



The effect of the home learning environment and parental involvement on cognitive development in early childhood

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Home Learning Environment

A good home learning environment (HLE):

- Where parents support children's thinking and learning during everyday activities (Niklas, Cohrsen & Tayler, 2016).
- Contributes to young children's emergent literacy and social competence and to their subsequent educational success (Foster, Lambert, Abbott-Shim, McCarty & Franze, 2005).

The early learning environment



Rodriguez & Tamis-LeMonda, et al., (2009).



Parental involvement

- Families are children's first teachers (Niklas, 2017).
- Parents with better language skills scaffold learning (Puglisi, Hulme, Hamilton, & Snowling, 2017).
- Home learning environment and both mothers and father's active involvement during the early years can predict later academic outcomes (Foster et al., 2016).



Cognitive outcomes

- Home learning activities predict later positive outcomes in vocabulary, alphabet knowledge and word reading in children of kindergarten age (Skwarchuk, Sowinski & Le Fevre, 2014).
- Fluid intelligence independent of previous knowledge, identifies patterns and relations and infer and implement rules. Crystallized intelligence is under the influence of learned knowledge (Horn & Cattell, 1966).
- Non-intensive family interventions may positively impact on HLE and children's fluid reasoning (Niklas, Cohrsen & Tayler, 2016).



Aims of study

- Examine home learning environment and its impact on development of 3 year and 5 year old Irish children
- Examine home learning environment, controlling for family, maternal and paternal factors and their effect on cognitive development



Method

Sample:

- GUI Wave 2 (n = 9,793) at 3 years
- GUI Wave 3 (n = 9,001) at 5 years.

Measures

Questionnaire data

Who is doing what at different waves?

Home Learning activities and number of books in the home

Someone reading at 9 months

Scaled measures

British Ability Scales: Naming Vocabulary and Picture Similarities



Method continued

Statistical analysis

- SPSS- Hierarchical multiple regression models looking at influence of Home learning environment.
- Controlling for family factors, maternal factors and paternal factors

Home learning index - frequencies

Age 3

1. Read to child
2. ABC's
3. Numbers or counting
4. Play games
5. Play active games
6. Songs and poems
7. Paint draw and colour

