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A Systematic Review of Race/Ethnicity and Parental Treatment Decision-making

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Abstract

Patient race/ethnicity impacts healthcare utilization, provider trust, and treatment choice. It is uncertain how these influences affect pediatric care. We performed a systematic review (PubMed, Scopus, Web of Science, PsycINFO, Cochrane and Embase) for articles examining race/ethnicity and parental treatment decision-making, adhering to PRISMA methodology. 9200 studies were identified, and 17 met inclusion criteria. Studies focused on treatment decisions concerning end-of-life care, HPV vaccination, urological surgery, medication regimens, and dental care. Findings were not uniform between studies, however pooled results showed 1) racial/ethnic minorities tended to prefer more aggressive end-of-life care; 2) Familial tradition of neonatal circumcision influenced the decision to circumcise and 3) Non-Hispanic Whites were less likely to pursue HPV vaccination but more likely to complete the vaccine series if initiated. The paucity of studies precluded overarching findings regarding the influence of race/ethnicity on parental treatment decisions. Further investigation may improve family-centered communication, parent engagement, and shared decision-making.

Keywords

decision-making; race/ethnicity; pediatrics; parent; caregiver; treatment; systematic review

Introduction

Over the past decade an emphasis has been placed on identifying and eliminating healthcare disparities in the United States.¹ Racial/ethnic disparities in healthcare utilization have previously been attributed to poor access to care and insurance status.^{2–3} However, studies of participants in Veteran Health Administration and Medicaid demonstrated racial disparities in utilization even when differences in insurance coverage are removed.^{4–7} In addition to

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access, another factor for these disparities may be differences in treatment preferences amongst different racial/ethnic groups. Understanding how factors such as personal experiences, and cultural and religious beliefs influence treatment decision-making amongst racial/ethnic groups may provide a more complete understanding of causes of healthcare disparities.

Racial/ethnic differences in treatment decisions have been noted across the spectrum of healthcare including acute and chronic conditions of lupus, end-of-life care, rheumatoid arthritis, and mental health care.^{8–17} In these cases, racial/ethnic minorities have been known to choose less aggressive treatment pathways for chronic medical conditions, such as use of drugs with fewer side effects or use of single drugs rather than multiple, but these same groups choose more aggressive end-of-life maneuvers. These trends have been attributed to the impact of spirituality on racial/ethnic minority decision-making. These decisions also may also be due to poor understanding of the benefits and risks of certain procedures or medications, as well as mistrust of clinicians.

Pediatric care involves treatment decisions made by parents, guardians, and caregivers on behalf of the child. Parental decision-making may also influence future health-seeking behavior of the child. We performed a mixed-methods systematic review of existing research that examined race/ethnicity and parental treatment decisions in pediatric care.

Methods

Search Strategy

We performed a mixed-methods systematic review of six electronic databases (PubMed, Scopus, Web of Science, PsycINFO, Cochrane and Embase) using combinations of the following key terms and synonyms in English language publications: “decision-making”, “parent”, “child”, “pediatric”, “race” and “ethnic groups”. A university informationist oversaw the database search for completeness and reproducibility. A primary literature search was performed from November 16th to December 22nd 2016. We adhered to the PRISMA checklist and statement recommendations during development of this systematic review protocol.¹⁸ The study protocol is registered with PROSPERO, an international prospective registry of systematic reviews.¹⁹

Inclusion Criteria

We included quantitative and qualitative studies that 1) involved at least one non-Hispanic White racial/ethnic group, 2) described a parental treatment decision made in pediatric health care, and 3) were written in the English language. Only studies which involved an explicit treatment decision were included. Additionally, studies were excluded if they did not meet inclusion criteria, did not state the treatment decision that was studied, pertained to non-pediatric (> 18 years) patients, did not include written abstracts, or did not include original research with human subjects (e.g., review articles). There were no restrictions based on publication date. Studies occurring outside of the United States were excluded due to inherent differences in health system administration and operations.

