion between the role of the clinic staff in the study and their role in providing care in the clinic. Written or verbal consent in English or Spanish will be obtained prior to participation. A semi-structured long interview will be conducted in either English or Spanish by the PI with the assistance of the clinic staff interpreter. An interview guide will be utilized, and all interviews will be audio recorded with permission from the participant. Interviews may last between 45 – 60 minutes. After the interview, a demographic survey in English or Spanish will be administered for descriptive data. A $15 gift card will be provided as compensation for participation in the study at the end of the interaction. The gift cards will be funded by the primary investigator. Data collection will be conducted until redundancy and saturation are achieved. Audio recordings will be translated and transcribed by an approved transcription service and will be audited for accuracy by the interpreter and PI.

With the participants' permission, observation of the clinic visit, and the participant's interaction with the healthcare team may also be conducted. The goal is to observe and note on naturally occurring interactions and conversations between participants and health care providers (Spradley, 1979). Observations will be done in the

waiting area of the clinic to take note of the interactions between parents as they wait to be seen by a provider.

Group interviews will be conducted during non-clinic hours with the assistance of the clinic staff interpreter. Recruitment for group interviews will occur at the time of check-in. Interviews will loosely follow the interview guide format, and informed consent will be obtained before the start of the interviews. The demographic survey will be completed at the end of each focus group interview. The PI will serve as the moderator and facilitator of the group. Focus group interviews will last between 60 to 90 minutes. A fifteen-dollar gift card will be given as compensation for participation in the study at the end of the interaction. Audio recordings will be transcribed using a translation and transcription service recommended by the dissertation committee.

Data Analysis

Data collection and analysis will occur concurrently. The PI and interpreter will verify the transcribed interviews by listening to the recordings and reviewing the transcripts. All personal identifiers will be removed, and a participant code will be assigned. The de-identified transcripts will be used for analysis. Consultation with the qualitative experts of the committee will occur through analysis meetings. The Developmental Research Sequence (DRS) method by Spradley (1979) will be utilized to analyze the data. The four fundamental tasks in the DRS method are identifying domains, establishing taxonomies, analyzing the components, and thematic analysis (Spradley, 1979). Domain analysis involves identifying the domains in which individuals organize cultural knowledge (Spradley, 1979). Taxonomic analysis delves deeper into a particular domain by understanding the structures and subsets of concepts within the data (Spradley, 1979).

Once a full taxonomy of a domain is completed, componential analysis identifies contrasts and attributes to formulate a complete paradigm which will inform the thematic analysis leading to the identification of cultural themes (Spradley, 1979). Although the DRS method is not a linear process, it provides a thorough framework for analyzing ethnographic data (Spradley, 1979). To ensure credibility of the data, peer debriefing with the qualitative experts and a doctorally-prepared member who is Spanish-speaking and is familiar with this population will be conducted. Analytic memos of the analysis process, reflexive notes, and bracketing in field notes will also be included in the analysis. A detailed research record will also be kept to provide an audit trail of the study. ATLAS.ti qualitative data analysis software will be utilized to organize and code the data.

Ethical Considerations

Qualitative research has unique moral and ethical challenges that are not common in other methodologies (Morse, 1999). Protection of participant rights throughout the process will be prioritized. Obtaining ethical approval through the institutional review process will be completed prior to the beginning of the study. Potential risks for participants include the loss of confidential information and participants may experience a sense of discomfort during the interview process. All attempts to protect the confidentiality of the participants and their data will be done. Transcription of audio recordings will be stored in a secure, password protected, encrypted server of the University of Texas Health Science Center Houston. Another potential risk is that participants may confuse the study with the usual care received in the clinic. To mitigate this, the participant will be thoroughly oriented to the purpose of the study and the

differences between the study and care received in the clinic prior to obtaining consent. Potential benefits to participants include the chance to share their experience and to be part of a study that has the potential to impact future care for children with fever. The findings will contribute to the body of knowledge by informing interventions that address fever knowledge and practices of Latino parents.

Timeline

- June 2019: Proposal Defense
- July 2019: Submission to the ethics review board for approval
- August 2019 – October 2019: Data collection and ongoing analysis

Potential Pitfalls and Limitations

Threats to the validity of the study can occur if the PI and the research team are not careful in interviewing techniques, transcription and analysis of the data. Potential issues with sampling may include difficulties in scheduling interviews, especially group interviews for which participants must schedule outside of their clinic visit. Efforts will be made to schedule at convenient times for families and allow an area for children to play and be occupied. Another potential issue related to sampling is the current fear in the Latino community as a result of unfriendly immigration policies. Since the PI is a former nurse practitioner in the clinic with previous relationships with families and both the PI and the interpreter speak Spanish, the fear of information being shared with authorities will hopefully be minimized. All attempts to assure participants of the confidentiality of the information in the study will be don

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LATINO PERSPECTIVES IN CHILDHOOD FEVER MANAGEMENT:

A FOCUSED ETHNOGRAPHY

A DISSERTATION MANUSCRIPT

SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE

DEGREE OF DOCTOR OF PHILOSOPHY IN NURSING

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Abstract

Background: Fever is the most common presenting complaint in the pediatric setting. Latino parents have greater misconceptions and are less knowledgeable of fever compared to other groups. They are more likely to believe that fever can cause serious harm and to present to the emergency department for non-emergent illness. Latino health practices are heavily influenced by cultural beliefs, yet few studies have focused on parental fever perception in this rapidly growing population. It is estimated that by 2050, 32% of the U.S. child population will be of Latino descent. Understanding the Latino perspective is a critical first step to formulating culturally sensitive interventions that increase knowledge and lessen morbidity risks in Latino children with fever.

Aims: The aims of this study were to 1) understand Latino parental beliefs and norms in children with fever, and 2) describe Latino parental practices in the management of fever.

Methods: A focused ethnography design was used to explore the cultural perspectives of 21 Latino parents related to management of child fever. Individual semi-structured interviews in English and Spanish along with observations and informal staff interviews were conducted at a primary care clinic in the greater Houston metropolitan area. Interview data, field notes, and analytic memos were analyzed according to Spradley's Developmental Research Sequence method.

Results: Four major themes emerged from the data: 1) attitudes about fever and management practices, 2) social influences on fever beliefs and practices, 3) parental ability to manage fever, and 4) expectations of treatment. Parents engaged both folk and biomedical systems of care when assessing and treating fever. They received information from many sources, they valued their relationships with healthcare providers, and they

were generally confident in their ability to carry out fever interventions. However, they lacked overall knowledge of the role of fever in illness, they lacked an understanding of antipyretic use, and believed that fever, if left untreated, resulted in febrile seizures and permanent brain damage.

Conclusions: Latino parents continue to have misconceptions and fears around fever. This study provides a more in-depth exploration of Latino beliefs and delivers a framework for understanding the relationship between fever beliefs and behaviors. Findings suggest that culturally sensitive, targeted education is needed to address the general lack of fever knowledge of Latino parents and to minimize fears that primarily drive their care decisions.

Keywords: Fever, Latino, Hispanic, parents, fever management, cultural beliefs

Introduction

Misconceptions about the role of fever in illness have led to inappropriate parental management of child fever. Fever is the most common complaint in the primary care setting and accounts for 20% of emergency department (ED) visits in children less than 15 years of age (Rui & Kang, 2015). Although the risk of bacteremia in febrile children has decreased significantly since the advent of the haemophilus influenzae vaccine, parental anxieties around fever persist with often serious clinical consequences (Chancey & Javheri, 2009; Enard & Ganelin, 2013). Inappropriate practices including the misuse of antipyretics and antibiotics in the treatment have been reported (Walsh & Edwards, 2006). Racial and ethnic variations in fever knowledge also exist with Latino parents reporting greater misconceptions and fears compared to other groups (Cohee et al., 2010). Latino parents are more likely to believe that fever can cause serious harm and are more likely to present to the emergency department for non-emergent fever (Taveras et al., 2014). Despite this knowledge disparity, there is a paucity of studies in exclusively Latino samples examining their fever beliefs and practices. Understanding the Latino perspective is a necessary first step to formulating culturally-sensitive interventions that increase fever knowledge, alleviate fears, and improve overall quality of care for Latino children with fever.

Background

One-fourth of U.S. children under the age of 18 are of Latino descent (U.S. Census Bureau, 2017). By 2050, it is estimated that Latino children will make up 32% of the U.S. child population (U.S. Census Bureau, 2017). Despite their growing numbers, Latino children have the highest uninsured rate and have poorer health outcomes

compared to African American and Caucasian children (Mather & Foxen, 2016). They are the least likely to have a primary source of care or medical home and have fewer well-visits or any visit to a primary care provider within a year (Mather & Foxen, 2016). As a result, they are among the highest users of ED services for non-emergent illness and are the most likely to report the ED as their usual source of care (Rui & Kang, 2015).

Language, culture, and economic barriers impact Latino parental decisions to seek care. Cultural differences between Latino individuals and healthcare providers have resulted in a lack of cultural understanding and unconscious racial and cultural biases that negatively impact care (Gonzalez et al., 2018). Latino individuals with limited proficiency in English have difficulties in communicating concerns affecting their ability to deliver and receive health information (Hall et al., 2015). These barriers have resulted in adverse outcomes in Latino children with one study postulating that the high rate of admission of Latino children from the ED may be attributed to delays in care related to economic, cultural, or linguistic barriers faced by parents (Flores & Vega, 1998).

Latino health practices are influenced by cultural beliefs learned from family and community members. In studies exploring general Latino health beliefs, child fever was attributed to either a pathological or folk-related illness and treatment often involved the engagement of both folk and biomedical medicine (Andrews et al., 2013; Mikhail, 1994). Although most reported interventions such as herbal teas and vapor rubs were generally benign and beneficial, Latino parents have also described practices that are counter to current recommendations (Risser & Mazur, 1995; Robledo et al., 1999). The use of lead-containing substances such as *greta* and *azarcon* that have resulted in lead toxicity and death have been reported (Brown, 2010).

This study aims to highlight the unique perspective of Latino parents to inform future education and interventions. Using a focused ethnography approach allows for an in-depth exploration of the lived experience of Latino parents dealing with fever. The research questions to be addressed are what are the fever beliefs of Latino parents, and how do these beliefs impact their management of fever in their children? Two specific aims will be explored: 1) to understand Latino parental beliefs and norms of children with fever, and 2) to describe Latino parental practices in the management of fever.

Conceptual Framework

The study design was influenced by Madeleine Leininger's (1988) Theory of Culture Care Diversity and Universality, also known as The Culture Care Theory. The theory emphasizes the complex interaction between an individual or groups' worldviews, cultural and social factors, and its influence on care patterns (Leininger, 1988). The purpose of the theory is to utilize research findings to provide culturally congruent, safe, and meaningful care (Leininger & McFarland, 2006).

Although not the theory itself, the Sunrise Enabler (Figure 1, Appendix A) was created by Leininger to serve as a cognitive map for discovering factors, tenets, and assumptions related to The Culture Care Theory (Leininger & McFarland, 2006). The model has been extensively used in nursing research and clinical practice. The model is multidirectional emphasizing the complex interaction between an individual or groups' worldviews, cultural and social factors, and its influence on care patterns (Leininger, 1988). Healthcare providers equally influence these patterns and practices using the cultural care decisions and actions outlined in theory with the goal of providing culturally congruent care (Leininger, 1988).

Methods

Research Design

A focused ethnographic approach was used to explore and describe Latino perspectives on childhood fever. Ethnography is a qualitative research method that intends to describe and interpret the shared patterns, values, behaviors, and beliefs of a culture-sharing group (Cresswell, 2007). Ethnography is both a process and an outcome. As a process, ethnography involves in-depth interviews, extensive field observations and participant observations in which the researcher is immersed in the culture. As an outcome, ethnography aims to formulate a cultural interpretation through a description of themes and concepts related to the research question.

Although originally from cultural anthropology, ethnography has evolved into many subtypes, each with its own theoretical aim. Focused ethnography is an applied form of ethnography exploring beliefs and practices of a culture or sub-culture within the context of a specific illness or healthcare process (Higginbottom, Pillay, & Boadu, 2013). Focused ethnography has been widely used in healthcare and nursing because its inductive approach allows for a more holistic perspective of a healthcare problem (Higginbottom, Pillay, & Boadu, 2013).

Setting

The study was conducted at a nurse practitioner-owned primary pediatric care clinic in the greater Houston metropolitan area. The clinic serves a predominantly Hispanic/Latino, low income, Medicaid population in a largely Hispanic neighborhood. The staff is also predominantly Hispanic/Latino and consists of three medical assistants,

five pediatric nurse practitioners, one family nurse practitioner, and two front desk staff. The primary language spoken in the clinic by both patients and staff is Spanish. A medical director serves as the delegating physician reviewing 10 percent of charts, serving as a resource, and seeing patients in the clinic once a week. The clinic is open Monday to Friday from eight in the morning to five in the afternoon, and although appointments are available, most children are walk-in patients. The clinic attends to an average of 80 patients per day and an independent pharmacy and dental office are located adjacent to the clinic within the one-story building. The primary investigator (P.I.) previously worked in this clinic from 2009 to 2012 as a nurse practitioner and has an established relationship with the providers, staff, and some patients and their families.

Sampling

Purposive sampling was used to recruit participants to ensure maximum variation of parental attributes. Eligible participants were Latino parents, grandparents, and caregivers who were greater than 18 years of age and who were the primary caregivers of children. Latino is defined as persons of Cuban, Mexican, Puerto Rican, South or Central American origin regardless of race (U.S. Census, 2010). Latino parents or caregivers who cared for children with chronic conditions such as asthma, hematological/oncological disorders, cardiac disorders, chronic lung disease, renal disease, or are immunosuppressed were excluded from the study since these children are at a higher risk for developing complications that may initially present as fever. Both English and Spanish speaking participants were recruited, and an interpreter was used during recruitment and for individual interviews of Spanish-speaking parents.

Data Collection Procedures

Initially, potential participants were approached by the PI in the clinic lobby. However, although participants were receptive to receiving information, none consented to participating. As a result, recruitment occurred primarily through clinic staff and providers who recommended and introduced potential participants to the P. I. after the check-in process or after the clinic visit. The initial introduction from clinic staff and providers appeared to help ease discomfort in potential participants and allowed for a more successful recruitment strategy. Due to the P.I.'s history with the clinic, it was made clear to participants that the P.I. was serving in the role of researcher and not as a provider for the purpose of the study.

