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The Assessment of Children's Performance at Child Care Centre

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Abstract

The study aims to examine children's performance through their behaviour and the relationship between children's performance and children's profile at child care centre. Data were collected through 43 children using questionnaires filled by teachers who supervise children aged between 2 - 4 years at three child care centre in Shah Alam, Selangor. Fifty-two variables which were generated from children's performance that include three behavioural categories (movement, interaction and attention) have been analyzed. The result indicated only three out of fifty-two children's behavioural elements have high performance level which were happy to go home, physical activity, and happy to watch television. They scored > 0.75 for Cronbach's alphas coefficient which indicated with high level of internal consistency.

Keywords: Children; performance; assessment; child care centre

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1. Introduction

Children are among those who are still growing and always need a fully attention from parents. Thus, the performance of these children should appropriately monitor from time to time to ensure that the growth process is going well. Additionally, early development of children is the most important and critical part for children development (Azlina & Zulkiflee, 2012). However, this growth process sometimes might not run smoothly. The placement of these children in Child Care Centre (CCC) somehow would hinder the growth expected that might be because of CCC design environment. The design environment of CCC should be considered in order to ensure that children in CCC gain a responsive and healthier physical development and also to ensure a better quality of the physical environment in child care centre (Azhari et al., 2015).

Today, the total of working women in Malaysia has increased from 45.9% in 2005 to 52.4% in 2013 (Ministry of Women Family and Community Development, 2014). The demand for CCCs has grown in response to the increased of total working parents. The increment of working parents would lead to the increment of enrolment of children in CCCs. Children that are sent to CCC would spend about 8 to 10 hours per day in the CCC. Children might feel stress, uncomfortable or afraid of being in CCC during that long hours stay because of low quality of the environment. The situation will affect their behavior which decreased children's mood and increased aggressive behavior during the activities (Anderson et al., 2000; Ciucci et al., 2013). Besides that, children's behaviour in CCC might be influenced by various aspects because of the environment of CCCs, the teacher's approaches, social interaction with other children or children's profile background. This study aim to examine children performance through their behavior and the relationship between children's performance and children's profile at CCC. The findings will help to improve the young children needs towards achieving high quality performance level on children's behaviour especially for two to four years of age children.

2. Literature review

2.1. Children's performance assessment

The performance assessment of young children has been an area of interest for years for early childhood professionals, policy makers and also one of the popular topics for the education reform (Eisner, 1999; Gallant, 2009). Performance assessment is also can be defined as an assessment of several activities in which the student or person perform to demonstrate, complete or perform actual behaviour of interest (Jorgensen, 1994; Meisels et al., 1995). Performance assessment also known as an alternative to traditional assessment methods that received a great deal of attention of participants (Craw, 2009). Moreover, the assessment of children's behavior towards their performance can be developed in many ways. According to Meisels et al., 1995, comprehensive performance assessment should contain three basic components which are checklist, portfolios and summary reports. The performance assessment may be most easily understood by approaching young or old children current knowledge and skill (Stallman & Pearson,1990; Meisels et al., 1995). It also generated by the accomplishment of daily activities at kindergarten or school (Meisels et al., 1995). However, the assessment of young children performance at CCCs may differ from the assessment of children at school due to their ability in terms of their age level.

The assessment of children's performance is to observe and measure the level of children's ability towards their action (Anderson et al., 2000; Ciucci et al., 2013; Wargocki & Wyon, 2013) and their achievement (Eisner, 1999). However, for young children 2 to 4 years of age, it might be hard to acknowledge their skill in terms of academic achievement because young children might not ready to explore educational tasks or tests. The children's competency to understand the instructions or task given will be distracted because of the discomfort feeling and discomfort learning environment (Sofian & Ismail, 2012; Zeiler & Boxem, 2009).

The combination of information on children's behaviour could be useful to measure children's performance through the establishment of questionnaires especially for young children (Rupp et al., 2015). Meisels et al. (1995) had stressed that the actual implementation of children performance can be adjusted on systematic standards of knowledge and curriculum development in relation to teacher, classroom and child. Measuring children's behaviour may involve the application of systematic standards of performance which include the action of young children

(Bower et al., 2008) such as attention (Haverinen-Shaughnessy, Shaughnessy, Cole, Toyinbo, & Moschandreas, 2015; Schneider, 2002; Wargocki & Wyon, 2013) interaction (Sofian & Ismail, 2012; Zeiler & Boxem, 2009) and movement. The aim of the current study was to evaluate children's performance through their behaviour and their daily activities at CCC. Next section would discuss on research methodology which involved participants, measurement instrument, procedure, data analysis and limitation. The discussion would be further on research finding and conclusion.