Screening and Data Extraction

Titles and abstracts were initially assessed to eliminate those articles not related to the stated topic. Title and abstract screenings were performed independently by seven reviewers. Reviewers were divided into reviewer pairs with citations divided equally among the reviewer pairs. Articles that were eliminated included books, clinical guidelines, conference notes, generalized treatment preferences, reviews, studies specific to adult subjects and studies that lacked primary data. Reviewer conflicts were resolved by a third reviewer. The articles that met inclusion criteria were then read in full by two reviewers. If upon review, an article no longer appeared to meet inclusion criteria, the reason was noted and the article was not included in the review. If after this analysis an article was still found to have met inclusion criteria, the data were extracted and included in the review. Data extracted included author, publication year, study purpose, study design, setting, study participants, racial/ethnic minority group distribution, clinical scenario, treatment decision and key findings. Coauthors independently performed data extraction using a predesigned data extraction form.

Data Synthesis

Studies were classified based on treatment decision type. The decision types in the included articles were: end-of-life care, HPV vaccination, Urological procedures, and medication decisions.

Quality assessment.—Study quality was assessed using the Mixed Methods Appraisal Tool (MMAT), a validated assessment tool that allows for quality assessment of qualitative, quantitative and mixed methods studies.²⁰ The quality of quantitative descriptive studies are appraised on criteria relating to four questions on: sampling strategy, selection of representative sample, appropriate measurements, and acceptable response rate. The quality of qualitative studies are appraised on criteria relating to four questions on: use of relevant data source, process of data analysis, if consideration was given to how findings related to the setting in which they were collected, and how the researchers may have influenced findings. Each study is given a score ranging from 0–100%.²¹ Mixed methods studies are given a score for the quantitative and qualitative portion of the study with an overall score not exceeding the score of its weakest component. No studies were excluded based on quality assessment.

Results

The search identified a total of 14,420 articles: PubMed search produced 2936 articles, Embase search produced 2131 articles, Cochrane search produced 176 articles, Scopus search produced 4839 articles, Web of Science search produced 1626 articles, and PsycINFO search produced 2712 articles. 17 articles met the inclusion criteria. Figure 1 summarizes the results of the literature search and review process. The most common reasons for exclusion were that the study focused on adult participants, was performed in a non-US location, and/or did not involve a treatment decision made. Table 1 lists the characteristics of included studies.

Of the 17 included studies, four focused on end-of-life (EOL) care, five focused on HPV vaccination, four focused on urological procedures, three focused on medication decisions and one focused on dental care. The majority of studies were quantitative (n=10). Overall there were 19,266 combined participants in the 17 studies with White and Hispanics being the largest racial/ethnic groups, 39% (n=7506) and 37.5% (n=7242) respectively. Cohort sizes were varied among studies and racial/ethnic groups were not equally distributed. Twelve of the studies compared more than one racial/ethnic group, one study (Ahaghotu, 2009) included 95% Black and 5% White participants with no comparisons made between groups. Of the remaining studies, one included Black participants only, and three included Hispanic participants only.

Table 2 lists results of quality assessment using the MMAT.²¹ Scores ranged from 50–100%. For most quantitative studies, score reduction was due to a response rate below 60% and/or sampling strategy. Few qualitative studies gave consideration for how study findings were influenced by the researchers and the setting in which the data was collected.

