Gender Differences in Play and Imagination

Salim Hashmi
Supervisor: Dale Hay

Cardiff Child Development Study
Astudiaeth Datblygiad Y Plentyn Caerdydd

MRC Medical Research Council

CARDIFF UNIVERSITY
PRIFYSGOL CAERDYDD

Introduction

- Play—and especially pretend play--has been regarded as an important aspect of development, as it has been found to be associated with processes such as language development and emotion regulation (Lillard et al., 2012).

- Despite Piaget's belief that pretend play begins to decline after the age of 6, there has been increasing support for the notion that imaginative play continues beyond this age (e.g., Lillard, 2014), though there is a paucity of research investigating play in middle childhood.

Gender Differences in Play

- Gender differences in frequency of pretend play mixed (Lillard, 2014).

- At the age of 18 months, children show preferences for gender-stereotyped toys which continues as they grow older (Singer & Singer, 2005).

Aims and Research Questions

- Explore gender differences in children's play and other imaginative activities during middle childhood.
  - Parents' reports of the activities their children enjoy.
  - Comparing the different ways in which children engage with a free play task.
    - To adapt a measure of children's imaginative engagement with play.
    - Compare results from variable-centred and person-centred analyses.

Methodology of the Cardiff Child Development Study

- The Cardiff Child Development Study (CCDS) is a prospective longitudinal study of first time parents and their children.

- The sample has been found to be nationally representative, it did not differ significantly on demographic characteristics with the participants in the UK Millennium Cohort Study (Hay et al., 2011).

- 332 first time mothers recruited in pregnancy; 309 (93%) still in sample at Wave 6.
  - Of the 309, 286 (93%) were assessed at the childhood assessment and 272 of these were observed in the home.
  - 43% of the children in the sample were female.

Wave 1
Prenatal Assessment

Wave 2
Early Infancy Assessment
6 months

Wave 3
Late Infancy Assessment
12 months

Wave 4
Early Toddler Assessment
21 months

Wave 5
Late Toddler Assessment
33 months

Wave 6
Childhood Assessment
6.5 – 7.5 years

Procedure at the Childhood Assessment

- One researcher interviewed the primary caregiver.
  - Questions to the parent regarding their children's activities.

- A second researcher assessed the child on a battery of various cognitive, social and emotional tasks.
  - A free play task with Playmobil figures.

- When a sibling was present, a third researcher occupied them to prevent them distracting the first born child.

Parents' reports of the activities their children enjoy.

