

# Promoting Resilience in At-Risk Children

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# Acknowledgements

- David DeWit
- Big Brothers Big Sisters of Canada
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- Many children, families, mentors involved with BBBS Canada



**No conflicts of interest to declare**

# Outline

1. Risk and Resilience in Children
2. Mentoring
3. Adult-to-child mentoring: Big Brothers Big Sisters
4. Existing research
5. Ongoing research



# **1. Risk and Resilience in Children**

- Goal** - Optimal outcomes for children (presence of developmentally appropriate function/absence of disorder)
- Risk** - Decrease optimal outcomes/increase maladaptive outcomes
  - Psychosocial hardship (e.g., poverty, family disruption, maltreatment)

#### Ontario Child Health Study: Poor Children

31.6%	psychiatric disorder	(13.8%)
29.7%	poor school performance	(13.3%)
11.9%	social impairment	( 3.5%)
25.6%	regular tobacco use	(11.6%)
30.1%	chronic health problem	(17.6%)

- Biological factors (e.g., prenatal and perinatal infections)
- Timing, environment, number of risk factors important

# Resilience

- Not a characteristic of the child
- Dynamic process that reflects positive outcome in context of adversity
- Implies protective processes (biological/environment)

Mentoring as a protective process to increase resilience



## **2. Mentoring**



# The Odyssey

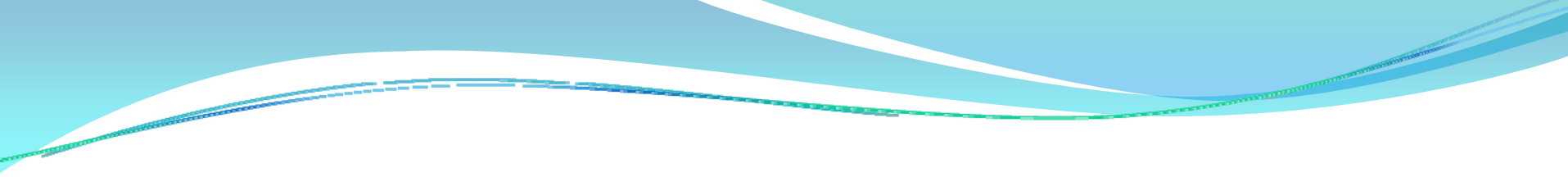
- Odysseus
- Mentor – friend of Odysseus, entrusted with education of Telemachus
- During his 20-year absence, wife Penelope and son Telemachus must deal with 108 suitors competing for Penelope's hand in marriage.
- Goddess Athena disguises herself and visits Telemachus to give advice and aid in search for father.



**Mentor:** a wise and trusted counsellor or teacher,  
an influential senior sponsor or supporter

**Mentorship:** developmental relationship between  
a more experienced mentor and a less  
experienced partner (protégé or mentee)



- 
- Supportive relationships with unrelated adults can mitigate negative effects of adversity on high-risk youth development
  - Werner and Smith 1992
  - OCHS (Rae-Grant et al, 1989)
    - 12 –16 year olds self-report
    - “confidant” associated with significant decrease risk of one or more psychiatric disorders



# **Traditionally, mentoring viewed as dyadic, face-to-face, long-term relationship**

- Psychosocial/Career-related
- Workplace/Academic/Community



**3. Adult-to-child Mentoring:  
Big Brothers Big Sisters**



**U.S.** - 1902 Ernest Coulter organized N.Y. Children's Court

- 1904 Ernest Coulter founds BB movement with 39 volunteers, Ladies of Charity befriends girls

- 1914 Lecture tour across U.S. with goal of national BBBS

- 1916 96 cities with BBBS

- 1920 Presidents become patrons

- 1977 Merger BBBS

# Canada

- 1913      Began
- 2001      Merger
- >150      Local agencies serving > 1,000 communities
- >23,000    Children matched with adults in 1:1 program
- goal      100,000 serviced in 2013

# International

- 12      countries



# TYPES

- 1:1 Community Match Program
- School-based Mentoring
- Couples for Kids / Cross-Gender Matching / Teen Mentoring / Internet Mentoring / Go Girls!
- Group-based waiting list programs



## **4. Existing Research**



**“oldest, largest, and most effective youth mentoring  
program in the U.S.”**

- Tierney, Grossman & Resch, 1995

1995

- **Public / Private Ventures; Tierney, Grossman & Resch. Making a Difference: An Impact Study of Big Brothers / Big Sisters**
- Will participation in a mentoring program result in important, observable changes in attitudes, perceptions and behaviour of at-risk young people?
- Outcomes: antisocial activities, academic outcomes, relationships with friends and family, self-concept, social and cultural enrichment.



- Information from youth / parent /caseworkers

- 1138 youth 10-16 years old who applied to BBBS program Oct 1991-Feb 1993, 8 U.S. agencies
- randomly assigned to treatment, waiting list
- compared baseline, 18 months

# Baseline Characteristics

- 60% male
- 60% minority
- 57.9% of parents had high school education or less
- 39.7% of households had income < \$10,000
- 14.6% of youth had experienced death of parent/guardian
- 39.9% of youth had experienced divorce/separation
- 27.1% of youth had experienced physical/emotional or sexual abuse
- 40.3% of youth had experienced family history of substance abuse

# Outcome

- 1138 youth enrolled (571 treatment, 567 control)
  - 1107 baseline (554 treatment, 553 control) 97.3%
  - 959 18-month (487 treatment, 472 control) 84.3%
  - 378/487 matched

<u>Outcome</u>	<u>Change</u>
<b>Antisocial Activities</b>	
Initiating Drug Use	-45.8%
Initiating Alcohol Use	-27.4%
Number of Time Hit Someone	-31.7%
<b>Academic Outcomes</b>	
Grades	3.0%
Scholastic Competence	4.3%
Skipped Class	-36.7%
Skipped Day of School	-52.2%
<b>Family Relationships</b>	
Summary Measure of Quality of the Parental Relationship	2.1%
Trust in the Parent	2.7%
Lying to the Parent	-36.6%
<b>Peer Relationships</b>	
Emotional Support	2.3%

# Less progress has been made assessing the mechanisms through which benefits are achieved

- Improved academic performance and decreased truancy in part due to improved parent-child relations and child self-esteem (Rhodes et al, 2000)
- Decreased substance use through improved parent-child relations, peer relationships and self-esteem, only in matches lasting 12 months or longer (Rhodes et al, 2005)
- Improved emotional and behavioural outcomes through enhanced support by non-familial adults and improved self-esteem (Dubois et al, 2002)



- **Youth and mentor characteristics existing before the match relationship**

(e.g., mentor gender, ethnicity, mentor confidence)

- **Characteristics of the youth-mentor relationship**

(e.g., quality of match relationship, length, amount of contact)

- **Related contextual factors**

(e.g., agency training and support, amount of contact with staff, parent support)

# Meta-analysis of mentoring programs for youth (Dubois et al, 2002)

- Aims:
  1. Assess overall effects of mentoring programs on youth
  2. Investigate variation in impact in association with
    - program design and implementation
    - participant youth characteristics
    - qualities of mentor-mentee relationships
    - outcomes assessed
- 55 studies
- Similarities between programs: at-risk youth, regular contact over time
- Differences between programs: basic goals and philosophy, format (alone vs. part of multicomponent program), size (373-47,000 +)

# Results

- **Overall effect size of 0.18**
- **Impact enhanced with “best practices”**
  - monitoring of program implementation
  - screening
  - matching mentors and youth on basis of one or more characteristics
  - prematch and ongoing training
  - supervision
  - support group for mentors
  - structured activities for mentors and youth
  - parent support or involvement
  - expectations of frequency of contact
  - length of relationship

# Improving youth mentoring interventions through research-based practices (Rhodes, 2008)

- Reviews 2002 – on: mixed results
- Meta-analysis 2002 – on: average effect size 0.08 – 0.32

“six-fold increase from just a decade ago...speaks volumes about the faith our society places in one-on-one relationships between vulnerable young people and caring adults...but what do we know about the effectiveness of this intervention strategy?”



