

Paper code: MUR04985

## Perspectives of “Big School”: Kindergarten Children’s Response to The Pictorial Measure of School Stress.

Elizabeth Murray and Linda J. Harrison

Charles Sturt University - Bathurst  
[emurray@csu.edu.au](mailto:emurray@csu.edu.au)

### ABSTRACT

This paper describes the development, administration, and scoring of the Pictorial Measure of School Stress (PMSS). This instrument was designed to describe individual differences in kindergarten<sup>1</sup> children’s feelings about everyday school situations and their coping strategies for dealing with these. The PMSS uses a semi-structured interview to present specific school scenarios, including in-class routines such as talking in front of the class/doing schoolwork, out-of-class events such as lining up/going to the toilet alone/buying lunch at the canteen, and scenarios involving peers such as joining in with group play/being pushed by other children. Children are asked how they feel, why they feel that way, whether they would tell the teacher about their feelings, and what might happen next. Following initial analysis of children’s positive and negative responses to these questions, interpretive methods were used to identify underlying themes. Positive responses to school were explained by children’s enjoyment of learning, warm relationships with peers and the teacher, and understanding and meeting the expectations of school. Negative responses were associated with a dislike of school activities, peer rejection, separation anxiety, and conflicted relationships with the teacher.

### INTRODUCTION

For all children school is a new and different environment with unfamiliar pressures and situations that must be dealt with from the first day. Even if children have had prior experience in a preschool or day care setting, they can never be completely prepared for “big school”. Starting school can be a time of excitement for children, but it is also a time of change, which may be associated with stress and anxiety (Erikson, 1985; Janis & Leventhal, 1968). As pointed out by Robson (1999), stress may have both positive and negative effects, depending on the child’s coping strategies and experience. Children will differ in their perceptions of everyday school situations as stressful and their coping strategies for dealing with stress. Measuring these differences is a relatively new topic in educational and psychological research. In particular, the identification and assessment of school-related stress in the early childhood years not been widely researched. The present study describes the development of a new measure, the Pictorial Measure of School Stress, which was designed to provide a means of examining and describing children’s feelings about their initial experiences of school and their strategies for dealing stressful situations.

Previous research has shown that the everyday anxieties and stresses that children experience in relation to school can be caused by many different factors. These include an increased emphasis on academic achievement, and other changes that occur as children move from home or prior-to-school settings to school. Howard, Dockett, & Perry (1999) report that children who find school unfamiliar and unrelated to their home environment tend to experience more “difficulty, confusion and anxiety during the transition” (p. 2). Stress can also be caused by social and behavioural expectations of the formal school environment that have not been encountered before. For example, it may be harder for children to form friendships with other children at school, because, unlike at home and prior to school settings, they no longer have the direct assistance of their parents or caregivers. Ladd (1990) notes that school entrance can be stressful for young children, as they have to negotiate their own interpersonal environment in the absence of parents and other attachment figures. Thus, children are required to form their own peer relationships and become part of a new social group. Dockett and Perry’s (2001) work on school transition has shown that the

nature of relationships between and among children has a “significant impact on children’s sense of belonging and acceptance within a school community” (p. 4). Other researchers have also found that effective child-child relationships are an important predictor in children’s successful transition to school and for later school success (Ladd, Birch & Buhs, 1999). A further factor explaining differences in school-related stress is children’s relationship with their teachers. Birch and Ladd (1997) note that it is likely that conflict in the teacher-child relationship acts as contributor to stress for school children, and “may impair their successful adjustment to school” (p. 63).

The specific demands and expectations of the school environment also play a significant part in making school a new and different experience for most children. Drawing on data collected from teachers, parents and children participating in the Starting School Research Project, Dockett and Perry (2001) report that “young children focus mainly on the rules they need to know in order to function at school, as well as how they feel about going to school” (p. 3). Dockett and Perry (1999) also noted that the two main issues that children saw as important for them during the transition to school were (1) knowing the school rules and (2) their feelings about school. Dockett and Perry (2001) talk about the importance of confidence within the child and note that knowledge of rules helps children to be more confident in the school environment. Children who feel and convey more confidence are more likely to have positive attitudes not only toward school but also toward relationships with their teacher and peers and, therefore, to suffer less stress associated with these aspects of school. Einarsdottir (2003) also investigated preschool children’s views and attitudes towards their transition to primary school. Results of this study showed that apart from learning to “read, write and do mathematics” (p. 42), children thought they would be learning rules and how to behave when they reached first grade (kindergarten equivalent). Similarly, Valeski and Stipek (2001) found that a classroom context with clear rules and consistent expectations could promote a sense of competence in young learners. We also know that children differ in terms of their ability to manage stress. Beaver (1997) notes that children use a variety of coping strategies in their daily lives. The most prevalent strategies focus on the environment, are oriented toward problem solving rather than emotion management, and involve overt and direct action approaches.

