

2000-2020 NHIS Studies: Factors Affecting Medication Adherence Rate in the Pediatric Population with Medical Complexity

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What We Already Know

- Children with medical complexity is a vulnerable patient population group that is defined by the interplay of:
 - Chronic health conditions
 - High healthcare utilization
 - Severe limitations in cognitive and/or physical functioning
- Members of this patient population often require a complex treatment regimen, especially the practice of polypharmacy → risk medication nonadherence
- Nonadherent pediatric population may cause:
 - Slower recovery time
 - Increased healthcare utilization → higher medical costs for families and the healthcare system

What We Want to Know

The socioeconomic variables and confounding factors associated with the medication adherence rate in the medically complex pediatric population in the United States.

Analysis

Figure 1.

Distribution of the socioeconomic independent variables among the articles identified and met the inclusion criteria of the study.

NHIS Data on Children's Medication Adherence and its Confounding Variables

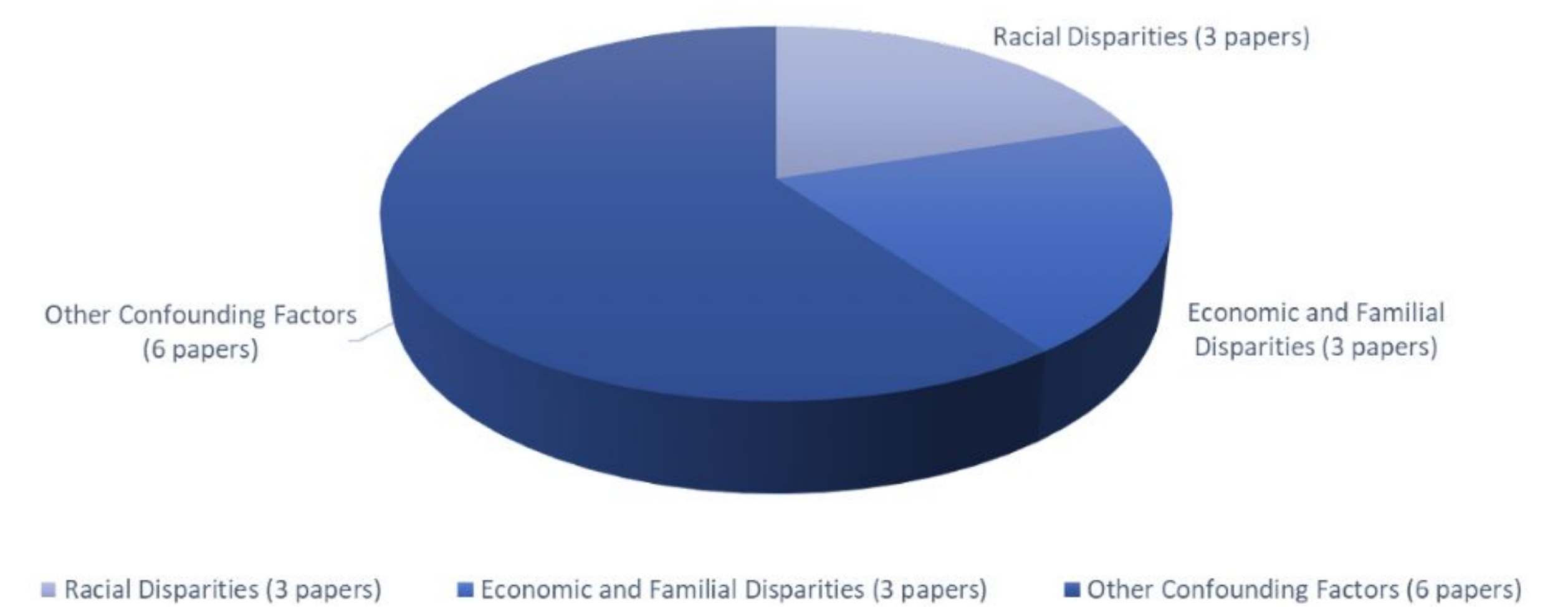


Figure 2.

Medication Adherence Rate Measurement

The parameters illustrated in other studies, that effectively standardizes medication adherence.

Cofounding Factors Controlled

The factors that were controlled for in identified articles in order to isolate the significance of each independent variable individually.

Variables Affecting Medication Adherence Rate

Recurring independent variables that commonly affect the medication adherence of the medically complex pediatric population.

Accounted Factors	Outcomes
Medication Adherence Rate Measurement	Missed doses, Missed scheduled refills, Number of reported exacerbations, Parents' feedback on child's medication adherence, Amount of ED visits in the past 12 months, Hospitalizations, Number of missed school days
Confounding factors controlled	Comorbidities*, Age, Sex, *Number of comorbidities included in the studies
Variable affecting Medication Adherence Rate	Racial and ethnic disparities, Financial hardships, Socio-economic status, Family background education, Poverty status, Children's health status, Quality of patient education, Religious beliefs

Zablotsky B, et al. 2019. Ludomirsky A.B., et al. 2021. Allshouse C., et al. 2018. Durkin M.S., et al. 2019. Abebe E., et al. 2020. Montgomery L.E., et al. 1996. Conn KM., et al. 2005. Loisel K., et al. 2015. Bhatia S., et al. 2014. Modi A.C., et al. 2006. Wallis M., et al. 2010. Lawrence EM., et al. 2020. Yamasaki A., et al. 2020. Lin NY., et al. 2020. Urquhart A., et al. 2020.

