DEVELOPMENT OF ANXIETY AND FEAR-RELATED SYMPTOM SCALES FOR ADOLESCENTS: PRELIMINARY RESEARCH RESULTS

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INTRODUCTION

Anxiety disorders are among the **most common mental health conditions in adolescents** (Mohammadi et al., 2020), with rates increasing annually (Parodi et al., 2022). The COVID-19 pandemic significantly worsened adolescent mental health globally (Benton et al., 2021), including in Latvia (Konstantinovs et al., 2021).

However, **Latvia lacks psychological tools** to evaluate adolescent mental health. **This study aims to assess the content validity and face validity** of scales designed to measure anxiety and fear-related symptoms (Generalized Anxiety, Panic Disorder, Agoraphobia, Specific Phobia, and Social Anxiety) **based on the International Classification of Diseases-11 (ICD-11)** in adolescents aged 13 to 19. The research is part of the National Research Project "Development of a new computer-assisted assessment tool for measuring and monitoring mental health outcomes of adolescents in the context of the post-COVID pandemic" (Nr. 1-PB-2/8/2024).

METHODS

CONTENT VALIDITY

- **PARTICIPANTS: Six experts** (two certified clinical and health psychologists, as well as four child psychiatrists).
- **MEASURES:** Anxiety and fear-related symptom scales using 4-point Likert scale from: 1- *definitely not* to 4 - *definitely yes*.
- **PROCEDURE:** Experts received the scales via email and assessed the content validity of each item.

FACE VALIDITY

- **PARTICIPANTS: Five adolescents** (three girls and two boys, aged 15 to 18 years; *M*=16.4).
- **MEASURES:** Anxiety and fear-related symptom scales (second version) using Likert scale or dichotomous scale.
- **PROCEDURE:** Data collection was conducted through supervised online survey administration via video conferencing (e.g., Zoom).

DATA ANALYSIS

CONTENT VALIDITY

Content validity was assessed by **calculating the item-level content validity index** (I-CVI) **and the scale-level content validity index** (S-CVI/Ave) based on expert evaluations.

FACE VALIDITY

Adolescent **feedback was summarized and analyzed**, and their comments were considered in refining the final version of the scale items.
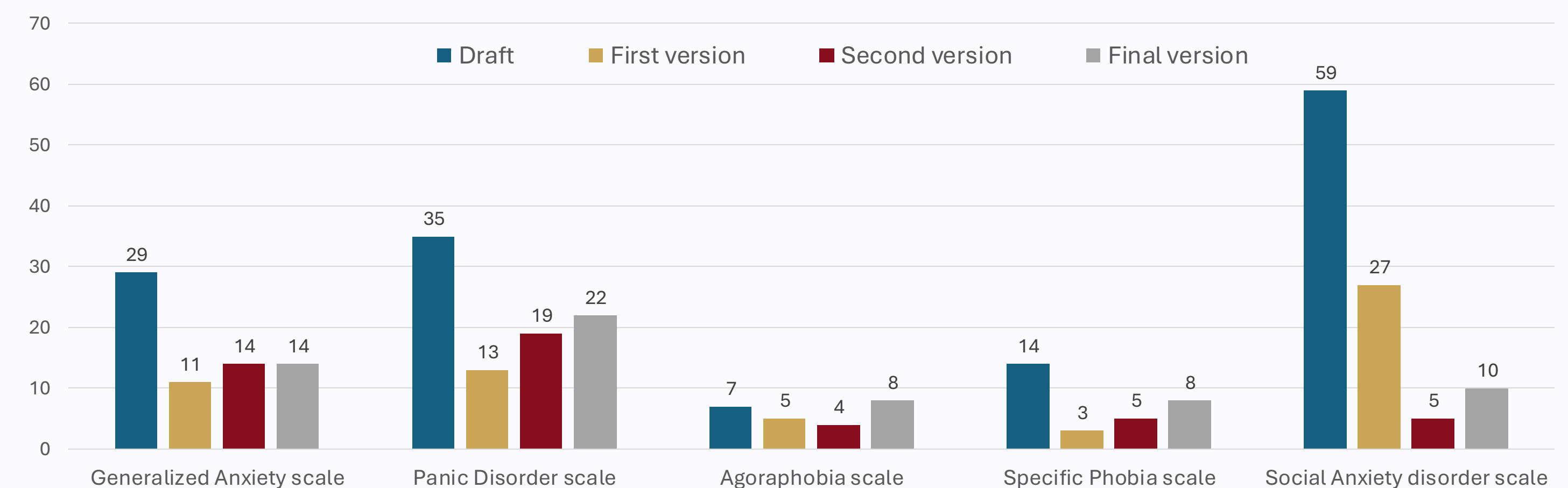
RESULTS

The item-level content validity index (I-CVI) **for the first version** ranged from **0.17 to 1**, with a scale-level content validity index based on the average method (S-CVI/Ave) of 0.89. Items with an I-CVI below 0.83 were revised.
In the second version, I-CVI **scores improved**, ranging from **0.75 to 1**, with an S-CVI/Ave of 0.99.

CONTENT VALIDITY INDICES

First version	S-CVI/Ave	Second version	S-CVI/Ave
Generalized Anxiety Scale	0,82	Generalized Anxiety Scale	0,98
Panic Disorder Scale	0,91	Panic Disorder Scale	1
Agoraphobia Scale	0,97	Agoraphobia Scale	1
Specific Phobia Scale	1	Specific Phobia Scale	1
Social Anxiety Scale	0,88	Social Anxiety Scale	1

* For content validity assessed by 5–6 experts, an I-CVI of ≥0.83 is considered acceptable (Yusoff, 2019).

NUMBER OF ITEMS IN SCALES

Legend: Draft, First version, Second version, Final version

Generalized Anxiety scale: 29, 11, 14, 14
Panic Disorder scale: 35, 13, 19, 22
Agoraphobia scale: 7, 5, 4, 8
Specific Phobia scale: 14, 3, 5, 8
Social Anxiety disorder scale: 59, 27, 5, 10

ADOLESCENT FEEDBACK

Scale	Original item	Feedback	Refined items
Panic Disorder Scale	How often do you experience trembling or muscle twitching during sudden fear or panic attacks?	"I think this overlaps with the earlier question about chills."	How often do you experience **muscle trembling or muscle twitching (tics)** during sudden fear or panic attacks?
Social Anxiety Disorder Scale	How strongly does your body react in such situations (e.g., excessive sweating, heart palpitations, shortness of breath, trembling, chills, sudden stomach issues, etc.)?	"It would be beneficial to include blushing, as it is a particularly strong reaction for me."	How strongly does your body react in such situations (e.g., excessive sweating, **intense blushing**, heart palpitations, shortness of breath, trembling, chills, sudden stomach issues, etc.)?

CONCLUSION

- Repeated item refinements improved content validity indices.
- Adolescent feedback supported the scales' face validity, highlighting their clarity and relevance.
- The next step is to collect data from clinical and general populations to determine the **cut-off score** and assess **concurrent validity**.

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