## **5. Ongoing research**



- **Canadian research?**

- **Big Brothers Big Sisters Program Evaluation: Feasibility Study**  
**Hospital for Sick Children Foundation**

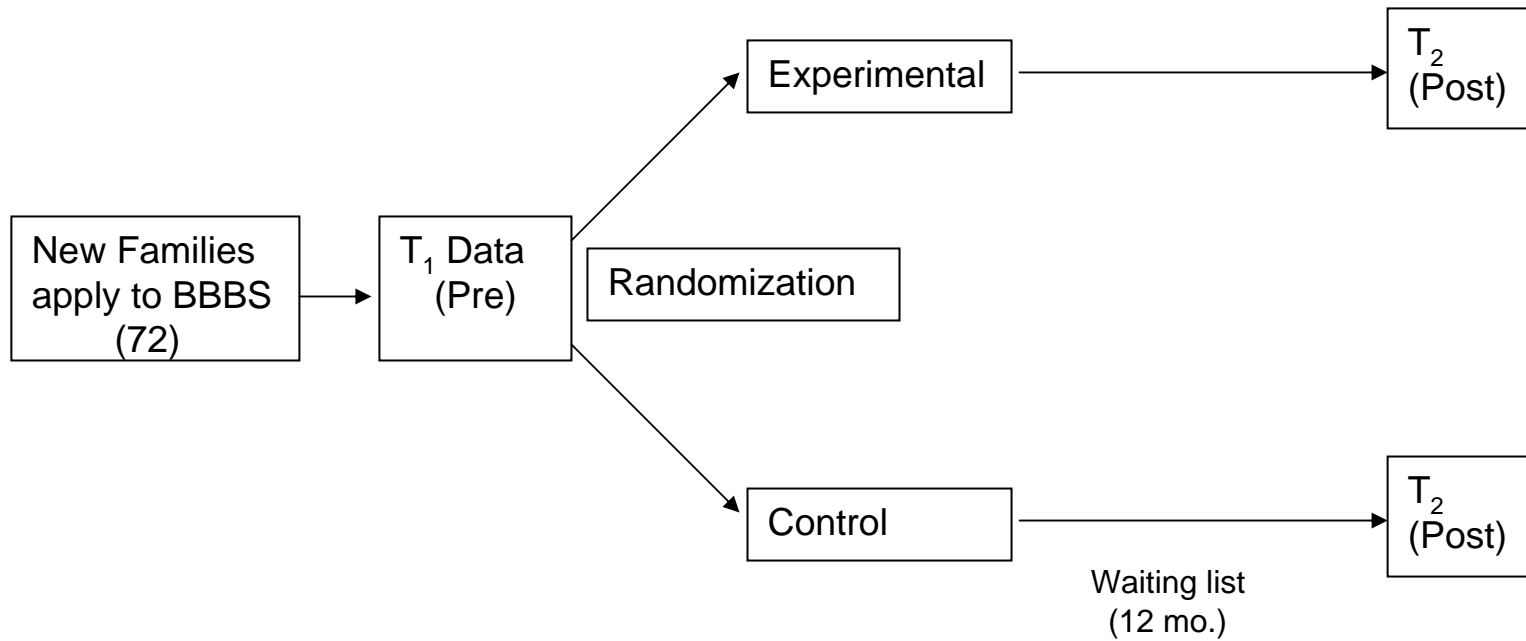
**BBBS Canada, Guelph, Hamilton-Burlington, Windsor**

- **Goal:** Assess feasibility of an RCT to evaluate BBBS community match programs at national level

- **Objectives:**

1. Assess willingness of new BBBS families and adult mentors to participate
2. Assess study attrition between pre- and post-data
3. Development of questionnaires for parents, children (7-14 years old), mentors

# Method



# Method

T<sub>1</sub> (Pre) – 60 min face-to-face interview-children  
– self completed questionnaire - parents

T<sub>2</sub> (Post) – same as above at 12 months  
– 30 min self completed questionnaire – mentor

Test-retest reliability at 4 months

# Outcome:

- Child (parent and child report) – academic and social competency  
family and peer relationships  
self esteem  
alcohol and drug use  
mental health  
behaviour
- Parent – mental health, social support, substance use
- Mentor – training, satisfaction with match process, quality of match, shared activities, amount of time

# Results

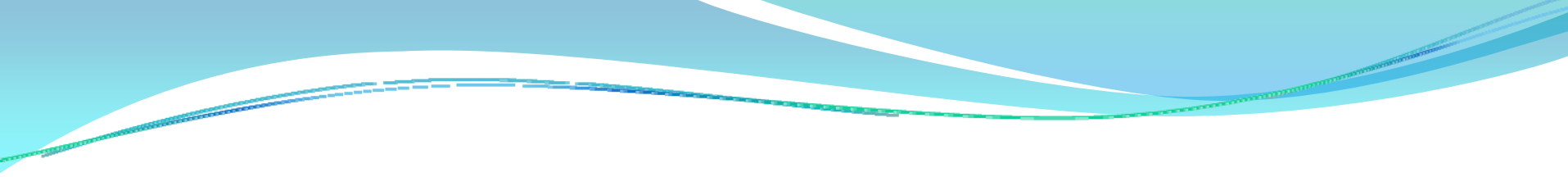
- 71/72 agreed (39 expt, 32 control)
- 12/72 families lost (7 expt, 5 control)
- 59 completed pre-post tests (33 expt, 26 control)
- Experimental and control groups and participants and dropouts were equivalent on majority of baseline demographics/outcomes

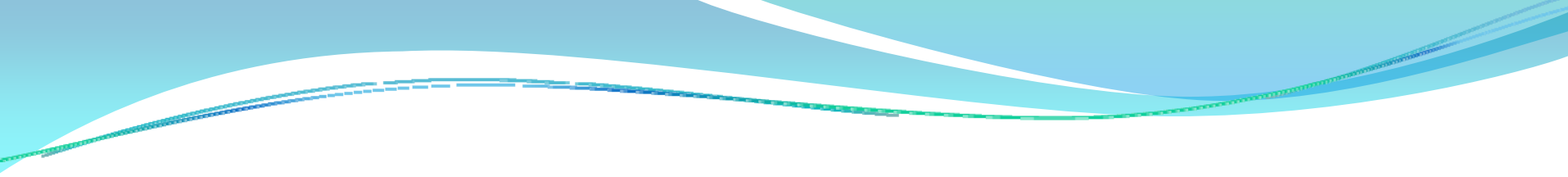
## Results: Parent Demographics (n=71)

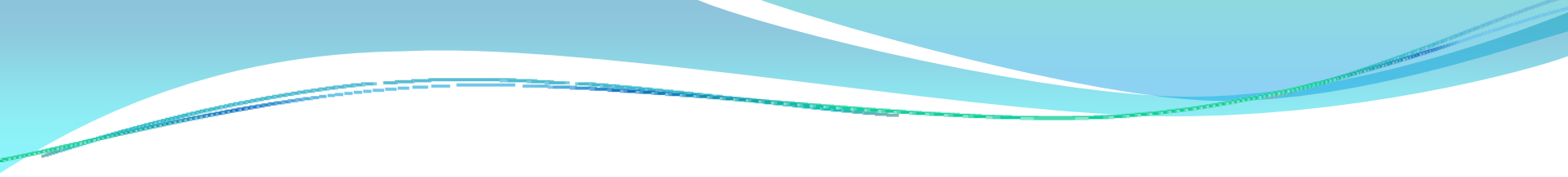
<b>Study Variable</b>	<b>Valid Percent</b>
<b>Age</b> Mean= 43.17 (SD=7.46)	
<b>Gender (Male)</b>	5.6
<b>Current Marital Status</b>	
Married or in Common-Law	12.9
Single: Separated / Divorced / Widowed/Never Married	87.1
<b>Education</b>	
< High School	23.9
Completed High School	25.4
Some College / University	19.4
Completed College / University	31.3
<b>Gross Household Income</b>	
< 20,000	50.7
20,000 - 39,999	25.4
40,000 - 59,999	17.5
60,000 +	6.3

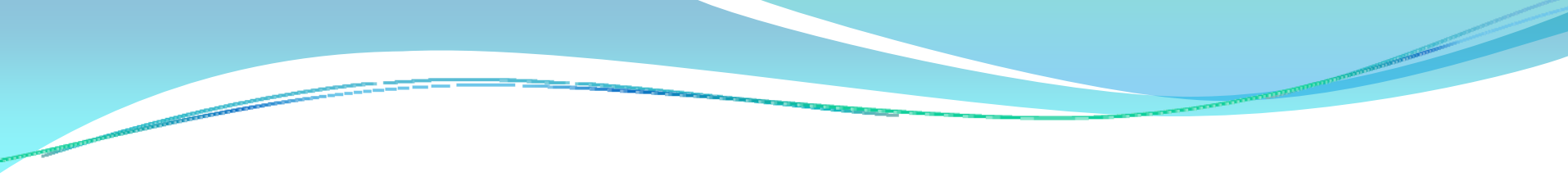
## Results: Parent Demographics (n=71)

<b>Study Variable</b>	<b>Valid</b>
<b>Family Economic Deprivation</b>	
<b>Subsidized Dwelling</b>	
Yes	36.8
No	63.2
<b>Own or Rent Dwelling</b>	
Own	33.3
Rent	66.7
<b>Social Assistance Support</b>	
Yes	36.4
No	63.6
<b>Number of Family Moves</b>	
Zero	34.8
One	18.8
Two or more	46.4
<b>Parent Long Term Illness</b>	
Yes	44.9
No	55.1

