Behaviour management by trainee and experienced nursery practitioners: a comparison

Doctoral (PhD) Thesis Booklet

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INTRODUCTION

In 2009 a new bachelor’s course was introduced in Hungary: Infant and Early Childhood Education (BA). Our planned contribution to this course was to learn and describe the techniques of behaviour management in nurseries and to develop methods for individual learning on this subject for students. We were wondering whether behaviour management was a challenge for trainee nursery nurses.

The literature on the topic consists, on the one hand, of microanalytic descriptions of behaviour management (e.g. Tardos, Dehelán, & Szeredi, 1977; Kurki, Järvenoja, Järvelä, & Mykkänen, 2016) and its effectiveness (e.g. Bayer, Whaley, & May, 1995; Wachs, Gurkas, & Kontos, 2004); and on the other, of the overall quality of childcare as a function of caregiver experience (e.g. Honig & Hirallal, 1998; Wilcox-Hertzog, 2004). We did not find any research that simultaneously examined practitioner experience and behavioural management in nurseries.
GENERAL CHARACTERISTICS OF THE STUDY

Our study was aimed at uncovering those caregiver behaviours that externally regulate children’s behaviour and that foster their cooperation.

Data for our study was collected from autumn 2015 to autumn 2016.

In terms of methodology, three types of data were collected: (1) written and oral interview questions, (2) interview based on video segments, (3) field experiment. Table 1 shows which data were collected for the different groups involved in the study.

The selection criterion for working caregivers was that the trainee and experienced practitioner should work in the same group. The trainees had at most 2.5 years’ experience, while the experienced caregivers had practised for at least 6 years. The students were in their second year of the aforementioned Infant and Early Childhood Education (BA) course. The laypersons were acquaintances of the students and their professions were not related to childcare.

<table>
<thead>
<tr>
<th>Interview questions</th>
<th>Layperson N = 20</th>
<th>Student N = 50</th>
<th>Trainee N = 31</th>
<th>Experienced N = 31</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experience related to childcare</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Categories of childcare experience; Professional confidence and development scale</td>
<td></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Information about the children taking part in the study</td>
<td></td>
<td></td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Interview about video segments – Nursery-VIP</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Field experiment – distribution of presents</td>
<td></td>
<td></td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

Table 1. Participation of groups in the study.
THESIS 1: DEVELOPMENT OF THE NURSERY-VIP (VIDEO INTERVIEW ON PROBLEM SITUATIONS) METHODOLOGY

Our aim was to develop a method that creates the same stimulus from one person to the next, which can be flexibly implemented with different persons, and which is reminiscent of the real-life situation. This is how the Nursery-VIP (video interview on problem situations) was born, where the person in the study watches 10 consecutive short video segments. The segments contain nursery-age children in a nursery or home environment. The task of the person is to describe verbally what they would do if they were present in the situation as a nursery nurse.

1. Our first research question was whether overall behaviour management in nurseries can be described on the level of behavioural components, and if so, along what categories. As a response to this question, we established the behaviour management coding system of the VIP method, aiming to encompass the whole of behaviour management using 19 codes.

2. Our second research question was whether there are certain detectable behaviour management styles that can be characterized by differing ratios of the aforementioned behavioural components. Cluster analysis was performed on the 19 VIP codes, which allowed the respondents to be classified into 4 types: rule-oriented, indirect, reasoning, balanced. In naming the clusters, we aimed to capture the typical response pattern of the cluster centres. Three out of the four parenting types in Houck & Lecuyer-Maus (2004) correspond closely to our cluster types; the same can be said for two out of the three parenting types in Baumrind (1967) (Table 2. ). The absence of a permissive/inconsistent style in our data is a good sign, as its presence would indicate a low quality of childcare.

<table>
<thead>
<tr>
<th>Baumrind, 1967</th>
<th>Houck and Lecuyer-Maus, 2004</th>
<th>VIP</th>
</tr>
</thead>
<tbody>
<tr>
<td>authoritarian</td>
<td>power-based</td>
<td>rule-oriented</td>
</tr>
<tr>
<td>authoritative</td>
<td>teaching-based</td>
<td>reasoning</td>
</tr>
<tr>
<td>permissive</td>
<td>inconsistent</td>
<td>balanced</td>
</tr>
<tr>
<td>--</td>
<td>indirect</td>
<td>indirect</td>
</tr>
</tbody>
</table>

Table 2. Comparison of our cluster analysis results with the parenting styles of Baumrind (1967) and Houck and Lecuyer-Maus (2004).
3. Our third research question concerned the psychometric characteristics of the nursery-VIP method.

