FRIENDSHIP AND WELL-BEING AMONG CHILDREN WITH CHRONIC PHYSICAL AND MENTAL HEALTH CONDITIONS IN GROWING UP IN IRELAND

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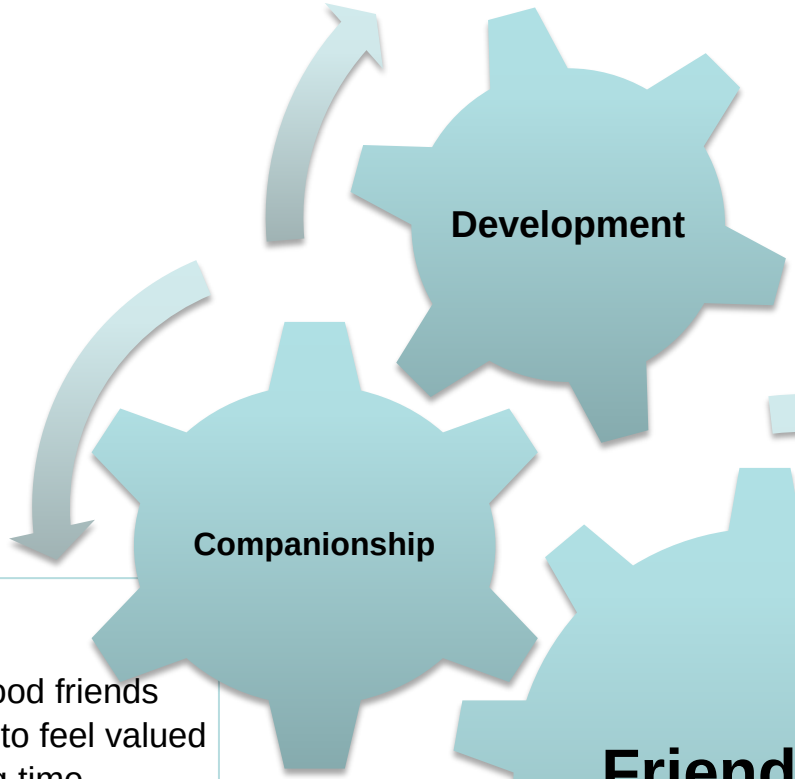
Why is Friendship Important



- Critical social and cognitive functions influencing normal and atypical development
- Protecting from stresses
- Stimulating explorations and learning
- Provides opportunities to learn a range of skills

- Like to have good friends
- Helps children to feel valued
- Enjoy spending time together
- Sharing common past times
- Provide enjoyable companionship

Importance of Friendship

- **Friendship is associated with better academic performance, greater self-confidence and better psychological adjustment (Wentzel, 2003)**
- **Friendships can protect against loneliness and depression in children (Nangle et al., 2003)**
- **Friendships can protect children from adjustment difficulties resulting from negative experience (Adams & Bukowski, 2007)**

Challenges of a chronic illness in childhood

- **Children with chronic illnesses face a variety of additional stressors…(Williams & Chapman, 2011)**
  - Understanding their medical condition
  - Teasing and bullying from peers
  - Activity restrictions/ missing school
  - Difficult or painful medical procedures
  - Demanding treatment regimens

IMPORTANCE OF FRIENDSHIP FOR CHILDREN WITH AN ILLNESS

- **Reduces the negative effects**
  - Improving pain (Forgeron, 2011)
  - Reducing the chances of victimization (Cardoos & Hinsahw, 2011)
  - Serves as a buffer against teasing and aggression from the larger peer group (Williams & Chapman, 2011)

- **Benefits**
  - Disclosing illness to friends can improve immune functioning (Sherman et al., 2000).
  - Makes a difference in children's self-acceptance and self-management of their medical condition (Williams & Chapman, 2011).
  - Support from close friends and the broader peer group seems to represent an important source of emotional support (Carcone et al., 2011).
  - Provide distraction (Eccleston, Wastell, Crombez & Jordan, 2008)
  - Can buffer outside stressors and help facilitate adjustment to the limitations imposed by the condition(Williams & Chapman, 2011).
  - Facilitates their disease adaption and may help with the lifestyle aspects of treatment regimens (LaGreca et al., 2002)

CHALLENGES IN FRIENDSHIPS FOR CHILDREN WITH ILLNESS

- **The majority of research suggests that establishing and maintaining friendships can be challenging for children and adolescents with chronic pain conditions**
  - Children and adolescents with chronic pain were found to participate in fewer peer activities, have fewer friends and were perceived as more isolated compared to matched healthy classmates (Forgeron, King, Stinson et al., 2010)

- **Children with asthma less likely to have a group of friends and more likely to have had at least one day away from school in the past month (Collins, Gill, Chittleborough et al., 2008)**

To our knowledge…

- While research has looked at development of children with illnesses and their friendships, these were on a much smaller scale

The Growing Up in Ireland (GUI) study provides an opportunity to understand the patterns of friendships and peer relationships of 9-year-old children in Ireland with chronic physical and mental health conditions and the effect of these on socio-developmental outcomes at age 13