Previous research into school-related stress has drawn on a range of different measurement tools. A large number of studies are based on parent and teacher reports, using instruments such as the Teacher Rating Scale of School Adjustment (Birch & Ladd, 1997) to rate aspects of children’s school-related behaviour. These, however, do not give a direct assessment of children’s feelings. Some studies have used child-report measures such as the School Liking and Avoidance Questionnaire (Ladd & Price, 1987) and the Feelings About School scale (Valeski & Stipek, 2001) to provide self-ratings about school, learning, and friendships. However, these do not ask about perceptions of school stress or the events that may be associated with school adjustment. Recent studies have drawn on qualitative approaches to identify children’s views and attitudes toward school and their coping strategies for stressful situations. Griebel & Niesel (2003) state that children in kindergarten are able to learn how to cope with stressful school situations. They also note that teachers play a large role in providing children with the coping strategies and knowledge to “realise one’s own reactions to stress and what to do” (p.29). Although the case study approach used in these studies generates interesting and thought provoking data, it is not suitable for large-scale studies.

The purpose of the present study was to add to the range of existing approaches and measures of school-related stress by developing a valid means of assessing children’s perceptions of stress at school. Specifically, we sought to design an instrument that would elicit children’s experiences of school stress, show what types of school situations are more or less likely to be associated with negative feelings, and identify the strategies that children draw on to cope with stressful situations. It was also important that the measure presented everyday situations that all children would be familiar with, but which would detect individual differences in the degree to which these were perceived as stressful. This paper will present the background to the development of a new measure for assessing Kindergarten children’s school-related stress and coping strategies, responses to the measure from two groups of Kindergarten children, and an interpretive, qualitative analysis of these responses.

## THE PICTORIAL MEASURE OF SCHOOL STRESS

### Development

The initial stages of designing the Pictorial Measure of School Stress (PMSS) were based on informal interviews with six kindergarten children who were asked about their feelings toward school. The children's responses and explanations for their responses identified certain school situations that were stressful for them. In addition, observations taken during the first author's teaching experiences and research literature on measurement of stress and anxiety (eg. Shouldice & Stevenson-Hinde, 1992; Valeski & Stipek, 2001) were drawn on to develop the PMSS. The initial version of the PMSS identified seven school situations that were reported as stressful by children:

1. *Waving good-bye to parent in the morning*
2. *Lining up outside the classroom*
3. *Speaking in front of the class (telling news)*
4. *Going to the toilet by yourself*
5. *Doing work at desk*
6. *Going to the canteen*
7. *Being pushed by other children*

The results of a pilot study (Murray, 2003) and further discussions with early childhood experts led to the development of the final version of the PMSS. We added two new situations involving peer interaction in the playground and a further in-class situation, listening to the teacher, in order to obtain a more holistic impression of children's experiences. The final ten-item PMSS included three in-class events (Scenarios 3, 4, 6), four out-of-class experiences (Scenarios 1, 2, 5, 7), and three peer-related experiences (Scenarios 8, 9, 10). These were presented in the following order to reproduce the sequence of the school day.

1. *Waving good-bye to parent in the morning*
2. *Lining up outside the classroom*
3. *Speaking in front of the class (telling news)*
4. *Sitting on floor listening to teacher*
5. *Going to the toilet by yourself*
6. *Doing work at desk*
7. *Going to the canteen*
8. *Entering the playground at the beginning of lunch*
9. *Watching other children play in the sandpit*
10. *Being pushed by other children*

Black and white line drawings were used to depict these scenarios. Pictures were chosen rather than photographs, which might include features that could distract the child from the main idea of the picture. The ten drawings included a range of male and female children and teachers. No facial features were drawn on the children or teachers, so that children would describe how they would feel in that situation without being influenced by the facial expression(s) in the picture.