3. Methodology

3.1. Participants

The study was conducted in registered CCCs in Shah Alam, Selangor. The samples included 43 children between two to four years of age. The respective teachers were given a brief description on the evaluation procedure and how to answer the questionnaire. Children were assessed by the experienced teachers that particularly take care of children between two to four years of age. Popham (1991) has justified that teacher may engage in unsound teaching practices in order to raise student test scores. The questionnaire would be answered by teachers based on one child equivalent to one set of questionnaire basis. The teachers have to answer the questionnaire because, children between two to four years of age have no ability to read, to analyze and to write. Previous studies indicated that children age of seven can provide more stable answers because during that age the major turning point in the development of children's cognitive ability is happening (Borgers et al., 2003, Piaget, 1929 & de Leeuw et al., 2004).

3.2. Measurement instrument

In assessing children's performance towards their behaviour in CCC, this study was used self-developed questionnaire. The questionnaire has used the combination of information on children's profile and children's performance in order to evaluate their movement, attention and interaction for young children. The questionnaire consists of two sections such as children's profile and children's performance. The children's profile section was used checklist approach. Furthermore, for the children's performance section in the questionnaire was based on five Likert-scales (1=very bad, 2= bad, 3=neutral, 4= good, and 5=very good). Previous studies have mentioned that likert is the type of rating scale which appropriate for children because it provides discrete choices that can be easily interpreted (Haddad et al., 2012, Chambers et al., 2002 & Laerhoven et al., 2004). The questionnaire was extruded three key components of children's performance towards children's behavior which are movement, interaction and attention. Figure 1 provides the theoretical framework for development of questionnaire that has been used for children's performance assessment. These three key components, has been expand to another five key aspects such as i) communication with teacher, ii) communication with other children, iii) attendance and health, iv) indoor activity and v) outdoor activity.

Children's Performance Components
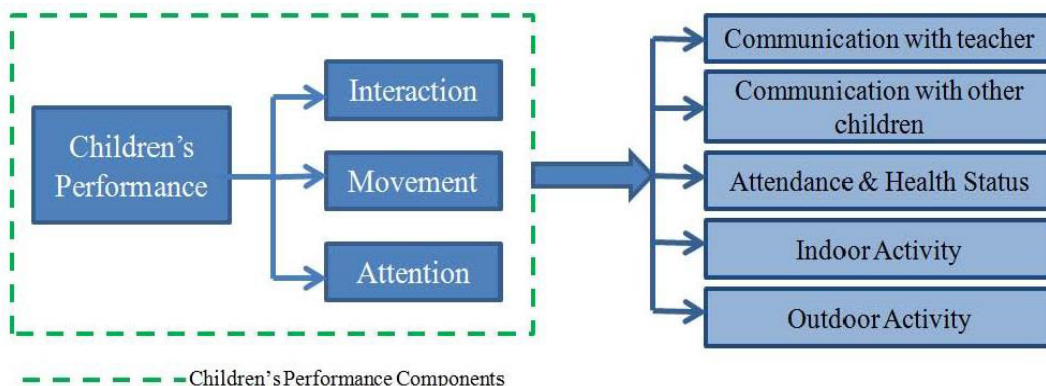
- Fig.1. Theoretical framework.

3.3. Procedure

The data collection was conducted through observation on children's performance during their activities in CCC. The appointments were made for each CCC before the visit. All the owners of CCC have been informed about the confidentiality of the data collected. They were aware that the data would only be used for study purposes. The ethical issues have been clarified before the data collection. The owners of the CCC have been informed that there would be no interaction with children during the visit. The data used in this study was drawn from the questionnaire that have been answered by teachers represent of 43 children age between two to four years at CCCs.

3.4. Data analysis

The result of statistical analysis of major findings is discussed in inferential and descriptive statistics. All statistical analyses were performed with IBM SPSS Statistics. Data from the visit has been carried out with reliability test to assess the reliability of each of the 52 questions that represent the performance of children's behaviour. The reliability test of questionnaire should be done because it is important which can influence the identification of the type, scale used and response the variables evaluated (Lee et al., 2010).