3.1. The two-level coding system of the nursery-VIP method increases coding validity, since the introduction of the basic codes allows differentiation of linguistic expression. Analysis of the basic codes suggests that the form of the interview (personal vs automated) influences the length of three basic codes, but does not influence the length of the most essential fourth basic code, namely the WHAT WOULD YOU DO code.

3.2. What responses are elicited for the different situations presented in the video segments? Owing to the nature of the VIP method, one situation may contain several problems. The situations were successfully categorized according to their code patterns: 1. Situations eliciting less intervention. 2. Situations where children are unable to read the other’s mind. 3. Conflicts over toys. 4. Complex situations with a health and safety hazard. The current situations do not allow for the implementation of a split-half procedure. This would require more situations, which would need to be analysed according to ideas presented in the dissertation on how VIP could be developed further.

3.3. What is the coding reliability? The inter- and intra-rater reliability are excellent.

3.4. What test-retest characteristics does the method have? According to the exploratory test-retest procedure, the temporal reliability of the nursery-VIP method is not satisfactory. Temporal reliability was calculated using laypersons and with the repetition of only two situations. It would be desirable to perform a test-retest study with professionals and with the repetition of several situations with a split-half procedure.

3.5. The situations elicit different behaviour management responses with varying frequency. Furthermore, as mentioned earlier, the situations themselves may contain more than one problem. For this reason, if we are to uncover the behaviour management style of a person, it is important to use several and diverse situations. The response to any one situation will not lead us to the general behaviour management strategy of the person. A method is needed that presents situations with diverse problems. The nursery-VIP meets this requirement.
THESIS 2: MEASUREMENT OF BEHAVIOUR MANAGEMENT IN REAL-LIFE INTERACTIONS

Behaviour management was measured with real-life interactions using a field experiment. In the novel method, the nursery nurse offers presents to the children. The success of the caregivers’ behaviour management is investigated during the situation, and we search for factors determining such success.

The situation provides two dependent variables: task completion and group mood. The task of the caregiver is the following: after 5–7 minutes of free play acting as an acclimatization period, she is to distribute presents to the children. There are three requirements regarding the distribution: each child should be given one present; the child should choose which present they wish; the distribution should occur by a table. Only one caregiver is present in the group. The first practitioner to distribute presents is given coloured paper boats, while the second is given laminated Berry and Dolly (Hungarian: “Bogyó és Babóca”) pictures.

The above provoked situation measures the ability of the nursery nurse to set boundaries. Since each child receives a present, it becomes possible for the nursery nurse to have a guiding interaction with all the children.

The distributed presents are attractive and of interest to the children. The tension is caused by all the children wanting to hold the presents in their hands, and wanting to see all of them one after the other, while all the other children want to do the same.

As mentioned before, the two dependent variables are task completion and group mood. Concerning the independent variables, both the characteristics of the nursery nurses and external factors are considered. For the practitioner characteristics, the nursery-VIP data presented in the previous chapter, as well as a self-developed professional confidence questionnaire is used. As for external factors, the circumstances of the present distribution, as well as data concerning the children are used (Table Table 3. Hypotheses and measured variables relating to the ).
<table>
<thead>
<tr>
<th>Nursery nurse characteristics</th>
<th>Hypothesis (success as dependent variable = task completion and group mood)</th>
<th>How was the independent variable measured?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Behaviour management style</td>
<td>Success: Rule-oriented Indirect &lt; Reasoning Balanced</td>
<td>nursery-VIP cluster, nursery-VIP codes</td>
</tr>
<tr>
<td>skills?</td>
<td>good skills → success ↑</td>
<td>total points attained in professional questionnaire</td>
</tr>
<tr>
<td>Nursery nurse characteristics</td>
<td>Data collection order: ctrl difference</td>
<td>present giving– are ships offered first and then Berry and Dolly, or other way round</td>
</tr>
<tr>
<td>day of the week</td>
<td>Monday, Friday → success ↓</td>
<td>on what day did the recording take place</td>
</tr>
<tr>
<td>number</td>
<td>number of children on the day ↑ → success ↓</td>
<td>number of children during the recording</td>
</tr>
<tr>
<td>number</td>
<td>number of children in the group ↑ → success ↓</td>
<td>total number of children enrolled in the group</td>
</tr>
<tr>
<td>gender</td>
<td>ctrl difference</td>
<td>proportion of boys in the videos</td>
</tr>
<tr>
<td>age distribution</td>
<td>older children → success ↑</td>
<td>mean and standard deviation of age, number of children under the median age of all the children</td>
</tr>
<tr>
<td>key child</td>
<td>more key children → success ↑</td>
<td>proportion of key children in the group</td>
</tr>
<tr>
<td>duration of nursery attendance</td>
<td>has been attending nursery for longer → success ↑</td>
<td>at how many months of age was nursery started, how many months have elapsed since then, two clusters based on sample distribution</td>
</tr>
<tr>
<td>as educational year progresses</td>
<td>→ success ↑</td>
<td>month number of the educational year when recording took place</td>
</tr>
<tr>
<td>temperament</td>
<td>more effortful control in any combination → success ↓</td>
<td>temperament scale of Sleddens, Kremers, De Vries, &amp; Thijs, 2013</td>
</tr>
<tr>
<td>integration of children</td>
<td>more children with atypical development → success ↓</td>
<td>number of children with atypical development in the group</td>
</tr>
<tr>
<td>with atypical development</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 3. Hypotheses and measured variables relating to the field experiment.
CHARACTERISTICS OF THE NURSERY NURSES