Chronic illness in GUI

- **Within the 9-year-old cohort of GUI, 11% of children are described as having a chronic physical or mental health problem, illness or disability. These include:**
  - Respiratory problems
  - Mental and behavioural problems
  - Nervous system problems
  - Digestive system problems

Hypotheses

- Children with chronic illnesses will have fewer friends compared to healthy peers
- Friendship will moderate the relationship between chronic illness and psychopathology (emotional problems, conduct problems and hyperactivity)

Two waves of the child cohort

- **9 year old first wave of child cohort (n=8568)**
- **13 year old second wave child cohort (n=7400)**
- Statistical weighting was used to increase comparability to the general population and account for attrition at the second wave

Data analysis steps

1. **Selecting children with a chronic illness @ 9 & 13**
2. **Excluding those with mental and behavioural problems at age 9 (n=87)**
3. **Matching the group of children with chronic illnesses @ 9 & 13 to a group of healthy children using propensity score matching**
4. **Comparing mental health outcomes between healthy children and those who have chronic illnesses**
5. **Computing the mediation model with Structural Equation Modeling (SEM)**

Measures

- ***Chronic Illness***
  - The cross-tabulation of 2 binary variables: chronic illness at age 9 and chronic illness at age 13
  - Included only cases with chronic illness at both 9 and 13, to ensure that chronic illness was indeed a long-lasting condition and we excluded cases with mental and behavioral disorders

- ***Friendship***
  - Single-item measure administered to a child at age 9 and 13: “How many close friends do you have?”
  - Answers were then coded 1-none, 2-one, 3-three or two, 4-four or five, 5-six or more

- ***Strengths and Difficulties Questionnaire (SDQ)***
  - 25 item behavioural screening questionnaire designed to assess emotional health and problem behaviours
  - Higher scores on the problem-orientated scales are indicative of more problems
  - 5 subscales
    - **Hyperactivity/ inattention**
    - **Emotionality**
    - **Conduct problems**
    - Peer problems
    - Pro-social behaviour

Propensity score matching

- **Total of 6649 children for whom the data about chronic illness at ages 9 and 13 were used for PSM**
  - **289** had chronic *physical* illness at both ages
  - 6247 had no chronic illness at age 9 nor 13
- **These 289 children with chronic illness were matched based on propensity score (nearest neighbour method) to 350 children with no chronic illness at both ages**

The effective sample consisted of 639 children, 289 of whom had physical chronic illness

School Characteristics	Household Characteristics	Mother-child relationship quality	Child health variables
• Degree to which bullying was a problem in the school • Class of study child • If school had more than 60% boys	Mothers ethnicity (white Caucasian / other) Mothers country of birth (Ireland / other) Income when child was 13 Mothers education If child witnessed conflict between parents at age 9 Recent death of a parent Maternal health @ 9 Drugs/ alcohol taking in household Single parent household @ 9 Mother of study child depressed Place of living (Urban / Rural) Family recently moved houses Crowded household conditions	Pianta Parent child Relationship scale • Conflicts @ 9 • Closeness @ 9 • Dependence @ 9	• Maternal smoking during pregnancy • Breastfed • Birth weight • Child obesity status

