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### An Integrative Review of School-Based Interventions for Addressing Childhood Obesity

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Seereeram, Marcel Mr; Trojand, Torri N. Ms; McMillan, Lindsay Ms; Johnson, Kian Ms; and Amicarelli, Madeline Ms, "An Integrative Review of School-Based Interventions for Addressing Childhood Obesity" (2022). *UWill Discover Conference*. 13.

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# An Integrative Review of School-Based Interventions for Addressing Childhood Obesity

Madeline Amicarelli, BScN, RN; Kian Johnson, BScN, RN; Lindsay Mcmillan BScN, RN; Marcel Seereeram BScN, RN and Torri Trojand, BScN, RN



# Introduction and Background

- Childhood obesity is a global issue that is on the rise
- 30-40% of children ages 5-17 are considered obese in North America
- Obesity rates have more than tripled over the past 30 years (Nickles et al., 2021)
- Childhood obesity is related to cardiovascular illnesses such as hypertension, high cholesterol, diabetes and cancers
- Social determinants of health are a key component in childhood obesity with children from lower socioeconomic status having higher rates of obesity
- Since children spend a considerable amount of time at school, it is thought to be the ideal location to implement a childhood obesity intervention.



# Introduction and Background

- Due to increasing rates of obesity among children it is necessary to create strategies and interventions to combat and reduce these numbers
- Interventions to reduce childhood obesity should consider, socio-demographics, and risk factors and not solely lifestyle modifications
- We conducted a literature review to explore current research of the topic to identify gaps, what interventions are effective and limitations





## Methods

- Utilized Whittemore and Knaffl's integrative review strategy
- Utilized electronic databases supplied through the University of Windsor
- CINAHL & Pubmed
- Search terms included; "Childhood obes\*" & combined separately with "nutrition\*" & "education\*"



Search  
criteria  
included:



- Includes childhood obes\*
- Includes nutrition\* education\*
- Peer reviewed research articles written in english
- Titles indicating childhood or adolescent obesity as the main topic
- Published within the last 5 years (2016-present)
- School based interventions
- Childhood obesity prevention



Exclusion  
criteria  
included:



- Obesity after childhood trauma
- Obesity related to medical conditions
- Obesity rates related to adults
- Qualitative articles



