

Sliding as play: Individual differences in toddlers learning to slide

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Sliding: a common play activity for children



Learning to slide involves cognition- problem solving skills; coordination, balance, and related gross motor skills to master the ability to slide.



Previous studies

Karen Adolph: child adaptations to different angles of slope

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Definition of a slide episode & Components of slide episode

1. Approach (5)
2. Climb (6)
3. Transition from step to slope (9)

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Components of slide episode

3. Slope (13)
4. Land (7)

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Non-conventional v.conventional

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Examples of non-conventional moves

Climb: Going up steps on knees

Transition: Stand: Child upright on slide

Lean: Child in prone position over slide

Straddle: Child sits sideways across platform of slide

Slope: H-back: Descending head first on back

Side-slide: Descend on slide in lying position

Sit-shuffle: Descend with uneven movements in sit position

Other: Creep down slide

Research questions

- What is the average age of mastery of sliding?
- What are the most difficult components of the sliding episode?
- Are there individual differences in learning to slide?
- How much maternal physical assistance is given and when and is it related to age of mastery?

Method

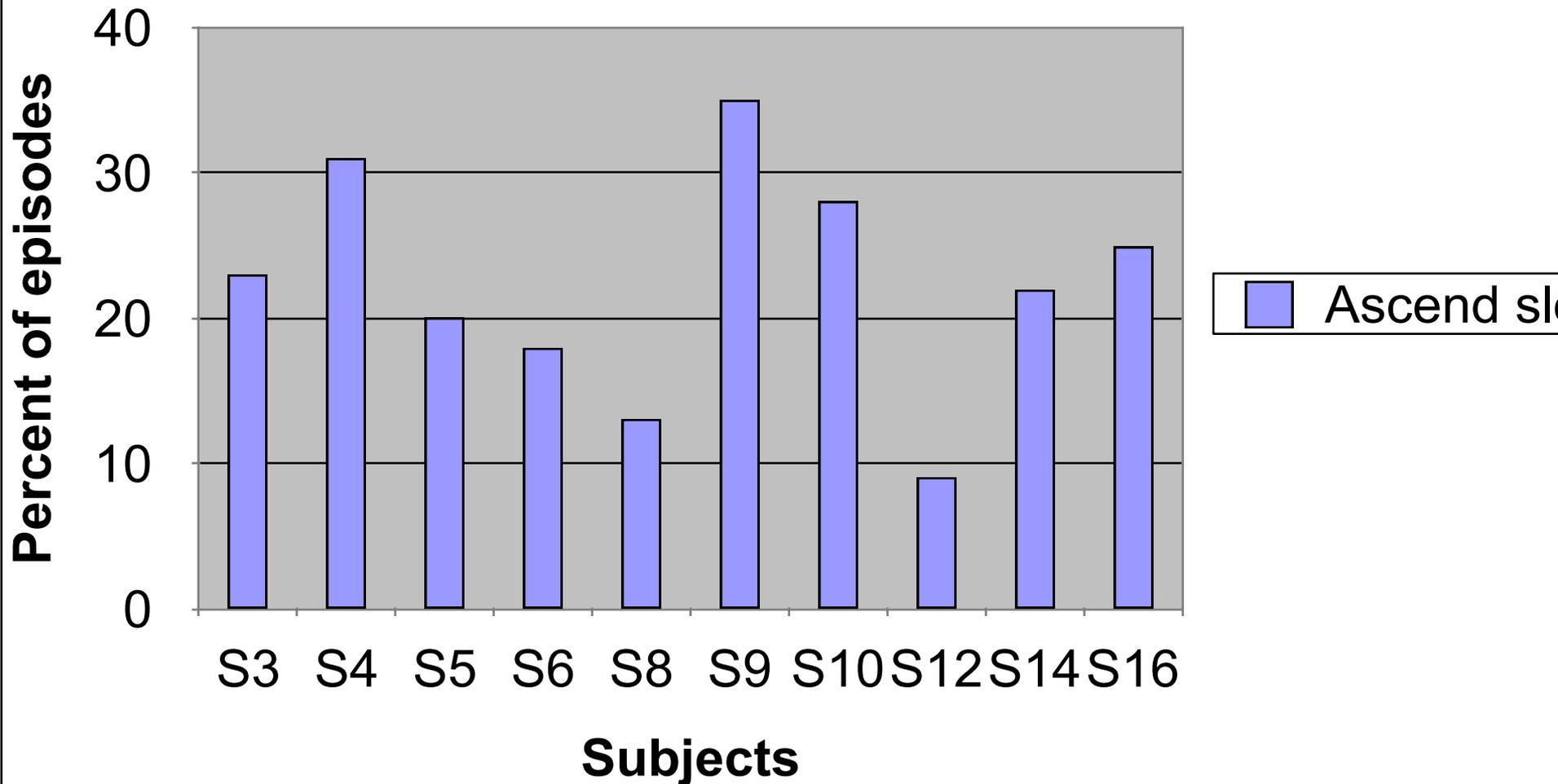
- There were 10 subjects, 8 boys and 2 girls.
- The data was extracted from a previous longitudinal study of the 11 subjects who were videotaped every two weeks for 20 min in lab playroom from the age of 52 weeks up until the age of 104 weeks.
- Videotapes were viewed to determine the occurrence of each slide episode from age 52 wks until skill mastered
- Sliding episodes were coded using 42 mutually exclusive codes to analyze approach, climb, transition, slope, and land.