After verbally consenting to the study, participants were interviewed in a quiet room at the back of the clinic. Most of the participants were individually interviewed except for two couples who were each interviewed as a unit. An interview guide based on previous literature was used during the interviews (Appendix B). Probing questions were asked to further explore emerging themes or clarify concepts. An interpreter who was training as a medical assistant in the clinic was oriented to the study protocol and completed human subject research training. The interpreter was present for all interviews with Spanish-speaking participants. After each interview, a demographic survey (Appendix C) was completed, and time was given to participants to ask other study related questions. A fifteen-dollar gift card was given to each participant as compensation for their time. Interviews were audio recorded and professionally transcribed by a transcription service.

Although group interviews were initially planned, none of the potential participants could commit to returning to the clinic at a designated time due to transportation, family, and work-related constraints. However, group interviews of staff and providers were informally conducted to obtain their perspectives on how Latino parents manage fever. Along with interviews, field notes of clinic visits from check in to check out, parent/caregiver interactions with staff and providers, and education provided at discharge were documented after each interview and throughout the clinic day. Data collection and fieldwork occurred over an 8-week period.

Data Analysis

Prior to analysis, all transcripts were reviewed for accuracy with the audio recordings. Translations of Spanish transcripts was completed by the P.I. in consultation with the interpreter and a Spanish-speaking member of the study team. Data collection and analysis occurred concurrently to ensure that concepts were fully explored and clarified. Transcripts were de-identified to maintain confidentiality and each was assigned a unique identifier for analysis. Field notes, reflections, and analytic memos were also coded and included in the analysis. ATLAS.ti qualitative data analysis software was used to organize, code, and manage data. Data saturation and redundancy was achieved after 17 interviews. However, data collection continued to include a total of 21 participants to ensure that no new concepts are discovered.

An inductive approach guided the data analysis for this study. Spradley's (1979) Developmental Research Sequence method was used to identify cultural domains and establish taxonomies while Saldana's (2016) coding manual guided the overall qualitative analysis. First cycle coding included descriptive, attribute, in vivo, process, and values

coding with all data coded and analyzed by the P. I. Codes were initially clustered into categories and patterns, and concepts and themes were then identified through peer-debriefing. An explanatory model was created illustrating the factors influencing Latino parental management of fever.

To demonstrate rigor in this qualitative study, the criteria for credibility, transferability, dependability, and confirmability were addressed (Lincoln & Guba, 1985). Credibility was achieved through prolonged engagement with participants and clinic staff as demonstrated by the 8-week period for data collection and through member checking with the interpreter, clinic staff, and qualitative experts of the study team. Translation of exemplars were verified with the interpreter and study team member with fluency in Spanish. Transferability was achieved through "thick descriptions" noted in the field notes and interview transcripts. Dependability was established by documenting the entire study process thereby providing an audit trail of the study. A study manual was created to archive all study documents and to record any changes in the protocol. Confirmability was established through reflexive journaling and ensuring adherence to the criteria outlined above.

Human Subjects Considerations

This study was approved by the University of Texas Health Science Center Houston Committee for Protection of Human Subjects. Informed consent of staff and participants was obtained prior to conducting both formal and informal interviews. All interview data were transcribed by a credible transcription service and saved on an encrypted UTHealth server.

Results

Description of Sample

The sample included 21 participants of which the majority (n=19) were female and identified themselves as mothers; only 2 fathers volunteered for the study. The average age was 33 years old and the participants had an average of 3 children. Most were born in the U. S. (n=8), were bilingual (n=14), and received some high school education (n=13), with an average length of residence in the U.S. of 19 years. All reported Hispanic as their racial/ethnic origin; six were born in Mexico, two in Honduras, one in El Salvador and four participants did not report their place of birth. None of the participants lived with their grandparents. Table 1 (Appendix D) displays individual participant characteristics and Table 2 (Appendix E) provides a summary of the demographics.

Overview

Four major themes emerged from the data: 1) attitudes about fever and management practices, 2) social influences on fever knowledge and practices, 3) parental ability to manage fever, and 4) expectations of treatment. Overall, parents engaged both folk and biomedical systems of care when assessing and treating fever. They receive information from many sources, they value their relationships with providers, and are generally confident in their ability to carry out fever interventions. However, the parents in this study had a lower threshold for treating fever at home and were fearful of persistent or prolonged fever lasting more than a day.

Attitudes about fever and management practices

Parents identified fever as *calentura* or *fiebre* in Spanish and defined it as a rise in temperature. Parents in this study associated calentura and fiebre with illness and their attitudes towards fever and fever interventions were influenced by their folk beliefs, perceived severity of illness, and previous experience with fever. These factors played an important role in how parents assessed fever and their choice of intervention.

Folk beliefs. Defined as the narratives, customs, rituals, food ways, and practices of a social or cultural group, all parents in this study reported exposure to and some belief in folk traditions. Most of the parents (n=17) believed in the humoral theory in which illness is a result of an imbalance of the hot and cold elements of the body and treatments are generally aimed at restoring balance. Exposure to rapid changes in temperature was frequently described as a cause of illness. “Sometimes by cold, if they bathe very late or because sometimes, they walk barefoot” (P15, 34 y.o.).

> “Well, I say there are a lot of reasons, different reasons that cause the fever. Like now, in this boy’s case, he took off- he was running. Hot, and then he go into the cold, so this, like the temperature of his little body changed. Then he started with a headache and cough. And he started with fever yesterday, that change, the change of the body, the heat” (P21, 29 y.o. U.S).

Restoring balance. All parents reported variations of folk remedies aimed at restoring the balance of the hot and cold elements of the body. Bathing the child in lukewarm or cold water was a prominent finding (n=14) along with applying vapor rubs such as Vicks Vapor Rub™ (n=5) and cold compresses (n=20). “They would put a little rubbing alcohol in the water and then some type of herb, so we’ll just let her sit there and I’ll have my feet in there and I’ll just be holding her” (P3, 21 y.o, U.S.). While some

participants reported covering the child for fever, most emphasized undressing them to cool them down.

> When he's like that with a fever and a cough, and more with the fever, what I do is take his clothes off and give him a bath. I don't put any clothes on him, just all underwear. I use the thermometer and I rub the vapor rub on the chest and back and in the soles of the feet and put socks on so that they can sweat and take everything out (P16, 37 y.o., Mexico).

Most parents (n=12) reported giving fluids in the form of "*suero"* or Pedialyte™ an electrolyte-replacement fluid while some gave herbal teas such as "*yerbabuena"* or mint tea, "*manzanilla"* tea or chamomille tea, and oregano tea. "When it is vomit, you have to make a cinnamon tea, so that calms down the discomfort in the stomach and lower the fever" (P17, 35 y.o., El Salvador). Some parents reported not giving herbal teas primarily because their children did not like them. However, they reported drinking herbal teas when they themselves were ill. Foods commonly given during illness included *"caldo"* or soup along with other comfort foods. "I give them medicine. I give them healthier food, chicken soup, and I put Vapor Rub, and then they rest. They go to bed" (P8, 52 y.o., Mexico).

Folk illness as cause. Several parents believed that folk illnesses cause fever (n=12). The two illnesses frequently mentioned were *mal de ojo*, defined by the parents as the evil eye, and *empacho* described as an impaction in the stomach that result in abdominal pain, vomiting, or diarrhea. "If it's mal ojo, they start getting fussy and they start screaming or like crying all of a sudden. And then they get a fever afterwards" (P20, 22 y.o., U.S.). When asked if there was a difference between fever from infection and

fever with mal ojo or empacho, one parent reported “It’s the same. The fever comes out being the same if you have infection or have evil eye or empacho” (P17, 35 y.o., El Salvador). However, several parents reported differences in fever between the two illnesses. “You don’t really get fever out of mal de ojo. He gets warm from the head, but they don’t get fever, like really, really fever. From empacho, you do get fever, but in the stomach only” (P6, 38 y.o., U.S.). “The stomach is different and is hot, that’s when I say it’s an empacho. And when it’s different, he only has fever in the head and the body” (P21, 29 y.o., U.S.). If mal ojo is perceived to be the cause of fever, parents reported sweeping an egg to remove the evil eye. “We’ll put this one on them. We’ll sweep them with an egg, all over the body, and then we give them rue or basil too. We fill the body and yes, [the fever] goes down with this” (P15, 34 y.o).

Folk healing. When asked about folk healers, none of the participants reported using a *curandero* or *sobradero*. Most stated that their children were too young to go to folk healers. However, some (n= 4) described their parents and grandparents performing healing rituals on their children. “One time, my daughter was very, very sick, and I went to my dad, and my dad he cleaned her with an egg, and he rubbed her belly and everything, from both empacho and mal de ojo, and she got better” (P8, 52 y.o., Mexico). Another described her mother treating illness with a massage. “My mom would say she’s probably *empachado* so she started massaging her and then I don’t know where she just like picked her up and was like [demonstrating pinching of back] and after that she did actually get better” (P3, 21 y.o., U.S.).

Although all parents had some knowledge of folk beliefs, several parents (n=9) reported disbelief. “Myths. I could tell you so many things” (P9, 39 y.o.). Another parent

stated that folk beliefs were not related to fever. “She’s [grandma] more on that belief, but for me, not so much as far as fever. To me, over time, you know that fever is a sign of an infection” (P11, 34 y.o, U.S.-born). Others expressed uncertainty. “I think sometimes, the faith one has in that can be a factor that helps that. But who knows if that is a myth or it is a reality that does exist” (P17, 35 y.o, U.S.).

Perceived Severity. Most of the parents in this study viewed fever as a potentially serious illness. They were very mindful of their children’s symptoms and sought care immediately when they believed it to be severe. However, severity of fever was subjective with parents reporting different symptoms and different degrees of temperature that would prompt them to seek care.

Infection as cause. Although some parents believed that folk illnesses could cause some degrees of fever, all parents unanimously expressed that fever was primarily due to an infection. “I think the heat is only because of infection. It’s a reaction to some infection, or suddenly a cold, which also produces temperature” (P14, 42 y.o., Mexico). When probed about the type of infection that caused fever, the majority responded with ear infections or throat infections and many (n= 14) believed that viruses caused fever but could not specifically name them. However, some parents did not believe that viruses were the primary cause. “Actually, about the viruses, I don’t think so much, because it happens before when they have temperature and I bring them to the doctor, he comes out “Oh, he has a throat infection. He had an infection in the ears” (P4, 40 y.o., Honduras).

Knowing fever. When assessing for severity, all the parents reported using a thermometer to check for fever. They also relied heavily on visual cues and touch for screening purposes. “If the child puts on his red cheeks, or if the hands also have redness

and are cold, so then he has a very high temperature" (P17, 35 y.o., El Salvador). A change in the child's demeanor was also a cause for concern. "She is very happy, if she becomes sad, then I am afraid that something else will happen, something more serious" (P1, 20 y.o.). The majority of participants (n= 16) reported a temperature of 100 ^{o} F or greater as fever and that febrile temperatures could increase indefinitely. They described differentiating between degrees of fever but there was no consensus on what constituted "low" and "high" fever. Some parents believed fever of 100^{o} F to be serious while others deemed temperatures greater than 101^{o} F as high fever. One mother reported temperatures of 90^{o} F as fever. For many, their decision to seek care in the emergency room versus the clinic depended on their assessment of severity based primarily on the degree of fever.

Fever fears. In general, parents in this study were very fearful of fever. "The only thing that really, really, really scares me is when they have fever, and the fever takes a while to go down. And they start crying and crying and you don't know what hurts, what's wrong with them. That's when I really, really, get scared" (P6, 38 y.o, U.S.). Central to their fear of fever was their fear of febrile seizures (n=15) and the possibility of brain damage. "I hear it's bad to let them have a lot of fever because their brains are affected" (P14, 42 y.o., Mexico). One participant noted that fever affects the child's thinking and could result in seizures. "My concern is that he's going to convulse. Because it's too much, his temperature. I feel for the brain and his whole little body because it doesn't help them think" (P21, 29 y.o., U.S.). When probed about discussions with their healthcare providers regarding their fever fears including febrile seizures, none of the parents reported receiving information or discussing their fears with their providers.

Previous Experience.

Febrile seizures. Interestingly, most of the parents have either experienced febrile seizures in their children (n=5) or have had a history of seizures in their immediate family and friends (n=8). One mother reported herself having a history of seizures with the last episode occurring during her pregnancy. Another described a relative having complications from a febrile seizure. “I have an aunt, when she had fever, she convulsed and through the seizures she went blind” (P17, 35 y.o, Mexico). Other parents described traumatic experiences when their children were young that have continued to affect their perception of fever as their children grew older.

> I have a bad experience. When he had a fever, I walked to the doctors in the emergency care and then they check his fever and they sent me to the house. And when I got back to the house, my baby he started having a convulsion and he almost died. And I called the ambulance but the ambulance took too long so I walk him back to the emergency (P4, 40 y.o., Honduras).

Positive experiences also impacted parental attitudes about fever. “We learn from experience. With the second one, you know was different from the first child, so we’re like okay, so we know if we bathe them their temperature comes down and we just tried it” (P12, 37 y.o., U.S.). Comfort level was also associated with their perceived cause and associated symptoms based on previous experience. “If she has a temperature and its flu, well, I know it may be something viral. It doesn’t worry me much, but it would scare me if the fever is accompanied by symptoms that I don’t know and that I hadn’t seen” (P10, 27 y.o.).

Social influences on fever knowledge and practices

Of all the social influences reported by parents in this study, healthcare providers exerted the greatest impact on their fever beliefs and practices. Although family members served as a frequent resource, when given a choice, most parents relied primarily on the recommendations of their healthcare providers and were more likely to comply with medical advice.

Healthcare Providers. All the parents expressed heavy reliance on medical advice and were often hesitant to try interventions that were not instructed by their healthcare provider. Most participants learned about the cause of fever from their providers (n=13). “They told us that fever is a sign of the body fighting out an infection so it’s not necessarily a bad thing, it just means that the body is doing its job” (P12, 37 y.o., U.S.). Parents implemented interventions that were learned from the clinic or hospital. “I know whenever I go to the hospitals, they take off clothes. So that’s what I do, I take off her clothes, leave her open and then if it doesn’t go down, I get a rag and I put it on her forehead” (P3, 21 y.o., U.S.).

Some parents reported being more comfortable administering antipyretics that were specifically prescribed by their provider even if the medicine is available over the counter (n=8). “If I’m going to buy something it has to be like something prescribed. I am not going to buy just anything because it can hurt her” (P1, 20 y.o.). Others only bought over the counter medications if they were previously prescribed a dose by their provider. “Oh honestly, we could buy the medicine in the store, but first we make a consultation” (P9, 39 y.o). Parents also depended on medical advice to understand when to give medication. “I asked the last time I came to the doctor. I asked how far from the

thermometer I should be concerned and take them to the doctor or to what degree can I give them only medicine" (P14, 42 y.o, Mexico). The decision to seek care was also influenced by recommendations from providers. In general, most of the parents reported taking their child first to their primary care provider before seeking emergency care. "Better here first [the clinic] and it depends on what the doctor tells me. And if I have to take him to emergency, I take him to emergency" (P21, 29 y.o., U.S.).