Children were asked five set questions for each of the ten scenarios. The questions were based on previous research using similar pictorial measures, such as the Separation Anxiety Test, which have shown that young children are able to project their own feelings onto the child in the picture, to describe how they would feel and to give reasons why they felt that way (eg, Harrison & Ungerer, 2002; Slough & Greenberg, 1990). Questions used in the PMSS also drew on the Feelings About School scale (Valeski & Stipek, 2001). The questions were asked in the following order:

1. *How does the child (in the picture) feel?*
2. *Why do they feel (the child's word)?*
3. *Do you think they would want the teacher to know they are feeling (the child's word)?*
4. *Why/why not?*
5. *What do you think will happen next?*

## Presentation

The PMSS was presented as an audiotaped structured interview with an individual child. Interviews in school settings required a semi-private location, eg. a computer room adjoining the classroom, or vacant office near the classroom, where the child would feel comfortable and safe, and where teachers or other school staff could see the interviewer. It was important that the child had seen the interviewer at least once prior to the interview, and that the classroom teacher introduced the interviewer to the class to on the morning of the interviews. As a preparation, children were shown how the audiotape worked and asked if it was all right if the interviewer taped their voices. At the conclusion of the interview, children were thanked and offered a sticker.

The interview lasted approximately 30 minutes. It was important that the interview didn't go for too long as children could become tired and responses could become unreliable. Therefore, if a child seemed tired, hungry or uncomfortable, the interview was stopped and resumed after a break, such as recess or lunch. This was more likely for interviews presented early in the school year, for younger children, or children with behavioural or intellectual difficulties. Having a break ensured that children's focus remained constant and helped ensure test reliability.

Establishing content validity was an important step in the procedure, to make sure that children's interpretation of the scenario as illustrated was the same as the interviewers. Therefore, initial questions were included to check that children understood the pictures and recognised what each was representing. For the first two scenarios all children were asked what they thought the picture was about and who they thought was in the picture, before the actual scenario description was read to them. In some cases, it was beneficial to include more introductory talk about the scenario before asking questions. This helped to ensure the child could understand and relate to the situation.

## Coding System

Each child's interview was transcribed for scoring. The coding system that was devised to categorise children's responses to each of the five questions has been described previously (Murray & Harrison, 2003). The categories were based on similar methodologies reported by Slough and Greenberg (1990), Resnick (1993), and Valeski and Stipek (2001), whose work includes categorisation of children's feelings about stressful situations, their ability to give reasons for their feelings, whether they would tell the teacher about how they feel, and strategies for coping with different situations. Broad coding categories for the five questions asked in the PMSS were as follows:

1. *How does the child in the picture feel?*
  - No response/unsure
  - Positive response
  - Negative response
2. *Why do they feel (the child's word)?*
  - No response/unsure
  - Appropriately justified response (provides a reason that appropriately explains the feeling, such as 'sad because he wants his mum')
  - Inappropriately justified response (provides a reason that is not related to the feeling)
3. *Would they tell the teacher they are feeling (the child's word)?*
  - No response/unsure
  - Positive response
  - Negative response
4. *Why/why not?*
  - No response/unsure
  - Appropriately justified response (provides a reason that appropriate/explains why the child would or wouldn't tell the teacher, such as 'yes because she likes the teacher')
  - Inappropriately justified response (provides a reason that is not related to the teacher)

5. *What might happen next?*

No response/unsure

Positive/constructive solution (child gives an outcome that does something to solve the problem or reduce anxiety, such as getting help)

Negative/destructive solution (child gives an outcome that worsens the situation or sees it as having a distressing outcome, such as being rejected or getting hurt)

Passive solution (child gives an outcome that does not actively solve the problem but does not make things worse or better, such as going home)

## METHOD

### Sample

A pilot study, which used the seven-item PMSS, was conducted at two intervals in the Kindergarten year (July and October 2002) with 10 children (6 girls, 4 boys) aged between five and six. The children were recruited from two public schools in regional New South Wales: a medium-sized school in a city and a very small school in a rural community. According to information provided by each child's teacher, families were from a mixture of socio-economic backgrounds, with either one or both parents working. Family structure included two-parent and single parent families. Three of the children were from an Aboriginal-Australian cultural background and seven from an Anglo-Australian cultural background. The sample included one singleton and one set of non-identical twins (girls).

The main study, which used the ten-item PMSS, was conducted in the first term of kindergarten (March 2004). Children were recruited from six medium-sized public schools and two central schools within a defined area of regional New South Wales. Eighteen teachers and 104 children participated in the March assessment interviews. For the present paper, transcripts from 15 participants at one medium-sized public school have been used. This sample included twelve children from an Anglo-Australian cultural background and three children from an Aboriginal-Australian cultural background. Families represented a mixture of socio-economic backgrounds including one and two parent families. The sample included one singleton.