End of Life Care:

Table 3 lists summary of findings for the four studies on end-of-life care. Two studies focused on neonatal care. Moseley et al (2004) found that more White families limited life sustaining therapy compared to Black families although the difference was not statistically significant per authors (80% vs. 62%; p-value not reported).²² Edmonds et al (2011) found that Whites were less likely than Blacks to use intubation in periviable infants born between 20 through 25 weeks gestation (OR 1.25, 95% CI 1.07–1.46; p=0.005).²³ The remaining two studies focused on hospice enrollment and end-of-life care for older children. Thienprayoon et al (2013) found that race/ethnicity was significantly associated with hospice enrollment (49% Hispanic, 34% non-Hispanic White; p= 0.02) and Hispanic patients were more likely to enroll in hospice when compared to White patients (OR 5.96, 95% CI 1.45–31.04).²⁴ In contrast, Baker et al (2009) found there was no racial/ethnic difference noted in the number of Do-Not-Resuscitate orders (84.21% White, 87.25% Black; p=0.57) or rate of hospice enrollment (41.6% Black, 44% White; p=0.64).²⁵

HPV Vaccination:

Table 4 lists summary of findings for the five studies on HPV vaccination. A 2010 study by Perkins et al found no racial/ethnic variation in receipt of HPV vaccination for daughters of low-income parents, with an 89% vaccination acceptance rate overall.²⁶ The study obtained qualitative data concerning parental decision-making on HPV vaccination which revealed that parents who intended to vaccinate had similar concerns to those that refused vaccination but thought that the benefits outweighed the risks, however these responses were not attributed to a particular race/ethnicity. In a study of factors associated with caregivers' decisions to pursue HPV vaccination for their children, Barboza et al (2016) found that Whites were least likely to vaccinate (28.6% Hispanic, 22.4% Black, 20.4% White; p <.01). However, White caregivers were more likely to complete all three doses if initiated (38.6% Hispanic, 53.5% Black, 58.9% White; p<.01).²⁷ A 2013 study by Perkins et al examining HPV vaccination rates for sons of low-income parents found that Hispanics had a higher vaccination rate compared to Whites and Blacks (59% vs 21% vs 22% respectively, p<0.01).

²⁸ A study by Bastani et al (2011) assessing HPV vaccine uptake and correlates among low-income, ethnic minority girls found that 29% of mothers initiated vaccination for their daughters with a 12% completion rate with no significant racial/ethnic differences ($p=0.295$, 0.305 , respectively). The study found racial/ethnic differences in HPV vaccine awareness. While around 60% of Hispanic, Chinese, and Black mothers were aware of HPV vaccine, only 44% of Korean mothers had heard of it ($p=0.029$). They also found racial/ethnic differences in vaccination beliefs. For example, 8% of Hispanic and 11% of Black mothers thought their daughters had a higher risk of HPV infection compared to other girls ($p<0.001$).²⁹ Finally, a study by Thomas et al (2012) examining HPV vaccination preferences of rural Black parents found that non-Baptist (OR 3.6, 95% CI 2.00–6.60, $p<0.001$) and higher levels of education was associated with a greater intention to vaccinate ($n=393$, $p=.050$).³⁰

Urologic Surgery:

Table 5 lists summary of findings for the four studies on urological procedures. In a study of parental decisions in the treatment of vesicoureteral reflux, Hsieh et al (2010) found that Hispanics chose open repair more often than endoscopic repair, accounting for 55.6% of open procedures and 21.1% of endoscopic procedures. Hispanics also rated reducing the number of future ultrasound examinations and finances as more important considerations than Whites ($p<0.05$).³¹

Three studies focused on parental decisions about circumcision. A study by Bisono et al (2012) consisting of a largely Hispanic cohort found only 33% of the cohort had circumcised their son. Parents who identified with cultures that believed in circumcision (Wald $\chi^2 = 5.03$ $p = < .0001$), families believing in circumcising boys (Wald $\chi^2 = 6.1$ $p = .014$), and believing circumcision to not be too risky, (Wald $\chi^2 = 20.5$ $p = < .0001$) influenced the decision to circumcise.³² A study by Ahaghotu et al (2009) consisting of Black parents found that 96% believed that circumcision is healthy, 72% believed that it is a necessary procedure, 41% indicated health reasons as the most important factor for choosing circumcision and 25% selected maternal preference as the main factor with the mother being 12 times more likely than the father to make the final decision.³³ In the one study that compared racial/ethnic groups, Binner et al (2002) found that 85% of participants opted for circumcision with no difference in circumcision rates amongst the different groups.³⁴