- 
- Measures good-excellent internal consistency and test-retest reliability (4 mo.)
  - Most parents and mentors had little or no difficulty with questionnaires
  - Younger children had more difficulty with questionnaires
  - Most felt comfortable

- 
- 30 additional matched children and families – measures
  - Cross-sectional

- 
- 102 children and families
  - Feasibility established
  - Measurement refinement
  - Need for research staff due to agency load
  - Ethical concerns
  - National program goals



# **Longitudinal Analysis of the Effects of Adult Mentoring on Children's Health and Well-Being: Examination of the Big Brothers Big Sisters Community Match Program**

CIHR (PIs DeWit, Lipman), 2006-2011

# Study Team Members

## Co-Investigators:

**Jeff Bisanz, Ph.D. University of Alberta**

**José da Costa, Ph.D. University of Alberta**

**Kathryn Graham, Ph.D. Centre for Addiction and Mental Health**

**Simon Larose, Ph.D. Laval University**

**Debra Pepler, Ph.D. York University**

**Karen Shaver, MSW Big Brothers Big Sisters of Canada**

## Collaborators:

**James Coyle, Ph.D. University of Windsor**

**David DuBois, Ph.D. University of Illinois at Chicago**

**Maria Manzano-Munguia, Ph.D. St. Francis Xavier University**

## Research Staff and Students:

**Karen Brown (student MSc candidate)**

**Charlotte Culbert**

**Annalise Ferro (student Ph.D. candidate)**

**Candace Kawiuk**

**Chris Pulford**

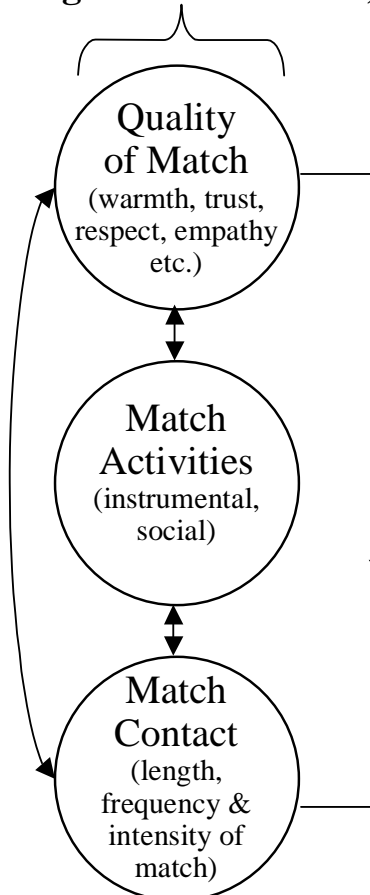
**Jennifer Swartman**

# Main Objectives

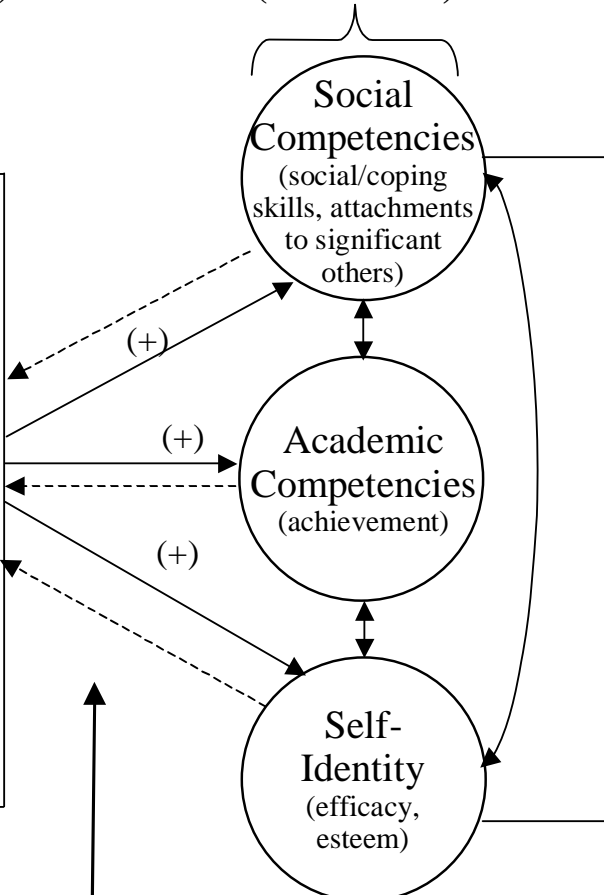
1. To identify aspects of BBBS community match relationships between adult mentors and children that contribute to health and well-being of disadvantaged children
  - specific match relationship components (e.g., quality, time, activity)
  - mechanisms
  - influence of demographic and other risk variables
2. To identify BBBS agency and other characteristics that contribute to match quality and healthy functioning of match relationships
  - agency, parent, mentor

# Theoretical Model (Figure 1)

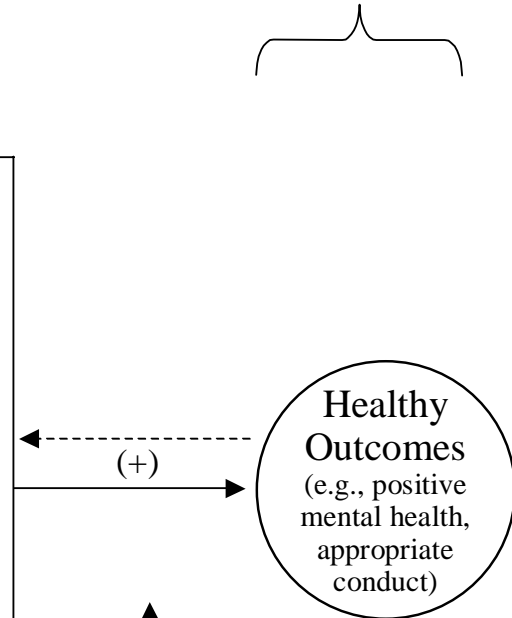
## Match Relationship Features (Exogenous Predictors)



## Developmental Tasks (Mediators)



## Outcomes



### Hypothesized Moderators of Model Pathways\*

- Child, parent, mentor characteristics (demographics, ethnicity/language, health status, parent mental health, child history of behavioural problems, child attachment security with parent, previous mentor experience, mentor self-efficacy)
- Agency support of match (match determination, mentor training, caseworker monitoring and supervision)
- Parent support of match (quality of relationship with mentor, frequency of contact with mentor)
- Child exposure to external supports (natural mentors, youth-based prevention programs)
- Ecological context (family, neighbourhood and school characteristics, geographic region, agency caseload, staffing, source of referrals, catchment area demographics)

\* Note: Moderators will also serve as model controls

# Methods: Participants

- Over 12 mo. 950 new intake families (parents and children) from BBBS agencies across Canada who are eligible to participate in BBBS community match program invited
- Informed about project by BBBS staff, interested families contacted by research assistant
- Eligibility: new applicant, child 7-16 y.o., meets BBBS eligibility requirements
  - : mentors invited once matched to study family
- Consent/assent



# Collaborating Big Brother Big Sister Agencies in Canada

1. Big Sisters of British Columbia Lower Mainland
2. Big Brothers Big Sisters of Calgary and Area
3. Big Brothers Big Sisters of Edmonton and Area
4. Big Brothers Big Sisters of Greater Halifax
5. Big Brothers Big Sisters of Greater Montreal
6. Big Brothers Big Sisters of Guelph
7. Big Sisters of London
8. Big Brothers Big Sisters of Moncton
9. Big Brothers Big Sisters of Niagara Falls
10. Big Brothers of Regina
11. Big Sisters of Regina
12. Big Brothers Big Sisters of Saskatoon
13. Big Brothers Big Sisters of Toronto
14. Big Brothers of Greater Vancouver
15. Big Brothers Big Sisters of Victoria
16. Big Brothers Big Sisters of Windsor Essex
17. Big Brothers Big Sisters of Winnipeg
18. Big Brothers Big Sisters of York
19. Big Brothers Big Sisters of Peel
20. Big Brothers Big Sisters of Ottawa

