Chapter 4
The public speaking experience in childhood and adolescence: a qualitative and quantitative investigation.

This chapter has been submitted for publication as: S.R. Sumter, C.L. Bokhorst, & P.M. Westenberg (2009). The public speaking experience in childhood and adolescence: a qualitative and quantitative investigation. Submitted for publication.

Abstract

Adolescence can be viewed as a period of increased sensitivity to social evaluation. However, it is unclear how adolescents experience social evaluative situations like a public speaking task, and how their experiences differ across age. To assess possible qualitative and quantitative differences an interview and questionnaires were administered to 295 nine to seventeen year olds. The results showed that with increasing age adolescents had more negative expectations concerning pending evaluations. They also reported more negative and less positive ruminative thoughts. In addition, it seems that adolescents perceive a need to live up to more diverse expectations from different parties, i.e. their own, their peers and their teachers. This might be an explanation for the increasing sensitivity for social evaluative situations.

Introduction

During adolescence we do not only observe increases in obstinate and risky behavior (Steinberg, 2007), adolescents also appear to become more reserved in certain situations. In comparison to other fears, social fears become more salient during adolescence (Weems & Costa, 2005). Recent studies have demonstrated a direct link between age and fear of social evaluation (e.g., Westenberg, Drewes, Goedhart, Siebelink, & Treffers, 2004; Sumter, Bokhorst, & Westenberg, 2009), this is social-evaluative situations were experienced as more distressing during adolescence than childhood. Finally, recent studies
(e.g., Stroud et al., 2009; Sumter, Bokhorst, Miers, van Pelt, & Westenberg, 2009) have shown that with increasing age physical responses during social stressors become stronger as well.

From the social anxiety literature it seems to emerge that a developmental sensitivity to social fears is most pronounced for performance situations, e.g. public speaking. For instance, Gullone and King (1993) found divergent age patterns for some items of the social fear subscale of a version of the Fear Survey Schedule for Children. The fear of being sent to the principal decreased, while the fear of having to present in public increased. Likewise, Sumter, Bokhorst, and Westenberg (2009) found no age differences for social anxiety in general, but 12 to 17 year olds reported a greater dislike for formal speaking and interaction situations, during which they need to perform in front of their peers, compared to 9 to 11 year olds.

Although it has become clear that adolescents become more distressed with regard to social situations, particularly public speaking, our understanding of how they experience public speaking situations is limited. The current study investigated how a public speaking situation is experienced by adolescents and whether there are qualitative and quantitative differences between different age groups in relation to presenting in public. Because public speaking is a complex, multifaceted experience that requires a wide array of skills from the speaker, there are several aspects that adolescents can perceive as more or less important for a successful speech. Public speaking might also trigger different thoughts, cognitions and concerns and adolescents might have different perceptions of their ability to do well. This complexity and the lack of literature regarding this topic make it difficult to formulate specific hypotheses. However, literature on adolescent development might provide some clues on which aspects of the public speaking experience might be important for youth and which of these aspects are sensitive to developmental change.

Adolescent Development and the Public Speaking Experience

Progression of cognitive development during adolescence leads to advanced reasoning skills. Rosenblum and Lewis (2003, p. 274) argue that this emerging ability to reflect on “abstract ideas, anticipated future events and recalled past events” come to trigger emotions during adolescence. Adolescents are able to
think of all kinds of theoretically possible outcomes for different situations which would suggest that they are able to think and speculate about all the great things that can happen, but also all the negative things that can happen. In line with the latter, Muris et al. (2002) found that with increasing age children reported more negative outcomes for situations that they were presented with. This is referred to as increased worry elaboration. In public speaking situations, the increased ability to foresee many possible negative outcomes might make adolescents more negative than children with regard to expected outcomes. Thus, adolescents might be more likely to report that they expect to perform worse than others, and will be evaluated negatively by others.

Age differences can also be expected to emerge in the days following the speech. It is expected that increased cognitive development would contribute to an increase in rumination afterwards. This increase has been observed for both genders by Jose and Brown (2008). In their study among 10 to 17 year olds they reported strong increases for girls (from age 10/12) and modest increases for boys (from age 15) in the amount of rumination. Hampel and Petermann (2005) also observed an increase in rumination in a sample of 123 youth aged 8 to 14 years. Because most of these studies have investigated rumination as a trait variable, it is unclear whether similar age patterns would be observed for rumination after a laboratory speech task.

Speaking in public might also become more demanding due to changes that take place in adolescents' social context. One of those changes has received widespread attention in adolescence literature and seems particularly relevant to public performance: the increased importance of peer relationships (e.g., Nelson, Leibenluft, McClure, & Pine, 2004). A successful public performance can advance youth’s social status among peers, but it could also damage their status, which would make performing in public especially challenging for adolescents.

