Are Neighbourhood Characteristics Associated with Quality of Child Care Programs?

Or

Do Neighbourhoods Matter?

June 3, 2016
My aim for this presentation

• Present evidence on a relationship between neighbourhood characteristics and child care quality
• Using equity lens initiate a discussion on funding priorities
• Raise the question whether equitable access to quality child care is even possible within Ontario’s current market system
Why Focus on Neighbourhoods?

• Focus of policy, funding and research
  – Moving To Opportunity (MTO - US)
  – Community Action Program for Children (CAPC)
  – Understanding Early Years (UEY)
  – Better Beginnings, Better Futures
  – Human Early Learning Partnership (British Columbia)
Why Focus on Neighbourhoods?

• Provision of research to support policy development
  – there is virtually no research in this area
• Specific issues:
  – Equitable access to high quality child care
  – Targeted vs. universal investments
  – Service system design
The Problems with Neighbourhood Effects Research

• Associations vs. effects

• Hypothesis testing is difficult while large number of possible causal mechanisms have been identified (Galster, 2012)

• Many theories without proof
  – “empirically empty frameworks” (MacLennan, 2013)
  – “Black-box” analogy (Jenks & Mayer, 1990)

• Some researchers argue that there are no neighbourhood effects ... especially in Canada
Why Focus on Neighbourhoods?

• From Toronto’s review of funding options we know that:
  – Centres in higher SES neighbourhoods:
    • Pay higher wages to ECEs and Assistants
    • Have a higher proportion of care delivered by ECEs
  – Children living in higher SES neighbourhoods have better access to service (less children per space and less low-income children per subsidized space)
Defining Neighbourhoods

• Most studies use administrative boundaries
  – Zip codes: US
  – Census areas (usually Census tracts): US, Canada and other countries
  – Eligibility for services such as subsidized lunches (UK)
  – Planning districts/areas

• Sometimes community assists in definition (BC)

• In Toronto 140 neighbourhoods defined in a collaboration between City staff and community agencies
Measuring Neighbourhoods

• Single measure (e.g. income) vs. index

• Neighbourhood Equity Score (NES)
  – Used by Toronto and other funders to allocate resources (Priority Neighbourhoods); consensus based
  – Concept developed by World Health Organization
  – A composite of 15 different individual measures
  – Scores range (theoretically) from 0 to 100
    • Toronto range = 21.4 to 92.1, average= 57.8
Some Neighbourhood Characteristics

- Area (km$^2$): $0.42 - 36.9$
- Children (0-5): $225 - 4,175$
- Children (0-5) per km$^2$: $360 - 2,607$
- Children (0-6) in Low Income Families: 4% - 64%
- Lone parent families: 11% - 51%
- Immigrant families: 18% - 75%
- Visible minorities: 9% - 94%
- English as Second Language: 3% - 64%
- Family income – median: $29,511 - $267,929
- Family income – mean: $38,181 - $657,613
Neighbourhood Equity Scores for City of Toronto Neighbourhoods

Source: City of Toronto Open Data Initiative
Evidence – part 1

Overall AQI Score by Neighbourhood Status

- Lowest
- 2nd
- 3rd
- 4th
- Highest
AQI Scores by NES Quintile

NES quintile
- Lowest
- 2nd
- 3rd
- 4th
- Highest

Total AQI
Environment
Interactions
Why Focus on Interactions?

• Quality of interactions is predictive of longer term child outcomes (Pianta et al., 2005; Sylva et al. 2006; Thomason & LaParo, 2009)

• Interactions are distinguishable from physical aspects of the child care environments (Cassidy et al., 2005; Sakai et al., 2003; Sylva et al.; Perlman & Falenchuk, 2010; Thomason & LaParo, 2009)

• Parents have difficulty assessing aspects quality that are not easily observable (Cryer et al., 2003)

• Child care environments are mostly regulated, easily observable and therefore can be assumed to be less affected by exogenous factors
Figure 1 - A generalized model of neighbourhood effects on child care programs

- **Neighbourhood**
- **Child Care Family**
- **Centre Structure**
- **Program Interactions** (AQI items 25-31)
- **Program Environment** (AQI items 1-24)

Bold lines represent paths that are being investigated; direct effects are represented by solid lines, indirect effects by dash lines.
Proportion of Centre by Type

Centre type
- Public
- Non-profit multi
- Non-profit single
- Commercial multi
- Commercial single

NES quintile
- Lowest
- 2nd
- 3rd
- 4th
- Highest
Interactions Scores by Type of Centre and NES Quintile

- Commercial single
- Commercial multi
- Non-profit single
- Non-profit multi
- Public

NES quintile:
- Lowest
- 2nd
- 3rd
- 4th
- Highest
## Other Neighbourhood Indicators