BEHAVIOUR MANAGEMENT STYLE

H1: Depending on membership of the behaviour management clusters, there will be variations in the task completion and group mood. The reasoning and balanced style clusters will have an advantage over the rule-oriented and indirect styles.

We did not find a relationship between the nursery-VIP clusters and the dependent variables. All the behaviour management styles could be effective.

Among the nursery-VIP codes, CARE was the only code that could predict the mood of the present distribution task. Those caregivers where the mood of the present distribution had a score of 2 in the field experiment did not respond with CARE when a child sneezed on the recording, or when a child ate sand. The common cause behind the two situations was probably the sensitive responsiveness of the caregiver.

SKILLS

H2: The professional confidence of the caregiver will have a positive correlation with their success in task completion and group mood.

The professional confidence (as assessed by a questionnaire) is a predictor of the group mood: if the confidence was higher, the group mood was better. However, the positive relationship between professional confidence and task completion was not significant ($p = .063$).

CHARACTERISTICS OF THE DATA COLLECTION

ORDER OF DATA COLLECTION

H3: There is no difference in the task completion and group mood between those caregivers who come first in the experiment and those who come second.

Whether the caregiver came first or second in the experiment influenced the task completion, with the second caregivers having a higher probability of obtaining lower scores in task completion. Nevertheless half of those who came second managed to complete the task with a full score.
As a consequence of the experimental setup, the effect of the order in which the caregiver comes and the present type cannot be separated, since the first person to give presents always gave paper boats, while the second always gave the Berry and Dolly pictures. This issue should be considered in any future experiments.

**DAY OF RECORDING**

| H4: The success of task completion and group mood will be adversely affected if the experiment takes places on a Monday or Friday compared to the middle of the week. |

There is no difference in the success of present distribution in the days that the experiment takes place. Only the number of children in the experiment was affected, as fewer children were on the recordings on Monday and Friday than in the middle of the week.

**NUMBER OF CHILDREN IN THE RECORDING**

| H5: With more children taking part in the distribution of presents, the success of task completion will be reduced and group mood will worsen. |

The number of children in itself did not influence the success of present distribution. The number of children becomes significant when this increases the number of children who are young or who have a difficult temperament.

**NUMBER OF CHILDREN IN THE GROUP**

| H6: When the total number of children in a group is higher, the success of task completion will be reduced and group mood will worsen. |

It seems that the total number of children in the group does not influence the success of present distribution. What has a stronger effect is how many children are present in the video itself, and more so, whether there are those among them whose characteristics will tend to worsen the success of present distribution.

**BOYS AND GIRLS IN THE RECORDING**

| H7: The success of task completion and group mood will not be affected by the gender distribution of the children during the recording. |

The answer to this hypothesis is complex. On the one hand, it is not true that every boy who is added to the group will worsen the success of present giving. However, since boys are more likely to have a difficult temperament, on the whole, a higher number of boys will tend to lower the success score.
**AGE OF THE CHILDREN**

H8: The success of task completion and group mood will be better if the age of the participating children is higher. ✅

This hypothesis was partially confirmed. If the number of younger children increased, the probability of the caregiver receiving the highest task completion score decreased. It should be mentioned that by young we mean below the median age of 34.7 months, which is rather higher than the 2 years typical starting age of nursery. We did not find a connection between group mood and the age of the children.

**KEY CHILDREN IN THE KEY CHILD SYSTEM**

H9: The success of task completion and group mood will be better if the proportion of key children present is higher. ❌

We could not confirm this hypothesis. The number of key children is an indicator of the number children in the experiment (there was a high correlation between the two variables).

We only found one case where a child showed separation anxiety towards his key person after his key person left the room during the experiment (as per the experimental setup). This case showed that when the key child system shows exclusivity, taking care of someone else’s key child can present problems.

**DURATION OF NURSERY ATTENDANCE**

H10: The success of task completion and group mood will be better if the children have been attending nursery for a longer time. ❌

We found the opposite: as a small but significant effect, every extra month spent in nursery will increase the probability of the group mood decreasing by one score.

