

Exploring the Therapeutic Potential of Honey in Children: A Mixed-Methods Investigation into its Efficacy for Allergies, Coughs, and Gastrointestinal Issue



Ferhat Ozturk*¹, Clarysa Luna ¹

The University of Texas at San Antonio, San Antonio TX, 78249

Abstract

This paper presents an exploration on therapeutic potential of honey for allergies, coughs, and gastrointestinal issues in children of the ages two to twelve. Recognized for its historical medicinal use and contemporary anecdotal evidence, honey's efficacy in pediatric health management remains underexplored in hands-on research. This investigation aims to comprehensively examine honey's effectiveness across a range of common childhood ailments. Two surveys have been developed to gather data from a healthcare professional and parents/caregivers perspective. One targets parents and caregivers, while the other is aimed at healthcare professionals such as physicians, nurses and pharmacists. Participants are assigned one or both surveys, each containing about six single-choice or multiple-choice questions about honey usage in children. Data collection will be facilitated through standardized surveys via Microsoft Forms, with responses collected anonymously over an extended period. Qualitative inquiry involved semi-structured focus groups with parents and caregivers of children who have used honey as a therapeutic remedy. Thematic analyses were employed to identify recurring themes and patterns in the qualitative data, providing insights into the perceived benefits and challenges associated with honey-based interventions. Results from the ongoing quantitative phase reveal promising trends indicating honey's potential efficacy in alleviating symptoms of allergies, coughs, and gastrointestinal issues in children. Additionally, qualitative findings offer valuable contextual understanding, highlighting factors influencing caregivers' decisions and experiences with honey-based treatments. This interdisciplinary approach underscores the importance of integrating quantitative evidence with qualitative perspectives to inform holistic assessments of alternative remedies in pediatric healthcare. The synthesis of quantitative and qualitative data enriches our understanding of honey's therapeutic role, providing a foundation for further research and potential integration into clinical practice and developing standard regimens for honey. This study contributes to advancing knowledge in pediatric healthcare and emphasizes the need for continued exploration of medical-grade honey in contemporary medical settings.

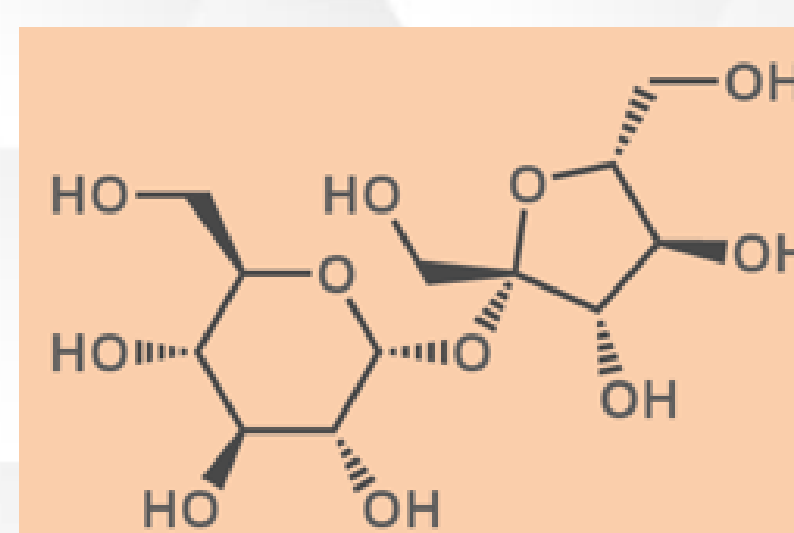
Keywords: Children, pediatrics, ailments, allergies, cough, gastrointestinal, honey, medical-grade