### Procedures

After gaining NSW Department of Education and Training approval to conduct research in government schools, information letters were sent to selected schools, inviting their participation in the study. For the pilot study, schools were approached in June 2003 (Term 2) and for the main study, in Term 4 (November/December) of the year before commencement of the 2004 kindergarten cohort. Principals were then contacted by telephone and a meeting time was arranged to discuss the project with principals, stage leaders and kindergarten teachers. Community support officers and Aboriginal Education Assistants were also invited to attend the meetings. After consents were provided by principals and teachers, parents were invited to give consent for themselves and their children to participate in the study. Information sessions for parents were held at each school, either after school or in conjunction with parent-teacher information nights/lunches/afternoons. After gaining parent consent for the study, including an audiotaped child assessment, interviews were scheduled with participating children. For the pilot study, children were interviewed twice - in Term 3 (early July) and Term 4 (October). For the main study, interviews were held between Week 6 and Week 10 of Term 1 (March). The interviewer visited each kindergarten classroom prior to conducting interviews so that children were familiar with her. Interviews were conducted in a separate space close to the child's classroom.

## RESULTS

Results from both the pilot and main studies showed that the PMSS elicited detailed, personal information from children about their views on school and school-related stress. The children reported their feelings about specific school situations, showed that they perceived some situations in the school environment as more, or less, stressful than others, and were able to offer responses regarding the strategies they might use for coping with these situations. Requirements for content validity were met, as were the procedural expectations of the task. Responses were coded in

accordance with the PMSS coding system and then analysed more fully, using interpretive qualitative techniques to identify underlying themes.

### **Content Validity**

Appropriate confirmatory techniques were used to test children's understanding of the picture scenarios. Children's initial descriptions of the scenarios indicated that they understood what was happening in the picture; eg. Scenario 1: "That boy is waving good-bye to his mummy and he has his school bag". Furthermore, children's descriptions of their feelings and their explanations for why they had these feelings provided a check that they understood the scenario that was presented in the picture and the questions that were asked. Children who had a lower than average level of vocabulary or who were intellectually delayed were not as confident when asked to give a feeling response to the first question "How does the child in the picture feel?" However, by asking these children if they have been in that situation at school and how they felt, they were able to respond appropriately.

To check if children's responses were a valid indication of how *they* would feel in the situation, and were not just a guess of how the child in the picture would feel, children were asked to provide further explanation of their own experiences. For example, for Scenario 1 we asked "Is that how you feel when you wave good-bye in the morning?" Most children volunteered a justification for their response, eg. "...Because that's how I feel". In cases where children reported that they didn't share the same feelings as the child in the picture, they were prompted to offer their own feelings. For example, one child said the child in the picture would feel happy and when asked is that how they would feel if they were in that situation, they said no, they would feel sad. In these instances children were prompted to explain how they were feeling to every scenario after they were asked how the child in the picture would feel.

### **Cognitive Requirements of the PMSS**

For the most part, children were able to actively and appropriately participate in the PMSS interview, which required them to concentrate for a period of time. Any problems with concentrate were overcome by splitting the interview up into two sessions. Children also needed to be able to demonstrate a certain level of cognition and understanding, not only in recognising and describing the pictures, but also in answering questions about feelings and possibilities. Children with language difficulties and developmental delays were not able to fully complete the task.

### **Children's Responses - Coding and Interpretive Analysis**

Results from our analysis of children's responses to the PMSS will be presented in three sections. First we will describe the range of emotional responses that the scenarios elicited, by discussing children's answers to questions about feelings about school. This section draws on questions 1 and 2: How does the child feel, and why does the child feel that way? Second, we will report on children's perspectives of their relationship with the teacher by analysing responses to questions 3 and 4, which ask whether or not the child would tell their teacher how they are feeling, and the reasons for telling or not telling. Third, we will consider the coping strategies children have for managing stressful situations at school through an analysis of children's responses to question 5, "What might happen next?" In each section, the broad categories provided by the PMSS coding system will be defined by specific themes that were identified in the interpretive analysis of the children's actual responses.

#### **1. Feelings about school**

##### ***Positive feelings.***

Many children expressed positive feelings when asked about scenarios that illustrated the daily routines of school, such as arriving and waving goodbye, lining up, speaking in front of the class, listening to the teacher, buying lunch at the canteen, and entering the playground at lunch-time, and were able to give an appropriate justification for their feelings. Children's justifications for

their positive feelings showed that they saw school as an enjoyable place to be and a place to play and learn, as illustrated by the following examples:

Scenario 1: Waving goodbye to the parent  
*Happy, 'cause it's his first day of school*  
*Happy, 'cause they're going to big school*  
*Happy, because he likes going to school because he likes to learn new things*  
Scenario 2: Lining up  
*Happy, they're going into class to play and sing songs and read books*  
Scenario 4: Listening to the teacher  
*Happy, because you're learning something new*

Positive feelings about school were also associated with the relationships children had with their family, their teacher, and their friends. In justifying their feelings about the scenarios, children mentioned a personal connection with someone they felt close to emotionally. The focus on friends is similar to findings reported by Dockett and Perry (1999), but here we are also seeing the importance of children's relationships with significant adults.