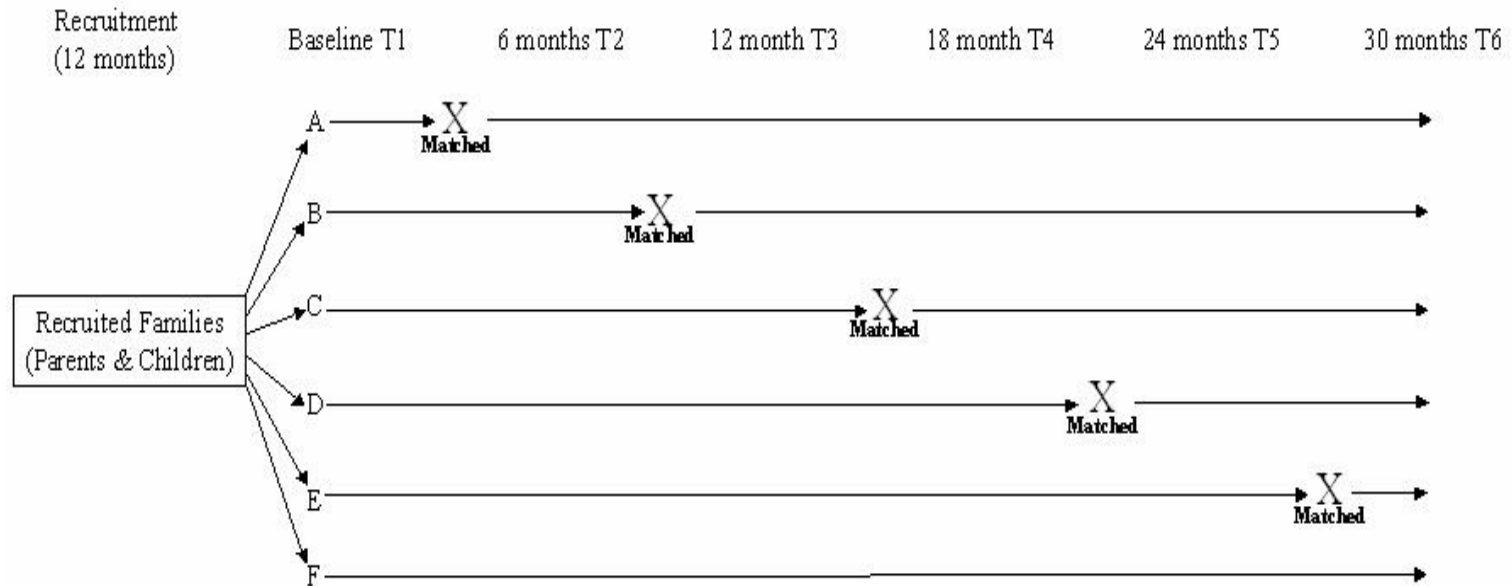
# Methods: Program Description

- Goal is to provide disadvantaged children with a one-to-one match relationship with a responsible adult volunteer
- Engage in leisure, educational and career-oriented activities with mentor at least hrs/week, at least 1 year
- Programs consist of three phases: a qualifying assessment phase to determine program eligibility, a match determination phase in which mentors and families participate in a formal interview to determine common interests, personal preferences, and mentor ability to meet needs of child, and a phase of caseworker supervision/support in which support is provided to matched pairs monthly for 6 months and every other month until 12 months; after 12 months, children waiting for match engage in agency sponsored recreational or educational activities

# Methods: Program Description

- Prospective, cohort study
- Face-to-face interviews are administered to children at baseline and at 6 month follow-ups until 30 months
- Parents complete a self-administered questionnaire when children complete interviews
- Mentors matched to study children completed a self-assessment questionnaire at each follow-up
- Incentives

### Study Design (Figure 2)



Note: "X" indicates that a child has been matched to an adult mentor

- Began recruitment April 2007
- Recruitment slow due to
  - turnover of research assistants
  - turnover of BBBS staff
  - time needed for start-up
  - new applicants
- Extend recruitment time
- Add new agencies, increase RA-agency contact
- Incentive
- Alternate ways of collecting data



- 975 families

- ~ 50% in match relationship

- Follow up rate	6 month	81% of eligible
	12 month	71%
	18 month	66%

## Profile of Parent Participants at Baseline (n=948)

Background Characteristics	Percent
Age Mean = 40.18 (SD=8.88, min=18 max=89)	
< 35	28.2
35 - 44	43.4
45 Plus	28.4
Gender	
Female	92.8
Male	7.2
Current Marital Status	
Married or Common-Law	19.3
Separated / Divorced / Widowed	45.5
Single / Never Married	35.2
Education	
Elementary or Some Secondary	16.2
Completed Secondary	19.3
Some College or University	26.2
Completed College / University	38.3

Place of Residence (population)	
> 100,000 people	76.3
50 - 99,999	10.9
< 50,000	12.8
Gross Household Income	
< \$10,000	17.3
10,000 - 29,999	39.4
30,000 - 49,999	24.3
50,000 +	19.0
Subsidized Dwelling	
Yes	29.0
No	71.0
Dwelling Ownership	
Own	28.3
Rent	71.7
Social Assistance Support	
Yes	32.0
No	68.0
Dwelling in Need Major Repairs	
Yes	21.9
No	78.1

## Number Family Moves Past 5 Years

None	32.4
One	22.8
Two	20.3
Three or more	24.5

## Number Children Living With You

One	33.8
Two	35.5
Three	19.8
Four or more	10.9

## Relationship With Study Child

Biological Mother	83.9
Biological Father	6.1
Other Related Female (e.g., grandmother, aunt)	6.8
Other (e.g., grandfather, adoptive or foster parent)	3.2

## Biological Parent Outside Home

Yes	78.7
No	21.3

Main Activities (multiple responses)

Unemployed / Laid Off	12.6
Permanently Unable to Work	5.7
Going to School	9.2
Full-time Employment	42.9
Part-time Employment	14.2
Homemaker Only	18.0
Volunteer Work	10.2
Retired	1.9

Language at Interview

English	92.4
French	4.9
Other	2.7

Chronic Health Condition

Yes	33.8
No	66.2

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## Profile of Child Participants at Baseline (n=948)

Background Characteristics	Percent
Age Mean = 9.77 (SD=2.22, min=6 max=17)	
6 - 9	48.2
10 - 12	39.7
13 - 17	12.1
Gender	
Female	51.0
Male	49.0
Living Arrangements	
Both Biological Parents	10.7
Biological Mother Only	64.1
Biological Father Only	5.2
Biological Parent and Other Unrelated Guardian	7.3
Other Relatives (e.g., sibling, aunt, uncle, grandparent)	7.5
Other Arrange (e.g., foster/step/adopt parent, group home)	5.3

## Number Siblings Living With You

None	32.3
One	34.4
Two	19.7
Three or More	13.6

## Ethnicity

African Canadian	10.1
Aboriginal or Native American	13.4
White Northern European	34.3
White Other European (South and East)	7.8
Asian	7.3
Hispanic	2.6
Canadian	11.2
Other	13.3

## Participate BBBS Waiting List Program

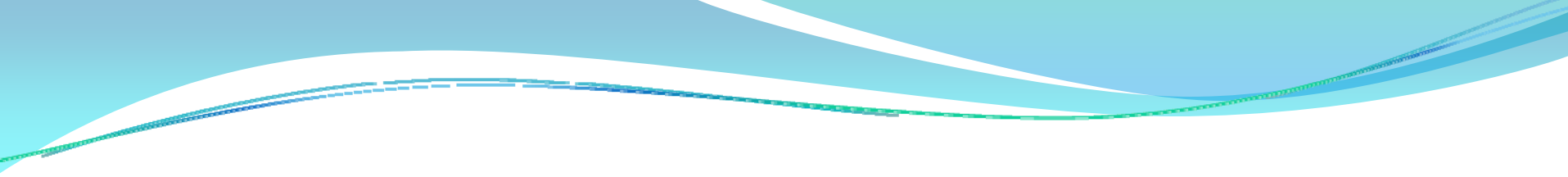
Yes	14.4
No	85.6

## Participate in Other Community Programs

Yes	14.6
No	85.4

## Ever Natural in Life?

Yes	78.7
No	21.3



Natural in Life (multiple responses)	
Teacher	23.5
Family Relative (aunt, uncle)	60.2
Older Sibling	6.4
Family Friend	19.5
Minister or Clergy	1.2
Family Doctor	2.3
Chronic Health Condition	
Yes	29.4
No	70.6
Activity Limitations	
Yes	6.3
No	93.7
Use Mental Health / Social Services	
Yes	27.8
No	72.2

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## Profile of Adult Mentor Participants (n=316)

