

Students' Stress and Expectations Related to National Exams



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Introduction

The process of implementing external evaluation of education is ongoing in Croatia. First phase of national assessment in secondary schools started in May 2006, the second was in February 2007 and the third one was in May 2007. The aim of the third national exams was to examine some issues about students' knowledge as well as their opinion (on subject area, classroom environment, expected grade and teacher interaction, etc.), attitudes (toward subject area, self evaluation, etc.), behavior (study habits, prior subject area performance, etc.) and perception of testing. Focus of the present paper is on students' stress and expectations related to the national exams.

Problem

Examine the effect of students' stress and opinion about the exam on the total exam score.

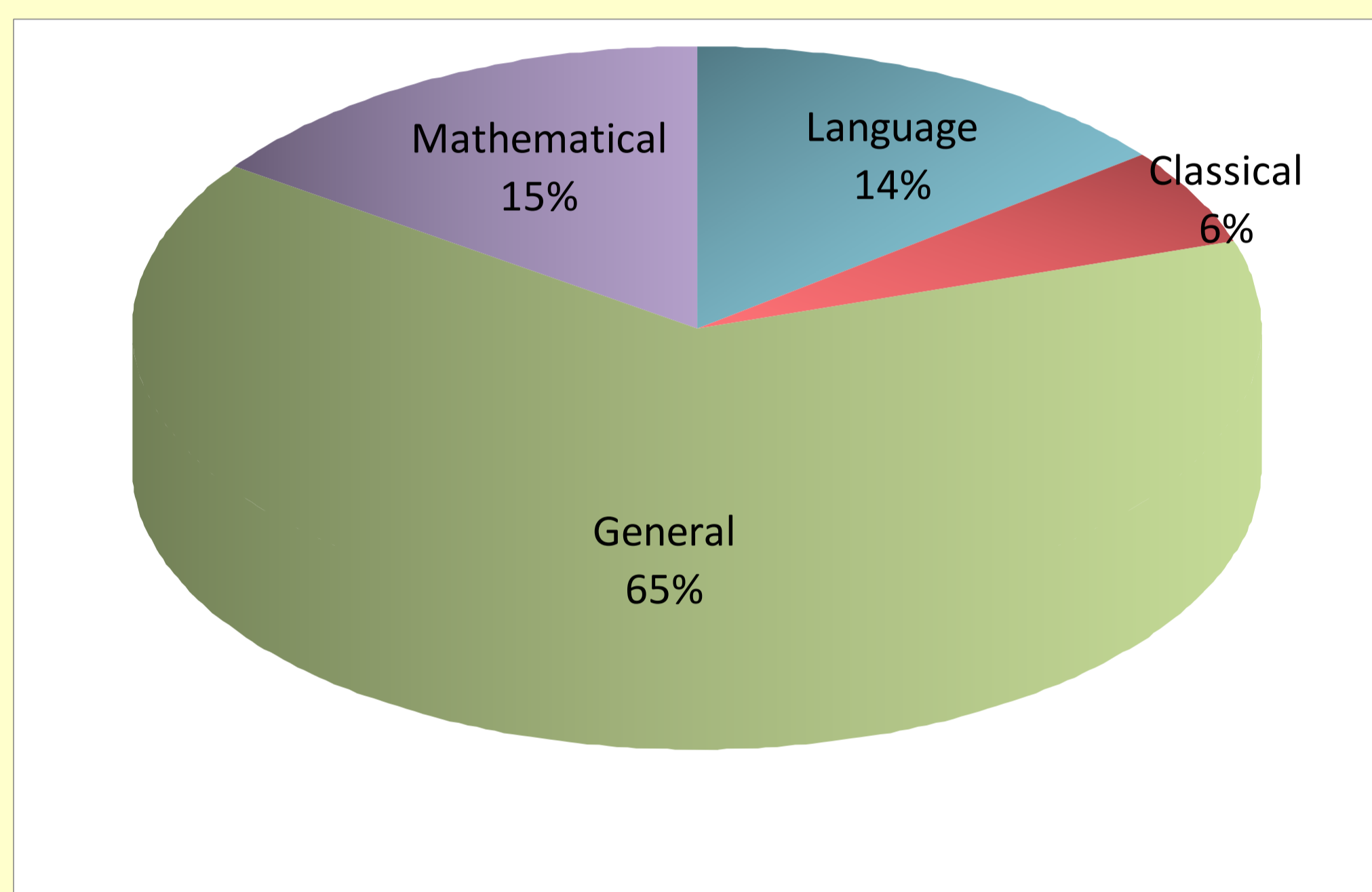


Figure 1. Students' population in four gymnasium programs

Methodology

A complete census of 1st grade Croatian gymnasium students (12400+) were examined in two subject areas: Croatian language and Mathematics. Instruments for both subject areas were "content" exams and the demographic, teacher, attitude/opinion/behavioral questionnaires designed by knowledgeable work groups (consisting of secondary school teachers and university professors) in cooperation with National Center for External Evaluation of Education (NCEEE) and the Institute for Social Studies in Zagreb. Questionnaires were handed out prior to and immediately after the national exam.