Results: Parents' reports of the outdoor activities their children enjoy.
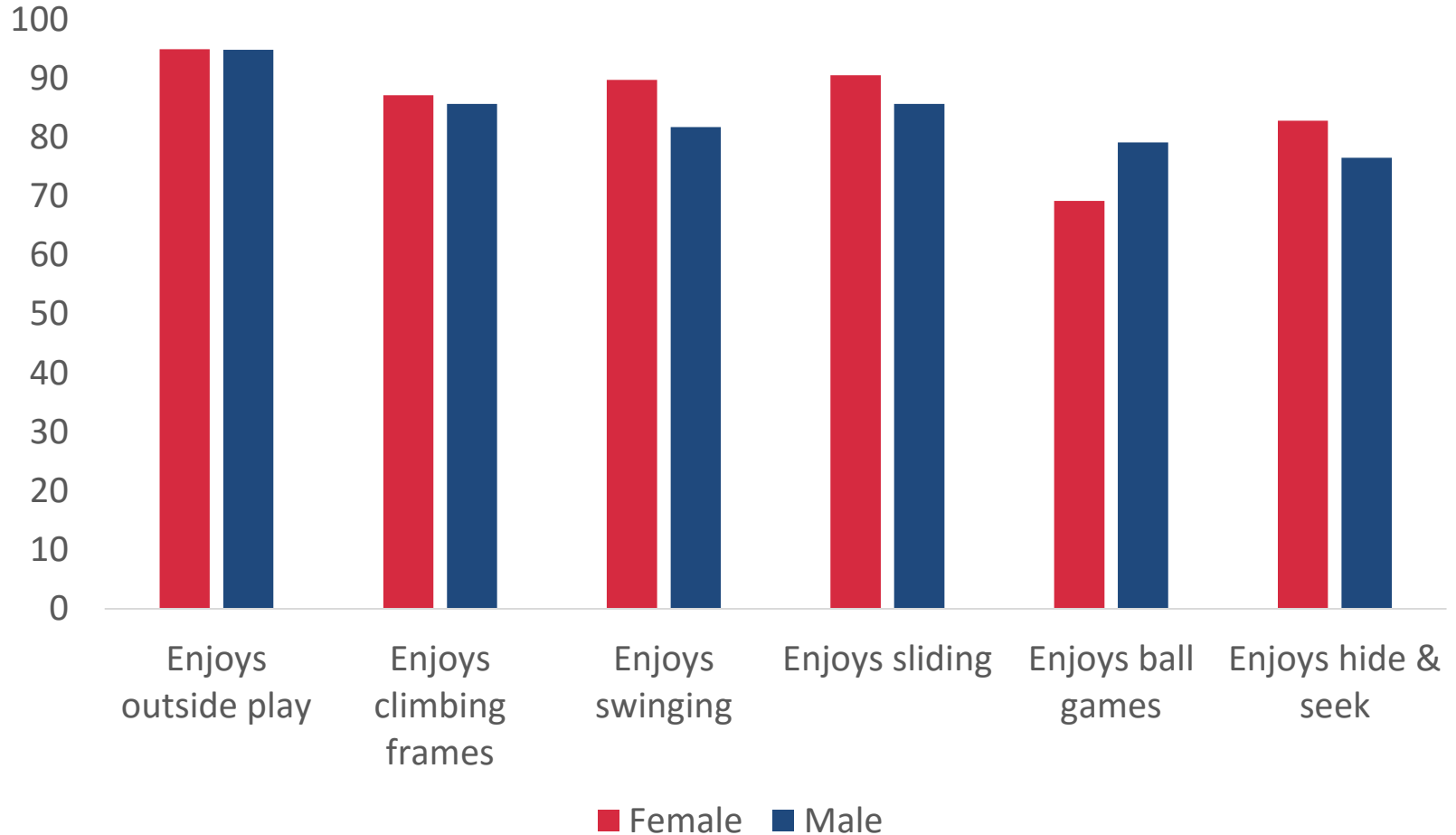
Figure 1. Parent's report of outdoor activities enjoyed by their children separated by child gender. * indicates significant gender differences (all p's <.05).