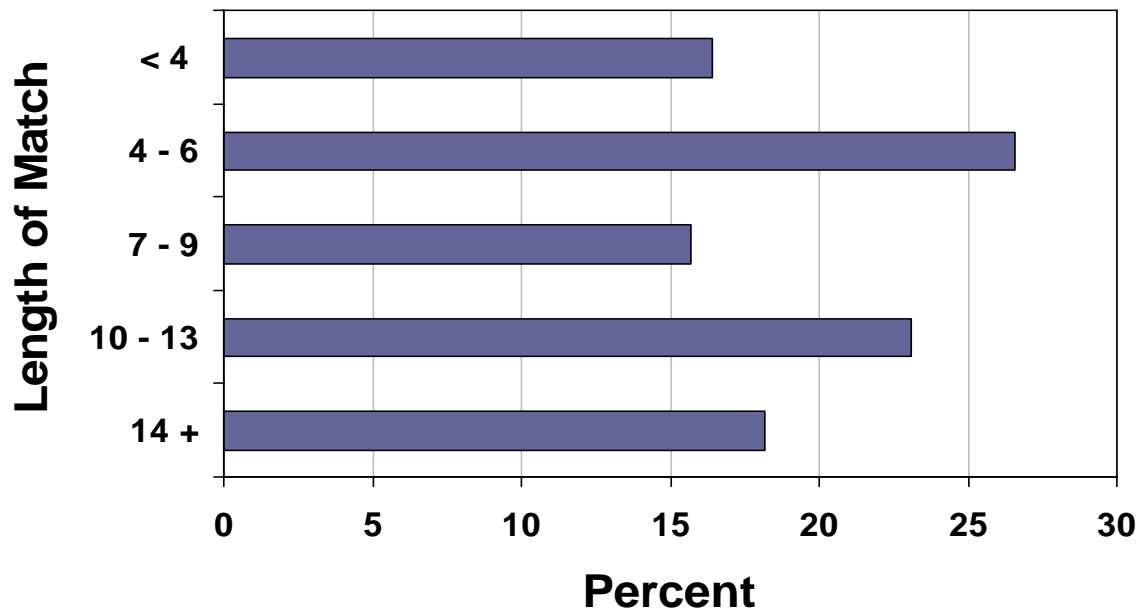
Background Characteristics	Percent
Age Mean = 29.93 (SD=8.48, min=19 max=65)	
< 25	28.2
25 - 29	33.4
30 - 44	29.2
45 Plus	9.1
Gender	
Female	65.1
Male	34.9
Current Marital Status	
Married or Common-Law	34.0
Separated /Divorced / Widowed	3.8
Single / Never Married	62.2
Education	
Some or Completed Secondary	10.6
Some College or University	24.7
Completed College / University	64.7

Place of Residence (population)	
> 100,000 people	79.6
15 - 99,999	19.1
< 15,000	1.3
Ethnicity	
Visible Minority (African Canadian, Aboriginal, Asian, Hispanic)	10.9
European (Northern, Southern, Eastern)	79.1
Canadian	5.1
Other	4.8
Gross Household Income	
< \$20,000	12.6
20,000 - 49,999	29.4
50,000 - 69,999	17.8
70,000 +	40.2
Dwelling Ownership	
Own	51.4
Rent	48.0

Main Activities (multiple responses)	
Unemployed / Laid Off	3.8
Going to School	27.9
Full-time Employment	73.1
Part-time Employment	20.7
Homemaker Only	0.6
Volunteer Work	19.6
Employed Social Service Profession	
Yes	21.2
No	78.8
First Time in Match Relationship	
Yes	86.8
No	13.2
Friends / Relative in Match With BB/BS	
Yes	38.5
No	61.5

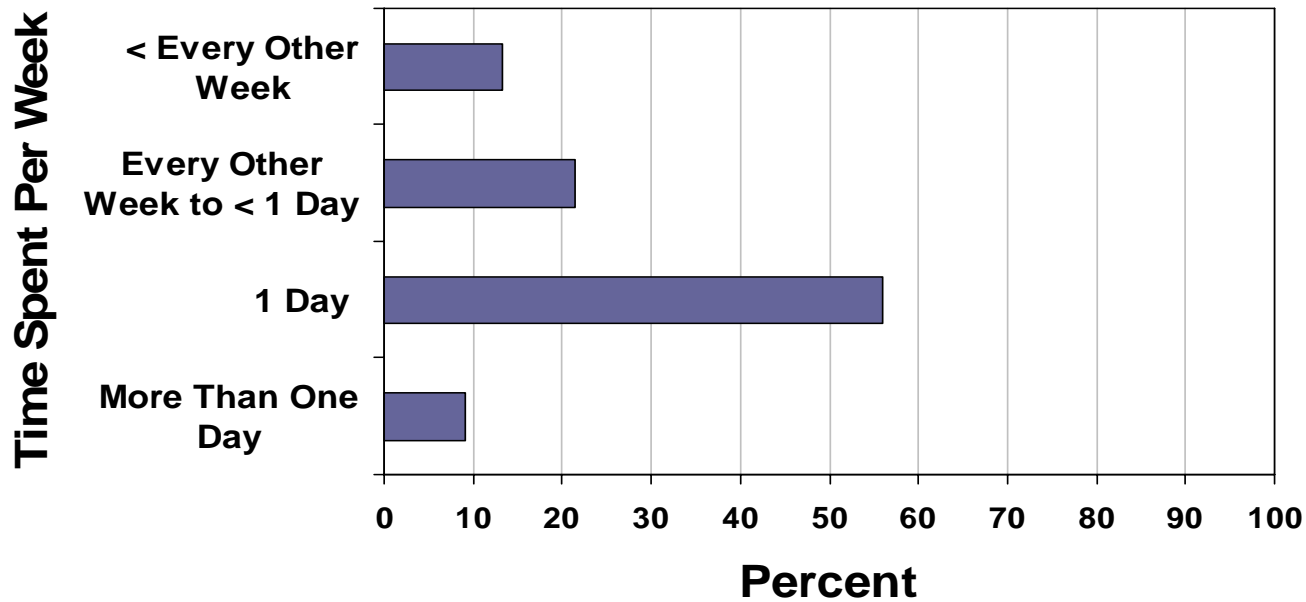
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**Figure 1**  
**Length of Match Relationship (Months)**  
**Parent Report (n=460)**