In addition to the increased importance of peer opinion, adolescent development is a time of increased autonomy. During adolescence youth come to rely more on their own ideas and beliefs. This is reflected in increased resistance to peer influence during adolescence (Steinberg & Monahan, 2007) and might result in an increasing importance of their own evaluation in public speaking task.
On first sight, this move towards greater autonomy would appear to make public performance situations easier for adolescents. However, greater autonomy does not preclude a sensitivity to the views and beliefs of others. In Loevinger’s model of ego development (Loevinger, 1993) this becomes clear as well. A person’s ego level determines how they perceive the world around them. Several developmental stages can be distinguished within this model. Three of these are particularly relevant for the adolescent period and influence feelings of social evaluative fear (i.e., the Self-protective, Conformist, and Self-aware stages). While the self-protective youth are not worried about what others think of them, conformist youth are strongly focused on what others think, especially his peers. At a higher ego level, this is self-aware, adolescents come to value their own opinion, but are still sensitive to the views and beliefs of others. Hence, social fears are found to be dominant in both the Conformist and Self-aware ego level (Westenberg et al., 2004). The findings on self-consciousness reported by Rankin, Lane, Gibbons, and Gerrard (2004) are in line with this ego development theory. During adolescence (13-18 year olds) private self-consciousness increased, whereas public self-consciousness showed a minor decrease. Overall adolescents reported more public self-consciousness than private self-consciousness.

These parallel developments might make public speaking situations more challenging: adolescents might experience the need to please both their peers and live up to their own standards. Sometimes these standards might not easily tie in with each other, resulting in some friction. This could be one of the contributing factors to the stress caused by public speaking situations. In addition, most public speaking situations take place in an academic setting which undergoes changes during this period as well. Teachers might set increasingly higher standards, enhancing the academic achievement aspect of public speaking.

Current Study

The focus of the current study was to unravel experiences, thoughts and concerns related to public speaking during adolescence. To capture the public speaking experience as a whole a wide range of measures, both qualitative and
quantitative, that covered various aspects of public speaking was used. The two main aims of the current study were: 1) to get a better understanding of the adolescent public speaking experience including thoughts concerning public speaking (e.g., what do they think makes a good speech according to different people), and 2) to investigate age differences in those thoughts and additional cognitions (e.g., performance expectations and rumination) related to public speaking. Both qualitative and quantitative age differences were investigated.

A structured interview was used to get an impression of what children and adolescents deem important in relation to public speaking and to investigated age-related differences in these aspects (qualitative differences). Three questions from the interview are highlighted in the current paper. Firstly, participants were asked how they know that their performance went well or poorly at school (Q1). It might be that due to increased autonomy, the oldest adolescents would base the judgment of their own performance more on their own beliefs, whereas younger youth would be led more by the opinion of others.

Secondly, we asked what made a good speech according to themselves, their peers, and teachers (Q2). It could be that peers are perceived to have very different expectations than teachers about what makes a good speech. If they perceive that the demands made by their peers and teachers are not the same and possibly contradictory, this might make the situation more stressful. These perceived differences between judges might also vary between age groups. For example, older youth might be more aware of differences in the standards held by peers and teachers than their younger counterparts.

Finally, adolescents were asked what they did not like about giving their speech in front of age peers (Q3). Because of increased cognitive ability, it might be that adolescents mention more diverse aspects that they do not like than children.

Based on the literature reviewed above some preliminary hypotheses could be formulated with reference to quantitative age differences in the public speaking experience, such as performance expectations, rumination and how much youth value the opinion of different judges. In line with Muris et al. (2002) who found that older adolescents were likely to envisage more negative outcomes for situations, it was expected that with increasing age adolescents
would have more negative outcome expectations before and after delivering a speech in front of age peers. In addition, adolescents were expected to report more negative and less positive thoughts about their performance a week later. These results would be in line with studies that have reported increased rumination with age (e.g., Jose & Brown, 2005). Finally, we expected to find that with age adolescents rely more on the opinion of peers but also on their own opinion (e.g., Loevinger, 1993). Because public speaking often takes place in a school setting, teachers opinion might also play a role. However, it was unclear whether age related changes would be observed in the way youth value their teacher’s opinion.

Method

Participants

The data used in the current study are part of the Social Anxiety and Normal Development study (SAND; Westenberg et al., 2009) which was approved by the Leiden University Medical Ethical Committee, the Netherlands.

The current sample consisted of 144 girls (48.8%) and 151 boys (51.2%). The participants were between 9 and 17 years of age, with a mean age of 13.08 (SD = 2.23) for boys and a mean age of 13.16 for girls (SD = 2.32; t(293) = -0.30, ns). Participants were assigned to four age groups, i.e. 9-10 years (n = 68), 11-12 (n = 79), 13-14 (n = 71), and 15-17 (n = 77). The sample included children from all educational streams from the Dutch school system representing varied levels of intelligence in the whole sample and within all age groups. The participants came from a predominantly middle-class area.