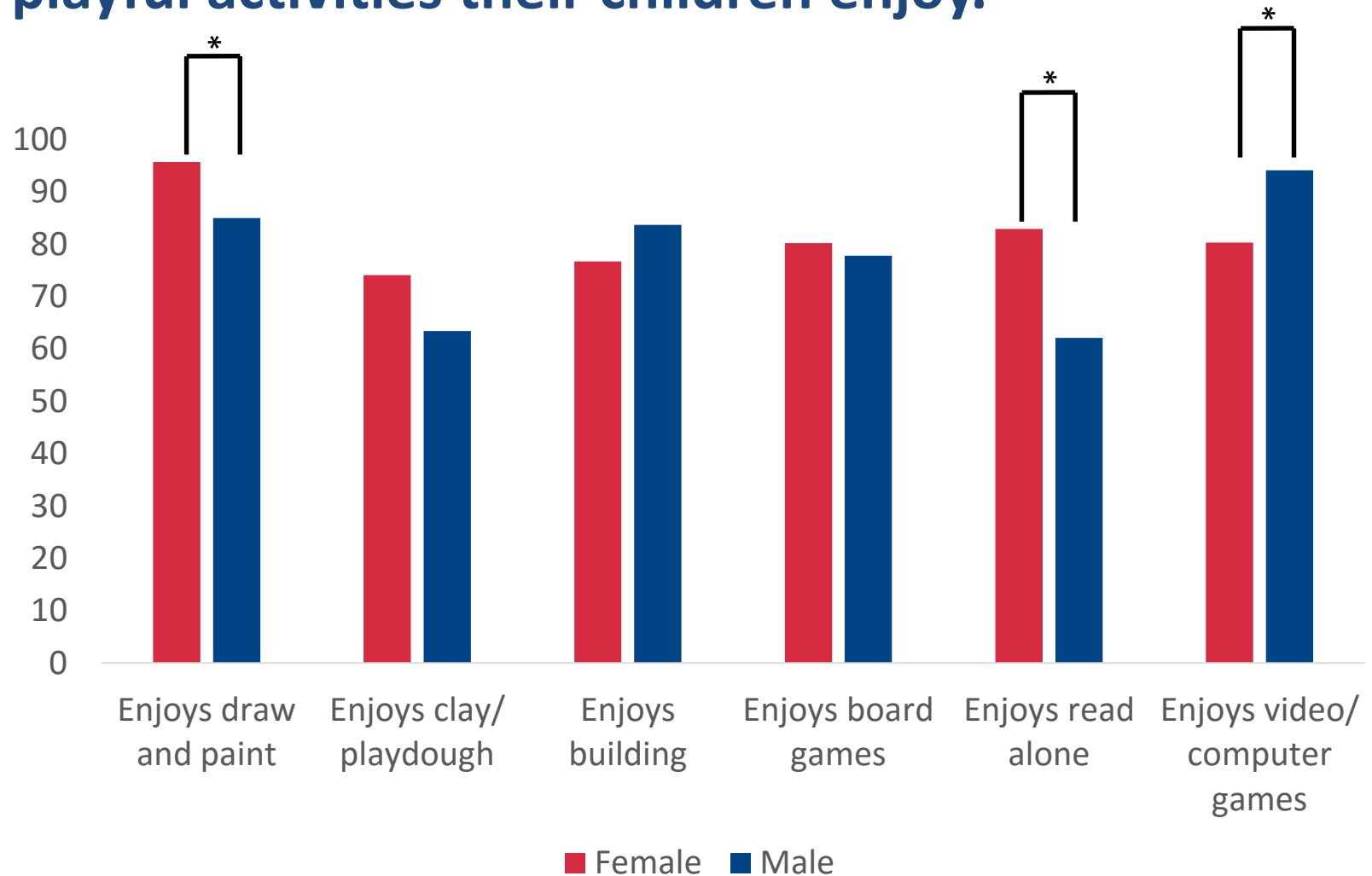# Results: Parent's reports of other imaginative and playful activities their children enjoy.

Figure 2. Parent's report of other imaginative and playful activities enjoyed by their children separated by child gender. * indicates significant gender differences (all p's <.05).

Results: Parent's reports of the types of play their children enjoy.
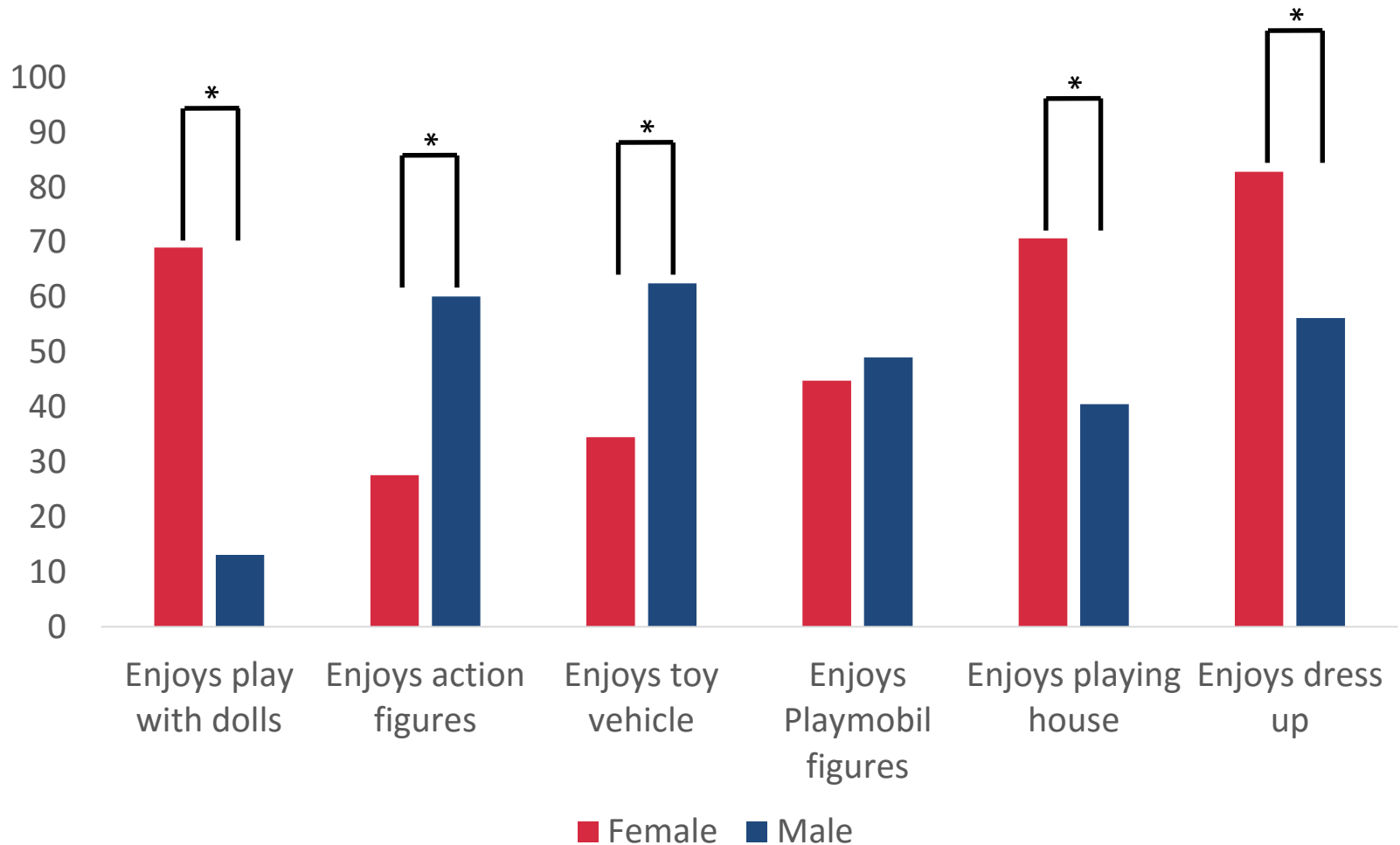