Introduction

In recent years, there has been a growing interest in utilizing honey as a natural remedy for various ailments, particularly among pediatric populations. Honey, a substance long revered for its medicinal properties in traditional medicine practices, has garnered attention for its potential in alleviating symptoms of common childhood illnesses. However, the lack of regulation in the honey industry poses challenges in understanding its true therapeutic benefits and ensuring its safe usage, especially for children. This research paper aims to open a clear set door for the realm of honey usage in pediatric healthcare, shedding light on its diverse types and exploring its unregulated status within the medical landscape. Moreover, it seeks to enhance the groundbreaking efforts of the Honey Pathway research initiative at the University of Texas at San Antonio (UTSA), spearheaded by Dr. Ozturk, in unraveling the therapeutic mechanisms of honey and paving the way for natural alternative medications for children. One of the primary focuses of this paper is to elucidate the distinctions among various types of honey and their respective medicinal properties. From Manuka honey to medical-grade honey, each variant offers a unique composition of bioactive compounds, which may confer specific health benefits. However, the lack of standardized guidelines and quality control measures raises concerns regarding the consistency and efficacy of these products, particularly in pediatric healthcare settings. Furthermore, the absence of regulatory oversight in the honey industry impacts the urgent need for robust scientific research to validate its therapeutic claims and ensure its safety, particularly for vulnerable populations like children. The Honey Pathway research initiative at UTSA stands at the forefront of this endeavor, employing rigorous scientific methodologies to explain the biochemical pathways through which honey exerts its therapeutic effects.