Measures

Evaluated Performance: negative expectations

The measure of Evaluated Performance (EP) was designed by Spence, Donovan, and Brechman-Toussaint (1999) for use with different behavioral assessment tests with children. Two versions are available, i.e. one for read aloud/interaction tasks and one for speech tasks. The latter was used in the current study. The measure was administered a week before (EP before) the speech and a
week after (EP after). The EP consists of six questions that reflect how participants expect to be evaluated by peers and teachers, and how well they expect to do or have done during the speech. On a 5-point Likert scale they were asked to indicate whether they would be evaluated positively (high score) or negatively (low score). The Cronbach’s alpha’s for both assessment moments were sufficient, respectively $\alpha = .75$ (EP before) and $\alpha = .79$ (EP after).

**Positive and Negative Rumination**

Rumination was assessed with the Thoughts Questionnaire (TQ, Edwards, Rapee, & Franklin, 2003). The TQ measures both positive and negative thoughts after a speech task. Each scale consists of ten items and participants rated how often they had had those thoughts in the week following the speech on a 5 point Likert scale (0 = never and 4 = often). To fill in the TQ, participants were sent an email six days after the speech asking them to complete the questionnaire online. The questionnaire was completed by 71% of the sample. This sample included 103 girls and 106 boys equally distributed over the four age groups ($\chi^2 (3) = 1.25, ns$). The reliability was good for both the positive rumination scale (Cronbach’s alpha is .88) and negative rumination scale (Cronbach’s alpha is .92).

**Interview**

The questions included three closed-ended and three open-ended questions. A bottom-up scoring system was devised for the open-ended questions, i.e. the answers were used as starting points for categories. A scoring manual was developed, and all answers were scored by the first author. A random selection of participants ($n = 33, \pm 11\%$) was coded by an independent researcher based on the scoring manual. The correspondence between the two coders was adequate and is mentioned below for the different questions.

*Open-ended Question 1 (Q1): How do you know that your speech went well when at school?* The answers given to Q1 were assigned to one or two of the following three categories: 1) *Internal answers* which are answers that reflected that participants knew for themselves how it went. In this situation, adolescents referred to personal standards, e.g. the fact that they had not made any
or few mistakes. 2) External answers which were answers that reflected that participants took into account the opinion of others. These answers referred to how the audience had behaved during or after their speech (e.g., had the audience asked questions, did they look interested or give you compliments after). In addition, these answers would refer to the grade they received for their speech. 3) Combination answers (i.e., internal and external answers) were applicable to adolescents who mentioned both types. If someone gave an answer that reflected both internal and external standards, this answer was coded as internal, external and the combination. Hence, the combination category overlaps with the internal and external categories. This question was asked to a subset of the sample \( n = 194 \). The level of correspondence between the two raters was 95%.

Open-ended Question 2 (Q2). What do you and other people think is important for a good speech? Answers given to Q2 were assigned to the following eight categories: (1) Boring. Participants indicated it was important that a good speech should not be boring, (2) Quality & structure. Answers that reflected more scholastic attributes of the speech. Adolescents emphasize that a good speech should be well planned (e.g. structure and clarity of the story), (3) Topic of the speech, (4) Forgetting your text, answers that reflected that the speaker should remember what he wanted to say, (5) Prepare. The speaker should prepare his speech, (6) Stance during speech, the speaker should mind his stance during the speech (e.g. making eye contact and engaging the audience), (7) Voice, answers that reflected the quality of a speaker’s voice (e.g. volume and speed), and (8) Relax, during a good speech a speaker should be relaxed and not nervous. This question was asked three times, that is with respect to the three different judges: according to adolescents themselves, their peers and their teacher(s). The average level of correspondence (and range) between the two coders across the eight categories was 95% (91-100%) for adolescents themselves, 93% (75-100%) for their peers and 93% (84-100%) for teachers.

Open-ended Question 3 (Q3). What did you not like about giving the speech? Answers given to Q3 were assigned to the following nine categories: (1) Performance, not having done well, (2) Audience, the presence of the audience, (3) Nothing, liking each aspect of the speech, (4) Nerves, feeling nervous,
(5) Speech general, giving a speech in general, (6) Lab, things in the lab, like the
physiological equipment, (7) Interaction, not being able to interact with the
audience, (8) Evaluation, being evaluated and recorded, and (9) Preparation,
having to prepare. The average level of correspondence between the coders was
97% (range: 91-100%).

Closed-ended questions. The participants were asked to indicate on three
separate scales, ranging from not at all to very important (1 to 5), how impor-
tant they find their own opinion, their peers opinion and their teachers opinion
when they give a speech at school.