Medication decisions:

Table 6 lists summary of findings for the three studies on decisions about medication use and one study on dental care. A study by Leslie et al (2007) on ADHD medication decisions involving 28 families found that all 8 families in the reluctant receipt of diagnosis and/or medication treatment category were Hispanic meaning they did not actively participate in at least one stage of the diagnosis and treatment trajectory pattern defined by the study.³⁵ There were no comparisons made between racial/ethnic groups. A study by Alegría (2004) using classification and regression tree methods to create a classification model of use vs non-use of pediatric mental health amongst Hispanic caregivers found that perceived impairment, concern about the child, and school problems predicted use of mental health services (sensitivity =0.83, specificity = 0.67).³⁶ A study by Valenzuela et al (2011) examining racial/ethnic differences in regimen intensity in children with Type 1 Diabetes found that

White, non-Hispanic youth was associated with higher rates of more intense treatment regimens use compared to Blacks and Hispanics (51.4 % vs. 0% vs. 23.8%, respectively; $p < .01$). Parent perception of cost ($p = .001$) and the provider's perception of family competence in diabetes care ($p = .01$) was associated with a preference for less intensive regimen.³⁷ In a qualitative study examining low-income Mexican immigrant caregivers' interpretations of their children's dental symptoms and need for treatment, Horton et al found that dental visits were obtained when both pain and poor appearance were evident.³⁸

Discussion

In this systematic review, we examined studies on race/ethnicity and treatment decisions made in pediatrics. The existing literature examining race/ethnicity and parental specific treatment decision-making in pediatric care is surprisingly sparse. We identified 17 studies which described treatment decisions made in five areas of clinical care: end-of-life care, urological procedures, HPV vaccination, medication decisions and dental care. Although findings on racial/ethnic based differences in treatment decisions were not uniform, they do illuminate key factors which play a role in parental healthcare treatment decision-making.

Racial/ethnic differences in end-of-life care decision-making have been noted in the adult literature, where racial/ethnic minorities often seek more aggressive care and are less likely to enroll in hospice care.^{39–48} The Edmonds (2011) and Moseley (2004) studies included in this analysis mirror these findings, where parents of racial/ethnic minorities were more likely to seek aggressive end-of-life care. However, findings related to hospice care differed with one study indicating that Hispanics were more likely than Whites to enroll in hospice and another finding no racial/ethnic differences in hospice enrollment rate between Black and White families.²⁴

The included studies regarding HPV vaccination focused on vaccination decisions made amongst low-income families and racial/ethnic minorities due to the prevalence of higher rates of HPV infection. Individuals belonging to these groups also have less access to screening and treatment for cervical cancer leading to higher mortality rates compared to the overall population.^{49–53} Most of the included studies on HPV vaccination found no racial/ethnic differences in HPV vaccination acceptance rates; this trend may impact reduction of future cervical cancer racial disparities.

Circumcision has become a contentious topic over recent years, and neonatal male circumcision rates have declined in the U.S. over the last decade.⁵⁴ Throughout history, the decision to circumcise has been largely influenced by cultural and religious practices.⁵⁵ The influence of culture and social/familial traditions on parental choice for circumcision of their son is reflected in each of the studies.