Data Analysis

ANOVA and regression analysis were employed.

$$F_{\text{math}}(12, 9891) = 27,58; p < .01 \quad F_{\text{cro}}(12, 9891) = 43,76; p < .01$$

$$R_{\text{math}} = 0,581; R^2 = 0,337 \quad R_{\text{cro}} = 0,271; R^2 = 0,071$$

Results and Discussion

ANOVA showed that the Mathematics exam is more stressful than Croatian language exam. Boys achieved higher results than girls in Mathematics, but the girls were better in Croatian language exam. In both subject areas students whose results positioned in the last quartile experienced lower level of stress. Still, relationship between stress and total exam score was not linear as predicted by Arousal Theory and Yerkes-Dodson law. Regression analysis was conducted to assess which questionnaire particles were related the most to the total score on each National Assessment test. The most predictive items were those assessing students' perception of their own success.

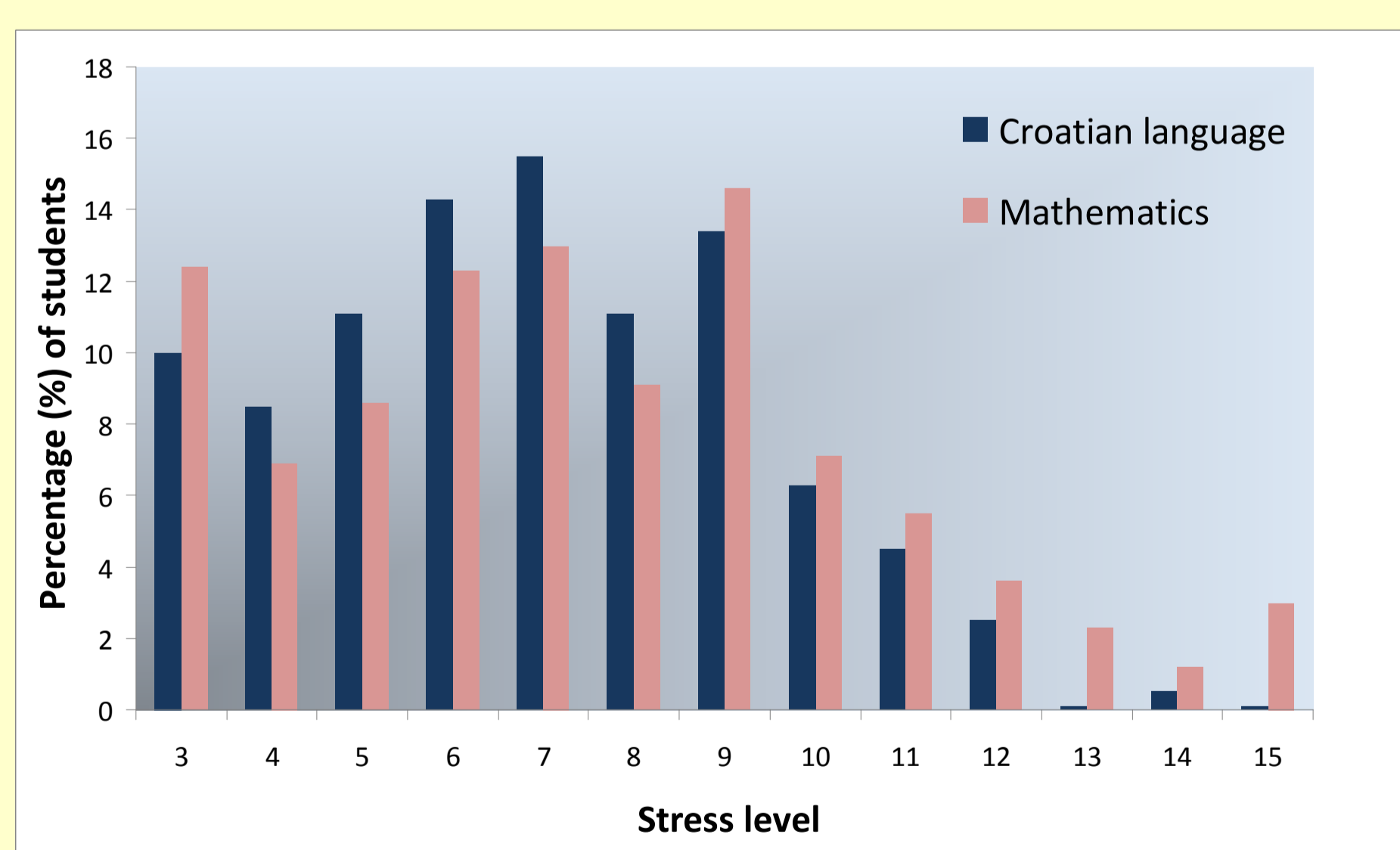