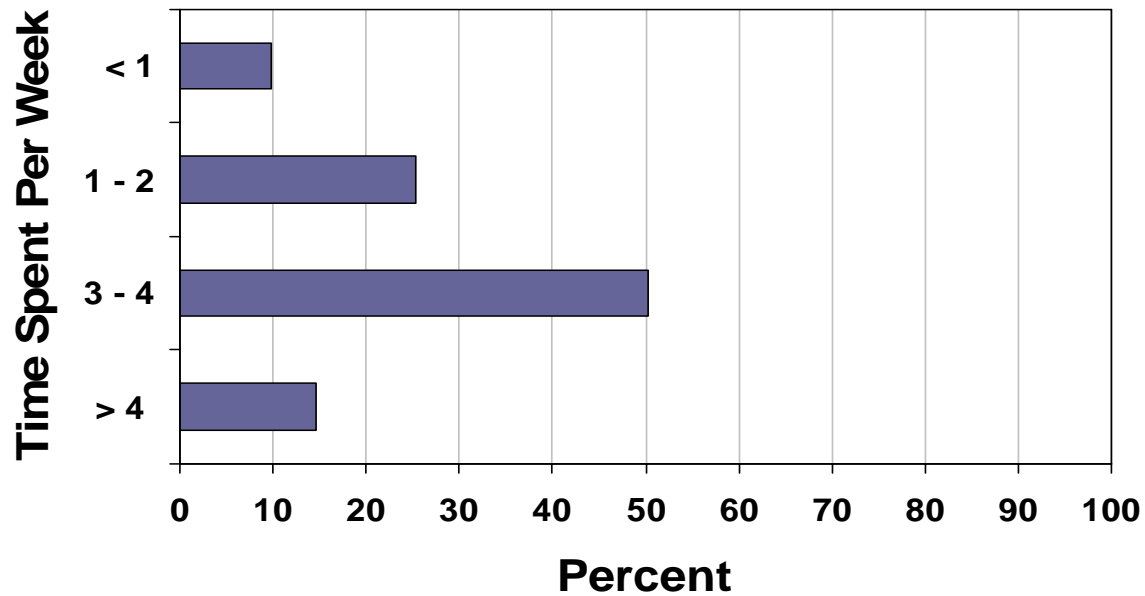


Mean Match Length = 8.90 months; SD = 5.78 0 – 28 months

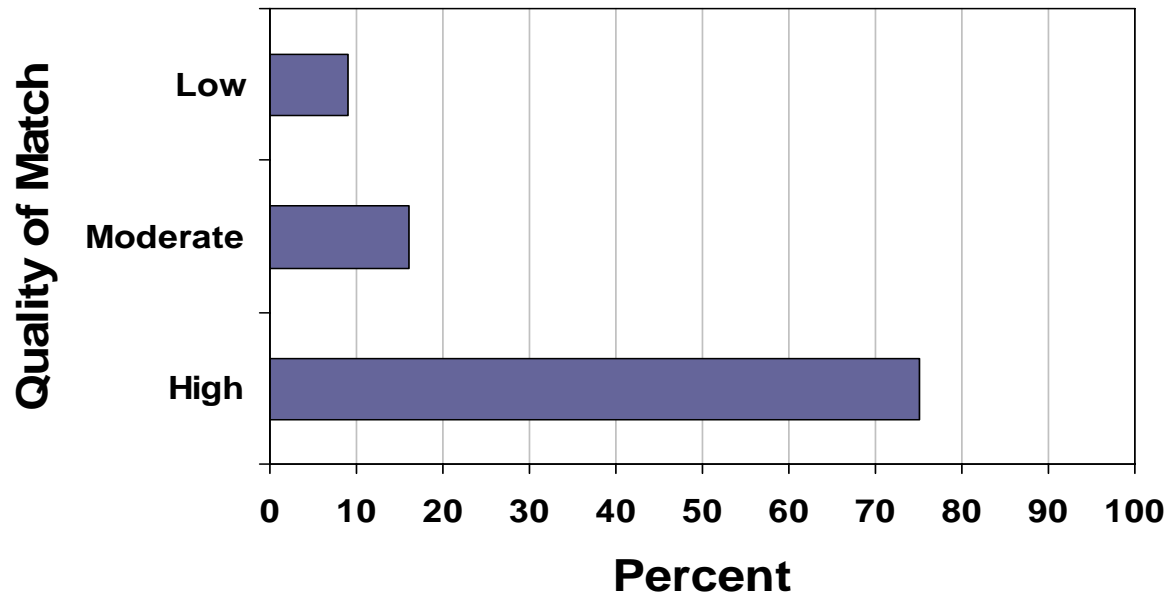
**Figure 2**  
**Time Spent Per Week in Match (Days)**  
**Child Report (n=450)**



**Figure 3**  
**Time Spent Per Week in Match (Hours)**  
**Child Report (n=407)**

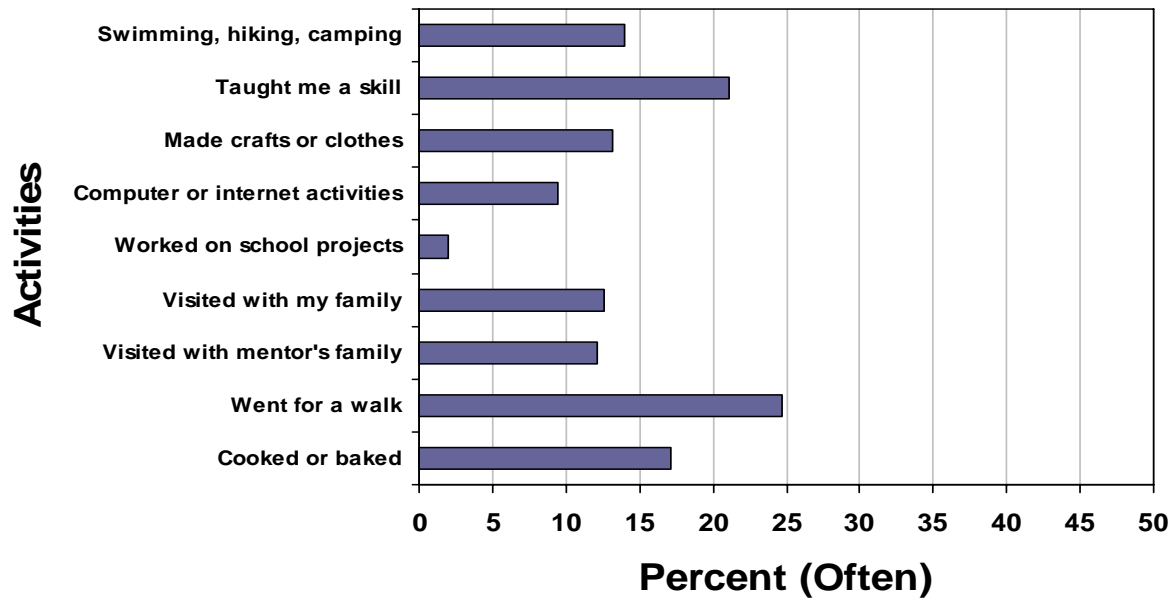


**Figure 5**  
**Perceived Quality of Match**  
**Parent Report (n=449)**

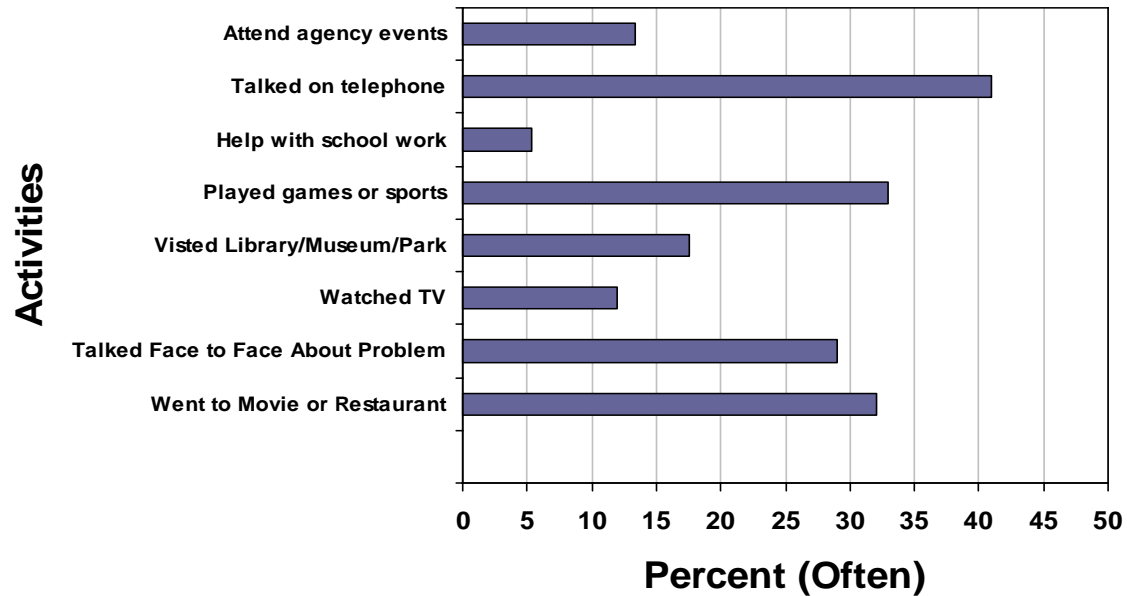


**Note:** Sample items: Child relationship with BB/BS: trusting, warm and affectionate  
Perceived Quality of Match Index Range 5 - 15  
High = Score 13 – 15; Moderate = Score 10 - 12; Low = Score < 10

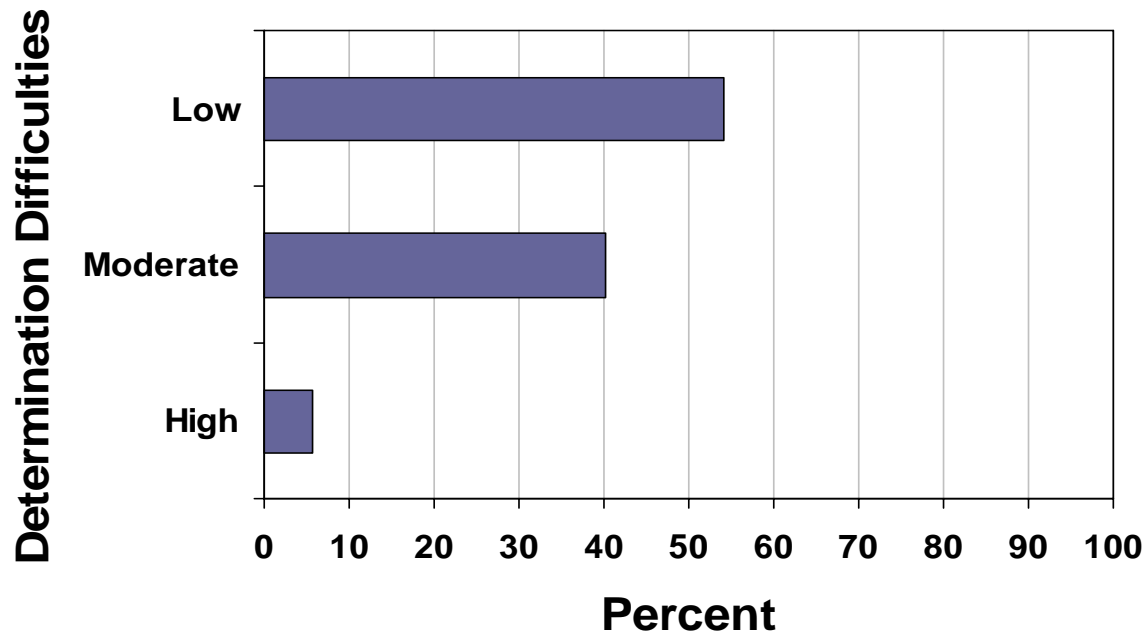
**Figure 6**  
**Frequency of Match Activities (Past Month)**  
**Child Report (n=413)**