Conclusion

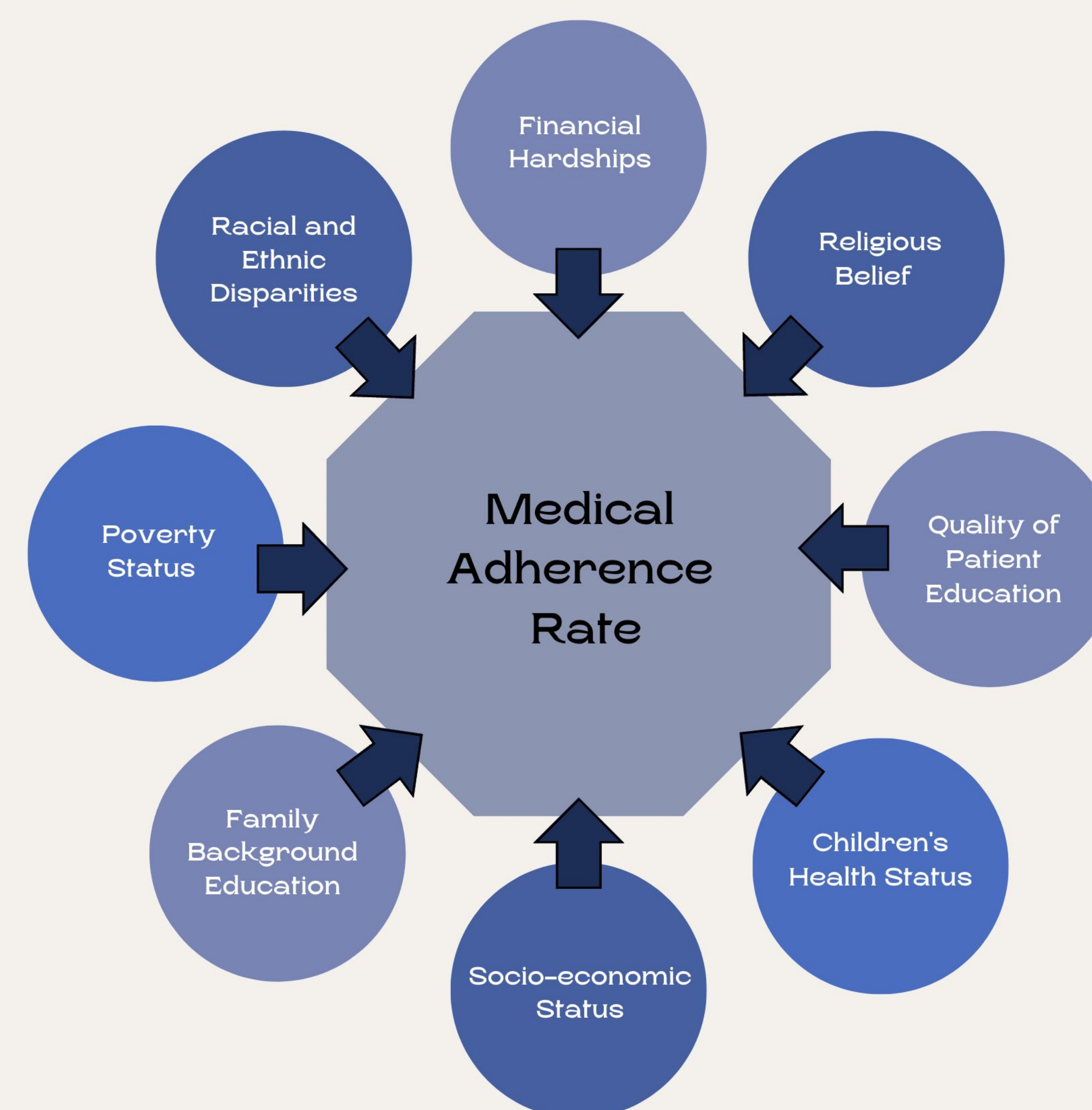


Figure 3.

Figure 3.

The diagram depicts the socioeconomic factors that were found to have associations with the medication adherence rate of the pediatric population with medical complexity in the United States.

Discussion

- Scarcity of studies on this topic – as reflected in the small number of articles found and reviewed.
- To better understand the medical adherence rate among the medically complex pediatric population of the U.S., phase two of this study has been conducted by extracting data directly from the NHIS database for analysis.
- Identification of the specific factors which influence medication adherence in the medically complex pediatric population was conducted with the intent of custom-making a medication therapy management (MTM) program specific to this novel population.

Acknowledgement

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Methodology