Results: Sliding episodes

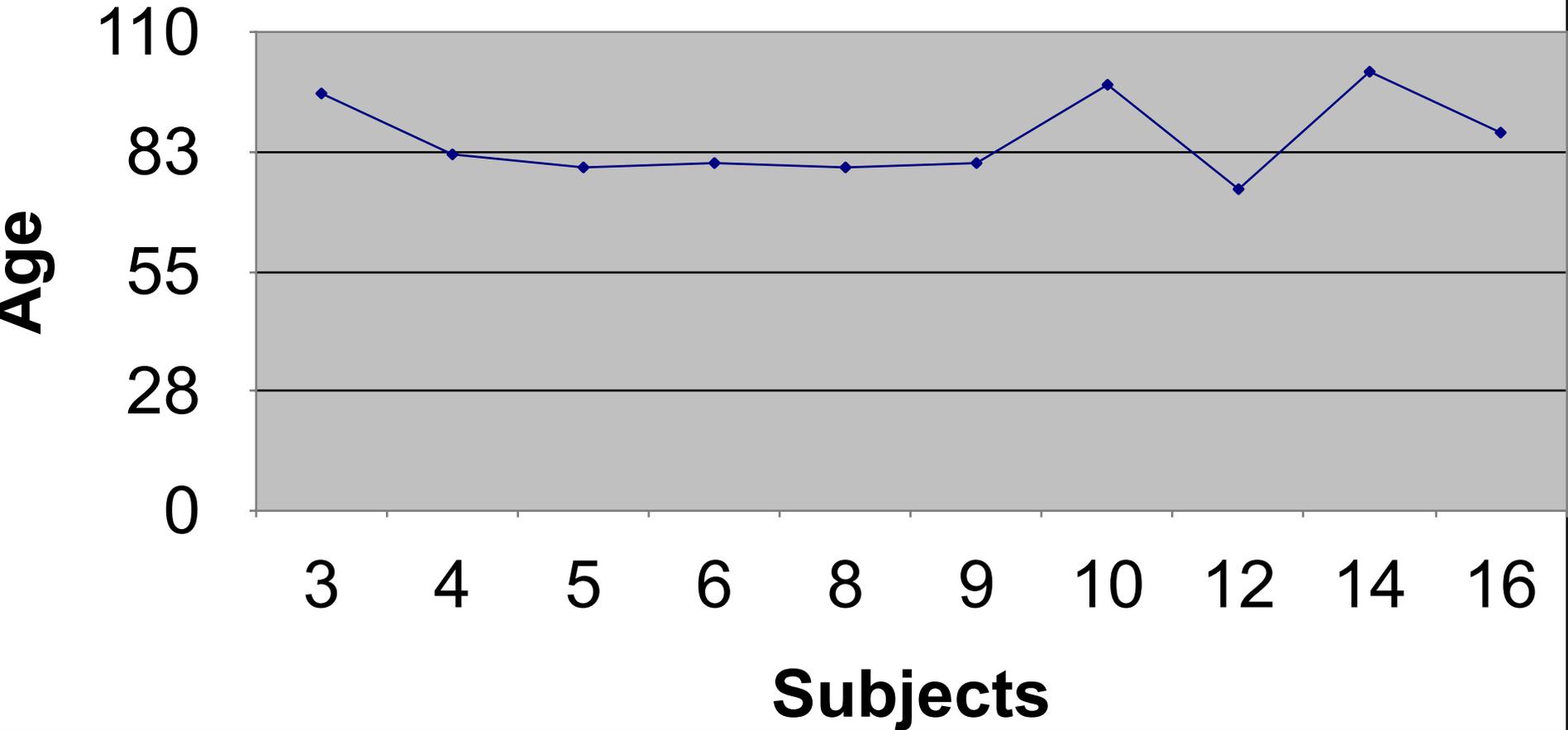
639 sliding episodes were analyzed

Incomplete unmastered	Complete unmastered
303	306
Complete mastered	Incomplete mastered
15	15