Scenario 1: Waving goodbye to the parent  
*Happy, because they say goodbye and they love waving good-bye to their parents*  
*Happy, 'cause he likes his teacher*  
*Happy, 'cause I wave to mum and my sister*  
Scenario 3: Speaking in front of the class  
*Happy, because I'm showing something really special to my friends*

Some children's gave reasons for feeling positive that suggested an early awareness of meeting the expectations of school, and knowing the rules and routines of the day. The importance of knowing about school rules and activities has also been noted in Dockett and Perry's (1999) Starting School Research Project. In the present study, responses focused on school rules, and expectations were also linked to receipt of teacher praise. For example:

Scenario 1: Waving good-bye to parent  
*Happy, because when the bell goes mummies go and I go up to class*  
Scenario 6: Sitting at desk doing work  
*Happy, because she's doing the right thing*  
Scenario 7: Lining up at the canteen  
*Happy, they're getting into lines*

### **Negative feelings**

A number of children described negative feelings when asked about everyday scenarios at school. A common theme for the children who mentioned negative feelings was insecurity about being alone or being separated from others. This was particularly illustrated by the first picture, but was also seen in responses to other questions. For example:

Scenario 1: Waving goodbye to the parent  
*Sad, 'cause he wants his mum and dad*  
*Sad, because they leaving their mummy*  
*Sad, 'cause the kid's going to school...'cause when I go to school I miss my mum*  
Scenario 5: Going to the toilet by themselves  
*Not very happy, 'cause he's all alone*  
*Sad, 'cause they want to take a person in there*

Negative responses were also associated with children's experience of stress or anxiety about some aspects of the school environment or classroom expectations, or a lack of connection to school activities. The theme that arose in some responses was around a general dislike of school. It was a place they didn't want to be. Strong emotions were sometimes expressed in children's justification for their negative feelings. For example:

Scenario 1: Waving good-bye to parent

*Sad, because he doesn't want to go to school*  
*Sad, because he don't like school*  
Scenario 6: Sitting at the desk doing work  
*Sad, because they hate doing their work*  
*Sad, 'cause (they) don't like doing work that often*

Rejection by peers, or concerns about the lack of friendships, was a further reason for children feeling negative or stressed at school. Child-child relationships play a very important role in the transition and school adjustment process. Birch and Ladd (1997) found that peers were a very important source of emotional and social support for children who are starting school. Negative feeling responses were particularly evident when asked about scenarios such as being outside in the playground or going to the canteen. For example:

Scenario 7: Lining up at the canteen  
*Sad, 'cause there's no-one coming with her*  
Scenario 9: Looking at other children playing together in the sandpit  
*Lonely, because she has no-one to play with*  
*Sad, 'cause they want to join in the game but the people said 'no'*

## 2. Relationship with the Teacher

Children's perspectives about their relationship with the teacher were assessed by analysing responses to questions 3 and 4, which asked whether or not the child would tell their teacher how they are feeling, and the reasons for telling or not telling. Appropriately justified responses (i.e., the reason is related to the teacher) were grouped around two main categories, those that were emotionally based and those that were instrumental or functionally based. Responses focusing on emotions indicated that children were either thinking about the teacher's feelings or were aware of how the teacher might respond to the child's feelings. On the other hand, responses illustrating the instrumental nature of the teacher focused on outcomes rather than feelings. Inappropriately justified responses (i.e., the reason is not related to the teacher) did not elaborate on the children's sense of their relationship with the teacher. These comments, which were often related to school activities, were omitted from this section of the analyses.

### *Positive towards the teacher*

The responses described in the following two sections gave a clear sense of closeness or warmth in the teacher-child relationship and offered valuable indicators of the emotional connectedness between child and teacher. For example, many children who said "yes, they would tell the teacher how they were feeling," were sharing a positive feeling. In some instances, children wanted the teacher to know they were happy because they thought it would make the teacher happy. These responses suggest that children think about their teachers' feelings and value the relationship with the teacher (Birch & Ladd, 1987). They also show children as empathic and aware of how others are feeling and how their own feelings might affect others. For example:

Scenario 5: Going to the toilet by themselves  
*Yes, 'cause...the teacher would feel happy*  
Scenario 3: Speaking in front of the class  
*Yes, because they (the teacher) like to feel happy*