Procedure
The children were recruited from two local primary schools and one secondary
school. All parents were sent information letters with active consent forms and
given the opportunity to visit the lab spaces at the university. Participation was
possible only if active consent was provided. Written assent was also obtained
from the participants themselves.

Children visited the university twice one week apart. During the first visit
(ca. 2.5 hours), children filled in questionnaires, including the EP before. To
familiarize them with the upcoming speech session and its procedure they
visited the lab spaces where the speech took place and met the researchers.
They were also given further instructions about the task. The researchers
informed them that they were expected to talk for five minutes about the type
of movies they liked or did not like and they should prepare for this as they
would for a presentation at school (for detailed information on this task see
Westenberg et al., 2009).

During the second visit children presented in front of a pre-recorded
projected audience of age peers and a teacher (see also Westenberg et al.,
2009). After their presentation they filled in a set of questionnaires, including
the assessment of the EP after. After they had completed these questions, the
researcher entered the experimental room for the interview.

A week after the speech all children were sent an email to inform them
about the last questions they needed to answer on the study’s website. At this
moment they filled in the Ruminations Questionnaire.
Results

Qualitative Data

Q1: How do you know that your speech went well?

The answers to this question demonstrated that youth use internal or external information, or both to decide how well their speech went. The external answers were given most frequently, followed by the internal answers. The combination answers were mentioned the least.

To test whether age differences were present in the type of attribution mentioned, cross-tabs were conducted between age groups and the three answer categories (see Figure 1). Chi-square statistic was significant for internal ($\chi^2 (3) = 9.07, p < .05$) and the combination category ($\chi^2 (3) = 16.91, p < .01$), but not for the external category ($\chi^2 (3) = 1.49, ns$). These results indicated that with increasing age children more frequently provided answers that reflect how they themselves feel about their speech. The external answers remained equally and highly important in each age group. In addition, with age the responses come to include multiple sources of information, that is from the audience and their own perception.

![Figure 1. Percentage of children that made internal or external attributions or both.](image-url)
Q2: What is important for a good speech?

The participants were asked to indicate what was important for a good speech according to themselves, their peers and their teachers. Their answers were assigned to the eight different categories as described in the Method. Some categories were more frequently mentioned than others (see Table 1). The different judges were compared and age differences in the answers were investigated for each category.

Table 1. Frequencies of Responses by Age Group for Each Categories of the Question “What is Important for a Good Speech” according to Yourself, Peers, and Teachers

