


RESEARCH ARTICLE

The construction of emotional competency test kits for preschoolers

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ABSTRACT

Emotional competence is one of the essential abilities to be possessed by children. Children with good emotional competence will be able to understand their emotions toward themselves or others well. This competence will help children adjust to and interact well in their social environment. This study aims to develop an emotional competency test kit for preschoolers. The items on this test kit are based on the theory of emotional competence presented by Denham. This test kit consists of eight-story scenarios that trigger the appearance of emotions in the child. The validity test on this test tool used expert judgment on 17 people consisting of early childhood care and education practitioners, child psychologists, parents, and Master of Professional Psychology students in Education, with the results of the analysis using Aiken's V. Aiken's V analysis results, obtained a validity coefficient of 0.71-0.95. Meanwhile, the results of the analysis of the test kit trial of 96 subjects obtained a reliability coefficient of emotional competency test kits of 0.801. This study showed that this test kit has good validity and reliability and can be used to measure emotional competence in preschoolers.

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INTRODUCTION

Childhood is one of the crucial periods of development. The child's cognitive, physical, social, and emotional abilities develop rapidly at this age. One aspect that needs to be considered in the child's development is emotional development. Levine & Munsch (2011) define emotions as physiological reactions, cognitive interpretations, communication, and behavior to situations. In line with this, Santrock (2007) states that emotions are represented by behaviors that express comfort or discomfort with the state or interaction experienced by a person. In childhood, the emotional abilities of the child are often associated with the term "emotional competence." Emotional competence is related to the child's ability to recognize and understand emotions felt by themselves and others and to regulate them (Denham in Morris, 2010). This emotional competence is vital so the child can adapt well to his environment.

Denham et al. (2012) stated that emotional competence in children consists of two components: emotion knowledge and emotion regulation. Emotional knowledge is a child's ability to recognize

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emotional expression (Denham, Blair, DeMulder, Levitas, Sawyer, Auerbach-Major, Queenan, 2003). In line with this, Tsai (2008) defines emotional knowledge as the ability to identify and label one's own emotions and the emotions of others, know the motivation of these feelings, and distinguish feelings from behaviors (Tsai, 2008). Meanwhile, emotion regulation is a person's ability to regulate and express emotions (Tsai, 2008). Furthermore, Denham et al. (2012) state that emotional regulation includes the ability to control and express or display emotions appropriately.

The importance of emotional competence abilities, especially in early childhood, has been conveyed by many researchers (Bailey, 2011; Denham, Basset, & Zinsser, 2012; Denham et al., 2002; Izard et al., 2012). The results showed that children who understand the causes of emotions are more prevalent among their peers (Denham, McKinley, Couchoud, & Holt, 1990; Pons et al., 2002). This is because emotional knowledge allows children to react appropriately to others (Denham et al., 2012). In line with this, Saarni in Tsai (2008) states that children who understand their feelings can better convey or express what they want and negotiate when there is a problem. In addition, Denham (1998 in Shields, 2010) states that children who are slow in mastering emotional competence are at risk of having problems, such as problematic behaviors or obstacles in social functioning. Therefore, screening is needed to measure emotional competence in children so that it can be a reference for early childhood education practitioners in making programs related to improving children's emotional competence. Several studies on emotional competence measuring instruments do not focus on preschool-aged children (Wang, Young, Wilhite, Marczyk, 2011; Ciarrochi & Scott, 2006; Fiorilli, Albanese, Gabola, Pepe, 2016).

This article aims to construct emotional competency test kits for children. The test kits created will be tested for the validity of the content and reliability to determine whether the test kits that have been designed can be used to measure the child's emotional competence. The emotional competency test is hoped to be one of the initial screening tools for determining children's emotional competence. From these results, it can be a consideration for early childhood education practitioners in making programs that suit the needs of children.

METHOD

Creating this test kit is done in stages. In the first stage, interviews and observations are done to get an idea of the events that will be used in scenarios that make preschoolers feel emotional. In the second stage, validity and reliability tests are done on the test kits that have already been made.