Figure 3. Parent's report of the types of play enjoyed by their children separated by child gender. * indicates significant gender differences (all p's <.05).

Comparing the different ways in which children engaged with a free play task.

Children's engagement with play

- When children engage in pretend play, their engagement can be in the role of a director, narrator and/or an actor (Scarlett & Wolf, 1979).

- Gender differences in the ways in which children engage in play may be present:
  - E.g., at age 4, pretend play that is dependent on transforming physical objects is more common in boys than girls (Matthews, 1971).

Procedure: Free play task

- All children were told the same series of stories as part of a battery of social understanding tasks.

- They were then given the opportunity to play with the toys in any way they would like to for 3 minutes.

Measures: Free play task

- **Imaginative engagement** (Auwärter, 1986; Giffin, 1984; Howe et al., 1998).
  - Enactment: *"Aah! She pushed me!"* (In play voice)
  - Sound Effect: *"Bang"* (Pushes character over with sound effect)
  - Narration: *"And she's pushed him over and took the ball"*
  - Management: *"The football goes here not there"*
  - Reality: "*My favourite football team is...*"

- **Use of objects** (Howe et al., 2014).
  - Handling objects
  - Set up/organisation
  - Expected use of objects
  - Creative use of objects
  - No use of objects

Results: Factor structure underlying children's engagement with play.

Item from coding schemes	Rotated factor loadings		
	Engagement as an actor versus manager	No engagement with play	Engagement as a narrator
Use of objects in expected or creative way	.86		
Play engagement sound effects	.79		
Play engagement enactment	.74		
Object use set up	-.57	-.51	-.55
Play engagement management	-.49		
Object use no use		.87	
Play engagement reality		.78	
Object use handling			.87
Play engagement narration			.57
Eigenvalues	2.63	1.73	1.25
% of variance	29.25	19.21	13.87