## Figure 6 (Cont'd) Frequency of Match Activities (Past Month) Child Report (n=413)

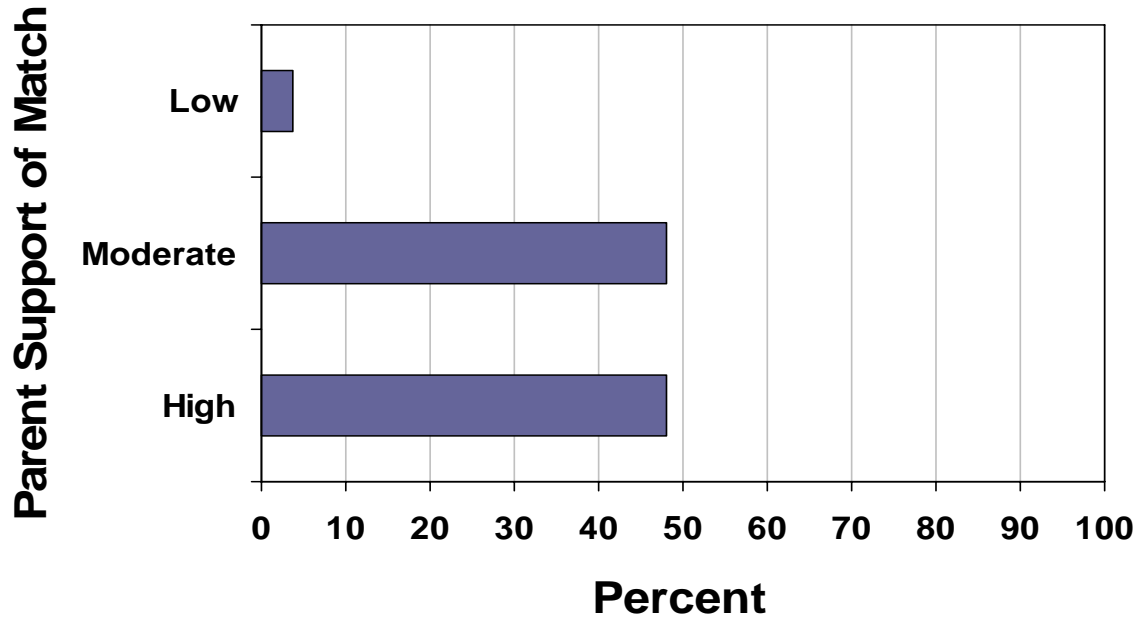


**Figure 7**  
**Match Determination Difficulties**  
**Parent Report (n=462)**



**Note:** Sample items: Took too long for a match to be found; did not feel happy about the match  
Match Determination Difficulties Index Range 4 - 12  
High = Score 8 – 12; Moderate = Score 5 – 7; Low = Score 4

**Figure 8**  
**Parent Support of Match**  
**Parent Report (n=415)**

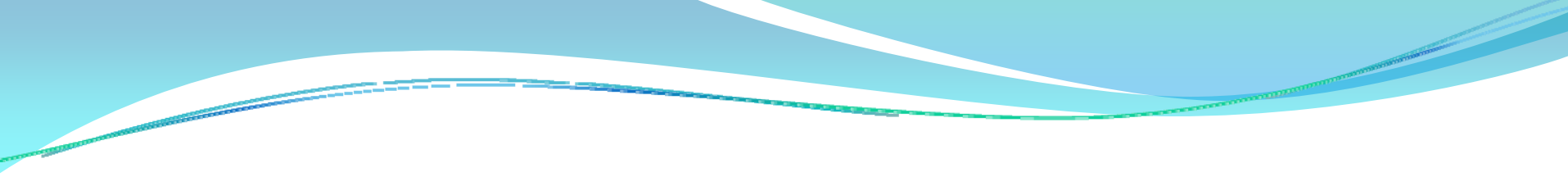


**Note:** Sample items: Parent suggest match activities, makes BB/BS feel welcome  
Parent Support Index Range 6 - 30  
High = Score 24 – 30; Moderate = Score 18 - 23; Low = Score < 18