Family. Most parents reported family, especially their mothers, as significant influences on how they manage fever (n=17). Fever beliefs and interventions were often passed down from generation to generation. "My mom cured us, and my mom grabs her remedies and I learned from her too. And with this I cured my own children too" (P16, 37 y.o Mexico). Aside from parents, one participant reported consulting with a family member who is a doctor living in their home country. "She [child's mother] consults on what she has, the medications that are used here, and he can tell you what medication you can buy that is free to buy here" (P9, 39 y.o).

Parental reaction to fever was primarily influenced by how their own mothers reacted to fever. "Well, just like my mom. She has told me that this is why she tells me to bring her because I have heard that they die from so much fever. They convulse and so on" (P1, 20 y.o.). While many learned their fever fears from their parents, two mothers reported that it was their mothers who helped them calm down about fever. "My mom was the one that would always tell me don't over exaggerate, you know, some fevers are just, you know, it's just a day. She was the one that would tell me what to do, what not to do, I mean she had five kids so." (P19, 33 y.o, Mexico). In general, most parents integrated pieces of what they learned from family members and applied it to create their

own practices. “I was a new mom and I would let her show me, but like I said, from there, I just grabbed bits and pieces of what I wanted to use towards my kids that I was like “Okay, so that I don’t think that works for me” you know? But I’ll just get different things” (P11, 34 y.o., U.S.).

Media. Several parents reported the media as a source of information. Two parents referred to a book they had received at the hospital as a guide, while four mothers looked to television as a source. However, the most common media source for information for parents (n=5) was the internet. Participants reported using the internet to better understand fever symptoms. “I regularly get into researching on the internet. Before what I did was based on what my mother or grandmother told me but if I see something different, I look on the internet, on Google” (P17, 35 y.o, El Salvador). However, other parents were more cautious and preferred to get their information from providers. “I hate the internet. I try to stay away from it because the internet tells you many things and it starts giving you ideas. It’s a bit much” (P19, 33 y.o, Mexico).

Parental ability to manage fever

Two factors were found to highly influence parental ability to manage fever: resources and perceived self-efficacy. Resources included access to healthcare facilities and availability of medication. Overall, parents reported high degrees of confidence in their ability to assess fever, manage fever at home, and seek care for fever if needed.

Resources. All parents reported that access to healthcare facilities, whether it be their primary care clinic or the ED, was a significant factor influencing their care behaviors. One mother described that not having insurance resulted in her seeking care in

the ED instead of the clinic since she could pay in installments despite the higher pay. Several parents (n=10) expressed that their willingness to "watch and wait" was dependent on the day of the week and whether the clinic would be open should they need care. "For fever I come to the clinic. If it's Saturday and I can't wait until Monday that they're like this with the temperature of more than 103. I'd better get them to the ER" (P14, 42 y.o., Mexico). For some parents (n=8) who preferred a prescription prior to purchasing antipyretics, lack of medication was a barrier to managing fever at home resulting in a visit to the clinic or the ED. "Right now, I have no medicine. I come right now for medicine" (P16, 37 y.o, Mexico). The proximity of the clinic to their homes and the ability to be seen without appointments were also significant factors. "It's convenient, it's easy to get here. You just walk in and out" (P13, 27 y.o, Mexico).

Perceived self-efficacy. All the parents reported high degrees of perceived self-efficacy in their ability to carry out fever interventions. Some parents (n=7) opted to primarily manage fever at home. "I just let them rest. I give them Tylenol and let them rest. I usually don't bring them in for a fever. I'm comfortable treating them at home" (P5, 36 y.o., U.S.). Most parents expressed that their ability to control fever greatly impacted their decision of whether to seek help for fever. "With the fever going too high, that's too hard for me. I can't control it. When it's 101, for me it's scary cause I feel like I lose the control of the fever" (P4, 40 y.o., Honduras). Another mother described how she determines when to go to the clinic or to the ED. "If I see that [the clinic] is not open, it is already late or something, but if I see that the medicine drops the temperature then I go the next day to the pediatrician. But if the temperature is very high, yes, straight to the hospital" (P17, 35 y.o., El Salvador).

Expectations of Treatment

When seeking care for fever, Latino parents expected that their child receive the full attention of providers and that their children are checked thoroughly. “When I bring the girls, they check them well, they check their little head, their stomach, everything” (P7, 20 y.o., Honduras). Parents also valued their relationships with their providers. “I know the doctors, they really do look into it when they see something. I actually like the way they treat the kids, the way they work with the kids” (P19, 33 y.o., Mexico). Parents also reported the need to get more information about fever. “We need more information when the fever goes up more than 103, because I know many kids and moms have problems when we can’t control the fever. We wanna see more choices” (P4, 21 y.o., U.S.).

Model development

An explanatory model (Appendix F) was developed to conceptualize the factors that impact Latino experience of fever. Although the themes and subthemes described the fever experience, they also support the domains of the Theory of Planned Behavior (TPB). Based on the Theory of Reasoned Action (Ajzen & Fishbein, 1980), the TPB was created to include the construct of perceived behavioral control (PBC). Under the TPB, attitudes are influenced by behavioral beliefs and the individual’s evaluation of whether performing that behavior leads to positive or negative outcomes. The theory assumes that negative attitudes about a behavior will lead the individual to be less likely to perform that behavior (Ajzen, 1991). Subjective norms are defined as the perceived social pressures to engage or not engage in a behavior. The degree to which an individual value the opinion of others greatly impacts their subjective norms towards performing a

behavior. Based on Bandura's (1986) Self-efficacy theory, the PBC is the individual's "perceived ease or difficulty of performing the behavior," (Ajzen, 1991, p.188). PBC is influenced by both internal and external factors that pose as barriers or facilitators in behavioral control. The TPB has been used in behavioral research and has proven to be successful in predicting and explaining a wide variety of health behaviors.

For this study, the TPB was adapted to reflect how the fever experience influences behavior. The resulting model can be applied to all fever behaviors including monitoring behaviors such as using a thermometer, treatment behaviors such as administering antipyretics, and help-seeking behaviors such as presenting to the clinic or the ED for treatment. The model demonstrates how the constructs of attitudes, subjective norms, and perceived behavioral control interact to influence each other. These constructs influence intention to manage fever and ultimately behavior performance. As an example, the decision to seek care was influenced by whether Latino parents believed the cause of fever to be folk or biomedical, their perceived severity of the fever, their previous experience with seeking care, perceived expectations from healthcare providers, family, media, whether the clinic or ED was available, and their perceived ability to bring their child to the clinic or ED for care.

The model also applies to home remedies employed for fever. For example, the use of bathing was prominent in this study. If the parent believed in the humoral theory of illness, and they perceived the fever to be manageable and they had good experience with bathing in the past, their attitude towards bathing will be more positive. Based on what they learned and what they have seen from their social interactions, and since bathing is readily available to them, their intention to bathe will be high and ultimately result in

carrying out the behavior. In contrast, if they did not believe in the use of bathing, their attitude toward the behavior will be negative and they will be less likely to comply.

Discussion

The aim of this focused ethnographic study was to understand the lived experience of Latino parents in the management of fever. The findings reveal a complex system of beliefs that include folk and biomedical influences, the role of healthcare providers and family, and the internal and external factors that drive parents to carry out specific fever behaviors. The attributes of culture including values, beliefs, patterns, and normative practices underpins all constructs identified in this study. Although previous fever studies have included Hispanic or Latino parents, to this author's knowledge, this is the first to explore the Latino fever experience in-depth through ethnography.

The humoral theory of illness was present in perception of cause of fever and in the ways that parents treated fever. Previous studies have found similar findings with parents attributing changes in weather and consumption of cold or hot foods as a cause of illness (Arcoleo, Zayas, Hawthorne & Begay, 2015; Hannan, 2015). Restoring balance was a central theme which included bathing in cold or lukewarm water, applying vapor rubs, and giving teas known to have a cooling effect such as mint tea. Despite general recommendations to avoid cold baths, this was a frequently reported intervention. Crocetti et al. (2009) found similar findings with 37% of respondents reporting a cold bath, 18% used alcohol, and 45% used tepid water. This finding indicates that fever education for Latino parents need to include an assessment and discussion of additional therapies employed in the home.

Medical pluralism, defined as “the use of therapies from more than one medical system” (Wade et al., 2008, p. 829), was a prominent finding in this study. All the parents reported employing remedies from both the biomedical and folk spheres and they often engaged both systems simultaneously. The most common combinations were herbal remedies such as rubs and herbal teas along with administering antipyretics. Contrary to findings from previous studies, none of the parents reported using folk healers to treat fever in their children. However, some parents did report the grandparents performing healing rituals for fever perceived to be caused by mal ojo or empacho. In general, the folk remedies (vapor rubs and herbal teas) used in combination with antipyretics were benign and may be helpful in preventing dehydration and increasing comfort through touch.

Similar to previous studies, most parents attributed fever to an infectious cause. Some parents reported folk illnesses, specifically mal ojo and empacho, as possible causes for fever, but some reported that the fever was different and occurred only in certain parts of the body. For these illnesses, parents generally treated with folk remedies including the passing of the egg or massaging of the stomach. Although parents in this study reported only mal ojo and empacho as possible causes, Taveras et al (2004) identified other illnesses including mollera caida (sunken fontanel) and susto (sudden fright) as causes of ever.

All the parents in this study reported using a thermometer to assess degree of fever. This finding is contrary to other studies which found only 35% of Mexican mothers reporting usage while 76% of Latino parents in another study reported owning and using a thermometer (Schwartz, Guendelman, English, 1997; Crocetti et al, 2009).

The high usage of thermometer in this study may be attributed to frequent exposure to clinic staff who emphasize the use of a thermometer with every visit. Also, the age of the studies reporting low usage may be a factor and the increase in thermometer awareness over the years may explain current findings. Most of the parents in this study had multiple children and had been in the U.S. for many years and as a result may be more acculturated to western medical practices.

Fear of fever was a dominant finding in this study. Fears were related to uncertainty in illness, fear of seizures, and fear of brain damage. Parents reported that they did not like not knowing what was happening to their child or seeing them ill and were afraid that "something else" could be wrong. Similar to findings from previous studies, febrile seizure was the most reported outcome of fever in this study (Griggs et al., 2013). It is interesting that most parents had experience with febrile seizure with their children, members of their family, or with themselves. Some of the seizures reported did not follow febrile seizure etiology in that they occurred in older individuals and were chronic in nature. However, parents did not differentiate between the types of seizures and reported that aside from seizures, prolonged, persistent fever could cause brain damage or death. These findings suggest that a more comprehensive discussion of the role of fever in illness and the etiology of febrile seizure is needed to help alleviate fears that significantly drive fever behaviors.

Overall, parents in this study reported a high degree of trust in their healthcare providers. Many of their beliefs and fever practices were derived from the biomedical sphere including the use of antipyretics and the belief that fever is caused by an infection. Parents implemented treatments that were recommended by their providers and were

hesitant to deviate from medical advice. Many of the parents gave only antipyretics prescribed by providers and avoided purchasing the same antipyretic over the counter. Some parents reported under dosing by giving only half of the antipyretic, while others reported more frequent doses than recommended; many of the parents described alternating doses. This finding is consistent with previous studies noting that 36% of parents gave ibuprofen more frequently than the recommend frequency and the high prevalence of alternating doses despite relief of fever (Wright & Liebelt, 2007; Crocetti et al., 2001).

Family was another influencing factor in parental management of fever. The cultural value of *la familia*, or the importance of family was a prominent finding. Most parents learned their practices from their mothers and continue to look to their parents and grandparents for guidance. However, an interesting finding in this study is that when given a choice, parents were more likely to follow medical advice than other sources. This is contrary to findings from other studies where family was viewed as the experts and the primary source of information during child illness (Harrison & Scarinci, 2007). However, understanding that the family continues to play an important role in parental management, engaging other members, especially grandparents, when discussing fever management may help to reinforce good practices and lessen fears.

The influence of media sources on parental beliefs and practices was a unique finding in this study. Previous studies on fever have not reported the media as a source of information. Print information received at childbirth continued to be a source for some parents. Television also influenced their fears around fever with one mother reporting that the shows she frequently watched were based on true events. However, the internet

was the most commonly utilized platform to seek out information. Many parents described using Google™ to search for terms related to fever and YouTube™ for videos on how to manage fever. When comparing the trustworthiness of different sources of information, parents viewed the internet with caution and preferred receiving fever information from their healthcare providers. However, educational interventions may benefit from using web-based platforms for dissemination in addition to one-on-one consultations during clinic visits.

The parents in this study exhibited high confidence in their ability to manage fever. However, healthcare and medication availability facilitated or hindered their perceived self-efficacy. When making decisions about fever, parents considered whether the clinic would be open should they need to seek care and whether they had an antipyretic available at home. Some parents were more comfortable with "watchful waiting" if the clinic was open the following day. Interestingly, parents did not hesitate to go to the ED if they perceived the fever to be very high or if the clinic was closed. A "high" fever was subjective with some parents reporting fever greater than 100^{o}F as requiring ED attention. Parents reported that their decisions to seek care were driven by their lack of ability to control the fever which some reported as fever greater than 1 day or fever that persistently returned hours after administration of antipyretics. No previous studies have explored the meaning of "high" fever in this population and how this impacts healthcare utilization.

In general, there were no significant differences between younger versus older parents, those born in the U.S. versus those born in foreign countries, and those who were bilingual versus exclusively Spanish-speaking parents. Most of the parents in this study

had a long-established relationship with the clinic and those who were new were referred by other families. The value of *personalismo,* defined as a cultural value with an emphasis on politeness and courtesy and establishing good rapport and a personal connection, was evident in their expectations of treatment and overall experience of care. It is possible that the high thermometer use and trust in healthcare providers found in this study are related to the parents' experience of care in this particular clinic. The fact that all of the providers and staff spoke Spanish, and most were also of Latino origin may be a significant factor in parents' receptiveness to fever education.

Findings suggest that more research is needed in the Latino population exploring their understanding of fever and their utilization of healthcare services. Current fever education handouts focus primarily on how to assess and treat fever but provide little information on febrile seizures and the role of fever in illness. Despite seizures being their biggest fear, none of the parents reported being informed or discussing febrile seizures with their providers. Most education materials are written at a college reading level and can be difficult to understand for non-English speaking parents even when it is presented in their native language. Findings also suggest that parental behaviors around fever are driven by access to resources and when given a choice, Latino parents prefer to visit their primary providers resorting to the ED only when clinics are closed. Although many of the findings in this study are consistent with previous studies, it is important to note that previous studies are more than 5 years old suggesting that little has changed in Latino approaches to fever and that disparities in fever knowledge continue to persist in this growing population.