<table>
<thead>
<tr>
<th>Category name</th>
<th>Judge</th>
<th>9–10</th>
<th>11–12</th>
<th>13–14</th>
<th>15–17</th>
<th>χ²(6 df)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Boring</td>
<td>Yourself</td>
<td>4.7</td>
<td>11.7</td>
<td>19.4</td>
<td>20.0</td>
<td>8.84*</td>
</tr>
<tr>
<td></td>
<td>Peers</td>
<td>21.9</td>
<td>30.6</td>
<td>52.5</td>
<td>45.9</td>
<td>17.90*</td>
</tr>
<tr>
<td></td>
<td>Teachers</td>
<td>7.7</td>
<td>15.6</td>
<td>21.7</td>
<td>16.2</td>
<td>5.12</td>
</tr>
<tr>
<td>2. Quality/structure</td>
<td>Yourself</td>
<td>20.3</td>
<td>26.9</td>
<td>29.2</td>
<td>31.1</td>
<td>2.24</td>
</tr>
<tr>
<td></td>
<td>Peers</td>
<td>20.6</td>
<td>16.7</td>
<td>18.3</td>
<td>19.2</td>
<td>0.37</td>
</tr>
<tr>
<td></td>
<td>Teachers</td>
<td>30.8</td>
<td>24.4</td>
<td>27.4</td>
<td>44.6</td>
<td>8.27*</td>
</tr>
<tr>
<td>3. Topic</td>
<td>Yourself</td>
<td>26.6</td>
<td>34.6</td>
<td>36.6</td>
<td>45.9</td>
<td>5.71</td>
</tr>
<tr>
<td></td>
<td>Peers</td>
<td>34.4</td>
<td>42.1</td>
<td>50.7</td>
<td>51.7</td>
<td>5.69</td>
</tr>
<tr>
<td></td>
<td>Teachers</td>
<td>35.4</td>
<td>44.9</td>
<td>68.5</td>
<td>70.7</td>
<td>26.17*</td>
</tr>
<tr>
<td>4. Forget</td>
<td>Yourself</td>
<td>21.9</td>
<td>19.2</td>
<td>19.4</td>
<td>9.5</td>
<td>4.54</td>
</tr>
<tr>
<td></td>
<td>Peers</td>
<td>7.8</td>
<td>6.9</td>
<td>4.2</td>
<td>1.4</td>
<td>3.82</td>
</tr>
<tr>
<td></td>
<td>Teachers</td>
<td>9.2</td>
<td>9.0</td>
<td>9.6</td>
<td>1.3</td>
<td>5.24</td>
</tr>
<tr>
<td>5. Prepare</td>
<td>Yourself</td>
<td>39.1</td>
<td>19.2</td>
<td>26.4</td>
<td>17.6</td>
<td>10.39*</td>
</tr>
<tr>
<td></td>
<td>Peers</td>
<td>7.8</td>
<td>4.2</td>
<td>2.8</td>
<td>4.1</td>
<td>2.09</td>
</tr>
<tr>
<td></td>
<td>Teachers</td>
<td>13.8</td>
<td>11.5</td>
<td>12.3</td>
<td>10.7</td>
<td>0.36</td>
</tr>
<tr>
<td>6. Stance</td>
<td>Yourself</td>
<td>23.4</td>
<td>41.0</td>
<td>43.1</td>
<td>54.1</td>
<td>13.50*</td>
</tr>
<tr>
<td></td>
<td>Peers</td>
<td>32.8</td>
<td>40.3</td>
<td>46.5</td>
<td>54.1</td>
<td>6.67*</td>
</tr>
<tr>
<td></td>
<td>Teachers</td>
<td>38.5</td>
<td>51.3</td>
<td>50.7</td>
<td>53.3</td>
<td>3.69</td>
</tr>
<tr>
<td>7. Voice</td>
<td>Yourself</td>
<td>35.9</td>
<td>55.1</td>
<td>48.6</td>
<td>56.8</td>
<td>7.28*</td>
</tr>
<tr>
<td></td>
<td>Peers</td>
<td>46.0</td>
<td>56.3</td>
<td>39.4</td>
<td>52.7</td>
<td>4.75</td>
</tr>
<tr>
<td></td>
<td>Teachers</td>
<td>50.8</td>
<td>46.2</td>
<td>52.1</td>
<td>48.0</td>
<td>0.63</td>
</tr>
<tr>
<td>8. Relaxed</td>
<td>Yourself</td>
<td>15.6</td>
<td>5.1</td>
<td>15.3</td>
<td>14.9</td>
<td>5.33</td>
</tr>
<tr>
<td></td>
<td>Peers</td>
<td>15.6</td>
<td>4.2</td>
<td>9.9</td>
<td>12.2</td>
<td>5.18</td>
</tr>
<tr>
<td></td>
<td>Teachers</td>
<td>6.2</td>
<td>7.7</td>
<td>5.6</td>
<td>9.3</td>
<td>0.93</td>
</tr>
</tbody>
</table>

* p < .05  † p < .10
1: Boring. The children more often indicated that their peers find it important that a speech is not boring compared to teachers or themselves. Furthermore, with increasing age children more often reported that they themselves and their peers found it important that a speech is not boring. This effect seems to be stronger for peers than themselves. Some just stated “that it isn’t boring”, whereas another child mentioned “That the kids like it. That you do something special, a quiz or something, or baking cookies, a treat. That is what kids like.”

2: Quality and Structure. The fact that the speech should be well-structured and clear seemed to be reported less often for peers compared to teachers and themselves. Furthermore, the oldest age group said that teachers pay attention to a speech’s structure most often. Some children only mentioned that it had to be “a story that flows well/that it is a coherent story”, whereas another mentioned that “you need to mention certain points issues and also a little the order.”

3: Topic. The topic of your speech is something that was most often reported for teachers, followed by their peers, and fewer times for themselves. With increasing age children more often reported that the topic of your speech is important to themselves, to their peers and especially their teachers. Some children mentioned that “you should pick the right topic” and you should pick “a topic you can say a lot about.”

4: Forget. Not forgetting what you had planned to say is something that the children indicated is important for themselves rather than something that peers or their teacher pay attention to. Limited age differences were observed for this category. An example for this category is “that they do not forget everything they wanted to say.”

5: Prepare. There were also differences in how important it is to prepare your speech. Answers that reflected the need to prepare your speech were most often provided for themselves, followed by teachers and least often for peers. The youngest age groups most often reported that it is important to prepare the speech. They would say that it was necessary “that you practice a lot and prepare well.”

6-8: Stance, Voice, & Relaxed. There were little group differences in the importance of your stance, the way you use your voice during the speech and appearing relaxed rather than nervous during your speech. However, with increasing age children more often reported that they themselves and their peers found the way you present important. Furthermore, for themselves the older children more often reported that your voice is important than the
younger children. The age differences in how relaxed you should appear are less clear.

Q3 **What did you not like about giving today’s speech?**

To investigate what the participants did not like about giving their speech, answers were categorized using nine categories. For the whole group, these categories were in order of prevalence: 1) *Performance* (31.4%), 2) *Audience* (24.7%), 3) *Nothing* (15.1%), 4) *Nerves* (13.7%), 5) *Speech general* (7%), 6) *Lab* (6.4%), 7) *Interaction* (6%), 8) *Evaluation* (6%), and 9) *Preparation* (5.4%) (see Method for detailed explanation of each category).