Data from main survey would be run with descriptive analysis to obtain the mean score value which could indicate between 1 to 5 represent the level of children performance. Elements of children's performance that exceeds "4" (good) will be run with correlation analysis to see the relationship between children performance and child's profile. The 52 variables of children's performance would be rated by respective teacher. All the variables have label by related code to present the element of children's performance in SPSS software. Table 1 presents all the 52 keywords of variables extruded from the questionnaire.

Table 1. The code of variables for children's performance.

Code	Variables	Code	Variables	Code	Variables	Code	Variables	Code	Variables
C1.1	Talk nicely	C2.3	Smile and laugh	C3.2	Infectious disease	C4.7	Speed up fan/AC	C5.1	Excited
C1.2	Permission for activity	C2.4	Cooperate-friend	C3.3	Admittance to hospital	C4.8	Swapping toys	C5.2	Outdoor activity
C1.3	Questioning	C2.5	Sharing toys	C3.4	Attendance	C4.9	Self-managed after bath	C5.3	Energetic
C1.4	Excited when finish the tasks	C2.6	Helpful	C3.5	Happy to go home	C4.10	Happy to watch television	C5.4	Play alternately
C1.5	Responsive	C2.7	Friendly	C3.6	Happy when come to CCC	C4.11	Focus during activity	C5.5	Play with everyone
C1.6	Complain	C2.8	Invite friend play together	C4.1	Independent at toilet	C4.12	Happy-finish work	C5.6	Tolerance with others
C1.7	Two-way interaction	C2.9	Tolerance	C4.2	Wanted to be in group	C4.13	Happy - shower	C5.7	Swapping toys
C1.8	Listen to the advice	C2.10	Focus to task given	C4.3	Offering to engage in activity	C4.14	Keep toys with teacher	C5.8	Offering to play new game/activity
C1.9	Follow instruction	C2.11	Patient	C4.4	Easy to sleep	C4.15	Line-up accordingly		

| **C2.1** | Happy play with friend | C2.12 | Help teacher | C4.5 | Happy after woke up | C4.16 | Physical Activity |
| **C2.2** | Easy to get along | C3.1 | Health status | C4.6 | Asking permission for meal | C4.17 | Quite Activity |

3.5. Limitation

The limitations was that this study used small number of children. This study also only focuses on children within the age of two to four years old. The reason is that CCCs in Malaysia that cater children between zero to four years of age focus entirely on play activities that accommodate play activity spaces.

4. Result and discussion

The result had presented the children's profile and level of children's performance. Figure 2 presents the total of children based on age group in this study. The majority of the respondents were 4 years of age (48%). In addition, 42% of the participants were 3 years of age and only 10% referring children 2 years of age.
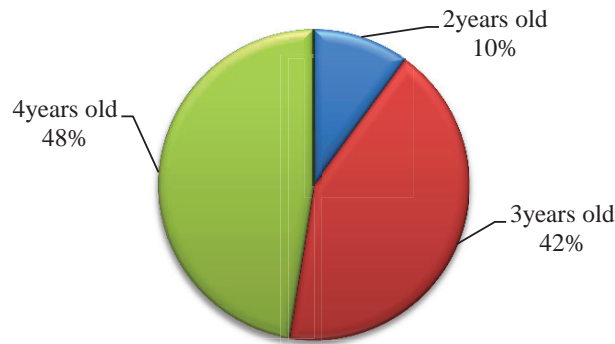
Fig. 2. Percentage of children's age.

Table 2 shows the crosstabulation between children's age and children's profile variables. The crosstabulations analysis for female has shown the highest percentage which recorded 25% for 4 year old children. Meanwhile, male has recorded 23% for 3 and 4 year old children. Moreover, 4 year old children have recorded the highest percentage for number of children that have two siblings in their family. Most of the respondents that 4 years of age were consist from second child in the family. Respondents for 4 years of age have recorded 26% of them have two siblings in a family. 93% for all children age have recorded that they do not have health problem with the remaining 7% have health problem such as asthma. Moreover, 56% of respondents have siblings that are also staying at the same child care centre. Most of the respondents staying at child care centre more than 2 years. They are respondents of 4 years of age which recorded 58%. 52% of respondents live less than 5 kilometers from child care centre. In the meantime, only 3% respondents live more than 35 kilometers from the child care centre. Most of the crosstabulation result between children's age and respondent profiles shows that children with 4 years of age have recorded the highest percentage for each respondent variable. This is due to the total of 4 years of age children which recorded the highest number of 48% in CCCs.