Limitations

Although the findings in this study enhance our understanding of Latino parental experience with fever, there were limitations that warrant discussion. Purposive sampling was used to identify parents; however, it is possible that the immigration climate when this study was conducted impacted parental willingness to participate contributing to sampling bias. Considering that the sample's average length of residence in the U.S. was 19 years, it is possible that the experience of newly immigrated or undocumented parents may be different from the experience of parents in this study. Generalizability to all Latino populations is also limited since most of the sample were U.S.-born or were from Mexico. This study was also conducted in a single site with a long-standing relationship with the community and therefore, the parents may be more acculturated or assimilated to the biomedical models of care.

Implications for Research and Practice

Findings reveal that more research is needed to understand how Latino parents experience fever, particularly in how they treat fever. More education research is also needed to determine the best way of delivering fever education. The finding that parents look to social media for information suggest that education can be delivered through different modes outside of the clinic visit. The prominent finding that Latino parents respected the advice of healthcare providers indicates the importance of consistent fever education to avoid confusion. Exploring the fever beliefs and practices of healthcare providers is important to determine if providers also need fever education. More research is also needed to formulate interventions that address Latino fears of fever, especially febrile seizures. Although the development of an explanatory model is an important first

step to understanding Latino fever behaviors, future research is needed to test this model with various fever interventions.

This study highlights that Latino parents continue to have misconceptions and fears of fever. Although parents in this study had a high usage of thermometers to detect fever and use antipyretics to treat fever, they continue to lack a general understanding of the role of fever in illness and the etiology of febrile seizures. However, their high trust in healthcare providers indicate that providers and staff play a crucial role in improving fever knowledge. An important intervention to consider is to focus education on addressing fears around fever along with providing screening and treatment information. Building a rapport with Latino patients and their families is also important not only for patient satisfaction purposes but also to establish personalismo which is critical to establishing trust and thereby increasing knowledge uptake and changing behavior.

Conclusion

Parental experience of fever is influenced by the complex interactions of attitudes, subjective norms, and perceived behavioral control. Underlying these constructs are the values, beliefs, patterns, and normative practices that are unique to Latino culture. The values of la familia and personalismo greatly impacts their receptiveness to fever education. Although Latino parents have a high confidence in their ability to carry out management behaviors, perceived loss of control and fear of febrile seizures are significant drivers for seeking care. In general, Latino parents lack an understanding of the role of fever in illness and have a much lower temperature threshold for fever. More research is needed to better understand Latino perspectives on fever and to test interventions that improve knowledge. Findings from this study highlight that Latino

parents continue to have misconceptions about fever that have the potential to impact overall child health.

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Letter to the Editor

Dr. Norma Graciela Cuellar, PhD, RN, FAAN
Editor-in-Chief
Journal of Transcultural Nursing

October 11, 2019

Dear Dr. Cuellar:

I am pleased to submit an original research article entitled *"Hispanic Parental Beliefs and Practices in the Management of Common Childhood Illnesses: A Systematic Review"* by Darlene Acorda, Dr. Christina DesOrmeaux, Dr. Cathy Rozmus, and Dr. Joan Engebretson, for consideration for publication in the *Journal of Transcultural Nursing* We conducted a systematic review of the literature to understand the health beliefs and practices of Hispanic parents when dealing with common childhood illnesses such as fever, cough, congestion, vomiting, and diarrhea.

In this manuscript, we show that there is a strong relationship between Hispanic cultural beliefs and how parents manage common childhood illnesses. We identified that Hispanic parents are generally fearful of childhood illnesses, believe in the humoral theory of disease, engage both folk and Western medicine in the treatment of child illness, and primarily use family as the source of health information.

We believe that this manuscript is appropriate for publication by the *Journal of Transcultural Nursing* because it aligns with the journal's mission to advance culturally competent health care. To our knowledge, our manuscript is the first systematic review exploring Hispanic parental belief and practices in common childhood illnesses. The findings in this review provides nurses and other healthcare professionals essential knowledge about Hispanic beliefs in order to deliver culturally sensitive care.

This manuscript has not been published and is not under consideration for publication elsewhere. We have no conflicts of interest to disclose.

Thank you for your consideration!

Sincerely,

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Cizik School of Nursing
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Abstract

Introduction

The purpose of this review is to describe the beliefs and practices of Hispanic parents in common childhood illnesses.

Methods

A systematic search of Pubmed, PsycINFO, and CINAHL was conducted. Studies were screened and reported according to the Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) guidelines.

Results

Fifteen studies met the inclusion criteria for synthesis. Key findings include 1) parental fears around common illnesses, 2) belief in folk illnesses as cause, 3) use of traditional healers and remedies, 4) utilization of family members as a source of health information, 5) engagement of both folk and biomedical spheres of care and 6) economic and access-related barriers that impact treatment decisions.

Conclusion

More current research is needed to better understand Hispanic parental management of common childhood illnesses. Evidence from this review can help guide the creation of culturally-sensitive interventions for a more culturally competent model of care

Introduction

Most common childhood illnesses are benign and self-limiting; care is primarily supportive, and symptoms can generally be managed at home. However, parents continue to have heightened anxieties despite the low rate of bacteremia in children; fewer than 5% of pediatric emergency department (ED) visits require hospital admission or result in severe complications (Chancey & Jhaveri, 2009; Cioffredi & Jhaveri, 2016; Enard & Ganelin, 2013). Although parents in general have worries about common illnesses, Hispanic parents are more likely to perceive them as serious and needing emergent care compared to other groups (Kubicek et al., 2012). Hispanic children are among the highest users of emergency services for non-emergent illness and 11.7% of Hispanic children under the age of 18 had at least one visit to the ED with 8.9% having two or more visits in one year (Black & Benson, 2018). These findings suggest that Hispanic perception of common illnesses significantly impacts their care decisions.

A strong link exists between Hispanic culture and their health beliefs. The use of folk healers, belief in hot and cold illnesses, and use of folk remedies are common practices found in previous studies (McCurley, Crawford, & Gallo, 2017; Rosser, Forno, Cooper, & Celedon, 2014). Religion and social support systems also influence how Hispanic individuals interpret disease, their management of illnesses, and their decision to seek care (Kemp & Rasbridge, 2004). However, Hispanics face barriers that limit their access to care and impact their ability to receive health information. The lack of Spanish-speaking providers or providers that understand Hispanic culture has led to suboptimal

communication and strained patient-provider relationships (Flores, Olson, & Tomany-Korman, 2005; Flores & Vega, 1998). Hispanic individuals often avoid discussing traditional beliefs and practices with their providers for fear of ridicule (Baig et al., 2014; Howell et al., 2006)

Although previous studies have examined Hispanic health beliefs and practices in chronic childhood illnesses (McCurley, Crawford, & Gallo, 2017; Rosser, Forno, Cooper, & Celedon, 2014), few have explored beliefs in common illnesses. Currently, one-fourth of US children under the age of 18 are of Hispanic descent (Mather & Foxen, 2016; U.S. Census Bureau, 2017), and as their numbers continue to grow, more Hispanic children will present to primary care and emergency departments for non-urgent illness that could be managed at home. The purpose of this review is to synthesize the current literature on Hispanic health beliefs and practices in common childhood illnesses to provide an understanding of the factors that impact Hispanic care decisions which may inform future interventions.

Theoretical Framework

Kleinman's (1980) model of local health care systems served as the guiding framework for this review. The model provides a structure for understanding how individuals respond to illness and consists of three overlapping sectors: the popular sector, the professional sector, and the folk sector. The model postulates that most of the illness experience begin and occur in the popular sector which is influenced by individual beliefs, social and cultural contexts, and family. It is in the popular sector where

individuals evaluate self-therapy and treatments obtained from the other two sectors. The professional sector consists of healthcare providers and biomedical treatments. The folk sector is composed of healers, rituals, and the use of complementary/alternative medicines. Although each sector is independent, individuals frequently engage multiple sectors throughout the illness experience.

Methods

A systematic search of the literature was conducted and reported using the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines. The databases Cumulative Index of Nursing and Allied Health Literature (CINAHL), PsychInfo, and PubMed: MEDLINE were searched for terms that included Latino, Hispanics, culture, health beliefs, health practices, traditional or folk medicine, parents, children, and other related terms. Hispanics is defined as "a person of Cuban, Mexican, Puerto Rican, South or Central American, or other Spanish culture or origin regardless of race" (U.S. Census, 2010). "Common childhood illnesses" were defined as conditions occurring in children that were considered low acuity, non-emergent, self-limiting, and can usually be managed at home. For the purpose of this review, this included fever, vomiting, diarrhea, and the common cold. These terms were not included in the search to avoid excluding studies examining a broad range of childhood illnesses but were assessed during the screening process. Medical subject headings (MeSH) terms and keywords were combined using Boolean operators and no date limits were applied since no previous systematic reviews on the subject have been conducted. Key articles

were cross-checked in the citation indexes, and only studies reported in the English language in peer-reviewed journals were included. International studies were excluded to concentrate on beliefs and practices within the context of the U.S. healthcare system.

Screening

A checklist of the inclusion and exclusion criteria was used to ensure consistency and objectivity of the screening process. Studies conducted in the U.S. with Hispanic parents as part of the sample and examined health beliefs or health practices related to common childhood illnesses as described in the previous section were included. The initial search of the databases resulted in 2435 articles; 23 additional studies were identified through hand searches of citation indexes (figure 1). After duplicates were removed, 2030 articles were screened; a total of 2015 articles were excluded in the screening process. Excluded studies were those that focused on chronic conditions such as cancer, obesity, asthma, and mental health, did not assess for Hispanic beliefs and practices, or focused on adult illnesses only. Interventional studies were also excluded since the aim of the review was to understand current beliefs without interventions aiming to alter or change beliefs. The quality of the evidence was evaluated using the Effective Public Health Practice Project Quality Assessment Tool (Jackson & Waters, 2005) for quantitative studies and the NICE Public Health Guidance (2012) for qualitative studies. Since the aim of this review was to describe the health beliefs and practices of Hispanic parents in childhood illness, studies were not excluded based on their quality.

Results

The fifteen studies included in this review were conducted from 1994 to 2013. Sample sizes ranged from 6 to 688; seven studies used qualitative methodology and eight were quantitative. Most were conducted in urban settings (n=11) and the rest in rural areas (n=4). Although the predominant ethnicity was Mexican, many of the studies included parents of different Latin American ethnicities. Overall, the quantitative studies were assessed to be weak due to design type, lack of psychometric reporting of instruments, and potential for selection bias. Two qualitative studies scored a ++ on the NICE public health guidance (2012) indicating good quality of evidence. Tables 1 and 2 provide a summary of the findings including the quality of the evidence.

Popular Sector: Self-management of Illness

Hispanic parents frequently self-managed childhood illnesses at home and reported a strong belief in the balance of the hot and cold elements of the body (Crocetti et al., 2009; Mikhail, 1994; Robledo et al., 1999; Risser & Mazur, 1995; Taveras et al., 2004). The common cold and fever were believed to be the result of changes in weather, drinking a cold beverage after playing outside, walking with bare feet, getting wet, or being improperly dressed (Robledo et al., 1999; Risser & Mazur, 1995; Taveras et al., 2004). When ill, parents generally believed common childhood illnesses to be serious and an indication of severe underlying illness (Andrews, Ybarra, & Matthews, 2013; Cohee et al., 2010; Crocetti et al., 2009; Grigg et al., 2013; Mikhail, 1994). They were most likely to be “very worried” about fever, believed that fever could rise indefinitely,

and believed that fever could cause brain damage, seizures, or death (Cohee et al., 2010, Crocetti et al., 2009; Schwartz et al., 1997). Mothers reported that diarrhea could lead to dehydration, weight loss, weakness, sadness, and death, and cough was deemed dangerous for its ability to affect the lungs resulting in breathing problems and asthma (Mikhail, 1994).

Use of over-the-counter medications to treat illness in the home setting was a common finding. Most of the studies reported parents using acetaminophen and ibuprofen to treat the common cold, fever, and diarrhea (Colucciello & Woelfel, 1998; Gordon, 1994; Grigg et al., 2013; Mendelson, 2003; Robledo et al., 1999; Cohee et al., 2010; Crocetti et al., 2009; Foronda & Waite, 2008; Mikhail, 1994; Pachter et al., 1998;, Risser & Mazur, 1995; Taveras et al., 2004). However, three studies found that parents were incorrectly dosing their children with antipyretics to treat fever (Cohee et al., 2010; Crocetti et al., 2009; Taveras et al., 2004). Cough medicine and laxatives were also used for cough and stomach-related symptoms (Mikhail, 1994, Mendelson, 2003). Parents in four studies reported giving their children medications from Mexico (Grigg et al., 2013; Harrison and Scarinci, 2007; Foronda & Waite, 2008; Mikhail, 1994). Reasons for this practice included the high cost of medications in the U.S. and the availability of antibiotics over the counter in Latin American countries (Grigg et al., 2013; Harrison and Scarinci, 2007). Three studies reported the use of aspirin for fever with one noting 23% of mothers using aspirin (Foronda & Waite, 2008; Mikhail, 1994; Taveras et al., 2004). Parents also gave medications bought from pharmacies in Mexican stores primarily because no appointment or permission was needed (Harrison and Scarinci, 2007). The

use of *azarcon* (lead tetroxide) and *greta* (lead oxide) obtained from Mexico as a laxative was reported in one study (Mikhail, 1994). Eleven percent of Mexican mothers reported using these substances to treat stomach problems or folk illness in their children (Mikhail, 1994).

Family and community members were the most commonly cited sources of medical advice for illnesses with only two studies reporting parents consulting healthcare providers first (Mendelson, 2013; Risser & Mazur, 1995). Grigg et al (2013) found parents asking family members still living in their country of origin for advice. Some sought the help of community members who were believed to be skilled in these illnesses (Andrews, Ybarra, & Matthews, 2013). One study found parents referring to a pamphlet obtained from Hispanic grocery stores as a reference for herbal remedies and cures (Robledo et al., 1999).