The Valenzuela (2011) and Hsieh (2010) study findings highlight the influence of financial considerations on decision-making amongst Hispanic parents regarding type 1 diabetes regimen intensity and repair of vesicoureteral reflux. While the Alegría (2004) and Horton (2009) studies illustrate that cultural belief concerning disease origin, interpretation of

symptoms and perceived treatment benefits greatly influence the decision to seek care for Hispanic parents.^{56–57}

Race/ethnicity plays a significant role in healthcare access and outcomes.^{58–61} As the medical community prioritizes patient-centered outcomes, it is important to dedicate time to understanding parent and family preferences in addition to individual patient preferences. The selected research studies focused on racial/ethnic treatment decisions with limited qualitative data to explain treatment preferences. Overall there is limited data on the effect of racial/ethnic treatment preferences in health outcomes in pediatrics and there is no large data set available to use to test hypotheses regarding racial/ethnic treatment preferences in pediatric care. In order to prevent instances where preferences may differ due to poor understanding of disease course, and treatment risks and benefits providers should engage in fully-informed shared decision-making. The clinical topics included in this review only represent a small subset of pediatric health care needs; additional studies covering a wide range of clinical topics are needed.

There are several limitations to this systematic review. Findings must be considered in light of limitations regarding small sample size and non-validated questionnaires in some of the studies. The participants in several of the studies are those that went to the doctor and may not be generalizable due to selection bias. The studies also used parental report which may lead to bias and overestimation of vaccination rates in particular. None of the selected studies indicated that power analysis was performed, and non-significant findings may be due to the studies being underpowered. This systematic review focused on treatment decisions made by parents and the included studies do not specifically explore general decision-making, factors influencing parental decision-making, or engagement in care.

Conclusion:

The existing patient-oriented scientific literature on race/ethnicity and medical treatment decisions made for children is limited. The few studies that were analyzed in this systematic review showed that parents of racial/ethnic minorities tend to prefer more aggressive end-of-life care, and newborn circumcision is mainly influenced by familial traditions and culture. We also found racial/ethnic differences in HPV vaccination with Non-Hispanic Whites being less likely to pursue HPV vaccination but more likely to complete the vaccine series if initiated. Additional research is needed to explore influences on treatment preferences for different racial/ethnic groups. Expanding the body of research on this topic may aid in the development of culturally-competent communication and education materials for parents making treatment decisions for their child.

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Figure 1.

Selection flow diagram according to PRISMA guidelines.

Adapted from: Moher D, Liberati A, Tetzlaff J, Altman DG, The PRISMA Group (2009).

Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement. PLoS Med 6(7): e1000097.

Table 1.

Characteristics of Included Studies (N=17)

Characteristic	n
Treatment Decision	
End of Life Care	4
HPV Vaccination	5
Urological Procedure	4
Medication Decision	3
Dental Care	1
Methods	
Quantitative	10
Qualitative	1
Mixed methods	6
Race/Ethnicity of Study Population (N=19266)	n (%)
White	7506 (39)
Black	3249 (17)
Hispanic	7242 (37)
Asian	172 (1)
Other	1097 (6)

Table 2.

Quality assessment

Citation	MMAT category	MMAT score
Moseley, 2004	quantitative descriptive	75%
Edmonds, 2011	quantitative descriptive	100%
Thienprayoon, 2013	quantitative descriptive	100%
Baker, 2009	quantitative descriptive	75%
Perkins, 2010	mixed methods	75%
Barboza, 2016	quantitative descriptive	100%
Perkins, 2013	mixed methods	75%
Bastani, 2011	mixed methods	75%
Thomas, 2012	quantitative descriptive	75%
Hsieh, 2010	quantitative descriptive	75%
Bisono, 2012	mixed methods	75%
Binner, 2002	quantitative descriptive	50%
Ahaghotu, 2009	quantitative descriptive	100%
Leslie, 2007	qualitative	75%
Alegría, 2004	mixed methods	75%
Valenzuela, 2011	mixed methods	75%
Horton, 2009	quantitative descriptive	100%

Table 3.