Children also gave reasons that suggested they saw the teacher as a person who cared about them and would want to know if they were happy. These responses offer an indication of comfort and warmth within the teacher-child relationship, as children give reasons for wanting to confide in the teacher. For example:

Scenario 1: Waving good-bye to parent  
*Yes, because, she (the teacher) wants to know how happy he is*  
Scenario 3: Speaking in front of the class  
*Yes, 'cause the teacher wants to know if a kid feels good or bad*  
Scenario 4: Sitting on floor listening to teacher  
*Yes, because they (the teacher) want to know if they (the child) feel(s) happy*



Scenario 6: Doing schoolwork at desk

*Yes, because she likes telling the teacher she's happy*

Scenario 7: Going to the canteen

*Yes, because she loves the teacher and she likes telling the teacher*

A different view of the teacher-child relationship was seen in responses where children said they would tell the teacher because they were exhibiting good behaviour or following the rules and may receive a reward. This suggests that children's view of the teacher is coloured by their awareness of the expectations made on them at school, and know how to act appropriately to generate praise. As discussed by Goodnow & Burns (1985), teachers hold the power in the teacher-child relationship as they decide when praise or punishment is necessary. Teachers who are positive and who praise children make children feel happier about being in the classroom. The following examples illustrate this functional aspect of the teacher-child relationship:

Scenario 2: Lining up outside the classroom

*Yes, 'cause the teacher would say "good"*

Scenario 4: Sitting on floor listening to teacher

*Yes, 'cause she's sitting properly*

*Yes, 'cause she's sitting up straight*

Scenario 6: Doing schoolwork at desk

*Yes, 'cause they are trying to get ten out of ten*

Scenario 8: Entering the playground at the beginning of lunch

*Yes, because she likes knowing about if they're being good*

There were also cases where children described a negative feeling about a scenario and said they would want the teacher to know. In many of these instances, these responses emphasised the functional role of the teacher, that is, as someone who could help solve a problem. Some children mentioned this in relation to a lack of confidence or when doing schoolwork, whereas others wanted the teacher's help to manage negative peer interactions. For example:

Scenario 5: Going to the toilet by themselves

*Yes, because, um, their teacher might let another person go with them to the toilet and then he would be very happy.*

Scenario 6: Doing schoolwork at desk

*Yes, 'cause they want the teacher to help them*

Scenario 10: Being pushed by other children

*Yes, 'cause if someone's being mean to you, you have to go tell somebody*

### ***Negative towards the teacher***

Nearly all of the responses where children said they would not tell the teacher how they were feeling were from scenarios where children's initial response to the scenario was negative. In examining the reasons for not telling the teacher, it seemed that these children had a negative perception of their teacher. They gave no sense of an emotional connection with the teacher. Birch and Ladd (1997) say that conflict within the teacher-child relationship is characterised by a lack of rapport between the teacher and the child and that children who experience a lot of friction with their teachers "limit the extent to which they may be able to rely on that relationship as a source of support" (p.63). Some children's responses depicted the teacher as someone who punishes or is mean to children. For example:

Scenario 1: Waving good-bye to parent

*No, 'cause he will get in trouble*

Scenario 2: Lining up outside the classroom

*No, 'cause, um, cause, cause, the teacher will get up 'em*

Scenario 7: Going to the canteen

*No, 'cause he might get in trouble...'cause the teacher might not want them to be happy*

Other responses indicated that some children had strong negative feelings about school that they didn't feel they could share with the teacher. The picture of the teacher inherent in these

comments was of someone who was unresponsive or not interested in their feelings or needs. For example:

Scenario 2: Lining up outside the classroom

*No, 'cause they'd wanna go home*

*No, because he's too sad*

Scenario 6: Doing schoolwork at desk

*No, 'cause they're cranky*

*No, 'cause the teacher might say you have to do your work*

Scenario 10: Being pushed by other children

*No, because the teacher doesn't like to hear that*

### 3. Coping strategies

Responses to the final question, "What might happen next?" enabled us to see the variety of coping strategies and solutions that children had for managing stressful situations at school. Children's responses were most informative when they were asked about dealing with a situation they perceived as negative. Responses were interpreted in relation to children's expressed emotionality or regulation of emotional responses. Responses to a difficult situation that were coded as constructive were characterised by children being able to manage their distress. The following examples illustrate children's constructive strategies. These described a range of ways that children would deal with stressful situations. For example:

Scenario 5: Going to the toilet by themselves

*Scared, Go in there with a person*

*Lonely, He'll go to the toilet with another boy*

Scenario 9: Watching other children play in the sandpit

*Sad, She will ask them can she play*

Scenario 10: Being pushed by other children

*Sad, She will tell the teacher*

*Sad, Um...might go and tell them not to push anymore*

*Sad, She'll tell the teacher and they'll say sorry to her*

In contrast, responses that were coded as destructive tended to focus on negative emotions or negative outcomes, and to describe events as getting worse. In some cases the child appeared to be overwhelmed by the negative emotions that the scenario elicited, and had no real coping strategy to solve the problem. Often the child described the situation as becoming worse. For example:

Scenario 1: Waving good-bye to parent

*Sad, I think they would walk to school and cry at his school*

Scenario 10: Being pushed by other children

*Sad, They all trip her over*

*Sad, Be mean to them (person being pushed would be mean to others)*

*Sad, They will push her one more time and then she'll cry or something*

*Sad, Someone took her lunch off her*

Passive solutions or outcomes to difficult or stressful situations were coded when children had no constructive coping strategy, but didn't mention something destructive happening. Resnick (1993) notes that a passive solution arises when a child does not take the initiative to do anything in order to deal with the situation, and when there is no activity or action specified which is positive or helps the situation improve. For example:

Scenario 1: Waving good-bye to parent

*Sad, He goes home*

Scenario 9: Watching other children play together in the sandpit

*Sad, Walking and getting a tissue to wipe her eyes*

*Sad, I think they'll (children in sandpit) move away and play somewhere else because they don't like her*

Scenario 10: Being pushed by other children

*Sad, She'll go in the classroom*

Children's coping strategies were also revealing when their initial response to the scenario was positive. In many cases, they simply gave a routine or realistic outcome to the situation. In other words, their ideas about what would happen next drew on a factual description of classroom routines. This type of response provided a further insight into children's awareness and confidence with the routines of school. They exemplify children's knowledge of school activities and classroom rules.

Scenario 2: Lining up outside the classroom

*Happy, let's see...he might be going to the library after that*

Scenario 3: Speaking in front of the class

*Happy, They change the news to (another) person*

*Happy...really happy, you might put it (your news) on your desk, or you could put it in your bag if you don't want to get it lost*

Scenario 5: Going to the toilet by themselves

*Happy, he'll go out to play...when the bell goes he has to line up*

Scenario 6: Doing schoolwork at desk

*Normal, sit on the floor and listen to their teacher*

*Happy, after when you've done your work you can colour in*

*Sad, they going back on the floor and listen to the next thing to do*

## DISCUSSION

This paper has described the development, presentation, and scoring of children's responses to the Pictorial Measure of School Stress (PMSS). Results from two separate cohorts of children interviewed at three different times during the kindergarten year have demonstrated that this measure is an appropriate tool for assessing children's perceptions of school-related stress. Scenarios depicted in the PMSS were developed from discussions with kindergarten children. Not surprisingly, therefore, a number of the illustrations in the PMSS were similar to the places chosen by children in Dockett and Perry's (2003) study of what children selected as being important at school. The PMSS included scenarios in the classroom, the playground, the toilets, and the canteen, all of which were identified by Dockett and Perry. The results of children's PMSS interviews revealed that they were well equipped to report their feelings about specific situations they face in kindergarten and to suggest strategies they might use for coping with these situations. Their responses indicate that even in the first term of kindergarten some children experience feelings of stress, anxiety and negativity towards school. The coding system developed by the authors to categorise children's responses provided a useful template for identifying the positive and negative feelings that communicated the degree of children's perceived stress. Our interpretive analyses of the underlying themes, which further explained a positive or negative feeling, have provided a rich picture of children's early responses to school.

Many of the children reported positive feelings towards the school scenarios depicted in the PMSS. Consistent with other research that has described child competencies in the process of adjusting to and succeeding at school (Dockett & Perry, 1999; Einarsdottir, 2003; Griebel & Niesel, 2003), children often referred to school as a place where they liked to learn. Einarsdottir (2003) also found that school learning was important to children, that is, they expected to "read, do maths, and write" (p.42). Children in Einarsdottir's study also assumed they would learn rules such as behaving yourself and raising your hand. Similarly, in the current study children saw school as a place that has rules and routines. They displayed a good knowledge of school activities and sequences, as well as teacher expectations. This was evident in their responses to the question "What might happen next?" where many children described the next step in terms of school routines, or relied on school rules as a means for managing a negative scenario. Teachers' expectations and school rules typify the differences between prior-to-school settings, or home, and formal schooling. Many studies have reported children's concerns with school expectations and rules, both from the perspectives of preschool-aged children and children who have already commenced kindergarten (Einarsdottir, 2003; Dockett, Whitton, & Perry, 2003; Brostrom, 2003). Valeski and Stipek (2001) recognise that "some amount of structure, including clear rules and consistent expectations, are assumed to promote a sense of competence" (p.1198). In the present study, children's positive perceptions of school were often tied to a sense of knowing what was expected.

