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):   .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

NES

- 21.4 - 40.5
- 40.5 - 53.7
- 53.7 - 62.9
- 62.9 - 74.5
- 74.5 - 92.0

Source: City of Toronto Open Data Initiative

Evidence – part 1

Overall AQI Score by Neighbourhood Status

AQI Scores by NES Quintile

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

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

Interactions Scores by Type of Centre and NES Quintile

Average Interactions & Neighbourhood Scores

Interactions
- lowest 20% (red)
- (orange)
- middle 20% (light yellow)
- (light green)
- highest 20% (dark green)

NES
- lowest 20% (dark red)
- (orange)
- middle 20% (light yellow)
- (light green)
- highest 20% (dark green)

Source: City of Toronto Children's Services & City of Toronto Opend Data Intiative
Mapping software:QGIS

Interactions and Neighbourhood Equity Score

Other Neighbourhood Indicators

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

significant P<.1
significant P<.05

* **Adjusted for program capacity**

Interactions and Neighbourhood Level of Female Education

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

Interaction Scores, Single Non-profit Centres

Interactions score, Single Non-profit Centres

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

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*

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