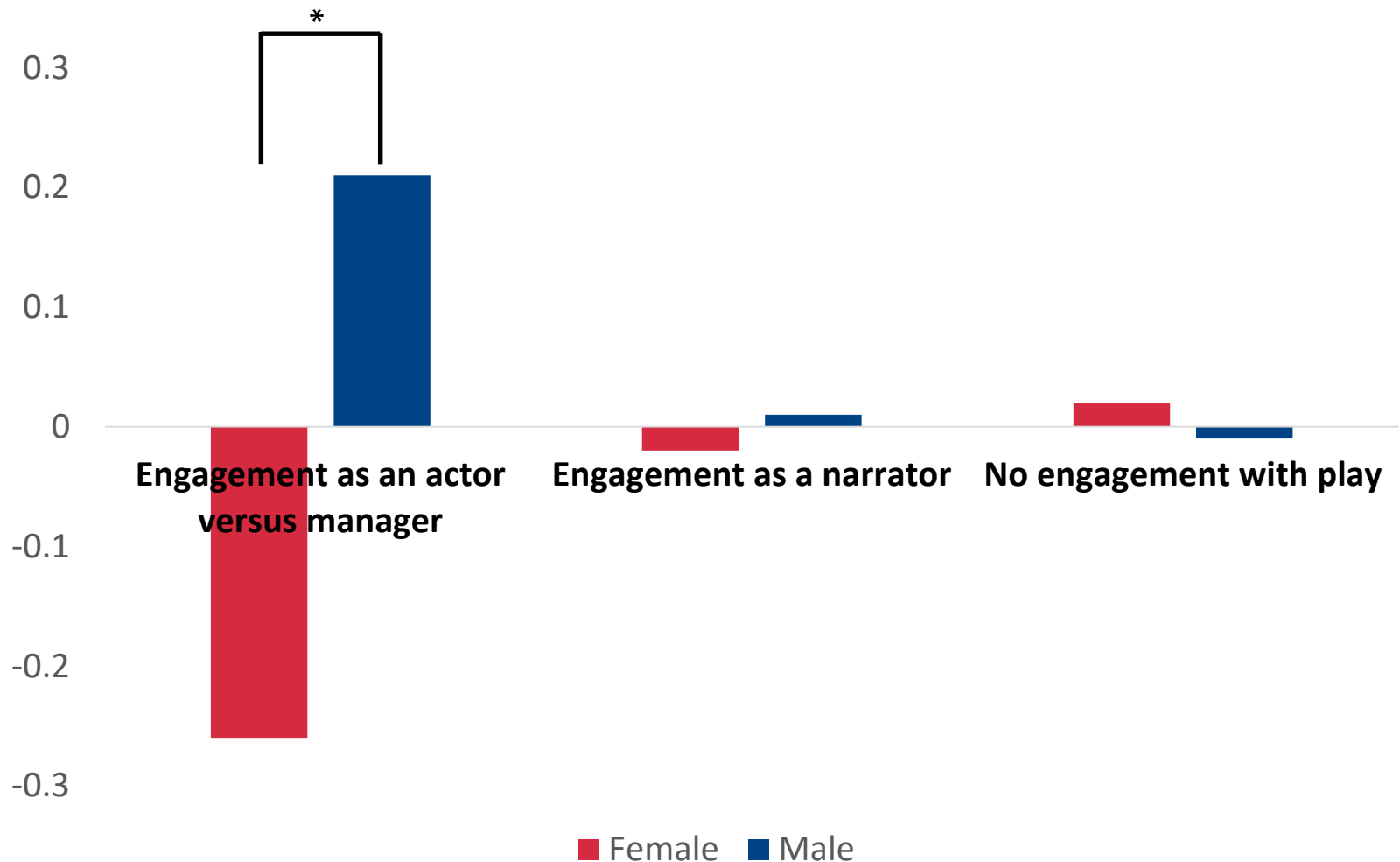# Results: Gender differences in factor scores reflecting children's engagement with play.

Figure 4. Mean factor scores reflecting children's engagement with play separated by child gender. * indicates significant gender differences (all p's <.05).

