Childhood Asthma and Consanguinity: Is There a Relationship? Maybe A Systematic Review Can Answer.

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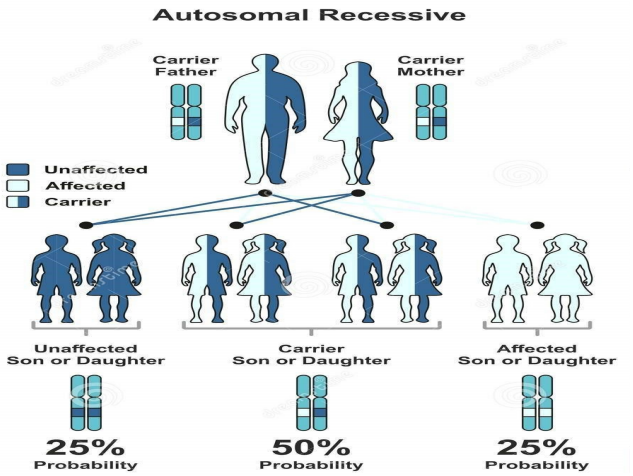
Background

- Asthma is the most common chronic disease among children.
- It is a complex disease caused by interactions of environmental and biological factors.
- Asthma runs in families suggesting a genetic component of this multifaceted pathology
- Recently, childhood asthma has been linked to a genetic causality pathway
- Consanguinity (cousins union) is a common marital practice in many parts of the world and among different ethnicities



Objectives

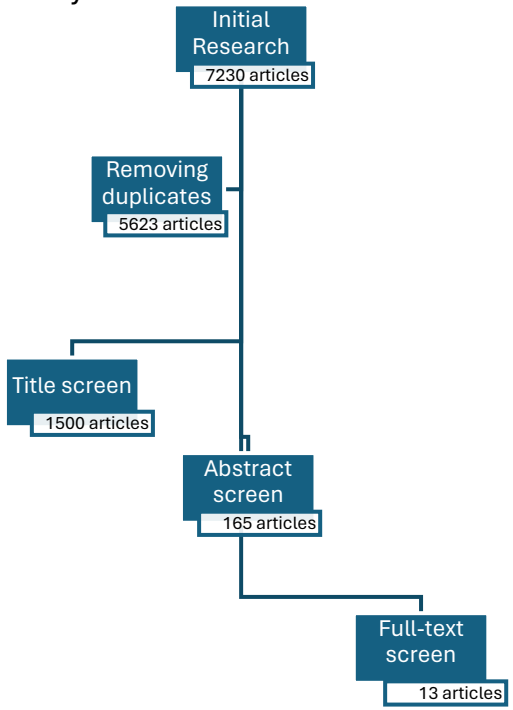
- To explore the available literature to understand possible links between childhood asthma and consanguinity
- To weigh on the quality of the available evidence

Methodology

- A literature review of all possible published English articles addressing links between childhood asthma and consanguinity
- Four search engines (PubMed, MEDLINE, Google Scholars, and Saudi Digital Library) were used
- Non-English articles and unpublished data were not included
- Two paired reviewers conducted screens and reviews. In case of conflict between reviewers, the principal investigator was able to resolve any conflict with a final decision

Results

- Using over 25 keywords yielded over 7000 articles



- All 13 studies except one found a positive correlation between childhood asthma and consanguinity

Results

- Children born to consanguineous parents are more likely to have asthma
- Consanguinity can put a child at risk of severe asthma
- The lone study that failed to establish a correlation between childhood asthma and consanguinity was a case-control design, lacked proper matching, and did not comment on all forms of consanguinity rates among controls
- All studies were observational studies and causality cannot be established

Discussion and Conclusion

- Consanguinity and childhood asthma are positively correlated
- This well-established connection can impact the incidence and severity of childhood asthma.
- The findings provide another example of the role of genetics in childhood asthma and might suggest an autosomal recessive pattern of inheritance

References will be shared upon request: yosseflalnasser@gmail.com

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