Chi-square statistics demonstrated age effects for four categories: 1) The youngest group indicated that they did not like the speech because it did not go well less often than the older groups (*Performance*: $\chi^2(3) = 7.98$, $p < .05$). 2) The oldest two groups less frequently said that the nervousness and jitters they experienced during or before the speech was a reason for not liking the speech (*Nerves*: $\chi^2(3) = 11.73$, $p < .01$). 3) The older adolescents more often indicated that they don’t like giving speeches in general than the youngest age groups. The four age groups separately did not differ, but if age groups 1 and 2 were contrasted with group 3 and 4, the effect was significant (*Speech general*: $\chi^2(1) = 3.83$, $p = .05$). 4) The youngest groups more often than the oldest groups said there was nothing that they had disliked (*Nothing*: $\chi^2(3) = 13.98$, $p < .01$).

**Quantitative Data**

**Evaluated Performance: negative expectations**

To test whether older adolescents had more negative expectations with regards to pending evaluation, age differences were investigated in the expected evaluation before and after the speech. A repeated measure analysis was performed with the expected evaluations (Time: before and after the speech) as a within-subject variable and age as a between-subjects variable (see Figure 2). A repeated measures analysis allowed for the comparison of age patterns between the two moments of assessment.

The repeated measure showed no Time x Age interaction effect (Greenhouse-Geisser (GG) $F(3, 281) = 1.37$, *ns*), but it did show a main effect for time (GG $F(1, 281) = 145.92$, $p < .001$, partial $\eta^2 = .34$). The expected evaluation was less positive after the youth had performed their speech.

Follow-up ANOVAs were conducted to test the age effects for expected
evaluation before and after the speech separately. A main effect was found for age on expected evaluation before the speech ($F(1, 284) = 4.39, p < .01$, partial $\eta^2 = .04$). The oldest age group expected a worse evaluation than the two youngest age groups (Bonferroni, $p < .05$). It is important to note that no age differences in expected evaluation were present right after the speech ($F(3, 284) = 1.87, \text{ns}$).

![Graph showing expected evaluation mean scores for 4 age groups (high score = positive evaluation).](image)

**Positive and Negative Rumination**

Age differences were also investigated for positive and negative rumination (Type of rumination) reported one week after the speech task (Figure 3). A main effect was observed for Type of rumination ($GG F(1, 205) = 34.08, p < .001$, partial $\eta^2 = .14$), with higher scores for positive compared to negative rumination. An interaction effect was observed between Type of rumination and age ($GG F(3, 205) = 3.11, p < .05$, partial $\eta^2 = .04$).

Follow-up ANOVAs were conducted for negative and positive rumination separately. A main effect for age was found for negative rumination ($F(3, 205) = 3.83, p < .02$, partial $\eta^2 = .05$). Follow-up polynomial contrast analyses showed a significant cubic effect for age: an increase in negative thoughts is followed by a decrease (Cubic Contrast Estimate = 0.20, $p < .05$). The 11 to 12 year olds
reported more negative thoughts than the youngest age group \( (p < .02, \text{ Bonferroni}) \) and than the oldest age group \( (p = .07, \text{ Bonferroni}) \).

A main effect of age was also observed for positive rumination \( (F(3, 205) = 2.80, p < .05, \text{ partial } \eta^2 = .04) \). Follow-up polynomial contrast analyses showed a significant linear decrease with age, this is they reported less positive thoughts \( (\text{Linear Contrast Estimate} = -.0.30, p < .05) \). Although post-hoc analyses \( (\text{Bonferroni correction}) \) did not show age differences, an independent samples \( t \)-test showed a significant difference between the 9 to 12 year olds \( (M = 1.01, SD = 0.70) \) and the 13 to 17 year olds \( (M = 0.91, SD = 0.73) \) with the oldest age group reporting fewer positive thoughts \( (t(206) = 2.95, p < .01) \).

![Graph](image)

**Figure 3.** Negative and Positive rumination mean scores for 4 age groups (high score = more ruminative thoughts).

**How important is someone’s opinion when you give a speech at school**

To investigate age differences in the importance attached to the opinion of themselves, their peers and their teachers a repeated measure analysis was performed. The judge \( (\text{i.e., self, peer and teacher}) \) was included as a within-subject variable and age as a between-subjects variable. A main effect was observed for judge \( (\text{GG } F(1.91, 556.24) = 73.56, p < .001, \text{ partial } \eta^2 = .20; \text{ see Figure 4}) \). The participants valued the opinion of the teacher more than that of
their peers ($t(294) = -10.89, p < .001$) and their own ($t(294) = -10.48, p < .001$). There was no difference between peers and themselves ($t(294) = -1.31, ns$).

