Asthma, a leading cause of childhood chronic disease, affects over 2.4 million adolescents and their families in the United States.

Non-Hispanic black adolescents and adolescents from families with low income have disproportionately higher asthma prevalence and worse asthma morbidity and mortality rates compared with adolescents of other races and ethnicities.

Effective asthma self-management is essential for the health, quality of life, and economic well-being of adolescents with asthma and their families.

Most studies about adolescents with asthma have focused on medication adherence, rather than on the specific preventive and relief behaviors involved in asthma self-management.

Conduct a secondary analysis using baseline data from a multi-site adolescent asthma self-management intervention-trial to explore the relationships among selected adolescent personal factors, environmental influences within the family, and adolescent asthma preventive and relief self-management behaviors among subgroups reflecting early, middle, and late adolescence.

Introduction

• Asthma, a leading cause of childhood chronic disease, affects over 2.4 million adolescents and their families in the United States.

• Non-Hispanic black adolescents and adolescents from families with low income have disproportionately higher asthma prevalence and worse asthma morbidity and mortality rates compared with adolescents of other races and ethnicities.

• Effective asthma self-management is essential for the health, quality of life, and economic well-being of adolescents with asthma and their families.

• Most studies about adolescents with asthma have focused on medication adherence, rather than on the specific preventive and relief behaviors involved in asthma self-management.

Purpose

Conduct a secondary analysis using baseline data from a multi-site adolescent asthma self-management intervention-trial to explore the relationships among selected adolescent personal factors, environmental influences within the family, and adolescent asthma preventive and relief self-management behaviors among subgroups reflecting early, middle, and late adolescence.

Aims

Specific Aim 1
Determine how asthma self-management preventive and relief behaviors differ by age subgroups (i.e., early, middle, and late adolescence) in adolescents with persistent asthma.

Specific Aim 2
Determine the extent to which adolescent personal factors (e.g., sex and asthma self-management self-efficacy) and environmental influences (e.g., family history of asthma, family socioeconomic status, and perceived family support) within the family predict asthma self-management preventive behaviors across age subgroups (i.e., early, middle, and late adolescence) in adolescents with persistent asthma.

Specific Aim 3
Determine the extent to which adolescent personal factors (e.g., sex and asthma self-management self-efficacy) and environmental influences (e.g., family history of asthma, family socioeconomic status, and perceived family support) within the family predict asthma self-management relief behaviors across age subgroups (i.e., early, middle, and late adolescence) in adolescents with persistent asthma.

Methods

Design: A secondary analysis of cross-sectional baseline data using a descriptive-correlational design

Sample: Convenience sample of 373 predominately (78.6%) non-Hispanic black adolescents (ages 12 – 20 years) with persistent asthma, 50% female

Setting: Adolescents with persistent asthma were recruited from clinics, schools, churches, health fairs, and other community locations and events by three urban study sites for the primary study
• Memphis, TN (University of Tennessee Health Science Center)
• Baltimore, MD (Johns Hopkins University)
• Buffalo, NY (University of Buffalo)

Instruments:
• Demographic Information Form
• Asthma Information Form
• Asthma Self-management Indices
• Perceived Social Support-Family Measure

Planned Data Analyses:
• Descriptive Statistics
• Pearson’s or Spearman’s Correlation Coefficients
• Multiple Linear Regression

Findings from this theory-guided study could:
• Better inform clinical practice and the care of adolescents with asthma and their families, especially those from an understudied population disproportionately affected by asthma and adverse health outcomes
• Be used to design more tailored and developmentally-appropriate asthma self-management interventions for adolescents and their families
• Determine the utility of Social Cognitive Theory in explaining outcomes and informing solutions in this population experiencing significant health disparities

Acknowledgments

The data from this project is attributed to a grant funded by the National Institute of Nursing Research, the National Institutes of Health R01NR014451-01A1, 2014-2019. This study was supported by the Tennessee Nurses Association District 1 Tennessee Nurses Foundation Scholarship and a stipend from the University of Tennessee Health Science Center, College of Graduate Health Sciences.