<table>
<thead>
<tr>
<th></th>
<th>Total</th>
<th>Environment</th>
<th>Interactions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total OC score*</td>
<td>1.0000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Environment score* (excl. Interactions)</td>
<td>0.9726</td>
<td>1.0000</td>
<td></td>
</tr>
<tr>
<td>Interactions score*</td>
<td>0.5514</td>
<td>0.3425</td>
<td>1.0000</td>
</tr>
<tr>
<td>% Spaces with POS Contract</td>
<td>-0.0177</td>
<td>0.0387</td>
<td>-0.2084</td>
</tr>
<tr>
<td>% Spaces Commercial</td>
<td>-0.1593</td>
<td>-0.1320</td>
<td>-0.1673</td>
</tr>
<tr>
<td>ICE Income</td>
<td>0.0926</td>
<td>0.0110</td>
<td>0.3279</td>
</tr>
<tr>
<td>% Children 0-6 in families below LICO</td>
<td>-0.1068</td>
<td>-0.0411</td>
<td>-0.2783</td>
</tr>
<tr>
<td>% Families with Income &gt;$100,000</td>
<td>0.0780</td>
<td>-0.0078</td>
<td>0.3357</td>
</tr>
<tr>
<td>Average Family Income</td>
<td>-0.0152</td>
<td>-0.0806</td>
<td>0.2241</td>
</tr>
<tr>
<td>Median Family Income</td>
<td>0.0311</td>
<td>-0.0461</td>
<td>0.2860</td>
</tr>
<tr>
<td>ICE Education</td>
<td>0.0557</td>
<td>-0.0391</td>
<td>0.3603</td>
</tr>
<tr>
<td>Female Labour force participation</td>
<td>0.0901</td>
<td>0.0328</td>
<td>0.2413</td>
</tr>
<tr>
<td>Female Unemployment rate</td>
<td>-0.0845</td>
<td>-0.0129</td>
<td>-0.2879</td>
</tr>
<tr>
<td>% Visible minority</td>
<td>-0.0470</td>
<td>0.0167</td>
<td>-0.2443</td>
</tr>
<tr>
<td>% Immigrants</td>
<td>-0.1087</td>
<td>-0.0480</td>
<td>-0.2602</td>
</tr>
<tr>
<td>% Recent immigrants</td>
<td>-0.1359</td>
<td>-0.0988</td>
<td>-0.1870</td>
</tr>
<tr>
<td>% ESL</td>
<td>-0.1049</td>
<td>-0.0552</td>
<td>-0.2202</td>
</tr>
<tr>
<td>% Lone parents</td>
<td>-0.1069</td>
<td>-0.0273</td>
<td>-0.3325</td>
</tr>
<tr>
<td>Spaces / children under 6</td>
<td>-0.0615</td>
<td>-0.1119</td>
<td>0.1484</td>
</tr>
<tr>
<td>Children 0-6</td>
<td>-0.0726</td>
<td>-0.0399</td>
<td>-0.1466</td>
</tr>
<tr>
<td>Neighbourhood Equity Score</td>
<td>0.0923</td>
<td>-0.0124</td>
<td>0.4100</td>
</tr>
</tbody>
</table>

significant P<.1  
significant P<.05  
* Adjusted for program capacity
Impact of Removing the Outliers

Examples of removing neighbourhoods with only one centre from the analysis:

- % of females with BA: .30 -> .41
- ICE – female education: .28 -> .39
- % visible minority: -.21 -> -.25
- ICE – income: .29 -> .37
- Children in LICO fams.: -.27 -> -.33
- % single parent fams.: -.36 -> -.36
A brief look at staffing in single, non-profit centres

• There is a weak relationship (r=.14) between percentage of ECE staffing and Interaction scores

• There is a weak relationship (r=.18) between hourly teaching staff compensation and interaction score
  – This increases to a moderate (r=.25) if outliers are eliminated

• There is a moderate relationship (r=.32) between compensation and NES

• There is a moderate relationship (r=.26 between percentage of ECE staffing and NES
Interactions score, Single Non-profit Centres

Mean = 62.9

Neighbourhood Equity Score

Centres Predicted score

Interactions score
Some considerations

• The is a difference between being able to explain and being able to act on the knowledge

• The danger of ignoring the neighbourhood context
  – Blind imposition/adoption of “best practices”
  – Blaming the victim

• The struggle of universal vs. targeted

• Rewarding good performance vs. intervention for improved performance
...and the market will ensure affordable, high quality child care for everyone...

with apologies to Charles Schultz
Barriers to Equitable Access to Quality

• Existing child care “system”
  – Market based approaches
  – Path dependency
  – Funding individuals vs. programs vs. system (J. Beach)

• Resistance to change

• Rhetoric of “choice” when little choice exists

• Lack of resources
  – Infrastructure
  – Funding
Remedies within the current system

- Rewards & incentives
- Sanctions
- Universal program supports
  - Training
  - Preparation time
  - Province-wide staff benefits (sick & study leave, pension plan)
- Targeted intervention
“Here is Edward Bear, coming downstairs now, bump, bump, bump, on the back of his head, behind Christopher Robin. It is, as far as he knows, the only way of coming downstairs, but sometimes he feels that there really is another way, if only he could stop bumping for a moment and think of it. And then he feels that perhaps there isn't.”

A.A. Milne, Winnie-the-Pooh
References


Galster, G. C. (2012). The mechanism(s) of neighbourhood effects: Theory, evidence, and policy implications (pp. 23–56). Springer