Summary of findings for studies on End of Life Care (n=4)

Citation	Study Purpose	Study Design	Setting	Participants	Treatment Decision	Key Findings
Moseley, 2004	To examine racial differences in parental end-of-life decisions for neonates	Retrospective chart review	Neonatal Intensive Care Unit in Detroit, MI.	38 infants; 58% Black, 42% White	Withholding or withdrawing life-sustaining medical treatment. *	• White families agreed to limit treatment more often than Black families (80% vs. 62%).
Edmonds, 2011	To determine whether race/ethnicity was associated with differences in periviable infant intubation	Retrospective cohort study	Children hospitals in California, Missouri, and Pennsylvania.	9632 infants; 19% Black, 33% White, 37% Hispanic, 11% Other.	Intubation	• Intubation was higher among Black infants compared to Whites and Hispanics (OR: 1.25, 95% CI: 1.07–1.46).
Thienprayoon, 2013	To determine association of race/ethnicity with hospice enrollment in children with cancer	Retrospective cohort study	Community hospice facilities in East Texas	114 children; 37% White, 44% Hispanic, 20% Other.	Hospice enrollment	• Hispanic patients were more likely to enroll in hospice vs Whites (OR 5.961, 95% CI 1.45–31.04).
Baker, 2009	To determine association of race/ethnicity with frequency Do-not-resuscitate orders or end-of-life discussions	Retrospective chart review	St. Jude's research hospital	206 children; 28% Black, 72% White.	Do-not-resuscitate order	• No significant racial/ethnic difference in number of DNR orders or hospice enrollment rate.

Table 4.

Summary of findings for studies on HPV Vaccination (n=5)

Citation	Study Purpose	Study Design	Setting	Participants	Treatment Decision	Key Findings
Perkins, 2010	To explore parents' intentions, regarding HPV vaccination for their daughters	Qualitative study with semi-structured interviews	Urban academic medical center and affiliated community health center in Boston, MA.	76 children: 43% Black, 26% White, 28% Hispanic.	HPV vaccination	<ul style="list-style-type: none"> 89% of daughters received vaccination with no racial/ethnic differences
Barboza, 2016	To explore factors associated with caregivers' decisions to pursue HPV vaccination for their children	Quantitative study using survey data	Behavioral Risk Factor Surveillance System survey *	5531 caregivers: 9.5% Black, 70.5% White, 20% Hispanic.	HPV vaccination	<ul style="list-style-type: none"> White caregivers least likely to vaccinate (28.6% Hispanic, 22.4% Black, 20.4% White; $p < .01$). White caregivers more likely to complete all three doses if initiated compared to Hispanics (OR 0.18, 95% CI 0.07–0.45).
Perkins, 2013	To examine HPV knowledge, attitudes toward vaccination and vaccination rates	Qualitative study with semi-structured interviews	Urban academic medical center and affiliated community health center in Boston, MA.	120 caregivers; 57% Black, 20% White, 23% Hispanic.	HPV vaccination	<ul style="list-style-type: none"> Hispanics had a higher vaccination rate compared to Whites and Blacks (59% vs 21% vs 22%, $p < 0.01$).
Bastani, 2011	To assess HPV vaccine uptake and correlates among low-income, ethnic minority girls	Qualitative study with open-ended interviews	Women's Health hotline in Los Angeles, CA.	492 caregivers; 7.8% Black, 52% Hispanic, 20% Chinese, 13.5% Korean, 6.7% other.	HPV vaccination	<ul style="list-style-type: none"> No significant racial/ethnic differences in vaccine initiation or completion rates.
Thomas, 2012	To identify predictors of HPV vaccination among rural Black families	Cross-sectional descriptive study	Schools in three rural counties in the southeast US	400 Black caregivers	HPV vaccination	<ul style="list-style-type: none"> Parents who intended to vaccinate were non-Baptist ($n=392$, $p < .001$) and had higher levels of education ($n=393$, $p=.050$).

* Connecticut, Kentucky, Pennsylvania, Texas, West Virginia, and Wyoming.

Table 5.