Folk Sector: Folk remedies and folk healing

The belief that folk illnesses were the cause of symptoms was a common finding; four illnesses were frequently described: *mal ojo, empacho, caida de mollera,* and *susto. Mal ojo* or evil eye was described as resulting from an unintentional coveting or intense admiration of someone else's child (Risser & Mazur, 1995). Symptoms of *mal ojo* included fever, diarrhea, irritability, or vomiting. *Empacho* or indigestion was believed to occur when food was not fully digested causing an obstruction or indigestion; in one study 50% of families believed diarrhea was caused by *empacho* (Andrews, Ybarra, & Matthews, 2013). *Caida de mollera* or fallen fontanel was believed to be due to an infant

being bounced too vigorously or if a bottle was removed abruptly from the mouth causing the fontanelle to sink (Risser & Mazur, 1995). *Susto*, defined as sudden fright leading to symptoms of insomnia, diarrhea, fever, or loss of appetite, was the least mentioned folk illness but was reported to be the most likely to require a folk healer (Andrews, Ybarra, & Matthews, 2013; Risser & Mazur, 1995). To prevent folk illnesses, parents believed in amulets such as *ojo de venado* or deer's eye to protect children from *mal ojo* (Mikhail, 1994; Risser & Mazur, 1995; Robledo et al., 1999). *Mal ojo* was also believed to be preventable by touching the head of the child after giving praise or complement (Risser & Mazur, 1995; Robledo et al., 1999).

If the illness was perceived to be folk-related, parents generally treated with folk remedies first (Andrews, Ybarra, & Matthews, 2013; Coluciello & Woelfel, 1998; Gordon, 1994; Risser & Mazur, 1995). For *mal ojo*, two studies reported a treatment of sweeping the child with a raw egg and cracking the egg on a glass of water (Risser & Mazur, 1995; Mikhail 1994). The glass is then placed under the head of the bed overnight and examined in the morning. The egg is believed to have absorbed the evil spirit if it solidified and appeared white. For *empacho*, massaging the stomach and pulling on the skin at different points around the spine was believed to aid in dislodging the obstruction (Mikhail, 1994). For *caida de mollera*, restoring the fallen fontanelle involved pressing on the soft palate to push the fontanelle up while turning the child upside down and tapping on the feet, applying a poultice to the fontanelle, or sucking on the fontanelle (Mikhail, 1994; Risser & Mazur, 1995). Cures for *susto* included sweeping an egg like *mal ojo* to religious rituals that last several days (Risser & Mazur, 1995).

The use of *sobradores* and *curanderos* was reported in several studies. *Sobradores* were folk healers who specialized in massage and bone manipulation to clear out the illness in a way that only folk healers could do (Andrews, Ybarra, & Matthews, 2013; Risser & Mazur, 1995; Colucciello & Woelfel, 1998). In one study parents believed that for diarrhea caused by *empacho* biomedical treatment was inadequate, and that *sobradores* was the most appropriate treatment (Andrews, Ybarra, & Matthews, 2013). *Curanderos*, on the other hand, were folk healers with a broader skillset who treated more complicated illnesses including *susto* (Andrews, Ybarra, & Matthews, 2013; Risser & Mazur, 1995; Mendelson, 2003). However, one study reported that not all children were appropriate for folk healers and that younger children were too little for *sobradores* (Andrews, Ybarra, & Matthews, 2013).

Herbal remedies were the most commonly used treatment for illness. Herbal teas including *manzanilla* or chamomile tea and *yerba buena*, mint tea, were frequently given for fever and diarrhea (Andrews, Ybarra, & Matthews, 2013; Colucciello & Woelfel, 1998; Foronda & Waite, 2008; Mikhail, 1994). Cinnamon tea, eucalyptus, and oregano were used for cough and cold illnesses (Mikhail, 1994; Robledo et al., 1999; Pachter et al., 1998). Mixing rice water with tea and Pedialyte, a type of rehydration solution frequently recommended by providers, was common in the treatment of diarrhea (Andrews, Ybarra, & Matthews, 2013; Mikhail, 1994). Herbal ointments and rubs were regularly used. Several studies noted the use of vapor rubs such as Vick's™ vaporub applied to the chest, back, and feet to treat fever and cold symptoms (Colucciello & Woelfel, 1998; Foronda & Waite, 2008; Grigg et al., 2013; Mendelson, 2003; Mikhail,

1994; Taveras et al., 2004). Applying poultices made of ground coffee and lard to the soles were used to treat cough (Mikhail, 1994). Rubbing the stomach with alcohol to cool a child with a fever was also common practice (Foronda & Waite, 2008; Colucciello & Woelfel, 1998; Mikhail 1994).

Professional Sector: Engaging with Healthcare Providers

Six studies reported on parents' beliefs on healthcare providers (Andrews, Ybarra, & Matthews, 2013; Grigg et al., 2013; Harrison & Scarinci, 2007; Mendelson, 2003; Pachter et al., 1998). Hispanic parents presented to the ED for several reasons including the belief that the ED is for ill visits and the clinic for well visits only, perception of a more thorough exam performed in the ED with the availability of multiple specialties, and the lack of convenient hours of primary care clinics (Grigg et al., 2013). Two studies described parents' dissatisfaction with providers- reporting a lack of trust, perceived lack of respect, and perceived racism (Grigg et al., 2013; Harrison & Scarinci, 2007). Parents reported feelings of mistrust, stating that health providers "are experimenting with our children" (Harrison & Scarinci, 2007, p. 39). Unmet expectations with treatment were reported by parents who were used to receiving definitive treatment like an antibiotic, similar to the care they received in their home country (Andrews, Ybarra, & Matthews, 2013). Interestingly, parents in one study trusted the care of healthcare providers more than their relatives, and another found that 39% of parents believed that care received from medical providers was more reliable (Mendelson, 2003; Risser & Mazur, 1995). In the same study, parents reported fears originating from past experiences in their countries

of origin with personal stories of children dying from simple illnesses and delays in care (Grigg et al., 2013). Parents also hesitated to discuss folk beliefs and cures for fear of ridicule and scrutiny from providers (Harrison & Scarinci, 2007). One study found that the long wait times in the ED and difficulty obtaining same-day appointments with providers also served as barriers to care (Grigg et al., 2013).

Combining therapies and crossing sectors

For most of the studies, parents used a combination of herbal remedies, folk cures, and pharmaceutical medicines to treat child illness. Herbal teas and acetaminophen were the most common treatments. Aside from using therapies commonly found in the home, parents engaging other forms of treatment was impacted by access and economic barriers. Parents reported that folk cures and folk healers were used because of a lack of access to healthcare providers, especially in rural areas, and the inability to pay the high cost of medical services (Harrison & Scarinci, 2007; Andrews, Ybarra, & Matthews, 2013). One study found that parents traveled back to Mexico to seek care for their children due to higher costs of care in the U.S. (Harrison & Scarinci, 2007). As a whole, parents engaged multiple systems of care when self-managing illness in the home setting. However, they reported turning to healthcare providers when they perceive the illness to be worsening or if home therapies are ineffective (Gordon, 1994; Grigg et al., 2013).

Discussion

The findings in this review reveal the complexity Hispanic beliefs and practices in the management of common childhood illness. In general, parents initially treated these

illnesses at home using both folk-based and biomedical remedies. However, parents viewed common illnesses as serious conditions with potentially severe consequences if left untreated. Their understanding of the cause ranged from the common belief that illness is a result of an imbalance in the hot and cold elements of the body to an infectious cause requiring immediate treatment. This finding suggests that Hispanic parents lacked knowledge of the etiology of common childhood illnesses leading to significant fears that drive their decision-making. This often led them to seek care faster or present to the ED for non-urgent cause. Aside from a lack of knowledge, it is likely that parents' previous experiences in their home countries continue to impact how they view child illnesses. Parents in this review were primarily from Latin American countries where the infant mortality rates are high and preventative services including vaccines are generally lacking. In this context, heightened anxieties around childhood illnesses may be protective and desirable. Differences in healthcare models may also contribute to the reasons why Hispanic parents prefer the ED over primary care clinics and urgent care, services that are uncommon in Latin American countries. The number of years spent in the U.S. may change these practices, but the studies in this review did not assess for the influence of acculturation.

A concerning finding was the unsafe practices around medication administration. In two studies, parents reported using Aspirin™ for fever which has long been discouraged by the American Academy of Pediatrics (AAP) due to the high risk for Reye's syndrome. Parents in several studies reported antipyretic practices that included overdosing of acetaminophen and ibuprofen either due to increase in dose or frequency

suggesting that Hispanic parents need more education on proper antipyretic use. Most concerning was the use of lead-containing substances such as *azarcon* and *greta* for treatment of fever and stomach-related symptoms. These substances have been banned in the U.S. due to reports of lead poisoning and deaths in children (Brown & Longoria, 2010). However, it is worth noting that the most current study in this review was from 2013, and initiatives in the past decade have brought national awareness to sources of lead significantly decreasing this problem (Brown & Longoria, 2010).

The value of *la Familia*, the belief that family is the primary source of social interaction and assistance, was a prominent finding in this review. Hispanic parents looked to their immediate family members, especially their mothers and grandmothers, or members in their community who were viewed as experts as their primary source of information. Other studies have found similar findings and Zeiders et al. (2015) found that familism values in the Hispanic community predicted child-rearing support and were associated with parental self-efficacy. Engaging grandmothers and important members of the community in health education should be considered and may be more impactful on changing behaviors than an individual approach.

It is clear in this review that Hispanic parents engage in folk-related practices. Most common was the use of herbal teas and poultices as supportive therapy. Use of folk healers and folk rituals for folk illnesses was frequently mentioned especially when dealing with *mal ojo* and *empacho*. The prominence of these beliefs and rituals suggest that they are deeply rooted in Hispanic culture and should be included in care

recommendations. However, healthcare providers have very little understanding of these beliefs (Green et al., 2017; Howell et al., 2006). and coupled with Hispanic individuals' hesitancy to share this information, provider understanding of a child's illness is severely limited. Considering that many of the folk remedies mentioned in this review are benign, these remedies could be used to augment treatment and supportive care. It is also important to note that since Hispanics generally hesitate to share this information, it is possible that findings in many of studies in this review may be an underestimation of actual folk remedy use in this population. Hispanic families' fears in discussing their folk beliefs openly with their providers contributed significantly to distress and mistrust (Desai, Rivera, & Backes, 2016).

As postulated by Kleinman's (1980) model, parents engaged multiple systems of care when treating illness. Medical pluralism is defined as "the use of therapies from more than one medical system" (Wade et al., 2008, p. 829) and Hispanic parental practices were not exclusive to folk or Western medicine and involved both systems simultaneously. Similar practices have been found in other Hispanic studies including asthma prevention and treatment (Desai, Rivera, & Backes, 2016). The decision to consult a folk healer versus a medical provider was a dynamic process; Hispanic parents often employed both depending on the perceived cause or severity of illness. Sandberg et al. (2018) found that Hispanic parents use a hierarchy of help-seeking depending on the complaint and age of the child. Some parents, however, turned to folk remedies and healers after consulting with a medical provider. Many expressed that their decision was impacted by dissatisfactions due to unmet expectations, language barriers, and perceived

lack of understanding of their cultural background (Baig et al., 2014; Howell et al., 2006).

Economic and geographical factors continue to impact Hispanic care decisions. In the studies conducted in rural settings, parents reported using folk healers due to their familiarity with Hispanic cultural values and lack of access to healthcare facilities (Harrison). This finding is echoed by other studies that found affordability of folk healers, as well as their ability to speak Spanish, as primary reasons Hispanics sought their care (Favazza, 2013).The cost of services in the U.S. healthcare system was also a significant barrier and parents reported traveling to Mexico for treatment to avoid costly medical expenses (Harrisson & Scarinci, 2007). Overall, the findings from this review reveal that Hispanic parents' health beliefs and practices are complex and deeply rooted in cultural beliefs. However, the lack of cultural competence in the part of healthcare providers may be the most significant barriers Hispanic parents face when receiving education and receiving care for common childhood illnesses.

A strength of this review is the comprehensive search strategy and the systematic evaluation of the studies. However, some studies may have been missed due to publication bias and the inclusion of only studies written in English. Many of the findings in this population may have changed over the years as a result of the increased focus on preventative medicine and the accessibility of available information via the internet. However, the lack of studies conducted in this population over the past decade limits our understanding of the changes that may have occurred over time. It is also important to

note that the sample in most of the studies were primarily Mexican Americans, and the findings may be more of a reflection of Mexican American beliefs than other Hispanic ethnicities who are equally diverse and may have their own unique beliefs and practices.

Findings from this literature review support the need for more research in this area. Educational interventions provided in the ED and primary care have not historically incorporated cultural beliefs and practices (Young et al., 2010). However, recent studies have called for more research on the ethnocultural differences that drive parents to seek ED care for non-urgent illness (Shapiro & Fine, 2019). Previous systematic reviews on fever interventions have found that understanding parental beliefs and providing one-on-one education is most effective in improving knowledge and changing behaviors (Walsh & Edwards, 2006; Young et al., 2010). Research in which there is a good representation of different Hispanic nationalities and ethnicities is also needed.

Conclusion

In summary, a better understanding of Hispanic health beliefs and practices in child illnesses is needed to provide quality care for a growing population of Hispanic children. Findings from this review reveal that care provided by Hispanic parents is complex and that both biomedical and folk spheres of treatment are engaged simultaneously. However, Hispanics face linguistic and cultural barriers to care and most do not feel comfortable discussing their folk beliefs with providers. Lack of provider understanding of Hispanic cultural beliefs could result in suboptimal care and a lost opportunity for partnership and education. Ultimately, a recognition of the need of

Hispanic parents to feel respected and engaged as they navigate a health care system that is a foreign culture to them is essential to providing compassionate, good quality care.