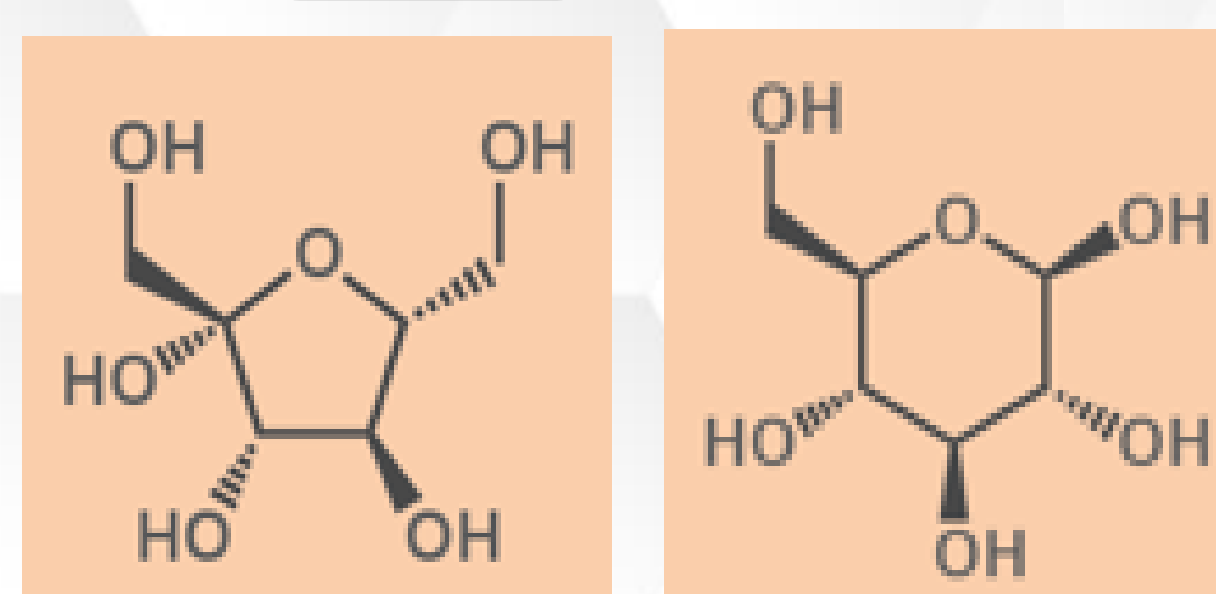


Components of Honey



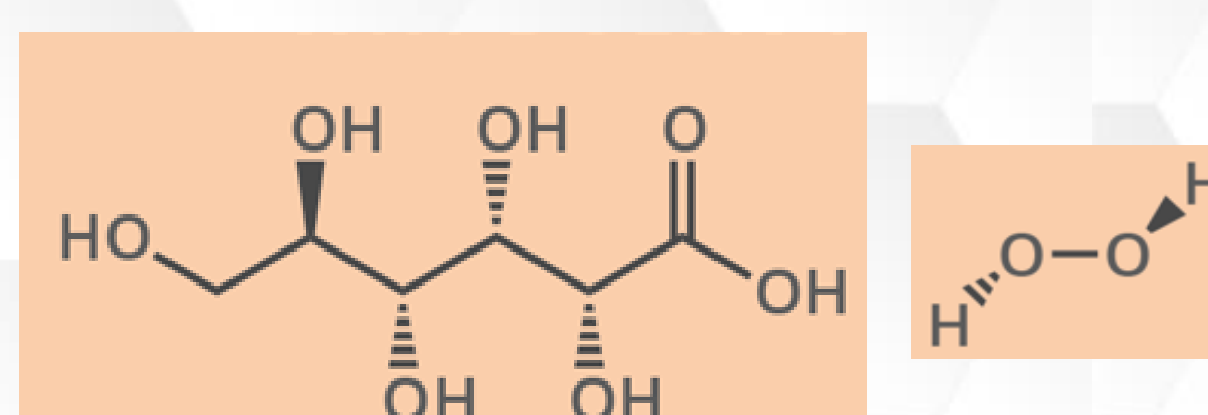
- Sucrose is a type of sugar which is commonly known as table sugar. Chemically, it is a disaccharide composed of one molecule of glucose and one molecule of fructose, linked together.
- As bees collect nectar, it gets stored in a specialized compartment called the honey stomach, distinct from their regular stomach. Within this storage, enzymes breakdown the nectar in complex sugars like sucrose into simpler sugars, such as glucose and fructose.

SUCROSE



- Glucose and fructose are simple sugars, also known as monosaccharides, and they are one of the primary sources of energy for living organisms. It is a crucial carbohydrate in biology. Glucose is a precursor for synthesizing other important molecules such as proteins and fats.

GLUCOSE & FRUCTOSE



- Gluconic acid is a compound which comes from glucose through oxidation by certain microorganisms, such as *Gluconobacter* and some fungi. This mild organic acid is commonly found in honey, fruits and wine.

GLUCONIC ACID & HYDROGEN PEROXIDE

- Gluconic acid, formed when bee secretions act glucose, stands out as primary acid in honey. This, alongside other acids, maintains honey's pH at a low level, usually between 3 and 4. This acidic environment, combined with a small amount of hydrogen peroxide, prevents bacteria growth in honey.

Surveys

Healthcare Professionals

- What is your healthcare professional title?
- How often do you recommend honey as a remedy for children suffering from allergies, coughs, or gastrointestinal issues?
- In your professional opinion, what are the potential benefits of using honey for children with these health issues? (Select all that apply)
- Are you aware of any specific guidelines or recommendations regarding the use of honey for pediatric patients?
- Have you encountered any adverse effects or complications related to the use of honey in pediatric patients?
- How do you typically advise parents regarding the safe administration of honey to children with health issues?
- Would you be interested in receiving more educational resources or professional guidelines regarding the use of honey in pediatric care? (If yes, add your email below)
- Email address