Summary of findings for studies on Urological procedures (n=4)

Citation	Study Purpose	Study Design	Setting	Participants	Treatment Decision	Key Findings
Hsieh, 2010	To understand how parents, elect to manage vesicoureteral reflux.	Cross-sectional study	Texas Children's Hospital urology offices	64 children: 70% White, 27% Hispanic, 3% other.	Open vs endoscopic repair of vesicoureteral reflux	<ul style="list-style-type: none"> Hispanics accounted for 55.6% of open procedures and only 21.1% of endoscopic repair. Hispanics rated stopping ultrasound and finances as more important considerations than whites ($p < 0.05$)
Bisno, 2012	To understand decision-making regarding neonatal circumcision	Qualitative study with in-depth interviews	Outpatient urology clinics in New-York Presbyterian Hospital	129 Hispanic parents.*	Circumcision	<ul style="list-style-type: none"> 67% had not circumcised their child. Culture ($\chi^2 = 5.03$, $p < 0.001$), familial traditions ($\chi^2 = 6.1$, $p = 0.014$), and believing circumcision to not be too risky, ($\chi^2 = 20.5$, $p < 0.001$) influenced the decision to circumcise.
Binner, 2002	To investigate the impact brochures on the parental decision about circumcision.	Cross-sectional study	Memorial-Hermann Hospital and the Woman's Hospital of Texas in Houston, TX.	190 women: 39% Black, 27% White, 26% Hispanic, 4% Asian, 4% other.	Circumcision	<ul style="list-style-type: none"> Race/ethnicity was not associated with the decision to circumcise.
Ahaghotu, 2009	To examine factors that drive Black parents to favor circumcision	Descriptive study	Outpatient urology clinics in Washington, D.C.	146 parents: 95% Black, 5% other.	Circumcision	<ul style="list-style-type: none"> 96% believed circumcision to be healthy. 41% indicated health reasons as the most important factor for choosing circumcision. 25% selected maternal preference as the main factor. The mother was 12 times more likely than the father to make the final decision. 72% believed that it is a necessary procedure.

* study included 10 non-Hispanic parents but data for race not included

Table 6.

Summary of findings for studies on Medication Decisions & Dental Care (n=4)

Citation	Study Purpose	Study Design	Setting	Participants	Treatment Decision	Key Findings
Leslie, 2007	To explore the role of familial sociocultural context on ADHD medication decisions	Retrospective chart review and semi-structured open-ended interviews	Primary care practices in San Diego County.	28 families; 21% Black, 32% White, 46% Hispanic.	ADHD Medication	<ul style="list-style-type: none"> Of the 8 families in the reluctant receipt of diagnosis and/or medication treatment category were Hispanic.
Alegria, 2004	To investigate factors that influence Hispanic caregiver's help-seeking for mental health care use	Qualitative study with structured interviews	Community sample of children who used mental health services in Puerto Rico	1896 Hispanic caregivers	Mental health care service use	<ul style="list-style-type: none"> Parents were more likely to obtain care if: <ul style="list-style-type: none"> The child is perceived to be impaired, They are concerned about the child, There are school problems.
Valenzuela, 2011	To examine racial/ethnic differences in regimen intensity in youth with type 1 diabetes	Cross-sectional study	Outpatient endocrinology clinics in Cincinnati, OH and Miami, FL.	178 caregivers; 9.8% Black, 20.1% White, 70.1% Hispanic.	Type 1 Diabetes regimen intensity	<ul style="list-style-type: none"> White, non-Hispanic youth were more likely to be prescribed more intense treatment regimens compared to Blacks and Hispanics (51.4 % vs. 0% vs. 23.8%; $p < .01$). Parent perception of cost and provider perception of competence was associated with preference for less intensive regimen ($p = .001$ and 0.01, respectively).
Horton, 2009	To examine low-income Mexican immigrant caregivers' interpretations of their children's dental symptoms and need for treatment	Qualitative study with in-depth interviews	Rural community in central California.	26 Mexican immigrant caregivers	Dental visit	<ul style="list-style-type: none"> Dental visits were obtained when both pain and poor appearance were evident due to lack of experience with teeth decay in rural Mexico due to differences in diet.