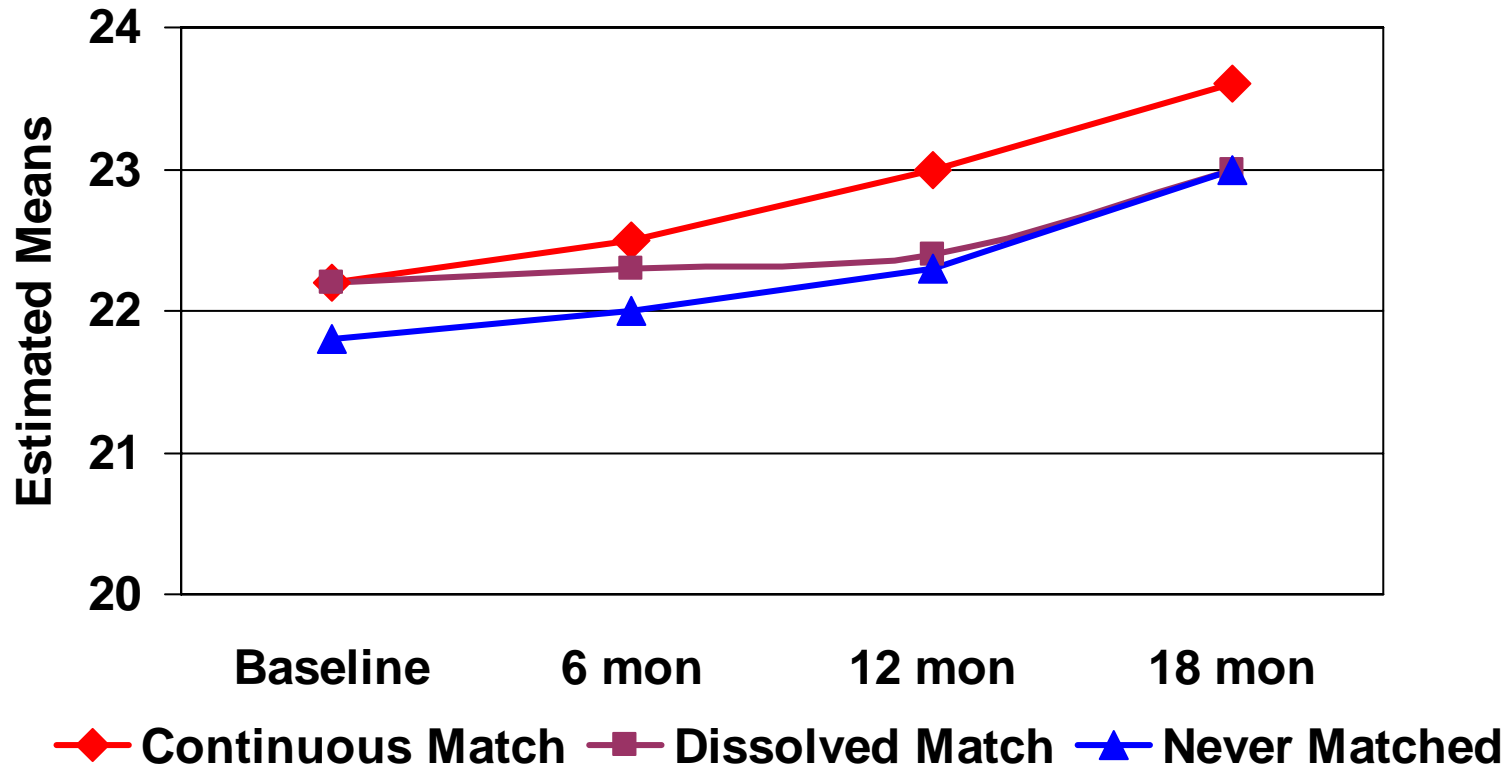


**Data!**

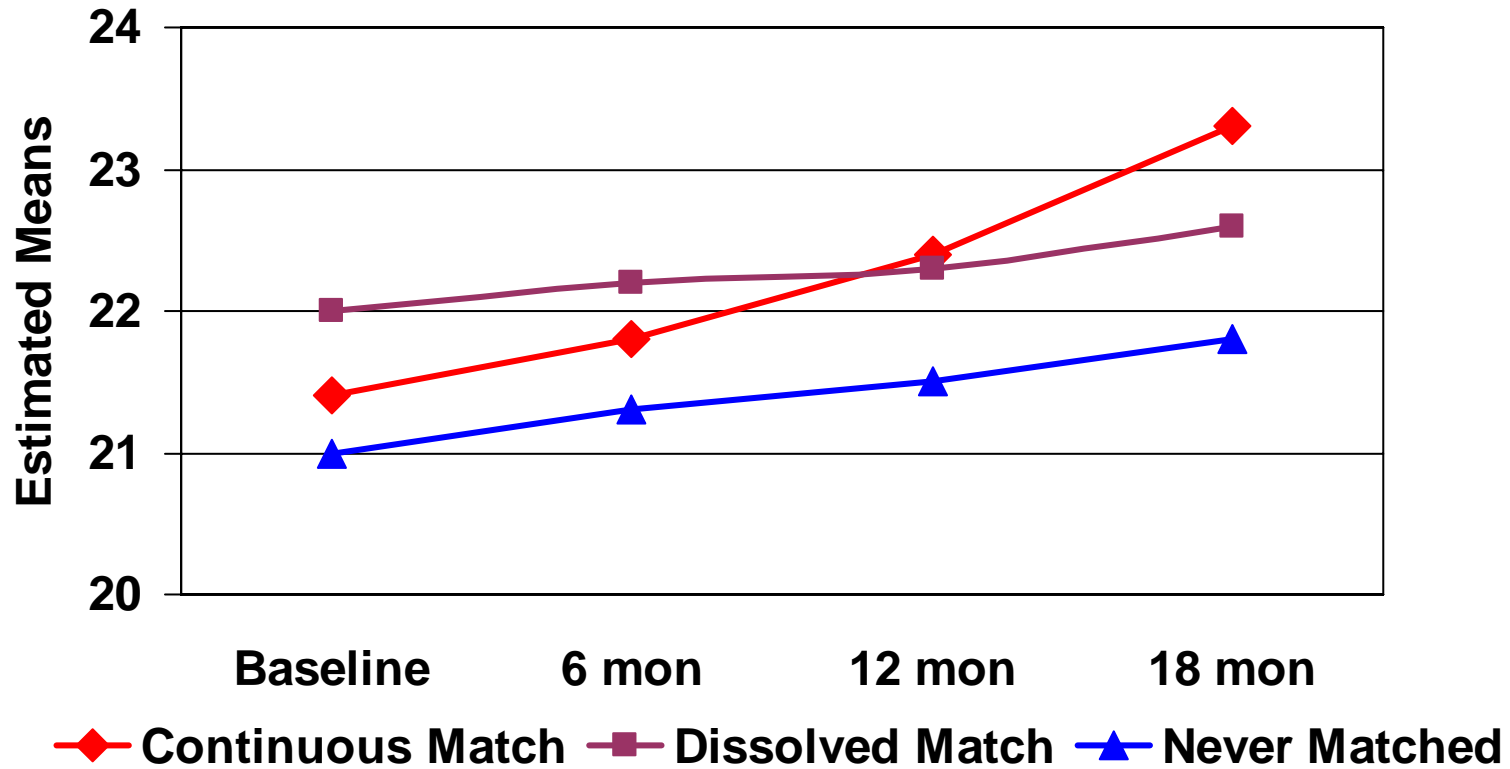
**Questions!**

- 
- Preliminary work
  - Do children in longer match relationships with an adult mentor experience increased mental health and use of community mental health services compared to unmatched children and those in shorter matches?
  - Continuous / dissolved matches
  - 18 month follow-up

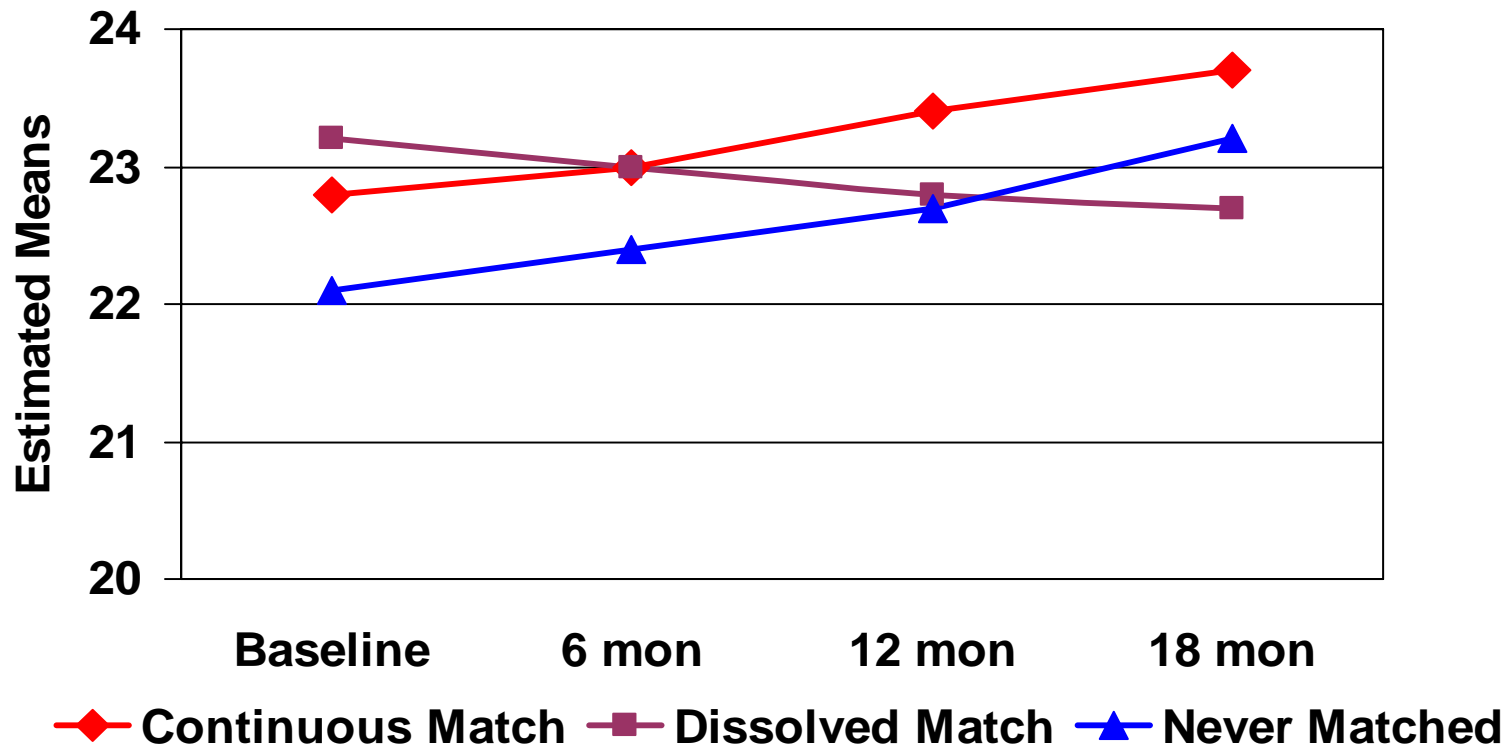
# Figure 1: Peer Self-Esteem

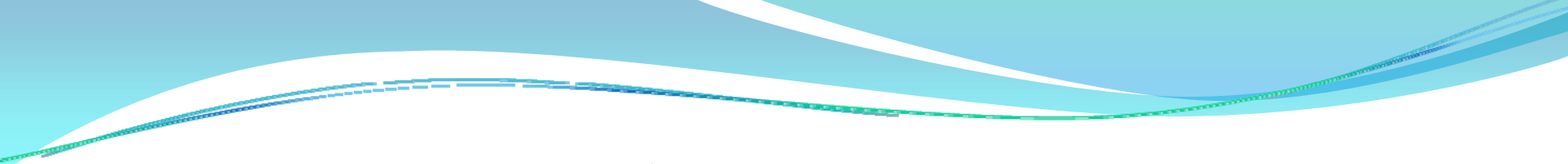


## Figure 2: Peer Self-Esteem Girls



# Figure 3: Peer Self-Esteem (CR) Boys



- 
- Ongoing work
  - Identify aspects of BBBS community match relationships between adult mentors and children that contribute to health and well-being of disadvantaged children (specific match relationship components, mechanisms, influence of demographic and other risk factors)
  - Identify BBBS agency and other characteristics that contribute to match quality and healthy functioning of match relationships (agency, parent mentor)