# Study Methods Utilized

**Quantitative**

**Mixed methods**



**Evaluation took place through an evidence table**

**Weekly input from group members**

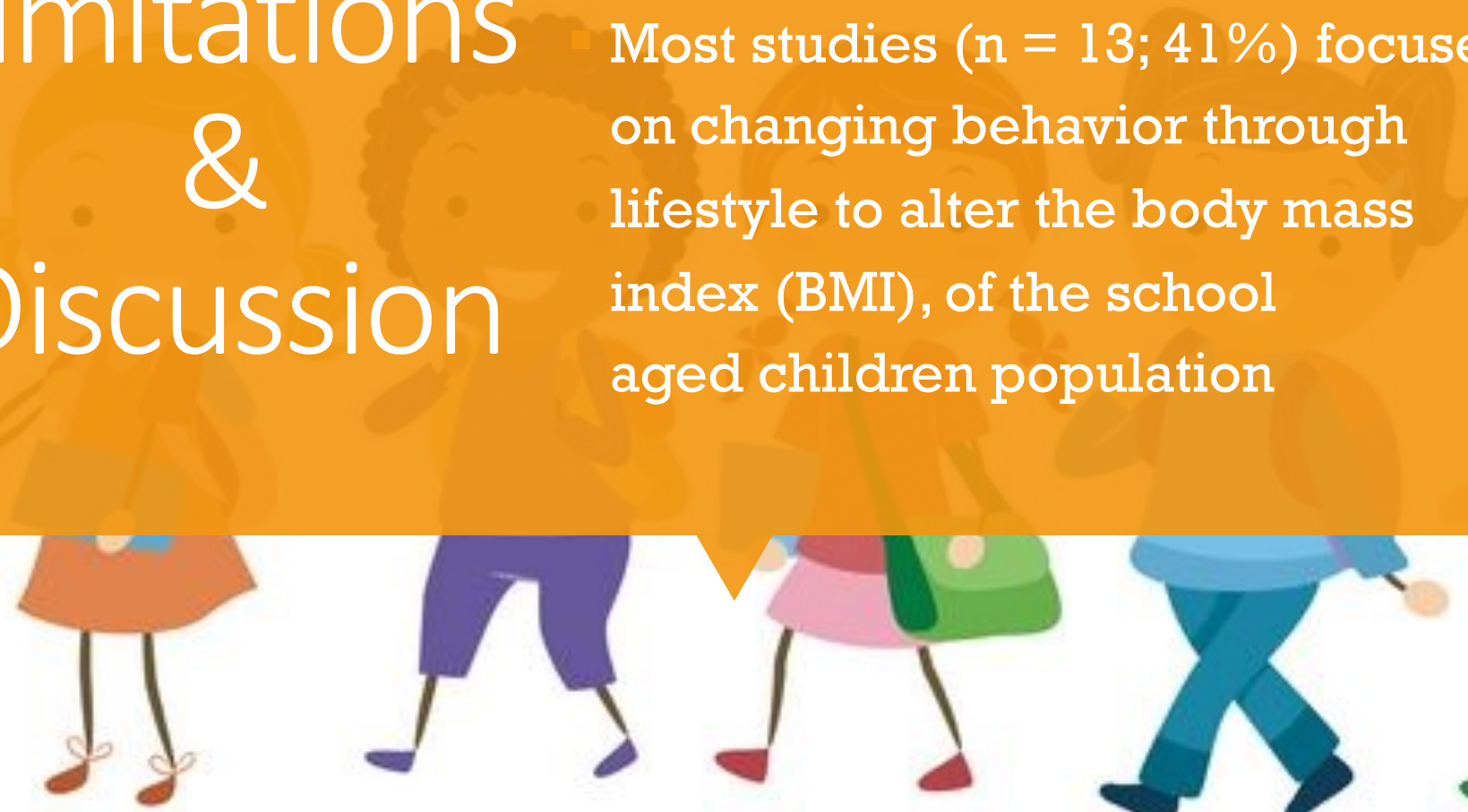


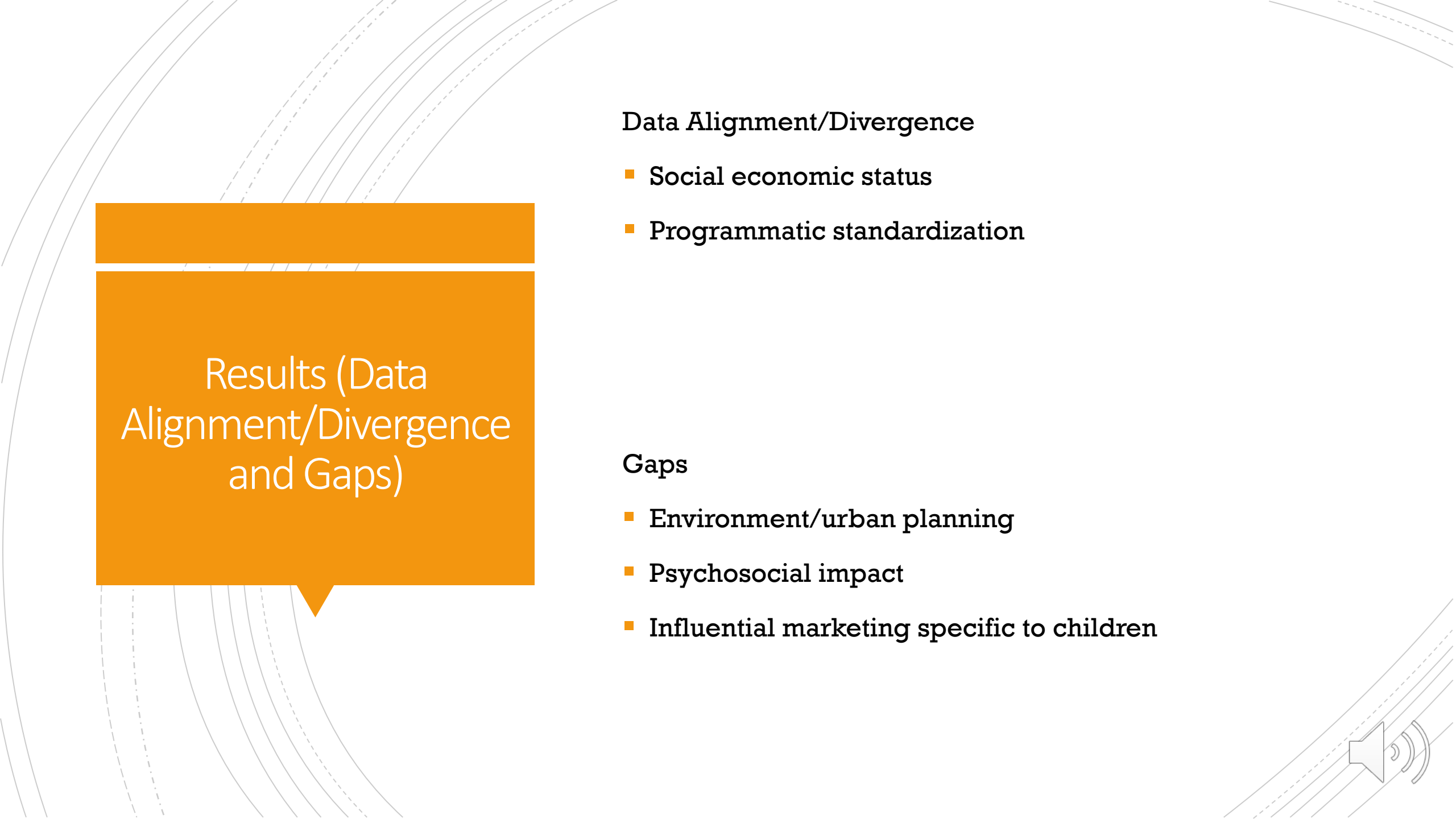




# Limitations & Discussion

Most studies ( $n = 13$ ; 41%) focused on changing behavior through lifestyle to alter the body mass index (BMI), of the school aged children population





## Results (Data Alignment/Divergence and Gaps)

### Data Alignment/Divergence

- Social economic status
- Programmatic standardization

### Gaps

- Environment/urban planning
- Psychosocial impact
- Influential marketing specific to children

# Recommendations

- **Increased parental involvement in:**
  - Changing perception of a healthy lifestyle
  - Dietary needs of children
  - Decreasing sedentary lifestyle
  - Education in the benefits of physical activity
- **Changes at a macro level:**
  - Government legislation to increase capacity for change
  - Additional healthy school initiatives programs
  - Decreasing the disparity gaps among families
  - Psychosocial contribution/affects
- **Longitudinal research:**
  - Childhood obesity into adulthood



# Conclusion

- Support for larger trial assessing the impact of the school-based intervention and the need.
- Implementation of educational intervention:
  - Increased the healthy eating practices
  - Decreased sedentary lifestyle
  - Increased physical activity.
- Changes in parental perception, parental involvement, government legislation and longitudinal research is needed to aid in combating the increasing obesity rates in childhood.



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