The construction of emotional competency test tool item

The Emotional Competency Test Kit is prepared based on the theory of emotional competence presented by Denham et al. (2012). Two components of emotional competence are measured: the ability to know and understand emotions (emotion knowledge) and the ability to regulate emotions (emotion regulation). The form of items in this test kit refers to the Emotion Recognition Questionnaire (ERQ) (Tsai, 2008) and the Challenging Situation Task (Denham et al., 1994). This emotional competency test tool has an introductory part, which is the recognition of emotions. Emotion recognition is an initial screening to determine whether subjects can be given emotional competency test kits

Emotion recognition. The emotion recognition section is the initial screening section. This section ensures that children are familiar with four basic emotions: anger, sadness, fear, and happiness. Children will be shown four pictures expressing emotions (happy, sad, angry, and afraid). Children are asked to name the emotions evoked by each of these images. If the child can correctly mention the emotions in each picture, the new child will get a story scenario to measure emotional competence.

To determine the images of the four basic emotions, researchers created several images and tested them on preschool-age children. The child is then asked to name the emotions displayed by each image. The image of the emotion the child recognizes the most will be selected as the image used in this test tool. Here are eight images showing the basic emotional expressions used for the initial screening:

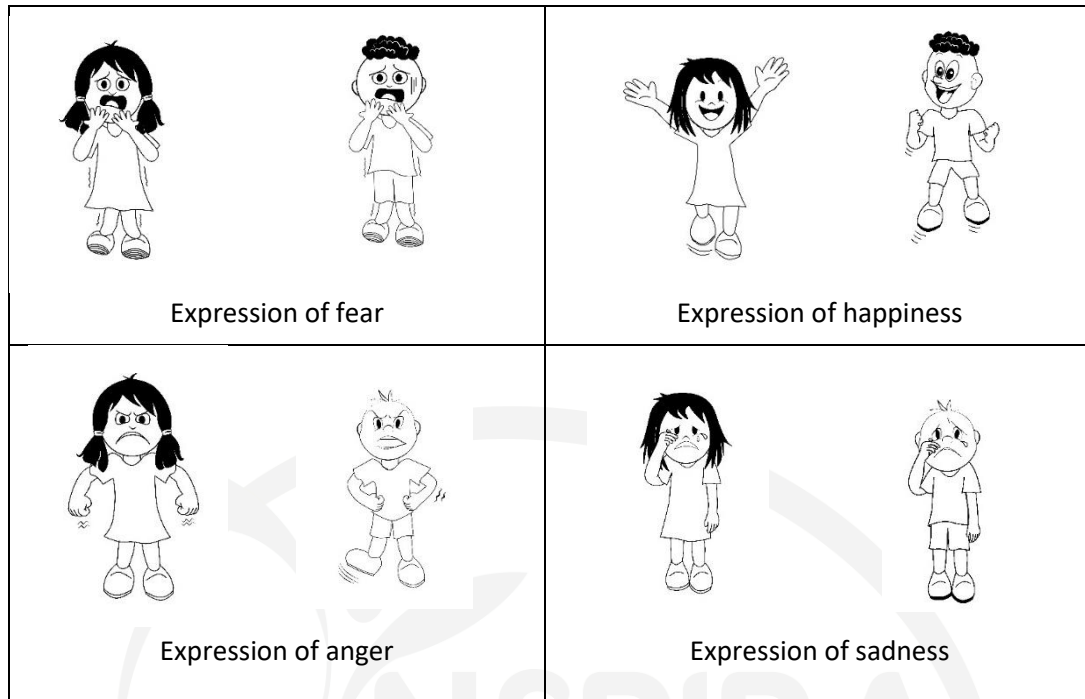


Figure 1. Basic emotional expressions

Emotional competency test tool. This emotional competency test tool is in the form of an illustrated story. The child will be read eight illustrated stories that trigger the emergence of certain emotions. The story contains events that trigger certain emotions that the characters feel, namely anger, fear, sadness, and happiness. Two stories represent each emotion. Children will be asked to answer questions about the content of the story, namely: a) What do the characters feel in the story, and what is the cause of these emotions? This item measures emotional knowledge, and b) What does the child do when they are in the situation of the character in the story? This item is to measure emotion regulation.