Missing data in all variables were imputed prior to the PSM

Results

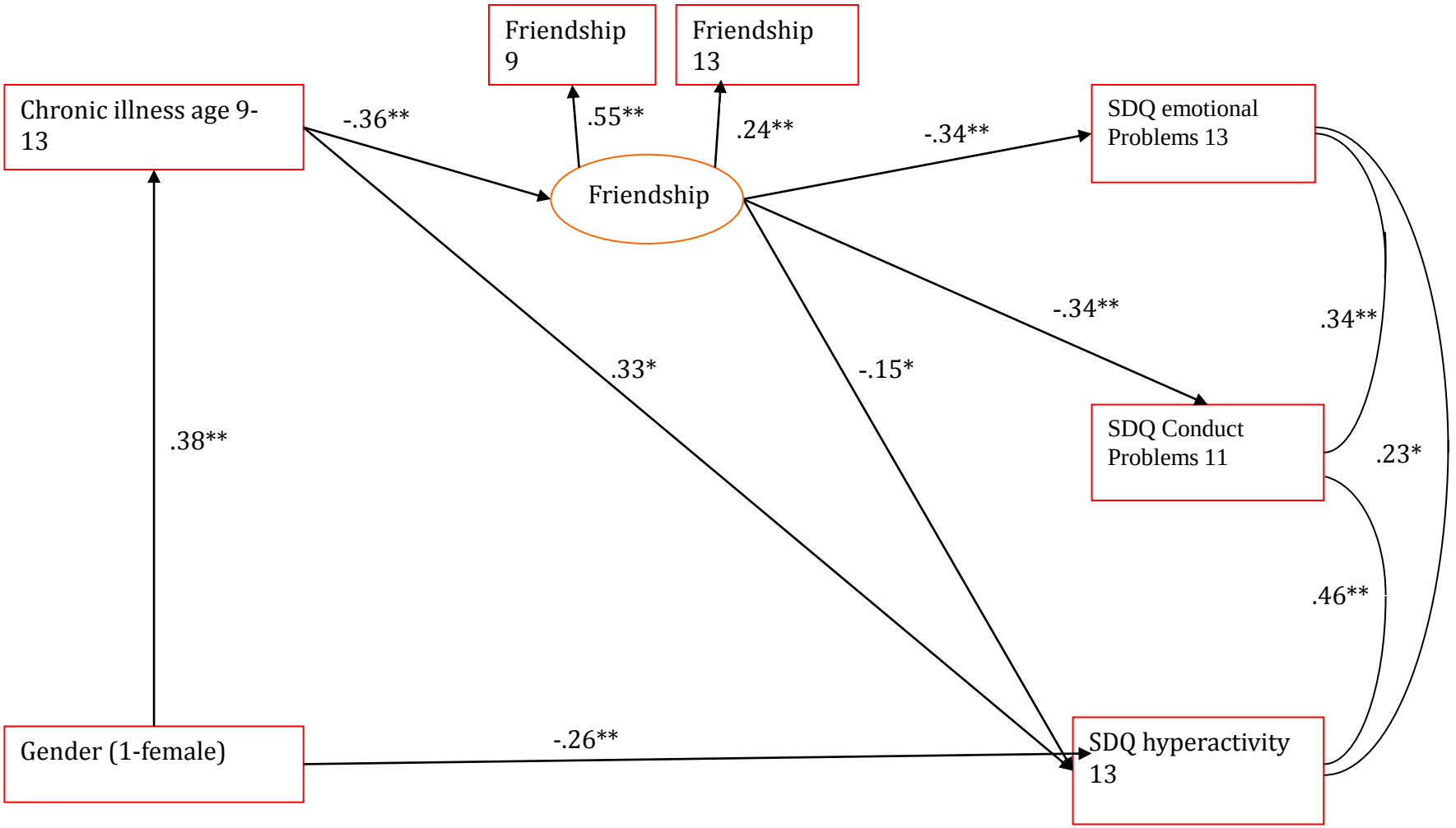
- **T-tests showed that children with chronic illnesses have worse mental health outcomes than propensity-matched children without a chronic illness…**
  - Children with chronic illness had higher scores ($p<.000$) on emotional problems ($M=3.20$, $SD=2.47$) than children with no chronic illness ($M=2.25$ $SD=1.96$)
  - Children with chronic illness had higher scores ($p<.000$) on conduct problems ($M=2.05$, $SD=2.11$) than children with no chronic illness ($M=1.39$, $SD=1.31$)
  - Children with chronic illness had higher scores ($p<.000$) on hyperactivity ($M=4.93$, $SD=2.96$) than children with no chronic illness ($M=3.34$, $SD=2.34$)

Results

- **Children with chronic illnesses have fewer friends compared to age- and gender-matched healthy peers (*r* =-.36)**

- **Children with chronic illnesses have fewer *close* friends than children who are not chronically ill**
  - 6.3% children with chronic illness reported having only one or no close friend, compared to 1.3% of children without chronic illness

Mediation model: SEM results



FIT INDICES: $\chi^2 = 10.15$, $df = 5$, $p = .427$, RMSEA =.005 (C.I. 0- .004), CFI=.999, TLI=.997

SEM Results

- **The model had good fit indices**
- **The negative effect of chronic illness on conduct problems was completely mediated by friendship**
- **The negative effect of chronic illness on emotional problems was completely mediated by friendship**
- **The negative effect of chronic illness on hyperactivity was partially mediated by friendship (chronic illness had a *direct effect* on hyperactivity)**
  - -> chronic illness increased the risk of hyperactivity

Discussion

- **Statistical analyses revealed results which are consistent with existing literature, emphasising the difference between children with chronic illness and those without**
  - Children with chronic illnesses had fewer friends in comparison to the propensity-matched group, supporting previous research suggesting this (Armstrong, Rosenbaum & King, 1992)
  - Children with chronic illnesses have poorer mental health outcomes overall, again in line with previous research (Collins et al., 2008)
- **Friendship can mediate the negative effects that a childhood chronic illness can have on development, as previously suggested by Carcone et al. (2011) and Williams & Chapman (2011)…**

Things to consider…

- **Separating mental and behavioural disorders from the chronic illness data in AMF dataset @ age 13**

- **Issue of measure of friendship quality**

Policy implications

- Friendship plays an important role in the lives of children coping with chronic illnesses and disabilities in Ireland and appears to have long-term benefits
  - Look at school and hospital policies that facilitate friendship development and maintenance in chronically ill children despite missing school, spending more time in hospital etc.

- It is vital that the development of any support systems for these children identify those most at risk for such psychological problems, while also recognising the importance friendship can play in supporting these children (Cardoos & Hinshaw, 2011)

HRB

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Any Questions?

Thank you