

## Title of the dataset: Patterns of Observed Child Participation and Proximity to a Small Group with Teacher in Swedish Preschool Free Play

### General description

Swedish preschool is a preschool for all children and free play is an important educational activity. The question is whether all children are participating (ie, are attending important activities and are engaged when they are there) to a sufficient extent in preschool free play? This study aimed to explore children's observed participation based on quantitative observational data and a person-oriented method of analysis. A series of systematic instantaneous observations á 3 seconds ( $M = 19.50$ ,  $SD = 8.40$ ) of individual children ( $n = 453$ ) with a minimum age of 36 months, were carried out continuously for 1-2 full days in 56 preschool units in southeast Sweden. Only observations where the overall activity (activity setting) was free play (indoors and outdoors) were used in the analysis. The summed observations resulted in frequency data for four types of activities; pretend play, associative / cooperative interactions, proximity to a small group incl. teachers, and level of engagement (level of focus or effort in the activity) and were selected as important based on the Swedish preschool context and previous research. Proportions (divided by the individual's total number of observations in free play) of the individual activities were calculated. The four proportion variables were used in a series of cluster analyzes to find distinct and interpretable clusters or patterns of participation where the children in a cluster were highly similar in all variables, and at the same time were very different from children in the other clusters. The clusters were then compared based on child characteristics (age, gender, need for special support, receiving mother tongue support) answered by preschool staff, and preschool unit characteristics (number of children, number of staff, children / staff ratio, number of children with mother tongue support, number of children in need of special support, number resource staff) answered by the preschool director / principal, to see if certain characteristics were more common in some clusters than in others.

### Description of the dataset

Note: The datasets need to be opened from within the respective reading program, e.g. SPSS or ROPstat. Open the program first, then select file, then open, and locate the file, and open. The files cannot be opened by double-clicking on the dataset directly. The dataset is a combination of data collected from the PEPI project (project leader Eva Björck, ORCID iD: 0000-0003-4492-2384) and the TUTI project (project leader Mats Granlund, ORCID iD: 0000-0001-9597-039X). Frida Åström, PhD student, ORCID iD: 0000-0002-7553-4678, and Madeleine Sjöman, PhD, ORCID iD: 0000-0001-6172-3876, performed the merge of the datasets in 2018. Frida later controlled the merge for the current study.

Data was collected with systematic observations with the help of the manual-based instrument Child Observation in Preschool (COP), adapted to the Swedish preschool context, in autumn of 2014 (TUTI), and autumn 2015 and spring of 2016 (PEPI). The observations consisted of many snapshot observations of individual children across a preschool day/s. Several aspects of the child's current activity were coded in each sweep/observation á 3 sec. Individual data were summed across the observations/sweeps, and proportions of different activities (pretend play, associative/cooperative interactions, proximity to small group with teacher, level of engagement) divided by the total number of sweeps in free play were calculated. Frequency data and proportion data (data names ending with “\_p”) from the observations are available in the data set, as well as child and preschool unit background information received through preschool teacher and director questionnaires. The source of the data is found in parenthesis in the variable labels.

The questionnaires and the COP observation manual are available in English and Swedish. The Swedish version was used in the study.

Note that the two SPSS data files attached include different number of participants, where the n=453 file is the main analytical file. The n=482 file contains all children that were eligible for the study. This file was not the main working file, so it does not contain all the variables as in the n=453 file. Both files are cleaned files. The reduction of sample was due to a residual analysis to identify and remove outliers as part of the cluster analysis. Technically, participants with extreme data (outliers) can create bias in the cluster structure, and theoretically, all cases cannot fit into a relatively small number of homogenous clusters (Bergman et al., 2003, p. 58). Outliers were defined as cases with an Averaged Squared Euclidean Distance (ASED) of 0.2 from its 1st nearest neighbor, resulting in 29 cases (6 %) of the original sample being excluded. The reduced analytical sample after removal of residuals consisted of 453 children.

#### Related files and documents:

A combined observational manual för COP för the TUTI/PEPI studies (attached) was created to align the two datasets as the two projects used different versions of the COP manual.

Preschool teacher questionnaires (incl. child background information used in the current study) for the two projects are attached. PEPI has teacher questionnaires in English and Swedish. The Swedish version was used in data collection. TUTI only has preschool questionnaire in Swedish and only available in PDF.

Preschool director questionnaire for PEPI (incl. information about the unit used in the current study) is attached. Note that the variable names visible in the preschool director questionnaire are NOT applied in the dataset. No preschool director/principal questionnaire questionnaires are available from the TUTI project. Requests for these might be addressed to Madeleine Sjöman (see ORCID below).

#### Related references that also used combined PEPI/TUTI data:

Frida Åström, Eva Björck-Åkesson, Madeleine Sjöman & Mats Granlund (2022) Everyday environments and activities of children and teachers in Swedish preschools, *Early Child Development and Care*, 192:2, 187-202, DOI: 10.1080/03004430.2020.1754209

Coelho, V., Åström, F., Nesbitt, K., Sjöman, M., Farran, D., Björck-Åkesson, E., ... Pinto, A. I. (2021). Preschool practices in Sweden, Portugal, and the United States. *Early Childhood Research Quarterly*, 55, 79–96. <https://doi.org/10.1016/j.ecresq.2020.11.004>