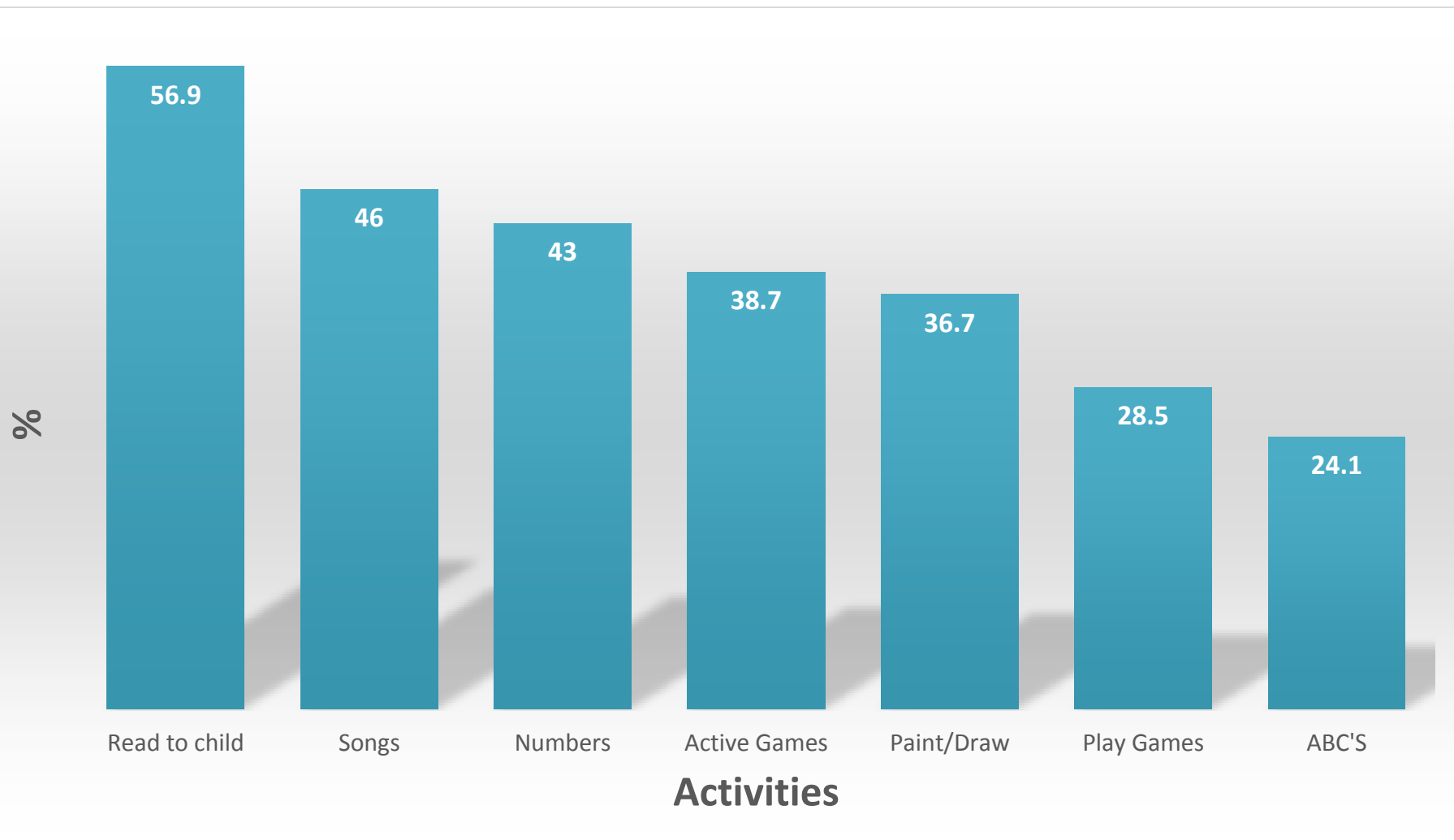
Age 5

1. Read to child
2. Listen to child read
3. Use computer
4. Play with child toy games puzzles
5. Sport/physical activities
6. Play computer games
7. Visit library
8. Go on educational visits