Table.2. Crosstabulation between Children's age and respondent profile variables.

		Age of children		
		2y.o	3y.o	4y.o
Gender	Male	8%	23%	23%
	Female	3%	20%	25%
No. of Children	1	3%	11%	16%
	2	5%	21%	29%
	3	0%	5%	5%
	4	3%	3%	0%
No. of Sibling	1	3%	3%	8%
	2siblings	5%	21%	26%
	3siblings	0%	11%	13%
	>4siblings	3%	5%	3%
Health Problem	Yes	0%	3%	5%
	No	11%	37%	45%
No of Siblings in CCC	Yes	10%	15%	20%
	No	0%	28%	28%
Duration living in CCC	2years	11%	18%	29%
	3years	0%	4%	21%
	4years	0%	7%	11%
Distance between house and CCC	<5km	7%	24%	21%
	6-15km	3%	7%	31%
	16-25km	0%	0%	3%
	>35km	0%	0%	3%

The findings also indicated that all 52 variables which related on children's performance during their daily activities at CCCs can be accepted in measuring the children performance. The Cronbach's alphas coefficient had presented the value > 0.75. Only 34 out of the 52 variables scored between .968 (the lowest) to .971 (the highest) (Table 3). Thirty four variables have high intensity. Out of the 34 variables, only 3 variables have mean score of ≥4.

Table.3. Reliability test for children's performance

Interaction				Movement		Attention	
CP	CA	CP	CA	CP	CA	CP	CA
C1.1	.969	C2.9	.969	C4.13	.969	C1.8	.970
C1.2	.969	C3.1	.969	C4.14	.969	C1.9	.969
C1.4	.968	C3.2	.969	C4.15	.969	C2.11	.968
C2.1	.969	C3.4	.970	C4.16	.971	C2.12	.969
C2.2	.969	C3.5	.969	C4.17	.968	C4.9	.969

C2.3	.970	C4.6	.969	C5.1	.970	C4.10	.970
C2.4	.969	C4.7	.970	C5.2	.970	C4.11	.968
C2.7	.968	C5.6	.969	C5.3	.969	C4.12	.968
C2.8	.969			C5.4	.969		
CP = Children Performance CA= Cronbach's Alpha Value							

The three elements include: (1) C3.5: Happy to go Home, (2) C4.10: Happy to Watch Television and (3) C4.16: Physical Activity). These three elements were under the category of "good" in relation to children's performance level. C3.5 falls under children's interaction. C4.10 falls under children's attention whereas C4.16 falls under children's movement. Overall, only 5% of children's performance indicated high level performance through their behavior at CCC. The remaining 95% indicated low level of performance.

The three components of children's performance show that the mean score (M) for all the variables scored more than "3" and below than "5" which mean all the answers were between neutral to strongly agree. The mean scores for three components can be seen in following figures. Figure 3 shows mean score for children's interaction that consist of 35 variables. The highest mean score is C3.5 (Happy to go Home) which recorded (M=4.1). Furthermore, for Figure 4, the highest mean score for children's attention is C4.10 (Happy to Watch Television), (M=4.1). In addition, Figure 5 shows mean score for children's movement that scored (M=4.1) for item C4.16 (Physical Activity).
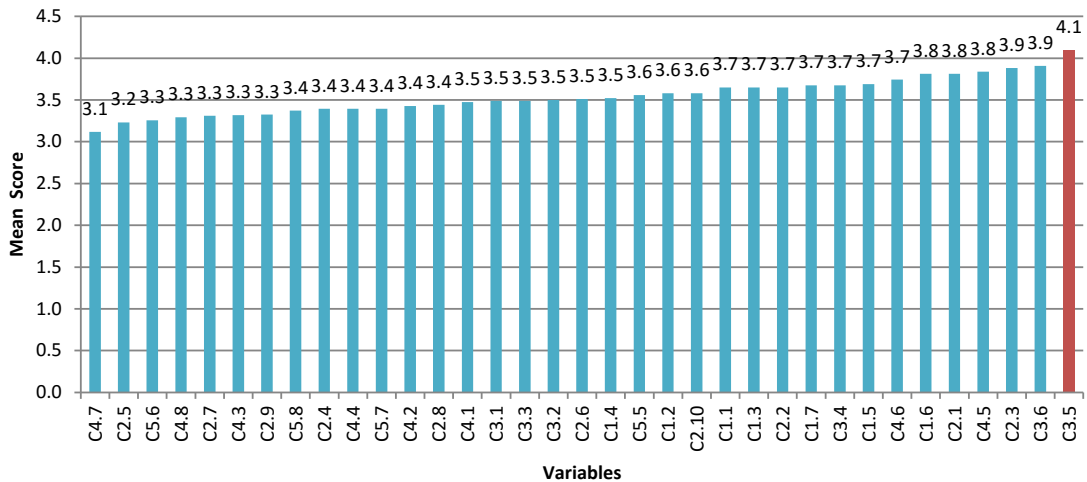