The answers the child gives can provide information about the behavioral responses that the child may display in emotionally triggering conditions. To ensure that the child is not affected by the emotional expressions displayed by the characters, facial images of the characters in the story are not created. In addition, the story's main characters are also distinguished as female and male subjects. This is done assuming that children will more easily relate the story's content to themselves when the main character in the story is of the same gender as the subject. According to the assessment rubric, the answers given by the child will be given a score between 0.1 and 2. Details of the blueprint for the test kit can be seen in Table 1.

Table 1. Story scenarios blueprint

Variable	Indicator	Item Number
Emotion competency	To know perceived emotions	1, 4, 7, 10, 13, 16, 19, 22
	To Know the causes of the appearance of emotions.	2, 5, 8, 11, 14, 17, 20, 23
	To Know the proper expression of emotions when experiencing certain emotions	3, 6, 9, 12, 15, 18, 21, 24

In making this story, researchers made observations in several kindergartens. In addition, researchers also conducted interviews with teachers and parents to find out events that usually trigger certain emotions in children that could be used as the basis for making stories.

Validity test

The validity test of the emotional competency test tool uses the validity of the content by asking for input and assessment from the expert judgment of the story scenario that has been made. Content validity is the conformity between the test item and the content that should be in the test (Furr & Bacharach, 2008). According to Straub in Azwar (2012), the decision on the relevance of an item to the purpose of measuring scale requires the agreement of several competent assessors' assessments (expert judgment). All appraisers must not fully agree upon the assessed item. If most appraisers agree that the item is relevant, then the item is declared as an item that supports the validity of the contents of the scale (Azwar, 2012).

The requested expert judgment consists of early childhood education practitioners, child psychologists, students of the psychology profession in the field of education, kindergarten teachers, and parents with preschool children. In this content validity test, 17 expert judgments were requested for assessment regarding this test tool. There are two types of assessments: quantitative assessment, which is related to the suitability of the item in terms of theory, and qualitative assessment, which is related to the story's context. Expert judgment assigns a score of 1 (strongly unrepresentative or highly irrelevant) to 5 (strongly representative or highly relevant) to the story scenario, images, and questions asked in each story scenario. Aiken's V formula is used to calculate the content-validity coefficient based on the expert assessment of n people on an item and the extent to which the item represents the measured counter (Azwar, 2012).

Reliability test

The reliability test was carried out by testing this test kit on 96 children aged 5-6 years in several kindergartens in Yogyakarta. The results of the trial data were then processed with alpha Cronbach analysis.

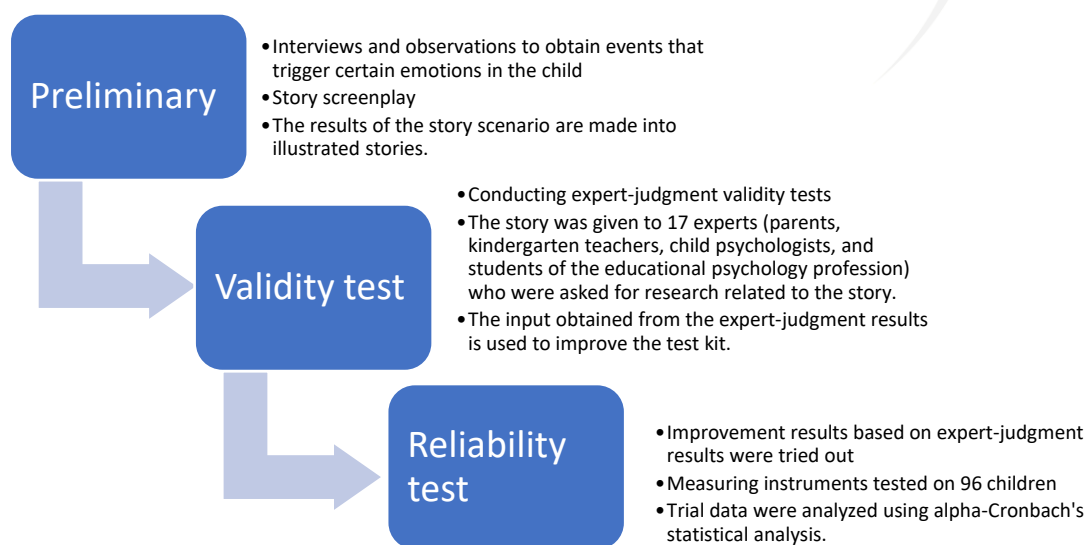


Figure 2. Instrument construction process

RESULT

Validity test

This emotional competency test tool was given to 17 expert judgments. There are two types of assessments given by expert judgment, namely:

Quantitative assessment. After converting the emotional competency test kit into an illustrated story, the story is submitted to expert judgment to determine the test kit's suitability with the construct to be measured. The expert judges will grade the submissions on a scale of 1 to 5 (very irrelevant, not representative, very relevant, representative). The score results are processed using Aiken's V Formula. Table 2 shows that the result of the content validity score using Aiken's V Formula is 0.71-0.96.

Qualitative assessment. Expert opinions are solicited in qualitative assessments to provide feedback on item improvements. In general, there are two inputs, namely: a) the omission of expression in the character image so as not to affect the child in answering the emotions felt by the character in the story; b) the use of the word "emotion" is replaced by "feeling" or "being felt" by the character.

Reliability test

A trial of an emotional competency test kit was given to 96 subjects. On the basis of these answers, a reliability test was carried out. As a result of these trials, a reliability coefficient of 0.822 was obtained

Table 2. Content validity results using Aiken's V Formula

Item number	Coefficient of Validity
Scenario 1	0,81
1	0,89
2	0,84
3	0,89
Scenario 2	0,88
4	0,89
5	0,85
6	0,88
Scenario 3	0,81
7	0,85
8	0,85
9	0,88
Scenario 4	0,84
10	0,89
11	0,87
12	0,91
Scenario 5	0,96
13	0,91
14	0,87
15	0,93
Scenario 6	0,82
16	0,88
17	0,87
18	0,91
Scenario 7	0,71
19	0,85
20	0,81
21	0,82
Scenario 8	0,94
22	0,96
23	0,87
24	0,91

DISCUSSION

Emotional competence is one of the essential abilities preschool-aged children possess to help them adjust to their social environment. Many educational programs for early childhood target improving children's emotional competence. This study aims to create a tool to measure children's emotional competence. It is hoped that this test tool can be an initial screening tool for early childhood practitioners to help determine children's emotional competence. The screening results can be considered when designing educational programs to improve children's emotional competence.

From the results of the validity test, it is known that this test tool has a content validity score range of 0.71-0.96. The Aiken's V table shows that with 17 people, the minimum score of Aiken's V is 0.71. Therefore, it can be interpreted that the story scenario on this test kit has good content validity and can be used to measure the child's emotional competence. In the next stage, trials of test kits are carried out on children. A reliability coefficient of 0.822 was obtained from the trial results. Kerlinger & Lee (2000) state that measuring instruments can already be said to be reliable if their reliability coefficient ranges from 0.5 to 0.6. In line with this, Kaplan & Saccuzzo (2009) stated that the coefficient range of 0.7–0.8 is considered good enough for most studies. Based on this, this measuring instrument can be said to be a reliable tool for measuring preschoolers' emotional competence. Based on the content validity and reliability test results, emotional competency test kits are qualified to measure emotional competence in children:

CONCLUSION

The content validity and reliability test results found that the Emotional Competency Test tool has adequate validity and reliability. This shows that the emotional competence test tool is sufficient to measure emotional competence in children. However, the test process is still in the classical stage with limited subjects. Subsequent research could conduct trials on a broader subject to improve the accuracy and standardization of measuring instruments.

DECLARATION

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Author contribution statement

Meria Susanti led the overall research design, conducted discussion processing, and wrote results and discussion. Maria Goretti Adiyanti provided in formulating the study's objectives, research design, analysis process, and result interpretation.

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Data access statement

The data described in this article can be accessed by contacting the first author.

Declaration of interest's statement

The authors declare no conflict of interest.

Additional information

No additional information is available for this paper.

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