Figure 2. National exam stress level

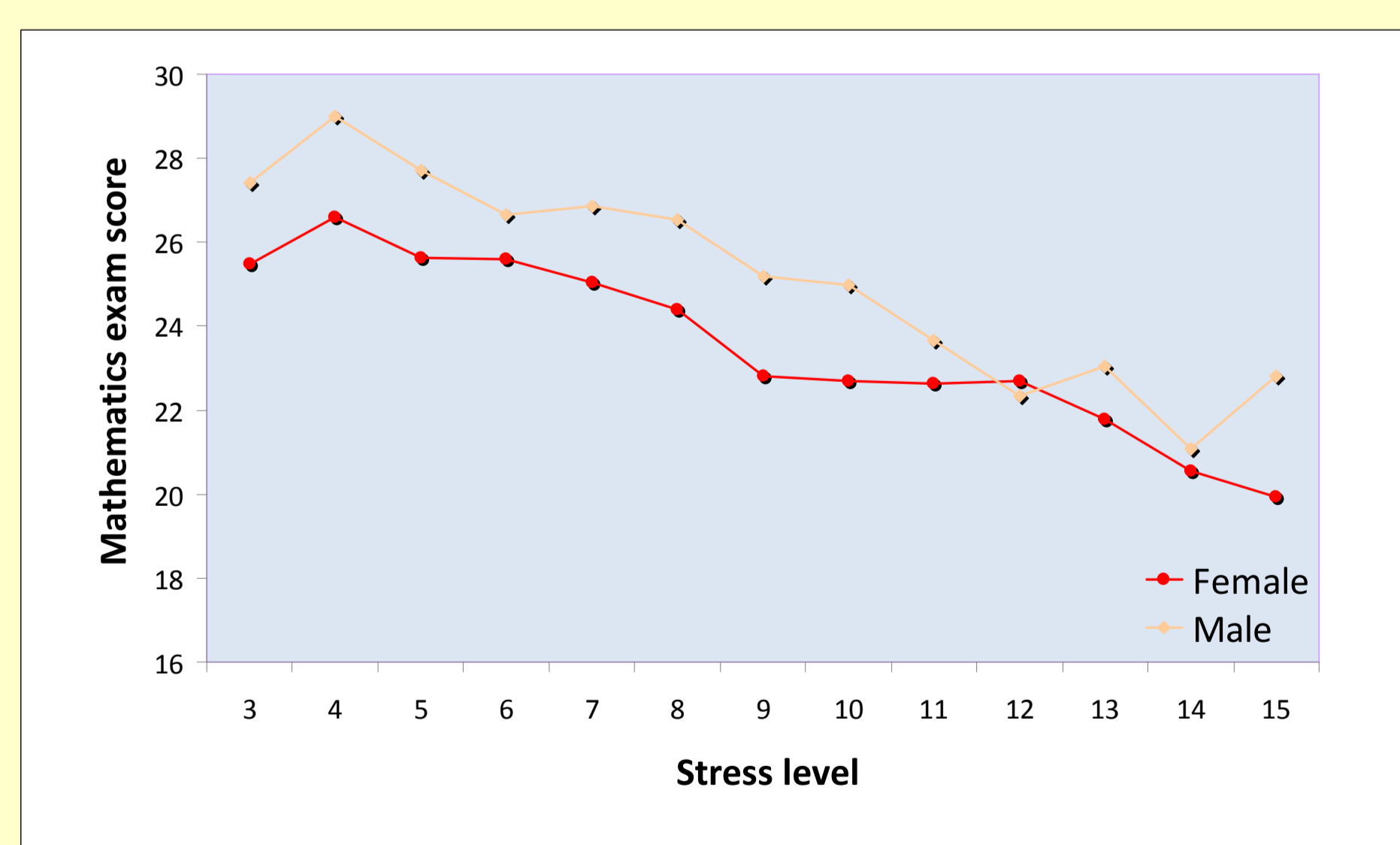


Figure 3. Mathematics exam score and stress level

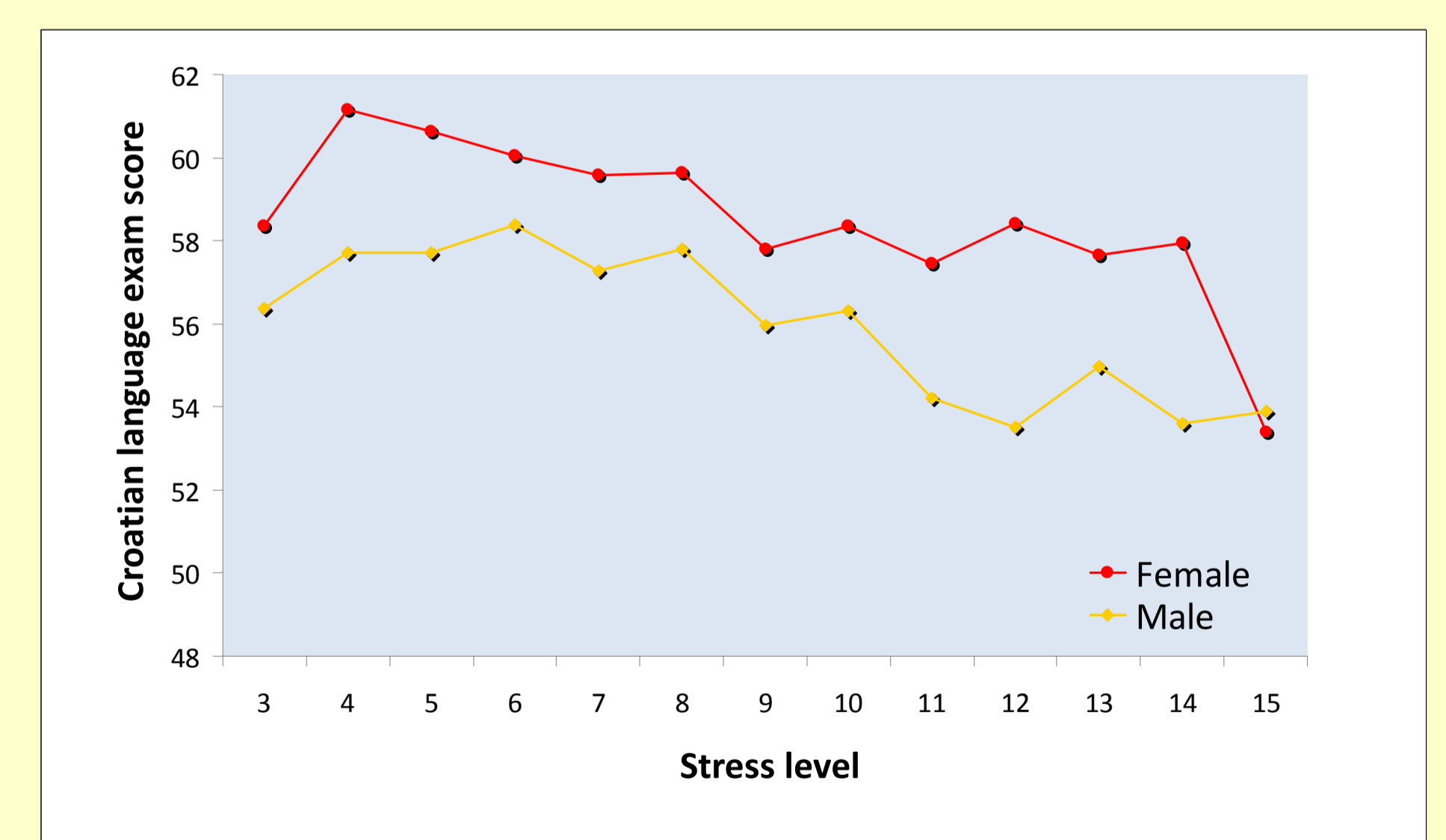


Figure 4. Croatian language exam score and stress level

Future Goals

Through additional questionnaires in the next few years our goal is to test the hypothesis derived from present paper – that fifteen-year olds have well-developed meta-cognitive knowledge.

References

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