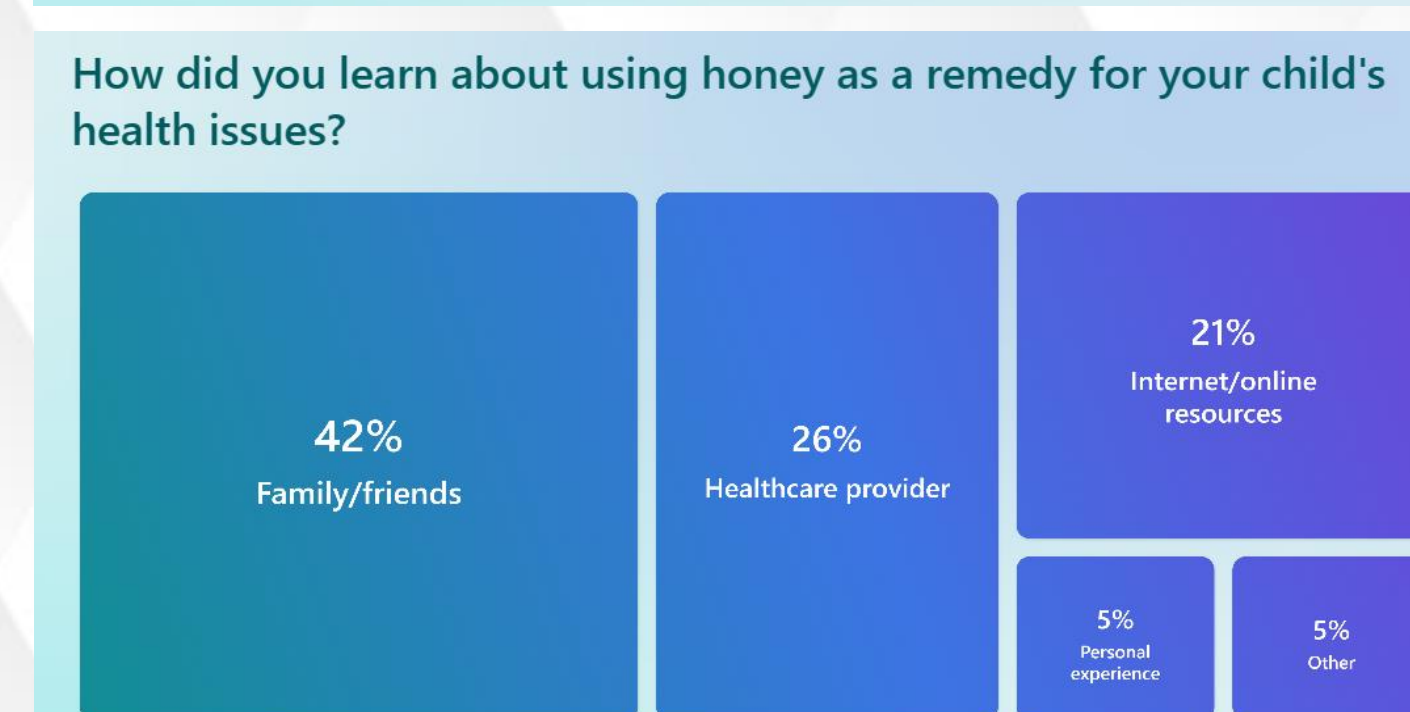
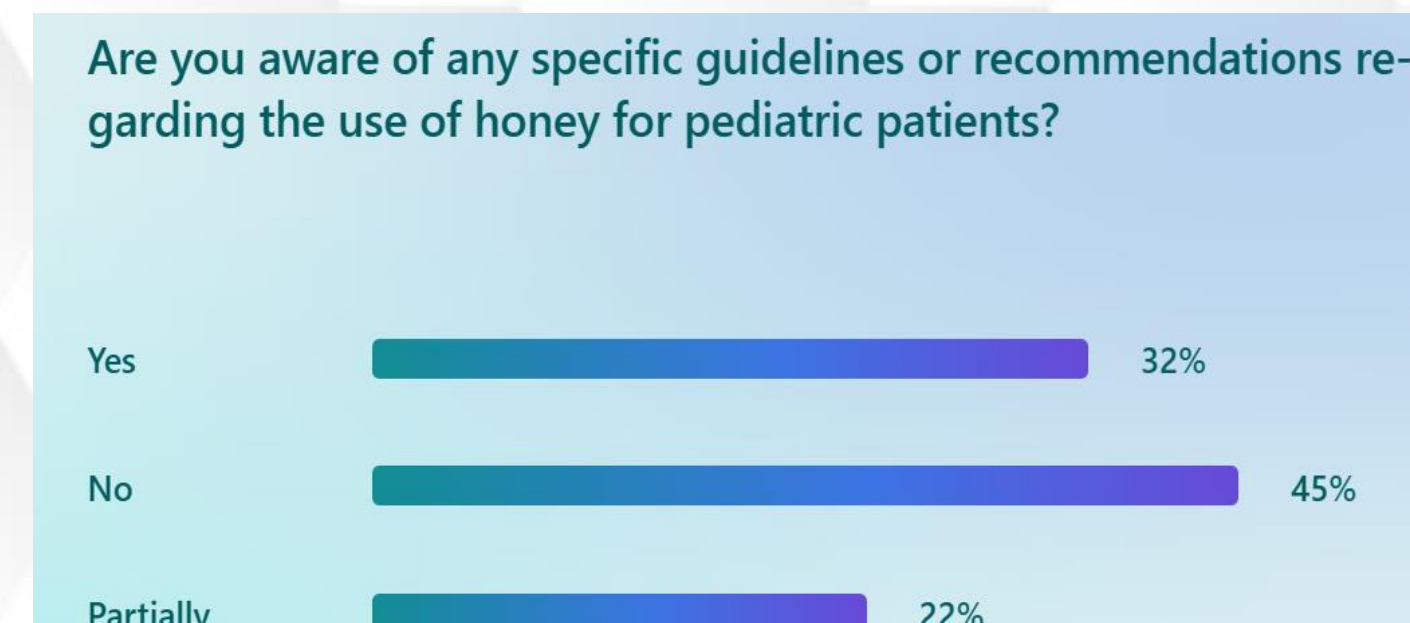