Appendix

Approval Forms and Study Documents

PRISMA Flow Diagram

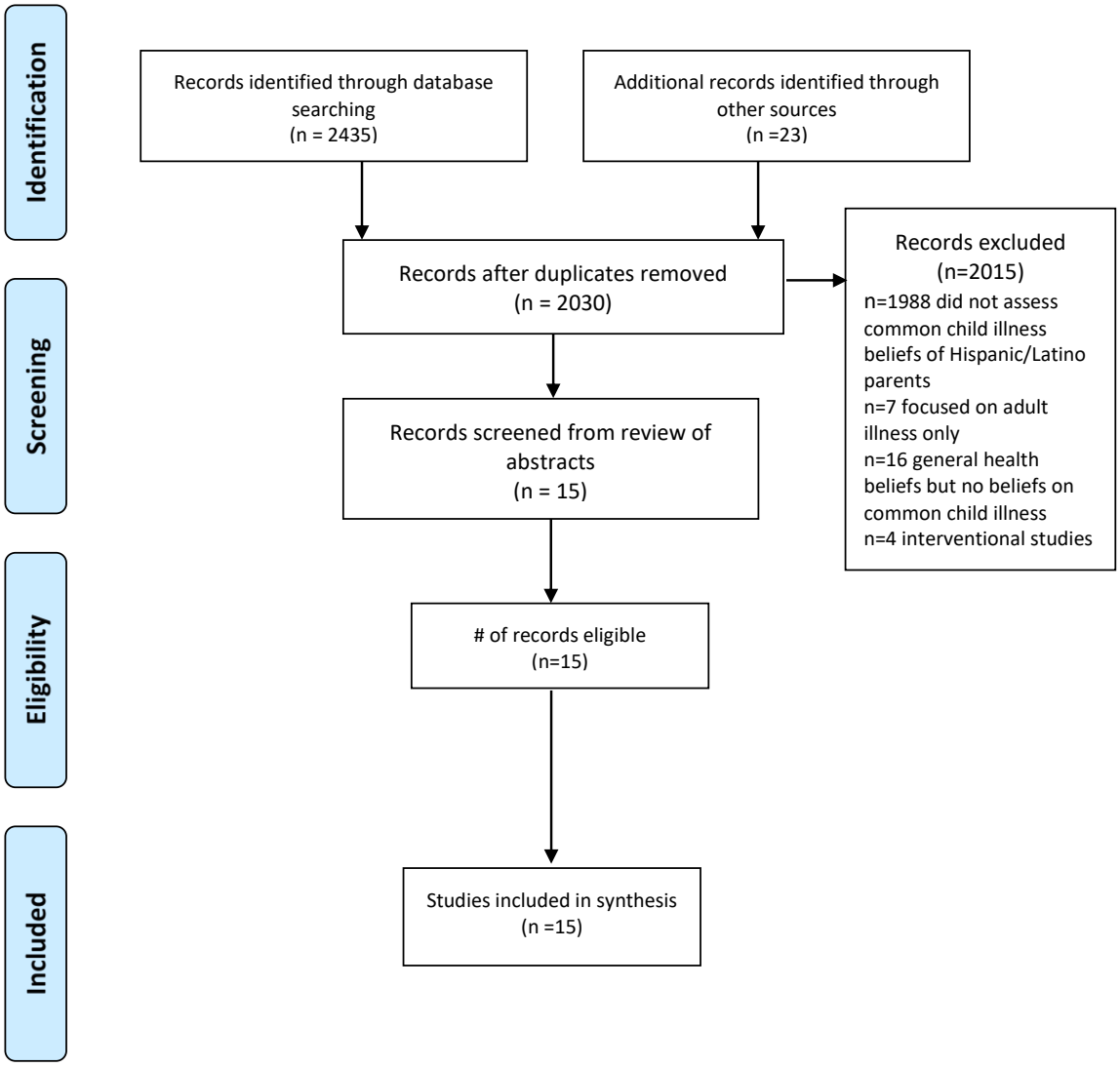

Table 1: Characteristics and major findings of qualitative studies

Author(s), Date	Purpose of Study	Approach	Sample and Setting	Measure and Evidence Grade*	Main Findings
Andrews et al., 2013	To assess the sources of variability in local Hispanic family responses to childhood illness in a pluralistic health care setting where both biomedical and folk healing are available	Ethnography Yakima County, Washington	N = 36 Hispanic adults, primary caretakers; 92% of mothers with young children, 83% first-generation immigrants N=12 Biomedical healthcare staff; Pediatricians (N=3), General practitioners (N=2), Physician Assistants (N=3), Registered Nurse (N=1), Nurse Assistants (N=2), Medical Assistant (N=1)	Semi-structured family interviews Grade: ++	*Beliefs:* ● Diarrhea caused primarily by food that has gone bad, switching formula, or empacho, caida de la mollera, or susto *Management:* ● If cause is folk illness, then folk cure is necessary. If cause is viral, then biomedical treatment is required. ● Majority used folk healing methods or folk healers to treat diarrhea ● *Sobradores* consulted for stomach problems ● *Curanderos* consulted for broader skill set ● Herbal teas such as manzanilla tea and rice water used ● Biomedical treatment when symptoms worsened and when a child has a fever ● Family members and skilled friends consulted first
Colucciello & Woelfel, 1998	To examine the types of cultural health care provided by Mexican-American mothers to their ill children at home, the extent of the child's illness and the interval from the onset of illness to when the mother sought medical attention.	Exploratory Ambulatory health care clinic in central Wisconsin	N=10 Hispanic mothers; mean age = 32; average age of children = 8; mean number of children = 4	Individual semi-structured interviews Grade: +	*Beliefs:* ● Hot and cold imbalance ● Internal well-being leads to external well-being *Management:* ● Biomedical medicine primarily for antibiotics when folk healing is ineffective ● For colds, Tylenol was used as most common treatment, followed by tea and Vicks vaporub. ● For fever, Tylenol was used and bathing (tepid bath or lukewarm bath) to bring down the temperature ● Used teas such as manzanilla tea and rice water for diarrhea ● Maternal grandmothers as sources of health information

Author(s), Date	Purpose of Study	Approach	Sample and Setting	Measure and Evidence Grade*	Main Findings
Gordon, 1994	To describe some common Hispanic cultural health beliefs	Mini-ethnographic Adult school in a large metropolitan area	N = 11 Hispanic women	Semi-structured group interview Grade: +	*Management:* ● Based on perceived cause whether to proceed with home remedy or biomedical treatment ● Herbal teas and cures for diarrhea and fever ● For fever, Tylenol mixed with herbal tea ● For fever, different bath practices and wrapping a child to keep warm ● Home remedies made of ingredients commonly found in the home ● Parents, family members, community as sources of health information

Grigg et al., 2013	To understand factors that influence Latino parents' use of the ED for nonurgent health conditions including cultural attitudes and beliefs about seeking care	Grounded theory Seattle Children's Hospital	N = 20, Spanish-speaking parents; 84% Mexican American females	Focus groups Grade: +	*Management:* ● Accustomed to receiving "definitive" treatment in their home countries ● Previous positive experiences with child illness made parents more comfortable caring for child at home ● Reluctant to continue care when symptoms are not improving ● Treated child's symptoms at home prior to seeking care in ED ● Tylenol given for fever ● Herbal teas and cures used ● Tried antibiotics bought from Mexico ● Combined both biomedical treatment and folk healing for most illness ● Believed clinics are for checkups and the ED is for acute illness ● Family and friends living in country of origin as source of information

Author(s), Date	Purpose of Study	Approach	Sample and Setting	Measure and Evidence Grade*	Main Findings
Harrison & Scarinci, 2007	To identify perceptions of Latino parents working in agricultural jobs in rural Alabama relating to child health needs, barriers to health care, parenting issues or concerns, and services needed to address child and family health needs.	Methodology not reported Marshall County, Alabama	N = 89 Latino parents (54 mothers, 35 fathers); Mexico (72), Guatemala (14), Columbia (2), El Salvador (1); mean number of children = 3.2	Focus group Grade: +	*Management:* ● Fear of criticism if home remedies discussed with doctors ● Lack of confidence in health care providers ● Used home remedies for cough and other child illness ● Used curanderos ● Bought medicines from Mexican stores ● Brought children back to Mexico for treatment
Mendelson, 2003	To describe the household-based health activities of a sample of	Ethnography	N = 13 Mexican American mothers; fluent English	Individual semi-structured interviews	*Management:* ● Used combination of home remedies and biomedical treatments

	contemporary Mexican American mothers living in a southwestern city	Large, southwestern city	speakers; mean age = 38 ± SD 7.63	Grade: ++	● For congestion and cold symptoms, applied vapor rub to chest and body ● For stomach issues, drank soups and teas (peppermint, chamomile, and yerba buena) ● Used OTC cough medications and antipyretics for cold symptoms ● Biomedical treatment if symptoms were severe or did not improve after a few days ● Mothers, grandmothers, in-laws as sources of health information
Robledo et al., 1999	To identify health perceptions and practices of Hispanic mothers related to the way they care for their children with respiratory illness	Pilot study, Methodology not reported Large southern city	N = 6, Hispanic mothers, Mexican origin; Age range: 22 to 35; Number of children: 1 to 6; Age of children: 5 months to 6 years	Individual semi-structured interviews Grade: +	*Beliefs:* ● Hot and cold theory ● Viruses as a cause ● Ojo de venado to prevent mal ojo *Management:* ● Use of folk remedies dependent on age of child ● Use health care providers initially ● Use of OTC medications (Tylenol and cough medications) and home remedies ● Seek HCP if symptoms persist ● Home remedies include gordolobo tea, juice from water-boiled raisins, honey with lemon, oregano, and cumin tea

**NICE Public Health Guidance (2012)*

Table 2: Characteristics and major findings of quantitative studies

Author(s), Date	Purpose of Study	Study Design/Setting	Sample	Measures and Evidence Grade*	Findings
Cohee et al., 2010	To explore knowledge and management of childhood fever among an ethnically diverse sample of parents and identify opportunities for educational interventions	Cross-sectional Survey 2 Urban hospital-based pediatric clinics in Baltimore, Maryland	N=487; Caucasian (125), African American (182), Latino (180); primarily mothers; mean age of 31 years 10 months; mean number of children per parent = 2.2 Latino parents: Mexico (54%), El Salvador (16%), Honduras (9%), Ecuador (6%), Guatemala (4%), Dominican Republic (3%)	27-item investigator-developed questionnaire Grade: Weak	*Beliefs:* • Latinos were 1.9 times less likely than Caucasians to list a temperature in the fever range • Latinos were 36.9 times more likely than Caucasians to believe that temperatures could rise to greater than 110F • Latinos were 10 times more likely than Caucasians to describe themselves as very worried • Latinos were 2 times more likely than Caucasians to believe that fevers can cause death or brain damage *Management:* ● 76% of Latinos reported owning a thermometer ● Latinos less likely to check temperatures rectally ● Latinos 10 times less likely to alternate antipyretics for fever
Crocetti et al., 2009	To explore knowledge and management of childhood fever among an exclusive sample of Latino parents, to evaluate factors associated with correctly identifying a temperature that is within a normal range and one that is a fever, and to assess opportunities for educational interventions	Cross-sectional Survey Urban hospital-based pediatric clinic in Baltimore, Maryland	N=180 Latino parents; Mexico (56% fathers, 55% mothers), El Salvador (17% fathers, 16% mothers), Honduras (9% fathers, 9% mothers), Ecuador (6% fathers, 6% mothers), Guatemala (3% fathers, 4% mothers), Dominican Republic (4% fathers, 3% mothers), Other (5% fathers, 7% mothers)	27-item investigator-developed questionnaire Grade: Weak	*Beliefs:* ● 90% were very worried about fever ● 53% believe temperatures could rise to 110 F or higher ● 96% believed that fever could cause at least 1 harmful effect ● 58% believed that fever could cause brain damage or death; 51% believed these could occur at temperatures less than 107F ● 30% reported not knowing why fever could cause harm *Management:* ● 76% reported owning a thermometer ● 68% preferred axillary method of measurement ● 67% reported checking every hour ● 97% reported using antipyretic medicines ● 73% used sponging ● 44% used chamomile tea

Author(s), Date	Purpose of Study	Study Design/Setting	Sample	Measures and Evidence Grade*	Findings
Foronda & Waite, 2008	To obtain knowledge of the health practices of Mexican American mothers for education of both health care providers and home caregivers	Cross-sectional Survey Mexican-populated church in Milwaukee, Wisconsin	N = 47, Mexican American mothers; Maternal age range 18 to 64	20-item investigator-developed survey Grade: Weak	*Management:* ● 85% used antipyretics to treat fever ● 96% used some type of alternative therapy ● 66% removed warm clothing ● 91% reported not combining OTC with home remedies ● 46% used home remedies from Mexico ● 70% informed doctor or nurse of using alternative therapies ● 36% used home remedies due to lack of money or health insurance
Mikhail, 1994	To identify and describe the Hispanic mothers' initial sources of advice and help with children's illnesses, beliefs about etiology and seriousness, and practices for management.	Cross-sectional, Mixed Methods Semi-structured individual interviews, survey with demographics and perceived ethnic identity scale Rural clinic, central California	N = 100 Hispanic women; 81% born in Mexico, 17% were Mexican American born in U.S., 2% born in Central or South America; mean age = 28.1 years ± 6.32 SD	Investigator-developed survey Grade: Weak	*Beliefs:* ● Hot and cold imbalance ● Empacho as cause of diarrhea ● Majority believed that fever, cough, and vomiting are serious illness ● Believed fever can result in convulsions and can affect the brain and other organs ● Cough considered serious as it could affect the chest and lungs ● Perceived vomiting as serious due to dehydration *Management:* ● Use of home remedies such as herbal teas ● Tylenol and Aspirin for fever ● Tried other treatments prior to seeking medical help ● Obtained medications from Mexico ● Combined OTC and home remedies for fever and diarrhea ● Physicians and nurses (32%) ● Relatives or friends (29%) Mothers, mother-in-law, grandmother (21%)

Pachter et al., 1998	To describe the home-based therapies and practices that parents from diverse ethnocultural backgrounds use to treat the common cold in their children	Cross-sectional Survey Clinics, Connecticut	N = 281 primary caretakers of Puerto Rican (108), African American (68), European American (85), and Indian Carribean (20) descent.	Investigator-developed survey Grade: Weak	*Management (Puerto Rican):* ● 65% Acetaminophen ● Ibuprofen (26%) ● Vapor rubs (20%) ● Chicken soup (21%) ● Lipton soup (11%) ● Vitamins (8%) ● Prayer (7%)

Author(s), Date	Purpose of Study	Study Design/Setting	Sample	Measures and Evidence Grade*	Findings
Risser & Mazur, 1995	To identify the types of home remedies used for common pediatric problems in a Hispanic population and to study traditional folk illnesses and their cures	Cross-sectional Survey Pediatric clinic, Houston, Texas	N = 51 first-generation immigrants; Mexico (40), El Salvador (4), Colombia (1), Guatemala (1), Honduras (1), Nicaragua (1); Mothers (47), Fathers (2), Grandmothers (2)	Investigator-developed survey Grade: Weak	*Beliefs:* ● Hot and cold imbalance ● Mal ojo caused by a person with "strong eyes" ● Folk illness as cause of a variety of symptoms ● Mal ojo preventable by touching head of child ● Wearing Ojo de Venado (deer's eye) ● Biomedical providers more effective for non-folk illness ● Biomedical cures as chemical ● Folk cures as natural ● Folk cures most effective in areas without a health care provider *Management:* ● Used pharmaceuticals primarily for URI and fever ● Used herbs in conjunction with pharmaceuticals ● Use of *curanderos* ● Used folk medicine if biomedical provider does not prescribe medicine Caida de Mollera treatments meant to realign the fontanelle