Children's responses to the PMSS also featured references to their relationships and interactions with peers, parents and teachers. They frequently mentioned play with friends as something they enjoyed about school. However, relationships with peers served as both a stressor for children, in the context of other children not letting them play in games or teasing or hurting them, and a coping strategy for overcoming negative feelings about situations. The findings relate to Birch and Ladd's (1997) work, where friends and familiar peers were found to be an important source of social and emotional support for children starting school who need to manage challenging situations. Continuity in peer relationships during the transition to kindergarten, they argue, "would serve as a stress-reducing function" (p. 1172). Children's relationships with their teachers have also been found to account for differences in children's transition to school (Birch & Ladd, 1997; Dockett & Perry, 2001; Pianta & Steinberg, 1992). Responses from the PMSS gave an indication of the degree of children's emotional connectedness to their teacher, through questions that asked whether or not they felt comfortable telling the teacher how they were feeling. Many children gave a sense of a close trusting relationship with the teacher, who was seen as a person whose feelings were important, who cared about them, and who would help them solve problems or alleviate stress in negative situations. Dockett and Perry (2001) have emphasised the importance of positive teacher-child relationships in their guidelines for effective transition to school programs, and recognise the need to focus on relationships during the transition to school. They note that in situations where positive relationships were evident between children and teachers, the children reported positive relationships. In contrast, when positive relationships were not reported, children had anxieties and concerns about school. Similar findings were seen in the current study, which asked children about their relationship with the teacher. Some responses were clear examples of what Birch and Ladd (1997) describe as "conflictual" teacher-child relationships. These children said they would not turn to the teacher as a source of help or support when they felt stressed or sad at school.

Negative feelings associated with school were more likely to be elicited by certain scenarios, such as going to the toilet by themselves, joining in with other children playing in the sand pit, and being pushed by other children. Waving good-bye to the parent was also a situation that was stressful, particularly when asked early in the school year. Separation from parents was a theme that appeared in a number of responses to the PMSS. This may be due to the timing of the study, which occurred in Term 1 of children's first year at school. Some children might cope better with this separation over time. Feelings of separation anxiety were also apparent when children felt unable to manage difficult situations on their own. Although sometimes the teacher was seen as someone who would help, children still referred to their need for parental figures. Janis and Leventhal (1968) have found that environmental change causes a degree of stress in young children. In the responses reported in this paper, stress was also linked to the social and behavioural expectations of school. Their first term may be more focused on developing the necessary social skills and appropriate behaviour that they will need to assist them to be a successful and happy participant in school. Based on this, implications for future research arise. It would be beneficial to collect follow up data later in the school year to see whether children's perceptions of stressful situations and coping strategies for dealing with these situations change as they become more familiar with school routines and expectations. Interestingly, it appeared that the academic demands on children, depicted in the in-class scenarios telling news/doing schoolwork, did not seem to elicit negative feelings. Perhaps kindergarten children may not be required to undertake many or difficult academic tasks in the first term. Again, a later assessment may give a different picture of children's engagement with the academic demands of school

Children's responses to the question "what will happen next?" showed a range of different coping strategies for stressful scenarios. Some children were able to provide a positive solution that would reduce anxiety, whereas others described outcomes or strategies that made the situation worse or more stressful. A third type of response was passive, in which the child did not have a means for actively solving the problem but did not describe things as getting worse. It was often the case that children who perceived a situation as stressful had no appropriate strategy that would either help them solve the problem or make them feel better. The differences between children were seen in their initial perceptions of a situation as well as their strategies for responding to the event. Alternately, it might be that, as Robson's (1999) study showed, children's level of stress in a situation depended on their ability to utilise or possess a constructive coping strategy. Beaver (1997) noted: "Coping has been defined as the individual's cognitive and behavioural efforts to

manage internal and external demands that are judged as a threat or challenge to that persons resources” (p.143). Future analyses of data from the PMSS will be able to shed further light on the question of how internal, child-related mechanisms for coping with stress and external, classroom-related factors contribute to differences in children’s perceptions of school.

Overall, we feel that our results show that the Pictorial Measure of School Stress can make an important contribution to furthering understandings of children’s experience of school stress as they adjust to the first year of school. Although based on a relatively small sample of children, the findings from this study indicate that the PMSS can be used to generate more comprehensive research into stresses associated with adjustment to school through gathering and analysing information from individual children.

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