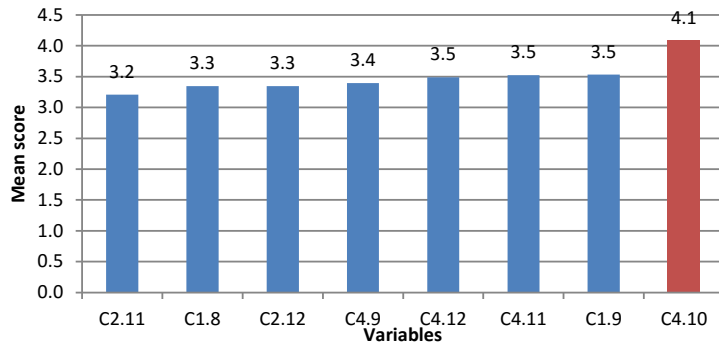Fig. 3. Mean score for Children's Interaction.
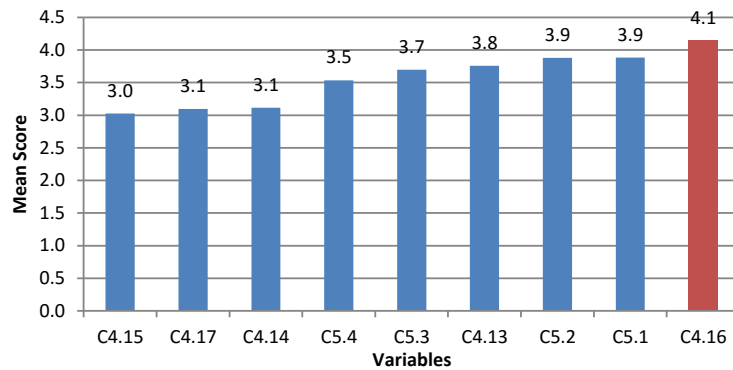
Fig.4. Mean score for Children's Attention.

Fig.5. Mean score for Children's Movement.

From the data concerning the children's performance, it was found that the physical activity of children has correlation with children's profile. The chi-square test (Pearson chi-square) results [$\chi^2 = 12.594$, df = 4, at p = .002 (p < .05)] show that there is significant difference between children's performance and children's profile (Health Problem) (Table 4). Concurrently, the chi-square test (Pearson chi-square) results between children's performance and children's profile also prove there is significance difference for (Duration live in CCC) with ([$\chi^2 = 15.756$, df = 4, at p = .003 (p < .05)].

Table.4.The relationship of children's performance and children's profile.

Code.	Children Performance	Mean (M)	Standard Deviation (SD)	Asymp. Sig. (2-sided)	Pearson Chi-Square Value
C3.5.	Back Home	4.09	0.43	-	-
C4.10	Watching Television	4.09	0.37	-	-
C4.16	Physical Activity	4.16	0.42	.002	12.594[a] (*Health problem*)
				.003	15.756[a] (*Duration live in CCC*)
				.041	6.373[a] (*Gender*)
p < .05) = Children Performance influence by Children profile					

5. Conclusions

In this study, attempts were made to examine children's performance through their behaviour and relationship between children's performance and children's profile at CCC. The questionnaire that have been used during data collection is a reliable measuring instrument for evaluating children's performance during their daily activities at CCCs. Research had proven that CCC becomes a suitable place for children to develop their performance skill. Children's performance which involved their action such as movement, interaction and attention should become the factors in measuring children's performance. By practicing this approach, CCC's owner could observe and record children's performance at CCC. The result from the observation can also be used for parents to acknowledge their children's performance level at CCC. Children's performance should be monitored regularly to ensure that their performance would be in good condition in line with their growth process.

Acknowledgements

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