An interaction effect was observed between judge and age (GG $F(5.73, 556.24) = 2.76, p < .02$, partial $\eta^2 = .03$). To explore the interaction effect follow-up ANOVAs were conducted with the importance of own opinion, peer opinion and teacher opinion as dependent variables and age as independent variable. A main effect was found for the importance of own opinion ($F(3, 291) = 4.02, p < .01$, partial $\eta^2 = .04$). Follow-up polynomial contrast analyses showed a significant linear increase with age (Linear Contrast Estimate = 0.38, $p < .01$). The two oldest age groups reported to value their own opinion more than the youngest age group ($p < .05$, Bonferroni). There were no age differences in how much they valued the opinion of their peers ($F(3, 291) = 0.86, ns$). Finally, an age effect emerged for teachers ($F(3, 291) = 2.95, p < .05$, partial $\eta^2 = .03$). Follow-up polynomial contrast analyses showed a significant quadratic pattern (Quadratic Contrast Estimate = -0.20, $p < .05$). The oldest age group reported to value their teacher’s opinion less than the 13 to 14 year olds.

![Figure 4. Age differences in the importance attached to your own opinion, peer opinion and teacher opinion (high score = more important).](image-url)
Discussion

During adolescence social evaluative fears become more salient and adolescents report a greater willingness to avoid these situations if possible (e.g., Weems & Costa, 2005). In the current study, adolescents between the ages of 9 and 17 years were confronted with a public speech in front of age peers. Using different assessment instruments we tried to get a better understanding of youth's thoughts, concerns and experiences related to public speaking. In addition, qualitative and quantitative age differences in the public speaking experiences were investigated.

What do adolescents think about public speaking and does this change with age?

To the best of our knowledge the current study is the first that has tried to understand what adolescents actually think about or find important in relation to public speaking and whether it differed between age groups. For this purpose an interview was developed and three main questions were posed: 1) how do they know that a speech goes well, 2) what do they and other people think makes a good speech, and finally 3) what did they not like about giving their speech in the laboratory.

The answers in relation to the first question demonstrated that children and adolescents use external sources of information (teachers and peers) on how well they did, but also rely on their own evaluation. In line with increased autonomy which has been shown to characterize adolescence (e.g., Steinberg & Monahan, 2007), it was found that older adolescents more often gave internal explanations, whereas no age differences emerged for external sources, such as the observation that your audience looks interested, you got a good grade, or they gave you compliments. Thus, adolescents came to use an additional source of information, namely with increasing age adolescents incorporated both internal and external sources of information in their final perception of their own performance. It remains unclear whether after the age of 17 years one's own opinion becomes more important than the opinion of others.

The finding that adolescents base their opinion on both their own ideas and those around them might be challenging if the expectations they have
for themselves do not correspond with those of their peers or teacher. One of the aims was to see whether adolescents feel that there are differences in the standards for their speech held by themselves, their peers and teachers. In line with our expectations adolescents believed that their peers, their teachers and they themselves use different criteria to evaluate a speech. In addition, there were also some age related changes which seemed to show that with age the criteria adolescents mentioned for the three judges became more differentiated:

On the one hand adolescents indicated that their peers would prefer speeches that are not boring more so than they themselves or their teachers. The need for an entertaining speech was more often mentioned by the older age groups (for themselves and peers). On the other hand teachers are more often said to pay attention to the structure and more quality related aspects of your speech in addition to the topic of your speech. The older children mentioned these two criteria for teachers more often than the younger children. Finally, adolescents themselves indicated that they think it is important not to forget the lines you have prepared at home and that you prepare. Note that the need to prepare was mentioned less often by the older children. Criteria that reflected the way in which you present (i.e., voice use, mimicry and poise) was found to be equally important for all judges. These were also aspects that were mentioned relatively often (41%-49%). It is interesting to note that appearing relaxed (little outward signs of nervousness) were mentioned less frequently (ca. 10%). This is in contrast with the idea that adolescents are especially self-conscious (Rankin et al., 2004). It would be interesting to see whether explicit questions on the fear of showing outward signs of nervousness would be rated above average on a scale and show an increase with age.

Finally, it was investigated what adolescents did not enjoy about giving their speech at the university. The type of answer that was most frequently given was that they felt that it had not gone well or they had made a mistake. This reason was more frequently given by the older than the younger participants. The finding that adolescents become more negative fits with studies that show an adolescent-limited decrease in self-esteem (Robins, Trzesniewski, Tracy, Gosling, & Potter, 2002), which might foster negative judgments of one’s own performance during adolescence. The second most frequently given reason was
the presence of an audience and this was mentioned by all age groups. It might have been that the audience served as cue for the realization that their performance would be evaluated at a later date. The idea that the social-evaluative component of the task was very salient to the adolescents is in line with the finding that social evaluation and peer judgment is a central concern during adolescence (e.g. Westenberg et al., 2004; Nelson et al., 2004). Interestingly, many of the younger children stated that there was nothing that they had not liked about giving the speech. Although it was the fourth most frequently given answer, this was done so by less than 15%. This finding provides further evidence that public speaking becomes more daunting with increasing age (e.g., Sumter et al., 2009).