**IN WHICH MONTH OF THE EDUCATIONAL YEAR DID THE RECORDING TAKE PLACE?**

H11: The success of task completion and group mood will be better if the recording takes place towards the end of the educational year. ❌

This hypothesis was not confirmed. Since children generally start nursery in autumn, and since there are those who spend several years in nursery, it is more fortunate to consider when exactly each of the participating children have joined the nursery. Nevertheless, the month in which the recoding took place is connected with the number of children participating in the recording, and even more so with the total number of people in the group.
The reason for this is that as the educational year progresses, the children get older, and according to law, if every child in the group reaches 2, two further children can be enrolled. In future studies it should be kept in mind that if we wish to work with larger groups, we have a greater chance of doing so in the spring.

**CHILD TEMPERAMENT**

| H12: The success of task completion and group mood will be adversely affected if the group contains several children whose low level of effortful control is combined with either of the two other temperament dimensions. |

Apart from children with a difficult temperament, the only children where we found a connection between temperament risk and task completion, was for those who had a low level of effortful control, and at the same time neither their extroversion, nor their negative affectivity was high. It turned out that these children were around a quarter of a year younger than their peers. In other words, in those groups, where the level of effortful control is low, the low level of effortful control may be caused by developmental differences in attention. This is because effortful control examines both the willingness to follow rules and attentiveness.

| H13: The success of task completion and group mood will be adversely affected if several children with a difficult temperament are present. |

Children with a difficult temperament will spoil the group mood during the giving of presents, as these are the first to express their dissatisfaction if the nursery nurse cannot prevent the situation from being stressful for them. We did not, however, find a connection between task completion and the number of children with a difficult temperament.

**INTEGRATION OF CHILDREN WITH ATYPICAL DEVELOPMENT**

| H14: The success of task completion and group mood will be adversely affected if several children with atypical development are present. |

The number of children with atypical development during the present giving did not correlate with either task completion or group mood. One explanation is that atypical development can take many different forms. The child’s late development does not necessary cause a conflict with other children. The problem occurs if it appears as a difficult temperament – and the latter appears more often than in children with normal development.
1. Using the nursery-VIP method we found differences between the nursery nurse practitioners and the students, as well as the laypersons. The laypersons and students are more rule-oriented than the practitioners. These results are in partial agreement with our earlier study, where we found that trainee nurses place more emphasis on rules than do experienced nurses (Gyöngy, 2017b). However, such a rule-oriented attitude was not found in the trainees in the current study, only in the students.

Changing the environment instead of trying to exert control over the child, is a form of gentle guidance. This strategy was used by experienced caregivers more often than by any other group. In contrast, the other end of the spectrum is represented by confrontational disapproval, which was present more often in laypersons and students than in working nursery practitioners. The urge to teach the children was characteristic for students, presumably due to their university studies. Developmentally inappropriate answers appeared with higher proportion in the laypersons’ answers, pointing to their lack of qualification.

2. No measure relating to experience could be shown to have a positive effect on the present giving task. Neither the number of years in the profession, nor any other professional experience, or age, level of professional qualifications, parenting or informal childcare experience as a teenager (babysitting), nor professional confidence had a connection with the scores received for task completion and group mood.

In terms of parenting, the results were opposite to what was expected: mothers of small children were more likely to achieve a lower score for task completion than those who had older children, or those who had no children. Although we were surprised by this result, we found similar results in the study of Honig and Hirallal (1998).
There have been relatively few studies in Hungary concerning nursery nurseries. We have conducted novel research on behaviour management in nurseries, and have contributed to the field with the development of two new methodologies. One of them is the nursery-VIP, which is an interview method with short video segments; the other is a present giving exercise recorded in a nursery group that measures the behaviour management strategies of the caregiver. With the help of the nursery-VIP method, we managed to describe the behaviour components of behaviour management, and identify styles involved.

In the present giving field experiment, no significant difference was found between trainee and experienced nursery nurses in task completion or the group mood. This was an interesting find. Moreover, the experiment contributed greatly towards capturing further factors that can influence behaviour management.

Using multivariate statistics, it was shown that the success of task completion was influenced by the number of children below the median age of 35 months, whether the caregiver is herself a mother of young children, or the order in which she takes part in the experiment. The group mood was significantly affected by the professional confidence of the caregiver, whether she used the CARE code during the nursery-VIP interview, the average number of months that the children in the group had been attending nursery, and how many children with a difficult temperament were present during the experiment. These factors should also be considered when we are assessing the quality of a nursery nurse’s childcare.

The nursery-VIP method is an appropriate tool to be integrated into the Infant and Early Childhood Education (BA) course, for instance as part of the educational psychology module.