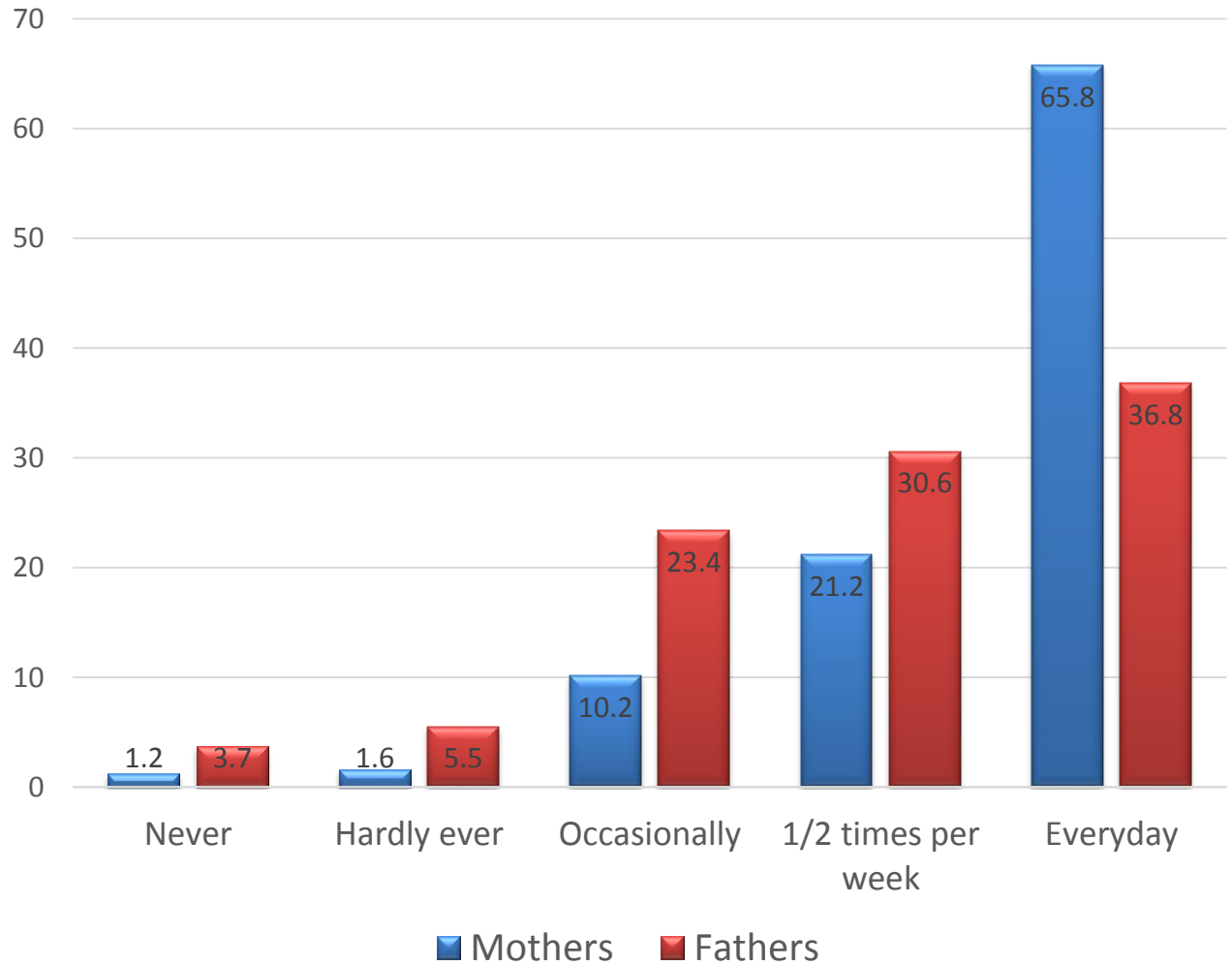
Mothers % daily involvement age 3



Read to child

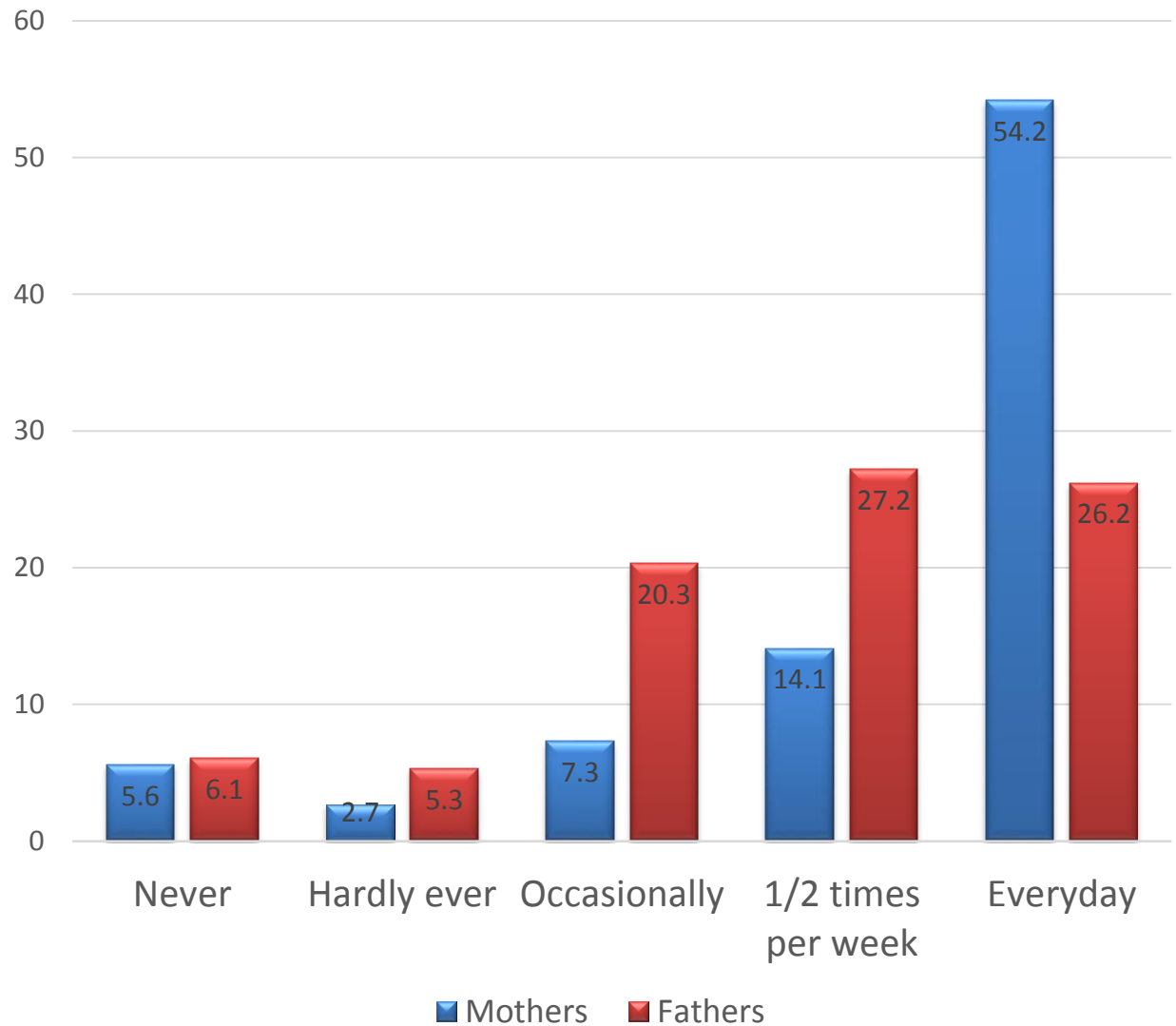


Age 5



Listen to child read

Age 5





Results BAS Naming Vocabulary

Age 3

Number of books in the home $\beta = .178$
Home learning environment $\beta = .075$
Someone reading $\beta = .041$

$F(18, 6415) = 35.393, p < .001$

HLE $R^2 = 6.5\%$

Age 5

Number of books in the home $\beta = .150$
Home learning environment $\beta = .071$

$F(18, 5697) = 23.01, p < .001$

HLE $R^2 = 4.5\%$



Results BAS Picture Similarities

Age 3

Number of books in the home $\beta = .094$
Home learning environment $\beta = .058$

$F(18, 6590) = 19.404, p < .001$
HLE $R^2 = 2.6\%$

Age 5

Number of books in the home $\beta = .071$

$F(18, 5721) = 9.75, p < .001$
HLE $R^2 = 0.9\%$



Considerations

- Impact of HLE on fluid v crystallized intelligence
- Research has primarily concentrated on mother's involvement and mother's sensitivity (Pleck, 2010) and from mothers' perspectives (Foster et al., 2016).
- Parenting remains very gendered (McMunn, Martin, Kelly & Sacker, 2015).



Implications

- Educating both parents on the importance of their role in the home learning environment to promote continuity and enabling positive transitions
- The importance of books and reading in nurturing a strong cognitive home learning environment
- Lack of national book gifting programme – pilot scheme announced this week

Questions?



Thank you



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