Parents & Caregivers

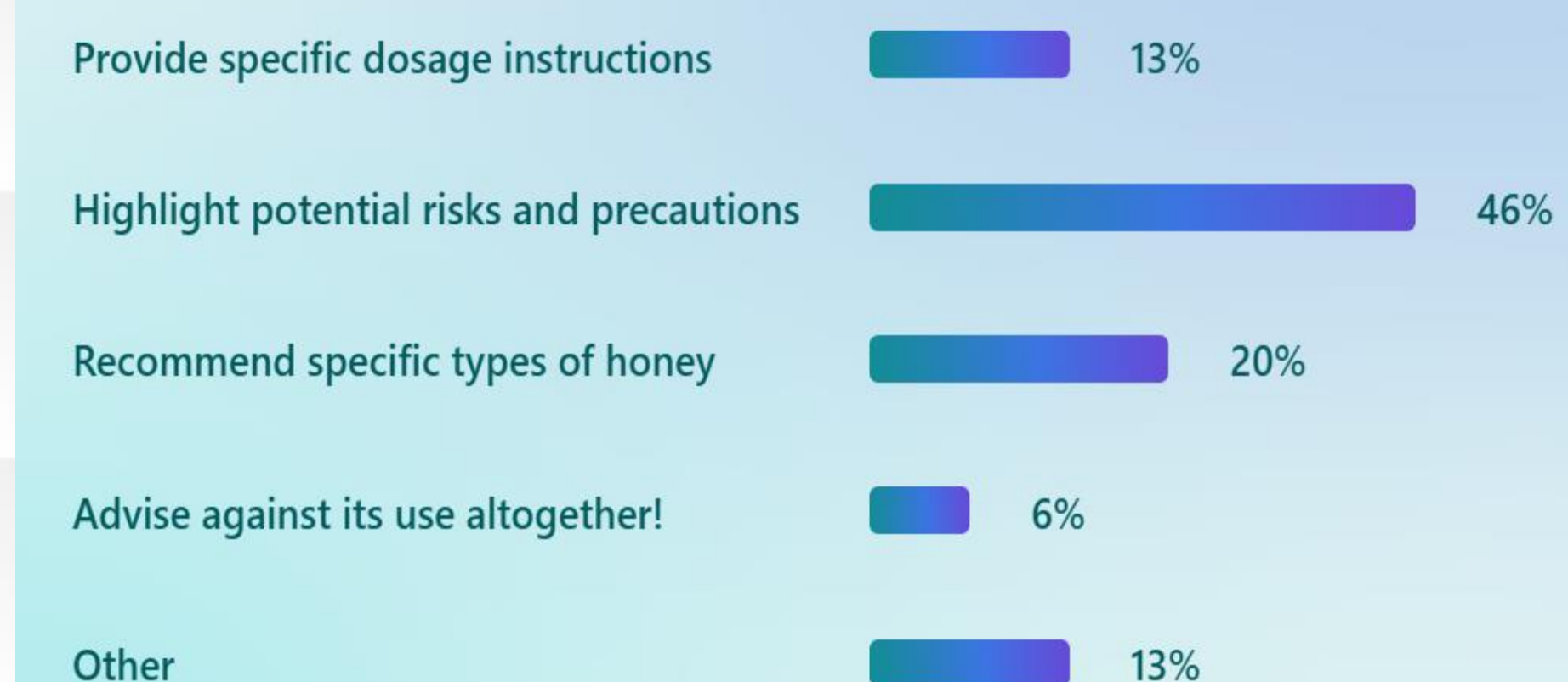
- How frequently do you administer honey to your child as a remedy for allergies, coughs, or gastrointestinal issues?
- What types of honey products do you prefer for your child's condition? (Select all that apply)
- On a scale of 1 to 5, how effective do you find honey as a remedy for your child's health issues?
- Are you aware of any potential risks or side effects associated with giving honey to children under the age of one?
- How did you learn about using honey as a remedy for your child's health issues?
- Would you be interested in receiving more information or resources about the safe and effective use of honey for children's health issues? (If yes, add email below)
- Email address