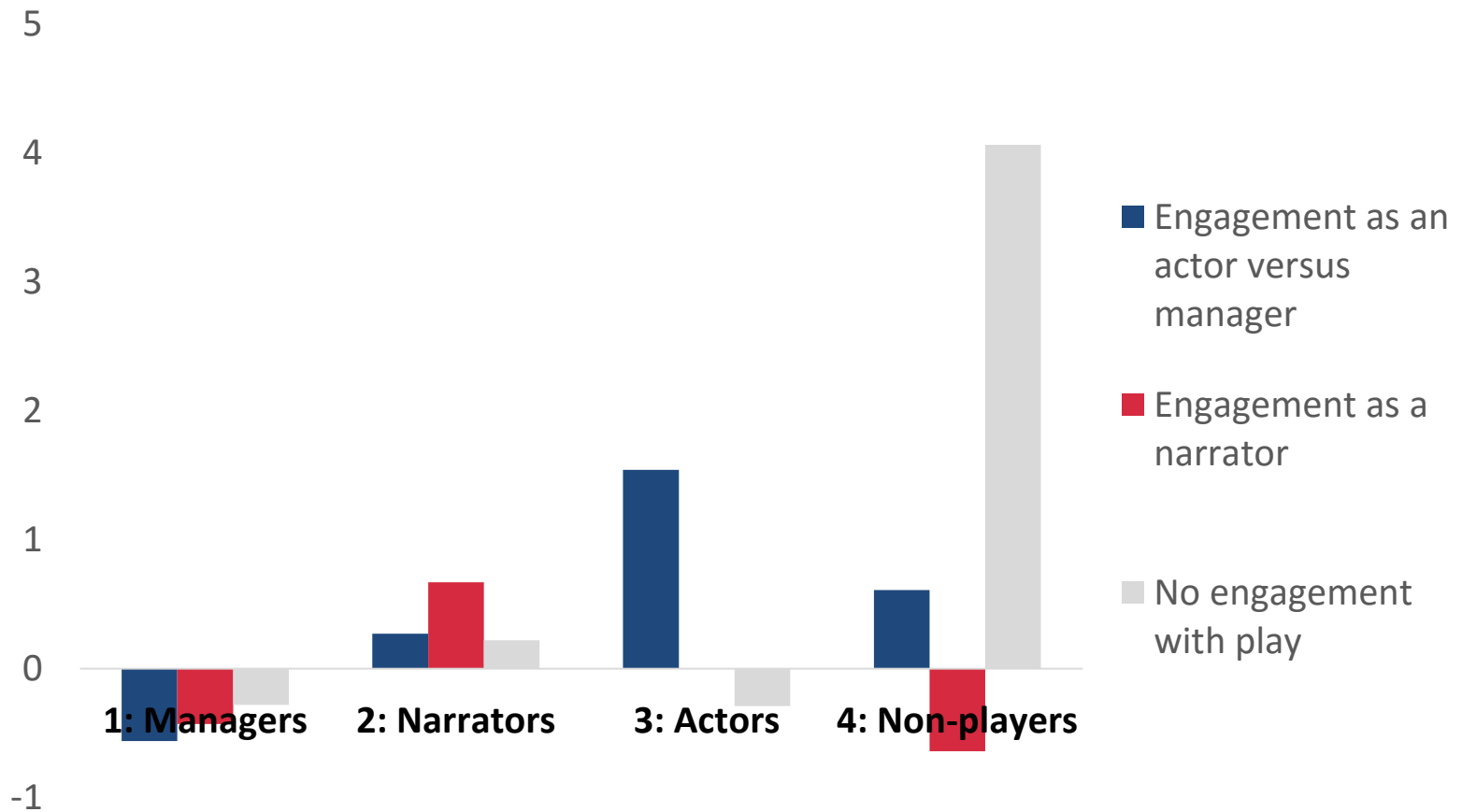# Results: Cluster analysis identifying children engaging in play in different ways.

Figure 5. Factor scores from the factor analysis investigating children's engagement with the play for the clusters extracted from the cluster analysis.
Note. The X axis represents the clusters from the final solution with their subjective labels.

