

Leiden Public Speaking Task

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Development of the Leiden Public Speaking Task

Anxiety and fear are suitable topics for a clinical psychologist with a keen interest in development. Fears are part and parcel of normal development. All of us have been afraid of monsters and feared separation from our caretakers. Humans would not survive without anxiety signals. At the same time, fears may grow out of hand and become maladaptive. Michiel Westenberg and colleagues wondered how and why that happens and started the SAND-study.

Michiel Westenberg

In high school Michiel Westenberg wanted to become a doctor but did not get into medical school. Three times he drew an unlucky number. While waiting for medical school he fortunately discovered psychology, and after a while he began to like it and decided that he wanted to become a clinical psychologist. He graduated in clinical psychology; however, he did not become a therapist. Westenberg had become fascinated by scientific research and wanted to know more about the developmental underpinnings of psychopathology. This quest has taken him from Amsterdam (Vrije Universiteit), to St. Louis (Washington University), to Berkeley (University of California), and to Leiden, at first in the Department of Child and Adolescent Psychiatry and currently in Developmental and Educational Psychology.

What is the SAND study?

SAND means: Social Anxiety and Normal Development. There has been a lot of debate whether social fears wax and wane, like other normal fears do. However, very little research had been conducted to explicitly investigate the normal course of social fears. Most research was aimed at individual differences in social anxiety and particularly very high levels. The SAND-study was designed to address two issues simultaneously: to investigate the normal developmental pattern of social anxiety during late childhood and adolescence and to study the development of extreme social anxiety. The project took 5 years to complete: it started in the fall of 2004 and it was finished only a few weeks ago: 331 participants (age 8 to 17 years) completed a wide range of measures and were tested three times during a two-year period.

Development of the Leiden Public Speaking Task

A key aspect of the research design was a public speaking task. The SAND-team was looking for a fully standardized task with high ecological validity while allowing for the simultaneous assessment of all three aspects of (social) anxiety: subjective experience, biological manifestations and behavioral expressions of anxiety. Such a task was not available in the literature and thus they set out to develop their own version.

What is new about it?

First, a pre-recorded classroom audience, projected life-size in the experimental room, was a novelty for this kind of task. A pre-recorded audience rules out differential treatment of participants by a real-life audience. Second, to enhance the ecological validity of the situation participants were informed ahead of time and were asked to prepare their speech at home as if they would for an oral speech at school. In contrast, most other public speaking protocols

include a live audience and the task is explained to the participants just before it starts. This is done to avoid an anticipation response and to ensure a sizeable stress response. Hence, many people expressed serious doubts whether the Leiden-PST would arouse meaningful anxiety levels.

Does it provoke much anxiety?

The SAND-team was very pleased to see the results: the Leiden-PST had a strong effect on subjective anxiety observable manifestations of nervousness. In addition, a clear response of various biological indicators (increased cortisol, heart rate and skin conductance) was observed. Yet, it took quite some time to convince the editor and reviewers of *Biological Psychology* that our findings are not spurious and that a fully standardized procedure is capable of eliciting a substantial response.

What was most difficult about it?

Westenberg explains that it proved to be very difficult to film a neutral and realistic audience. They could not manage it using ordinary school classes and therefore hired a professional director who instructed pupils in her acting class. Even then it took many takes before a natural and neutrally behaving audience was created on tape.

Take home message

Making the tape made the SAND-team think more clearly about the role and behavior of an audience during presentations. It made them realize that most audiences do not react sympathetically towards the speaker. And this appears to be particularly true for socially anxious speakers, as they have now shown in several publications. It has also made them more aware of the role of peer interactions in the development of social anxiety. Something they will pursue more explicitly in future studies.

Why name it the Leiden-PST?

Westenberg and colleagues decided to call it the Leiden-PST, because it was the outcome of a joint effort of their research team and the management and technical support provided by several FSW staff members: Deborah Alexander, Jaco Dubbeldam, Jan de Koning, Neeltje Plug, Thijs Schrama, and Jan van der Velde. The Leiden-PST is now finding its way in the world. The first research groups to adopt this paradigm are from the Vrije Universiteit and the Universiteit Utrecht.

The Future

When asked about future research, Westenberg responds that they first need to realize more publications from this rich data set. While doing this they are already making preparations for two extensions of the SAND-study. One project is about the influence of gene-environment interactions in the development of social anxiety (in collaboration with other research groups of the Leiden Social Anxiety Network). Another project is about understanding and preventing speech anxiety in high school pupils. Severe speech anxiety has to be taken seriously as it will negatively influence the careers of young people. The Leiden-PST will play a major role in both projects.

Reference

Westenberg, P.M., Bokhorst, C.L., Miers, A.C., Sumter, S.R., Kallen, V.L., Van Pelt, J., & Blöte, A.W. (2009). A prepared speech in front of a pre-recorded audience: Subjective, physiological, and neuroendocrine responses to the Leiden Public Speaking Task. *Biological Psychology*, 82, 116-124.