Schwartz et al., 1997	To examine the extent to which Mexican immigrant mothers in California use household thermometers when fever is suspected and describe the methods that are used to determine fever by those mothers who do not use thermometers	Cross-sectional survey San Diego county	N = 688 mothers of Mexican descent; Children age 8 months to 16 months	76-item investigator-developed open and closed-ended questions Grade: Weak	*Beliefs:* ● Mothers who had never used a thermometer relied on visual signs of fever such as a red face, watery or red eyes, sadness and tiredness ● Behavioral changes included not eating, sleeping more or less than usual, crying or irritated or sad *Management:* ● 35.3% used thermometer to determine fever ● 65% relied primarily or exclusively on touch or visual observation to determine fever ● 40% never used a thermometer

Author(s), Date	Purpose of Study	Study Design/Setting	Sample	Measures and Evidence Grade*	Findings
Taveras et al., 2004	To examine childhood fever beliefs and practices in a multiethnic, multiracial, and socioeconomically diverse sample	Cross-sectional survey Urban hospital clinic, urban neighborhood center, and suburban private practice	Total N = 274 Latino parents (N=124), AA (N=42), White (N=69), other (N=39); Latinos predominantly	40-item investigator-developed open-ended and yes/no questions Grade: Weak	*Beliefs:* ● Only 42% of parents knew the correct temperature for fever; no differences between racial/ethnic groups ● Latino parents 3 times more likely to believe that childhood fever is caused by Latino folk illness compared to non-Latino parents ● Foreign-born Latinos were twice as likely to believe that any Latino folk illness cause childhood fever *Management:* ● Latinos (55%) more likely to take their children to the ED for fever than whites ● Mean of 7 times Latino children visited the ED in the previous year ● 10% of Latino parents would not seek medical care for a 3-week old with fever ● Latino parents more often use rubbing alcohol and Vaporub compared with white parents

**Effective Public Health Practice Project (20*

UTHealth
The University of Texas
Health Science Center at Houston

Committee for the Protection of Human Subjects
6410 Fannin Street, Suite 1100
Houston, Texas 77030

Dr. Darlene Acorda
UT-H - SN - Nursing Graduate Studies

NOTICE OF APPROVAL TO BEGIN RESEARCH August 15, 2019
HSC-SN-19-0684 - Latino Parental Beliefs and Practices in Child Fever: A Focused Ethnographic Study
Number of Subjects Approved: Target: 30 /**Screen:** 4000

PROVISIONS: This approval relates to the research to be conducted under the above referenced title and/or to any associated materials considered by the Committee for the Protection of Human Subjects, e.g. study documents, informed consent, etc.

APPROVED: By Expedited Review and Approval

REVIEW DATE: 08/15/2019

APPROVAL DATE: 08/15/2019

CHAIRPERSON: L. Maximilian Buja, MD L. Maximilian Buja

Subject to any provisions noted above, you may now begin this research.

PLEASE NOTE: Due to revisions to the common rule that went into effect July 19, 2018, this study that was approved under expedited approval no longer needs to submit for continuing review. Changes to the study, adverse events, protocol deviations, personnel changes, and all other types of reporting must still be submitted to CPHS for review and approval. When this study is complete, the PI must submit a study closure report to CPHS.

CHANGES: The principal investigator (PI) must receive approval from the CPHS before initiating any changes, including those required by the sponsor, which would affect human subjects, e.g. changes in methods or procedures, numbers or kinds of human subjects, or revisions to the informed consent document or procedures. The addition of co-investigators must also receive approval from the CPHS. **ALL PROTOCOL REVISIONS MUST BE SUBMITTED TO THE SPONSOR OF THE RESEARCH.**

INFORMED CONSENT DETERMINATION:
Waiver of Documentation of Informed Consent

INFORMED CONSENT: When Informed consent is required, it must be obtained by the PI or designee(s), using the format and procedures approved by the CPHS. The PI is responsible to instruct the designee in the methods approved by the CPHS for the consent process. The individual obtaining informed consent must also sign the consent document. Please note that only copies of the stamped approved informed consent form can be used when obtaining consent.

HEALTH INSURANCE PORTABILITY and ACCOUNTABILITY ACT (HIPAA):
Exempt from HIPAA: Yes

UNANTICIPATED RISK OR HARM, OR ADVERSE DRUG REACTIONS: The PI will immediately inform the CPHS of any unanticipated problems involving risks to subjects or others, of any serious harm to subjects, and of any adverse drug reactions.

RECORDS: The PI will maintain adequate records, including signed consent and HIPAA documents if required, in a manner that ensures subject confidentiality.

Letter of Permission

CLINICA LA SALUD

Clinica La Salud, LLC
2323 Wirt Rd. Suite F-8
Houston, TX 77055

07/01/19

Dear University of Texas Health Science Center IRB,

Based on my review of the proposed research by Darlene E. Acorda, I give permission for him/her to conduct the study entitled *"Latino Parental Beliefs and Practices in Child Fever: A Focused Ethnography"* within the Clinica La Salud clinic pending approval from The University of Texas Health Science Center IRB. As part of this study, I authorize the researcher to recruit, purposively sample, interview participants, and conduct field work in the clinic. Individuals' participation will be voluntary and at their own discretion.

We understand that our organization's responsibilities include: providing a protocol-trained personnel to serve as an interpreter, allocating a room to conduct interviews, and providing access to patient education materials. We reserve the right to withdraw from the study at any time if our circumstances change.

We understand that the research will include in-depth semi-structured individual interviews and focus group interviews as well as fieldwork by the researcher. I confirm that the researcher has discussed the project fully with me and answered any questions I have about the project.

This authorization covers the time period of July 2019 to July 2020.

I confirm that I am authorized to approve research in this setting.

I understand that the data collected will remain entirely confidential and may not be provided to anyone outside of the research team without permission from the University of Texas Health Science Center IRB.

Sincerely,

Pamela Lombana

Pamela Lombana, MSN, RN, CPNP-PC
Clinic Director
(713) 467 - 4900

Has your child ever had fever?

We want to hear about your experience.

The UT Health Cizik School of Nursing is recruiting Latino parents, grandparents, or guardians to take part in a research study to understand your experience with managing fever in children.

You may participate in the study if you are:

- Latino
- Greater than 18 years old
- A parent, grandparent, or guardian
- Primary caretaker of a child less than 18 years old

Participants may be compensated for their time

UTHealth The University of Texas Health Science Center at Houston | Cizik School of Nursing

UTHealth The University of Texas Health Science Center at Houston

IRB NUMBER: HSC-SN-19-0684
IRB APPROVAL DATE: 08/15/2019

¿Alguna vez ha tenido fiebre su hijo?

Queremos escuchar su experiencia.

La Escuela de Enfermería Cizik de UT Health está reclutando a padres, abuelos o tutor legal Latinos para que participen en un estudio de investigación para comprender su experiencia en el manejo de la fiebre en los niños.

Usted puede participar en el estudio si esta:

- Latino
- Mayor de 18 años
- Un padre, abuelo, o tutor legal
- Cuidador primario de un niño menor de 18 años

Los participantes pueden ser compensados por su tiempo.

UTHealth The University of Texas Health Science Center at Houston | Cizik School of Nursing

UTHealth The University of Texas Health Science Center at Houston
IRB NUMBER: HSC-SN-19-0684
IRB APPROVAL DATE: 08/15/2019

UTHealth The University of Texas Health Science Center at Houston | Cizik School of Nursing

INFORMED CONSENT TO TAKE PART IN RESEARCH

Study Title: Latino Parental Beliefs and Practices in Child Fever: A Focused Ethnographic Study

Principal Investigator: Darlene E. Acorda, MSN, RN, CNE, CPNP-PC, PhD Candidate

Study Contact: Darlene.E.Acorda@uth.tmc.edu / (713) 855- 1531

We are inviting you to be in a research study conducted by investigators at the University of Texas Health Science Center at Houston. We are studying the fever beliefs of Latino parents and how these beliefs impact their management of fever in their children.

If you agree to be in our study, we will ask you to participate in a semi-structured interview and complete a demographic survey. You do not have to be in the study if you do not want to; it is your choice and your employment in the clinic will not be affected. You can change your mind at any time and there will be no penalty. Your total time commitment is expected to be about 45 to 60 minutes. You will be receive a $15 gift card as compensation for your time.

You do not have to share any information that you are not comfortable sharing. You can stop participating in conversation at any time. Some people may be upset or angry if they hear others in the focus groups expressing views different from their own.

We will be careful to keep your information confidential and we will ask you and all the focus group members to keep the discussion confidential as well. There is always a small risk of unwanted or accidental disclosure. We plan to record the interviews and the focus group sessions with your permission. Any notes, recordings, or transcriptions will be kept private by Darlene Acorda. Any digital files will be encrypted and password protected. You can decide whether you want your name used.

If you have any questions about this study please call Darlene Acorda at (713) 855 1531. If you have any complaints, suggestions, or questions about your rights as a research volunteer, please contact the UTHealth Committee for the Protections of Human Subjects (CPHS) at 713-500-7943.

UTHealth The University of Texas
IRB NUMBER: HSC-SN-19-0684
IRB APPROVAL DATE: 08/15/2019

UTHealth The University of Texas Health Science Center at Houston | Cizik School of Nursing

CONSENTIMIENTO INFORMADO PARA PARTICIPAR EN LA INVESTIGACIÓN

Titulo de Estudio: Creencias y prácticas de los padres Latinos en la fiebre infantil: un estudio etnográfico enfocado

Investigador Principal: Darlene E. Acorda, MSN, RN, CNE, CPNP-PC, PhD Candidate

Contacto de Estudio: Darlene.E.Acorda@uth.tmc.edu / (713) 855- 1531

Lo invitamos a participar en un estudio de investigación realizado por investigadores en el Centro de Ciencias de la Salud de la Universidad de Texas en Houston. Estamos estudiando las creencias sobre la fiebre de los padres Latinos y cómo estas creencias afectan el manejo de la fiebre en sus hijos.

Si acepta participar en nuestro estudio, le pediremos que participe en una entrevista semiestructurada y complete una encuesta demográfica. Usted no tiene que estar en el estudio si no quiere hacerlo; es tu elección y la atención que recibirá en la clínica no se verá afectada. Puedes cambiar de opinión en cualquier momento y no habrá penalización. Se espera que su compromiso de tiempo total sea de aproximadamente 45 a 60 minutos. Recibirá una tarjeta de regalo de $ 15 como compensación por su tiempo.

No tiene que compartir ninguna información que no se sienta cómodo compartiendo. Puedes dejar de participar en la conversación en cualquier momento. Algunas personas pueden sentirse molestas o enojadas si escuchan a otros en los grupos focales que expresan puntos de vista diferentes a los suyos.

Tendremos cuidado de mantener la confidencialidad de su información y le pediremos a usted y a todos los miembros del grupo de enfoque que también mantengan la conversación confidencial. Siempre existe un pequeño riesgo de divulgación no deseada o accidental. Planeamos grabar las entrevistas y las sesiones de grupos focales con su permiso. Cualquier nota, grabación o transcripción será mantenida en privado por Darlene Acorda. Cualquier archivo digital será encriptado y protegido por contraseña. Puedes decidir si quieres que tu nombre sea usado.

Si tiene alguna pregunta sobre este estudio, llame a Darlene Acorda al (713) 855 1531. Si tiene alguna queja, sugerencia o pregunta sobre sus derechos como voluntario de investigación, comuníquese con el Comité de Salud de los Estados Unidos para la Protección de Sujetos (CPHS) al 713-500-7943.

UTHealth The University of Texas
IRB NUMBER: HSC-SN-19-0684
IRB APPROVAL DATE: 08/15/2019

UTHealth The University of Texas Health Science Center at Houston | Cizik School of Nursing

INFORMED CONSENT TO TAKE PART IN RESEARCH

Study Title: Latino Parental Beliefs and Practices in Child Fever: A Focused Ethnographic Study

Principal Investigator: Darlene E. Acorda, MSN, RN, CNE, CPNP-PC, PhD Candidate

Study Contact: Darlene.E.Acorda@uth.tmc.edu / (713) 855- 1531

We are inviting you to be in a research study conducted by investigators at the University of Texas Health Science Center at Houston. We are studying the fever beliefs of Latino parents and how these beliefs impact their management of fever in their children.

If you agree to be in our study, we will ask you to participate in a semi-structured interview and complete a demographic survey. You do not have to be in the study if you do not want to; it is your choice and your employment in the clinic will not be affected. You can change your mind at any time and there will be no penalty. Your total time commitment is expected to be about 45 to 60 minutes. You will be receive a $15 gift card as compensation for your time.

You do not have to share any information that you are not comfortable sharing. You can stop participating in conversation at any time. Some people may be upset or angry if they hear others in the focus groups expressing views different from their own.

We will be careful to keep your information confidential and we will ask you and all the focus group members to keep the discussion confidential as well. There is always a small risk of unwanted or accidental disclosure. We plan to record the interviews and the focus group sessions with your permission. Any notes, recordings, or transcriptions will be kept private by Darlene Acorda. Any digital files will be encrypted and password protected. You can decide whether you want your name used.

If you have any questions about this study please call Darlene Acorda at (713) 855 1531. If you have any complaints, suggestions, or questions about your rights as a research volunteer, please contact the UTHealth Committee for the Protections of Human Subjects (CPHS) at 713-500-7943.

UTHealth The University of Texas Health Science Center at Houston
IRB NUMBER: HSC-SN-19-0684
IRB APPROVAL DATE: 08/15/2019

Interview Guide

Introduction Checklist:

☐ Introduce the purpose of the study *(i.e. "We want to understand how Latino parents think about fever.")*

☐ Inform that the interview will be recorded with an audio recorder and that they may stop the recording at any time.

☐ Inform that notes may be taken during the interview to make sure the interviewer understands

☐ Inform that the study will not affect the care they receive in the clinic.

☐ If using an interpreter, orient the participant to the role of the interpreter.

Grand Tour: Can you tell me what happens when your child gets sick?

Mini Tour: *(Suggested probes in italics; more probes may be asked)*

1. What have you heard about fever in children?
   - *What does it mean to you when your child has fever?*
   - *What are the different names for fever in your language?*

2. What have you heard about what causes fever in children?
   - *Some people say that folk illness causes fever, what do you think about that?*
   - *Some people say they learned about fever from their family, who did you learn from?*

3. What have you heard about how to know when a child has fever?
   - *Some people use a thermometer, what do you think about that?*
   - *How do you interpret the numbers on the thermometer?*
   - *Some people use touch, what do you think about that?*

4. What have you heard about how to treat fever?
   - *Some people say they use folk cures or folk medicine, what do you think about that?*
   - *How do you get your information about how to treat fever?*
   - *Some people use medicine from (country of origin), what do you think about that?*
   - *Have you ever heard of azarcon or greta for fever? What do you think about that?*
   - *Some people say they've taken their kids to Mexico, what do you think about that?*
   - *Some people use herbal remedies, what do you think about that?*

5. What have you heard about getting help for a child with fever?
   - *Some people say they talk to their mothers/grandmothers, what do you think about that?*
   - *Some people say they've taken their child to a folk healer, what do you think about that?*
   - *Some people take their child to the emergency room, what do you think about that?*

6. What have you heard about where to get information about fever?

7. What have you heard about this clinic and what made you decide to come here?
   - *When you come here for fever, what do you expect?*

Always ask if there is anything else that we missed or anything that they want to talk about

Demographic Survey

Please answer the following questions. Mark your answer by filling in the appropriate circle.