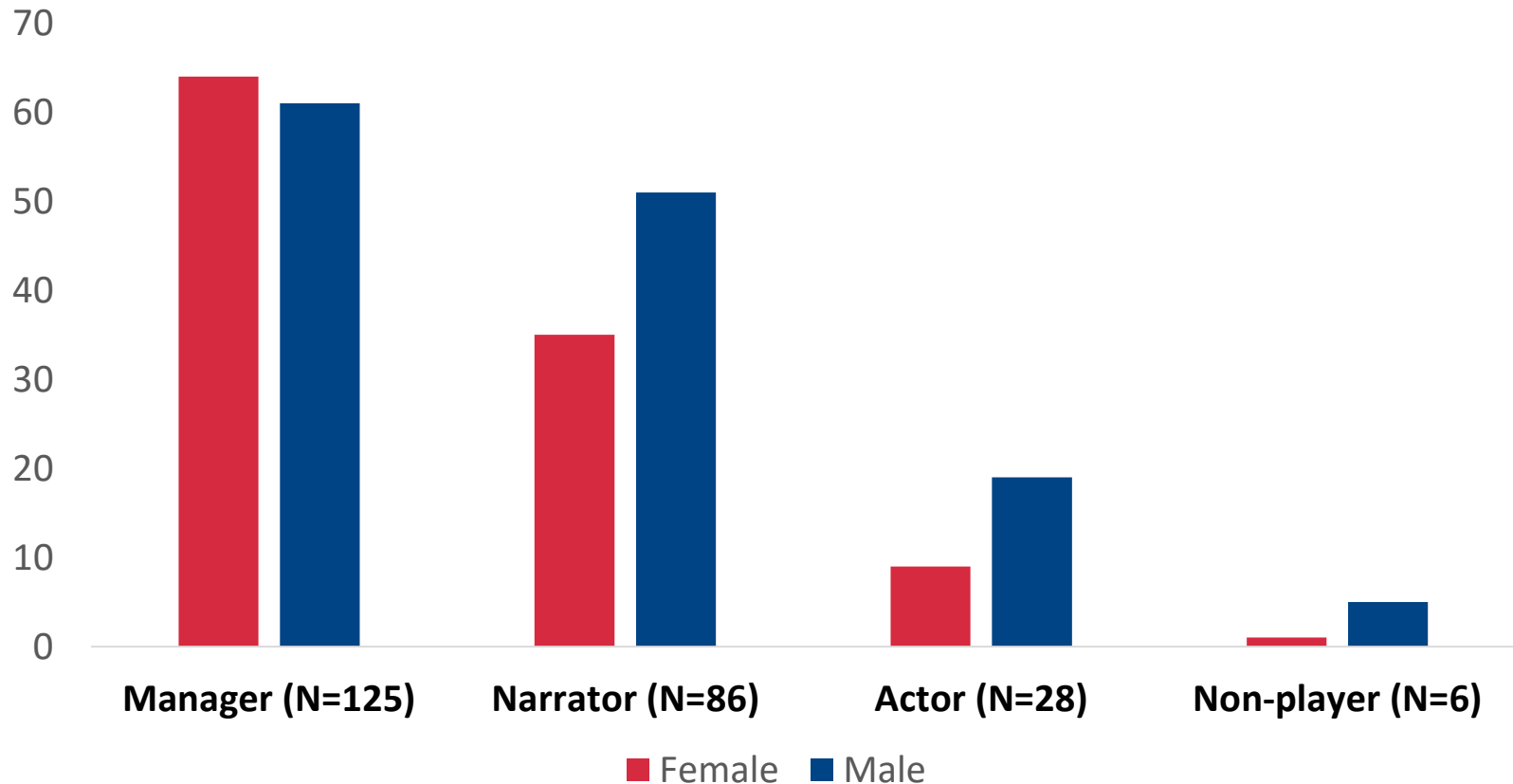# Results: Gender composition of clusters.

Figure 6. Gender composition of the groups that emerged from the cluster analysis.

Discussion

- Mixed findings:
  - Parents report gender differences in the activities their children enjoy.
  - Males are more likely to engage in play by animating objects, whereas females are more likely to engage by managing the play.
  - No gender differences were found when the children are grouped according to the ways in which they engage in play.

- Implications:
  - Benefits of combining variable-centred and person-centred analysis.
  - Play therapy.

- Future directions:
  - Compare children's engagement in the free play task with their engagement with video-game play.
  - Investigate gender differences in themes present during the free play task.

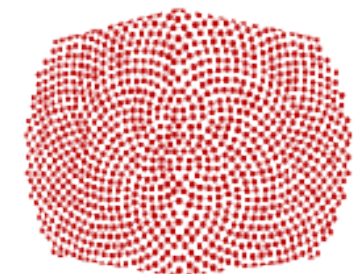# Thanks for listening, any questions?

Thanks to:

My supervisor

The families who took part in the CCDS

The MRC for funding the CCDS