Results from Ongoing Collected Data



How do you typically advise parents regarding the safe administration of honey to children with health issues?



Conclusion

In closing our exploration into the therapeutic potential of honey in children, it becomes increasingly evident that we are bridging two paths illuminating by both science and tradition, where the ancient wisdom of natural remedies converges with the rigorous methodologies of modern research. Through the lens of this interdisciplinary journey, we have unraveled a tapestry woven with threads of promise, insight, and collaboration. Our investigation, rooted in the historical medicinal use of honey and propelled by contemporary scientific inquiry, has shed light on its efficacy in addressing several pediatric ailments, ranging from allergies and coughs to gastrointestinal issues. As we navigate through the wealth of data collected from surveys, focus groups, and scientific literature, we are met with a blend of perspectives and experiences, each contributing to our collective understanding of honey's therapeutic role in pediatric healthcare. Indeed, the synthesis of quantitative evidence and qualitative insights has allowed us to paint a comprehensive picture of honey's impact on children's health. From the statistical trends indicating honey's potential efficacy to the narratives revealing caregivers' experiences and perceptions, every piece of information adds depth to our understanding and informs our future endeavors. Yet, as we stand at the door of discovery, we recognize that our journey is far from complete. There are still valleys to traverse and peaks to ascend, as we enter deeper into the mechanisms through which honey exerts its healing influence. Moreover, there are bridges to build, forging connections between the realms of traditional wisdom and contemporary medical practice, to ensure that the benefits of honey reach those who stand to gain the most—our children. In the spirit of collaboration and innovation, we envision a future where honey stands as a cornerstone of pediatric healthcare—a natural, accessible, effective, medical-grade treatment for common childhood ailments. We remain fueled by optimism and determination, knowing that our efforts could impact the lives of countless children and their families. Together, let us continue to explore, to question, and to discover. Let us harness the power of nature's golden elixir to nurture the health and well-being of our youngest generation. And let us do so with a steadfast commitment to scientific hardship, cultural sensitivity, and the enduring belief that a better, brighter future lies ahead—one where all feels honey's healing touch.

References



All honey sample donors and beekeeper associations