Slide episodes with Slope Ascent



Mastery Age



Order of acquisition of component skills

1. Slope

2. Climb

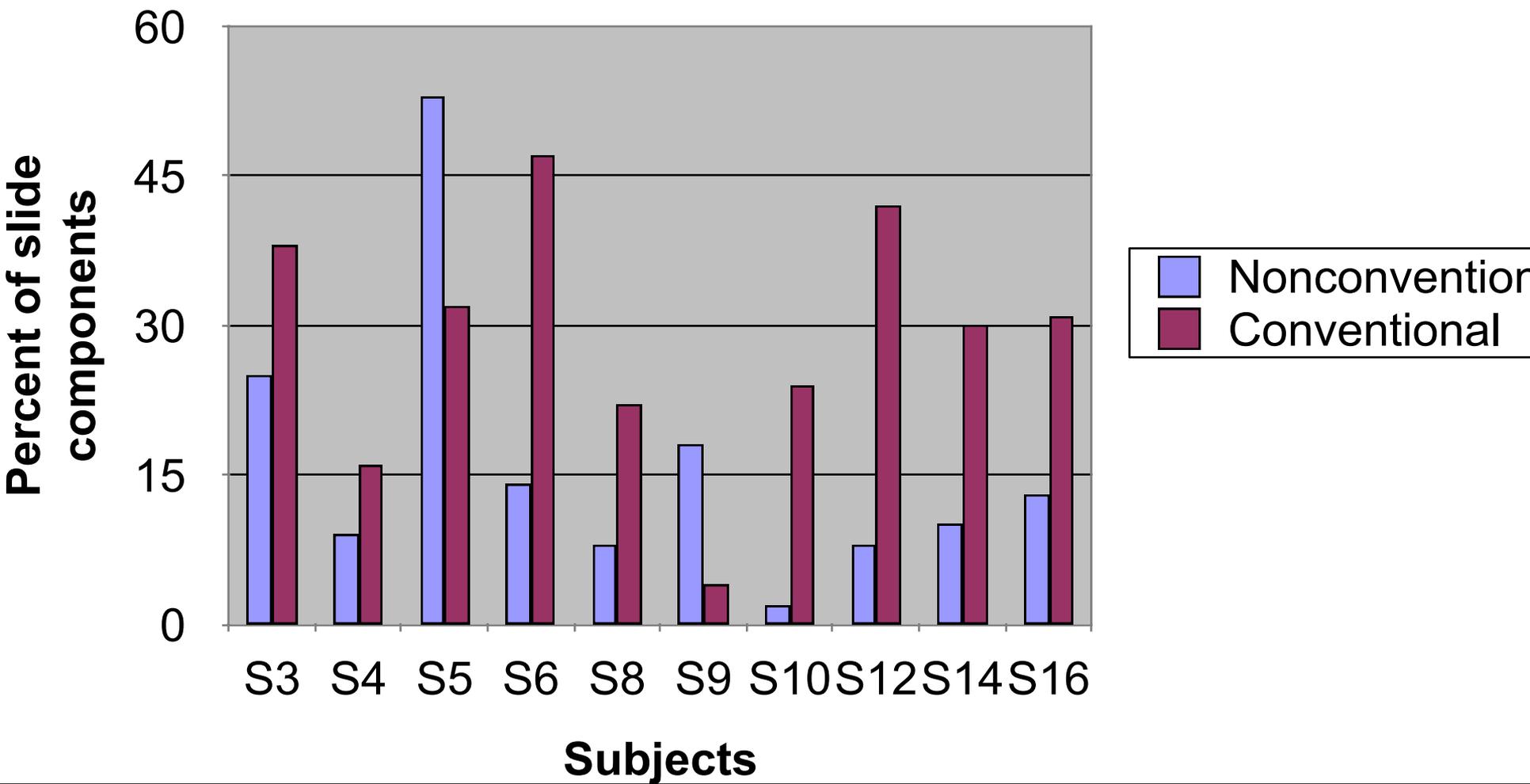
3. Transition

4. Land

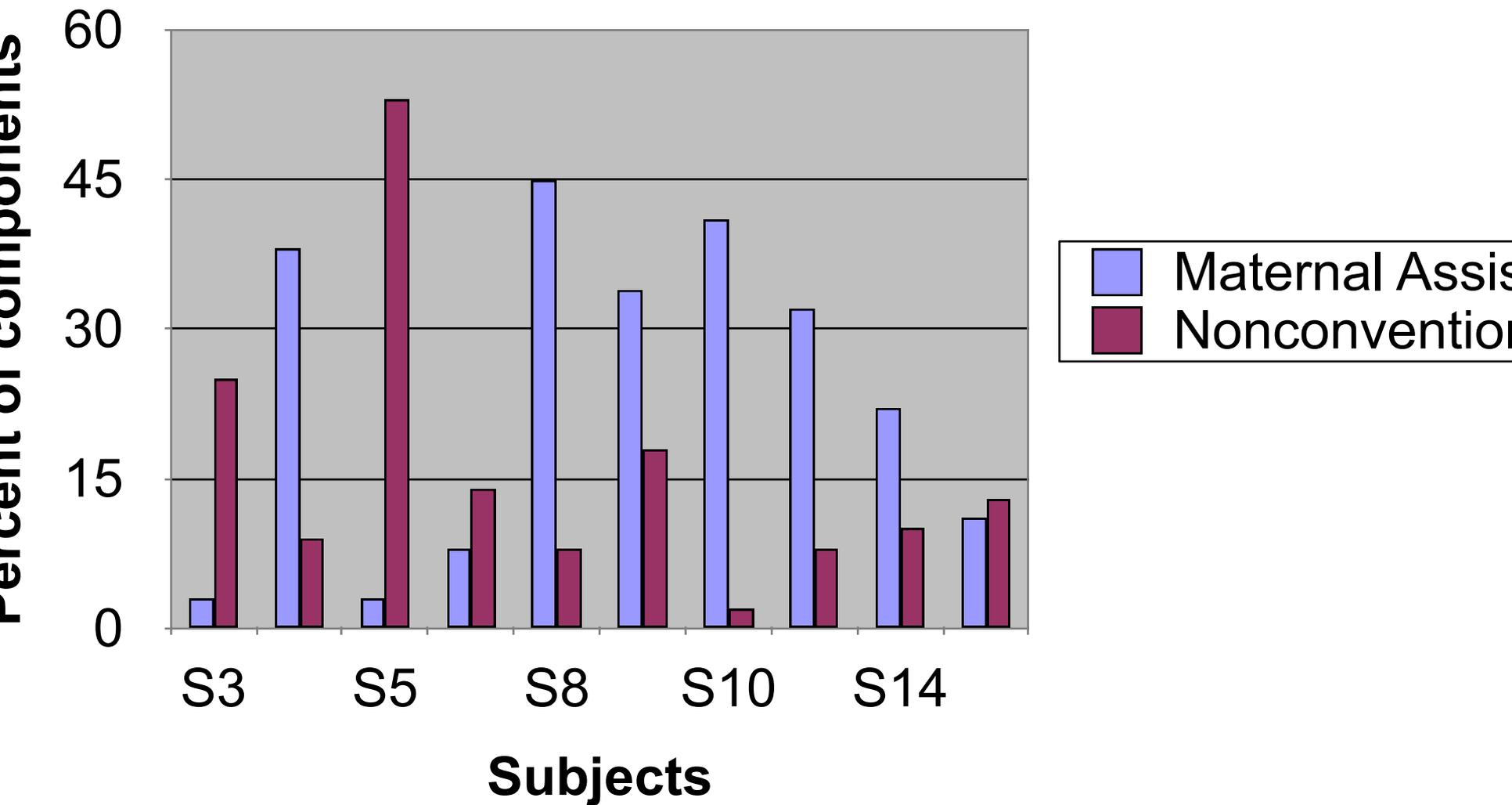
Results

- **Maternal physical assistance** was significantly associated with **infant age** but not significantly associated with **age of mastery**
- High neg correlation between proportion of **Maternal physical assistance** and prop. of **Completed slide episodes** in 6 subjects for climb, slope and land ($n=10$, $r=-.941$, $p<0.01$) and for transition ($n=10$, $r=-.666$, $p<0.05$)
- Mothers provided significantly more assistance with climb than slope
- Mothers provided significantly more assistance with transition than slope and land

Conventional and Nonconventional Moves



Maternal Assistance and Unconventional Moves



Maternal physical assistance

- 4 children had patterns of two or three combinations of moves for transition
- 2 of these had NO maternal physical assistance with transition

Examples:

squat+sit

lean+squat+straddle

straddle+partial sit+assisted transition

Discussion & Conclusions

- Providing physical assistance to the child increases the number of experiences of a complete slide episode with 4 components. However it is unlikely to significantly increase the age the child acquires this skill.
- Additional data is needed to examine if the lack of maternal physical assistance results in more novel strategies during the learning period.
- Knowing that landing is the most difficult and then transition may help in suggesting what support to give children with this popular play activity. Mothers may help more with climb and transition because they view these as more dangerous and difficult than landing.