Date: ___/___/___

1. What is your age? _____
2. What is your gender? ◯ Male ◯ Female ◯ Other
3. What is your relationship to the child? ◯ Father ◯ Mother
   ◯ Other:_____
4. Where were you born? _____
5. How long have you been in the United States? _____
6. What ethnicity do you call yourself? _____
7. What language do you speak at home?
   ◯ English only ◯ Spanish only ◯ English and Spanish
   ◯ Other: _____
8. How long did you go to school? _____
   ◯ Elementary ◯ High School ◯ College ◯ Graduate School
9. How many children do you have? _____
10. How old are your children? _____
11. How many generations have your family been in the United States?_____
12. How many adults (greater than 18 years old) live in your home besides you? _____
13. Do you live with grandparents? ◯ Yes ◯ No

---------- *Please Return to Interviewer* ----------

FOR INTERVIEWER ONLY

Completed by:
◯ Participant on paper
◯ With assistance
◯ Interviewer (P.I.) in person

Participant	Age	Gender	Relationship to Child	Place of Birth	Years in the US	Language Spoken at Home	Education level	Number of Children	Age Range of children (years)
P01	20	Female	Mother	n/a	2	English and Spanish	High School	1	11 mo.
P02	38	Female	Mother	U.S.	38	English and Spanish	High School	3	3 – 15
P03	21	Female	Mother	U.S.	21	English and Spanish	High School	1	3
P04	40	Female	Mother	Honduras	25	English and Spanish	High School	7	2 – 23
P05	36	Female	Mother	U.S.	n/a	English and Spanish	High School	3	2 – 16
P06	38	Female	Mother	U.S.	38	English and Spanish	High School	5	4 – 23
P07	20	Female	Mother	Honduras	5	Spanish only	High School	2	9 mo. – 2
P08	52	Female	Mother	Mexico	25	English and Spanish	High School	4	15 – 28
P09	39	Male	Father	n/a	11	English and Spanish	n/a	2	1 – 2
P10	27	Female	Mother	n/a	7	Spanish only	College	3	2 – 7
P11	34	Female	Mother	U.S.	34	English and Spanish	College	5	7 – 15
P12	37	Male	Father	U.S.	37	English and Spanish	College	5	7 – 15
P13	27	Female	Mother	Mexico	24	English and Spanish	College	2	2 mo. – 2
P14	42	Female	Mother	Mexico	18	English and Spanish	High School	4	10 – 21
P15	34	Female	Mother	n/a	15	Spanish only	Elementary	3	15
P16	37	Female	Mother	Mexico	13	Spanish only	High School	3	6- 17
P17	35	Female	Mother	El Salvador	16	Spanish only	High School	3	4 – 12
P18	40	Female	Mother	Mexico	17	Spanish only	High School	3	4 – 16
P19	33	Female	Mother	Mexico	16	Spanish only	Elementary	2	6 – 14
P20	22	Female	Mother	U.S.	22	English and Spanish	College	1	n/a
P21	29	Female	Mother	U.S.	29	English and Spanish	High School	1	10

Table 1. Participant Characteristics

Attribute	N	%	Mean
Age			33
20-30	7	33	
30-40	10	48	
>40	4	19	
Gender			
Female	19	90	
Male	2	10	
Place of Birth			
United States	8	38	
Mexico	6	29	
Honduras	2	10	
El Salvador	1	0.5	
Did not disclose	4	19	
Years in the U.S			18.8
<5	4	19	
5-10	1	0.5	
10-15	2	10	
15-20	3	15	
20-30	6	29	
>30	4	19	
Did not disclose	1	0.5	
Number of Generations in the U.S.			1.5
1	10	48	
2	4	19	
3	2	10	
Did not disclose	5	24	
Language			
Spanish only	7	33	
English and Spanish	14	67	
Education			
Elementary	2	10	
High School	13	62	
College	5	24	
Did not disclose	1	0.5	
Number of Children			3
1-2	8	53	
3-5	12	57	
>5	1	0.5	

Table 2. Demographic Summary of Participants

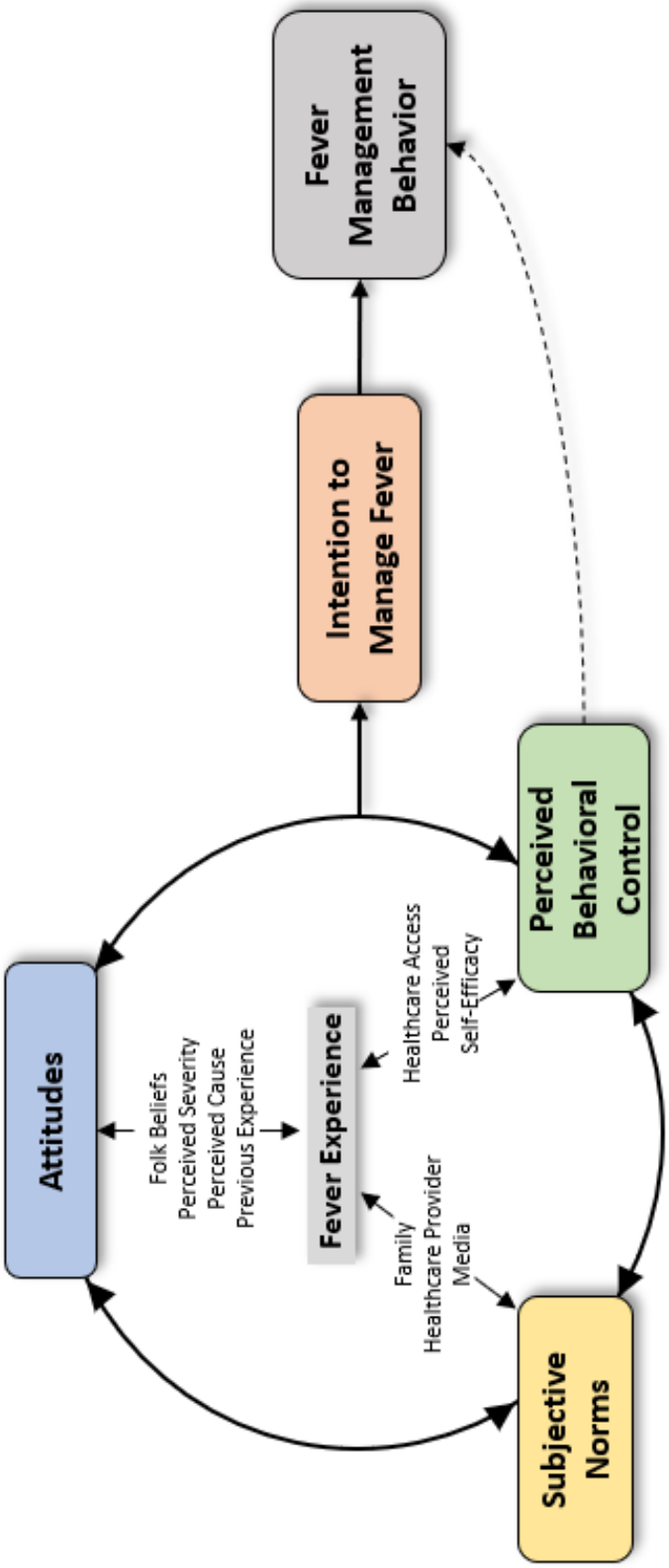

Figure 2. Exploratory Model

Curriculum Vitae

DARLENE E. ACORDA, PHD, RN, CNE, CPNP-PC

EDUCATION

The University of Texas Health Science Center – Houston **2020**
PhD

The University of Texas Health Science Center – Houston **2017**
Post-master's in Nursing Education

The University of Texas Health Science Center – Houston **2009**
MSN

The University of Texas Health Science Center - Houston **2004**
BSN

OTHER EDUCATION

National Institute of Nursing Research Precision Health: Smart Technologies, Smart Health Boot Camp **2019**
The Foundation for Advanced Education in the Sciences, Inc.
At the National Institutes of Health
Bethesda, Maryland

LICENSURE AND CERTIFICATION

RN License no. 706108	State of Texas	07/2021
APRN License no. AP118401	State of Texas	07/2021
CPNP-PC	Pediatric Nurse Certification Board	12/2019
CNE	National League of Nursing	12/2023
BLS	American Heart Association	12/2021
PALS	American Heart Association	2018

PROFESSIONAL EXPERIENCE

Texas Children's Hospital **03/2012– Present**
Clinical Specialist
Pediatric Critical Care Department

University of Texas HSC Houston- Cizik School of Nursing 05/2017 – Present

Adjunct Clinical Faculty, FNP Program

Texas Children's Urgent Care **01/2016 – 05/2019**
Pediatric Nurse Practitioner

University of Texas HSC Houston- Cizik School of Nursing **06/2011 – 05/2012**
Adjunct Clinical Faculty
BSN Pacesetter Program, Pediatric Clinical

Clinica La Salud, LLC, Houston, TX **05/2009 – present**
Pediatric Nurse Practitioner

Texas Children's Hospital **12/2007 – 06/2009**
Staff Nurse
Progressive Care Unit, Critical Care Department

Children's Memorial Hermann Hospital **07/2005 – 12/2007**
Staff Nurse
Children's Special Care Unit

Ben Taub General Hospital **08/2004 –07/2005**
Staff Nurse
Level II Nursery

TEACHING EXPERIENCE

UTHealth, Cizik School of Nursing **Summer 2017**
Lecturer – "The Child with Hematological and Immunological Conditions"
N3536 Child and Adolescent Health Care, BSN
Pacesetter Program

UTHealth, Cizik School of Nursing **Summer 2017**
Lecturer – "The Respiratory System"
N3515 Adult Health Care I, BSN Pacesetter Program

UTHealth, Cizik School of Nursing **Summer 2017**
Lecturer – "The Urological System"
N3515 Adult Health Care I, BSN Pacesetter Program

RESEARCH

The University of Texas Health Science Center Cizik School of Nursing
Primary Investigator, Dissertation Research **2019 - present**
Latino parental beliefs and practices in child fever: A focused ethnographic study

Texas Children's Hospital

Primary Investigator
Caregiver experience of high-fidelity tracheostomy simulation: A descriptive qualitative study **2020 - present**

Texas Children's Hospital
Co-Investigator **2019 - present**
Nursing perception of patient safety, design, and work effectiveness in a newly constructed unit.

The University of Texas Health Science Center Cizik School of Nursing
Co-Investigator **2019 - present**
Analysis of exit interviews of homeless youth using EMA methodology

The University of Texas Health Science Center Cizik School of Nursing
Co-Investigator **2018 - present**
Parental beliefs on safety culture in the NICU: A secondary analysis

PEER-REVIEWED PUBLICATIONS

Acorda, D. E. (2015). Nursing and respiratory collaboration prevents BiPAP-related pressure ulcers. *The Journal of Pediatric Nursing, 30(*4), 620-623. http://dx.doi.org/10.1016/j.pedn.2015.04.001

Under Review

Acorda, D. E., Rozmus, C., DesOrmeaux, C., & Engebretson, J. (2019). Hispanic parental beliefs and practices in common childhood illnesses and symptoms: A review of the literature. *The Journal of Transcultural Nursing.*

PRESENTATIONS

International

Acorda, D. E. (2019). The Impact of Culture on Nursing Care. *Pediatric Critical Care Summit of the Americas*. Houston, TX. Podium Presentation.

National

Acorda, D. E., Leathers, N., & Prewitt, C. (2020). A Whole New World: Supporting Families Transitioning from the NICU to the PICU. *American Association of Critical-Care Nurses National Teaching Institute & Critical Care Exposition*. Indianapolis, IN. Podium Presentation.

Acorda, D. E., Charles, E. & Engleman, S. (2019). Tracheostomy and gastrostomy care and management in the school setting. *National Association of School Nurses*. Denver, CO. Podium Presentation.

Acorda, D. E., Stephen, L., Loeb, A., McFadden, B., & Walden, M. (2016). Compassion Fatigue Assessment of Nurses in a Large Academic Pediatric and Women's Health Care System. *Society of Pediatric Nurses National Conference*. Minneapolis, MN. Podium Presentation.

Acorda, D. E., & Villalta, M. (2016). Should They Stay or Should They Go? A Checklist Approach to Patient Safety. *Society of Pediatric Nurses National Conference*. Minneapolis, MN. Poster Presentation. Clinical Practice Award Recipient.

Acorda, D.E. (2015). Together We Can: Preventing BiPAP-related Pressure Ulcers through Nursing and Respiratory Collaboration. *Society of Pediatric Nurses National Conference*. Anaheim, CA. Podium presentation.

Acorda, D. E. (2014). The Nurse and the Bundle: The Impact of Nursing Ownership on Eliminating Central Line Associated Blood Stream Infections. *The Annual Pediatric Nursing Conference*. National Harbor, MD. Poster Presentation.

Local

Acorda, D. E. & Abela, K. (2019). EBP, QI, and Research: Exemplars from the Bedside. *Baylor St. Luke's Medical Center Annual Nursing Research and EBP conference*. Houston, TX. Keynote Speaker.

Acorda, D., Engebretson, J., Rozmus, C., & DesOrmeaux, C. (October 2019). Hispanic Parental Beliefs and Practices in Common Childhood Illnesses and Symptoms: A Systematic Review. *8th Annual Research and Evidence Based Practice Day, The University of Texas Health Science Center Cizik School of Nursing*. Houston, TX. Poster Presentation.

Abela, K., **Acorda, D.,** Cain, C., & Gibbs, K. (June 2017). Relationship of Food Insecurity to Sociodemographic and Hospitalization Characteristics of Children Living in Texas. *6th Annual Research and Evidence Based Practice Day, The University of Texas Health Science Center Cizik School of Nursing.* Houston, TX. Poster Presentation.

PROFESSIONAL SERVICE

Manuscript Reviewer

Journal of Pediatric Nursing	2018 - present

Professional Organizations

Society of Critical Care Medicine	2019
Southern Nurses Research Society	2019
Texas Nurse Association District 9	2018
Elected 2019 Delegate	
National Association of Pediatric Nurse Practitioners	2009 – present
Houston Area Nurse Practitioners	2011 – present