In addition to qualitative changes, quantitative differences between age groups in expected evaluations, rumination afterwards and the importance of the opinion of different judges were also investigated. First, the results partly supported the hypothesis that with increasing age public speaking situations become more challenging. The finding that the week before the speech the older children expected to perform worse than the younger children is in line with the study by Muris et al. (2002) who found that with increasing age children are able to think of more negative outcomes for situations. Interestingly, these age differences in expected performance evaluation were absent after they had delivered their speech. It might be that at this time actual performance influences their expectations and pending evaluations can be better, more objectively, judged. The fact that age differences were present in expectations before the speech and not after the speech, coalesces with the idea that anticipation to social evaluative situations might be especially sensitive to developmental differences (Sumter, Bokhorst, Van Pelt, Miers, & Westenberg, 2009).

Following previous rumination studies (e.g., Jose & Brown, 2008, Hampel & Petermann, 2005), it was expected that with increasing age participants would report less positive and more negative thoughts a week after the Leiden PST. As expected, the number of positive thoughts a week after the speech showed a significant negative trend with 13-17 year olds reporting less positive thoughts than 9-12 year olds. The findings for negative thoughts were less clear. The results showed a temporary increase in negative thoughts, i.e. the 11 to 12 year olds reported the most negative thoughts. Further research needs to verify
and try to explain this specific result. It should be noted that the rumination questionnaire was not completed by all participants. It is unclear whether the children and adolescents who were more negative were less likely to complete these questions.

Age differences were also observed in the amount in which participants rated the importance of their own opinion, the opinion of their peers, and their teachers’ opinion when they gave a speech at school. Their own opinion was valued more with increasing age. This finding concurs with the idea that during this time adolescents become more autonomous (e.g., Steinberg & Monahan, 2007). In contrast to our expectations and previous studies that emphasized the increased importance of peers during adolescence (e.g., Nelson et al., 2004), the opinion of peers was not seen as more important by the older age groups in comparison to the younger age groups. It might be that the increase occurred at an earlier, before the age of 10 years.

The opinion of their teachers became less important over time. The fact that overall teachers opinion was valued more than the others might be related to the fact that at school their speech would be graded by their teacher. During the interview many children commented that their teacher’s opinion was most important because they determined your grade. A study by Muris (1998) showed that academic worries are most often mentioned during adolescence. It would be interesting to see whether the value placed on teachers’ opinion would be more strongly related to achievement evaluation than social evaluation.

Limitations and Conclusions

There are some limitations that warrant mention. The current findings are all based on cross-sectional data, which makes it difficult to draw firm conclusions about developmental changes. Longitudinal studies are needed to confirm that the reported changes are developmental in nature. Furthermore, the sample included participants from a relatively affluent area in the Netherlands. Therefore, future studies need to be conducted with a more diverse sample to test the generalizability of the current results.

With reference to the methods, at the stage of coding it emerged that some answers to the questions were not easy to interpret. Future studies would benefit from additional questions to the interview which would clarify ques-
tions that are part of the original interview, e.g. why do they value the opinion of their teacher. Finally, standard prompts should be incorporated in order to make full use of the open-ended questions and facilitate the assignment of answers to certain categories.

It is interesting to note that several questions (both qualitative and quantitative) showed that adolescents became more negative about public speaking. For one adolescents were less likely to indicate that there was nothing they had disliked about the experience than younger participants. Furthermore, adolescents had more negative outcome expectations before the speech and reported fewer positive thoughts about their performance. In theory, however, advanced cognitive development would also allow adolescents to think of numerous positive scenarios for certain situations. It remains unclear why the speech task seems to have mainly negative connotations to adolescents. A theme which emerged from both the qualitative and quantitative data might be partly responsible for these negative thoughts. The whole sample seemed to take into account the criteria of others (e.g., they valued the opinion of peers and teachers highly), but with increasing age their own opinion became more important as well. Furthermore, they appeared to be more aware of seemingly conflicting criteria set by different judges. These developments could make the public speaking situation more challenging and stressful.

In sum, the effects of the current study were moderate in size. However, most findings seemed to corroborate our hypotheses. Future studies should try and work on more sensitive methods to understand the adolescent experience of public speaking and possible age differences. The answers that the adolescents gave to the interview form a good starting point from which a new instrument to investigate the public speaking experience during adolescence can be designed.

Funding

This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.