

1. Background

Exams are an important part of Higher Education to assess students' attainments and progress. Exams may lead to stress and worry which may have been exacerbated during the current pandemic.

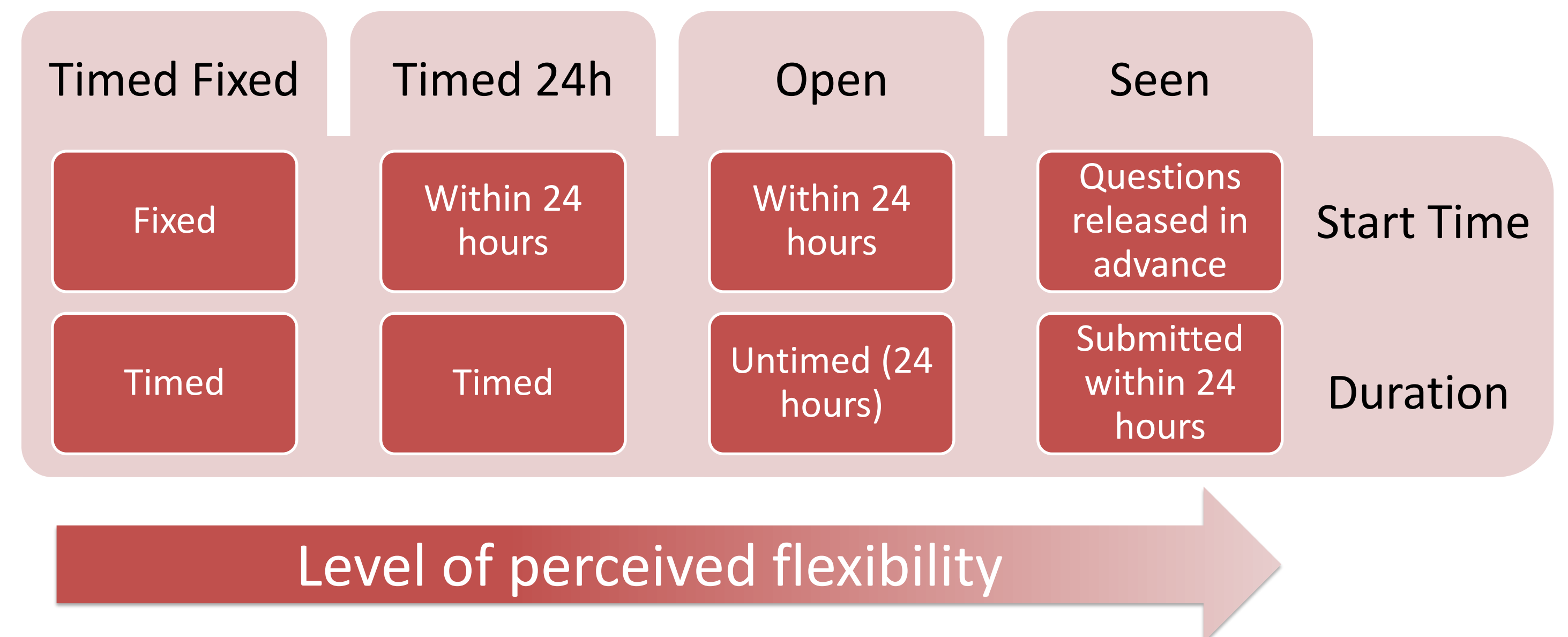
Students report higher levels of test anxiety under less controllable condition (Pekrun et al., 2007), and lower levels of test anxiety for open-book assignments with flexible time and unlimited resources (Akulwar-Tajane et al., 2021).

Yet, timed closed-book exams resemble the traditional testing methods of written exams in lecture halls. Invigilated exams has been shown to increase test anxiety levels in an online speaking exam (Andujar & Cruz-Martínez, 2020).

Gap in the literature: Research for written online examinations is missing

2. Aim & Hypothesis

This study aimed to investigate differences in test anxiety levels between 4 exam types.



We hypothesised that cognitive test anxiety levels as measured by CTAS-2 scores would differ by online exam type. Exam types with higher level of perceived flexibility were predicted to score lower on test anxiety

3. Methods

Participants

Exam Type	N	Gender			Age	
		Female	Male	Non-binary	Mean	SD
Timed Fixed	25	20	5	NA	21.4	2.7
Timed 24h	32	20	11	1	20.2	4.0
Open	27	22	4	1	19.6	3.3
Seen	7	4	3	NA	18.2	0.4
Total	91	66	23	2	20.2	3.4

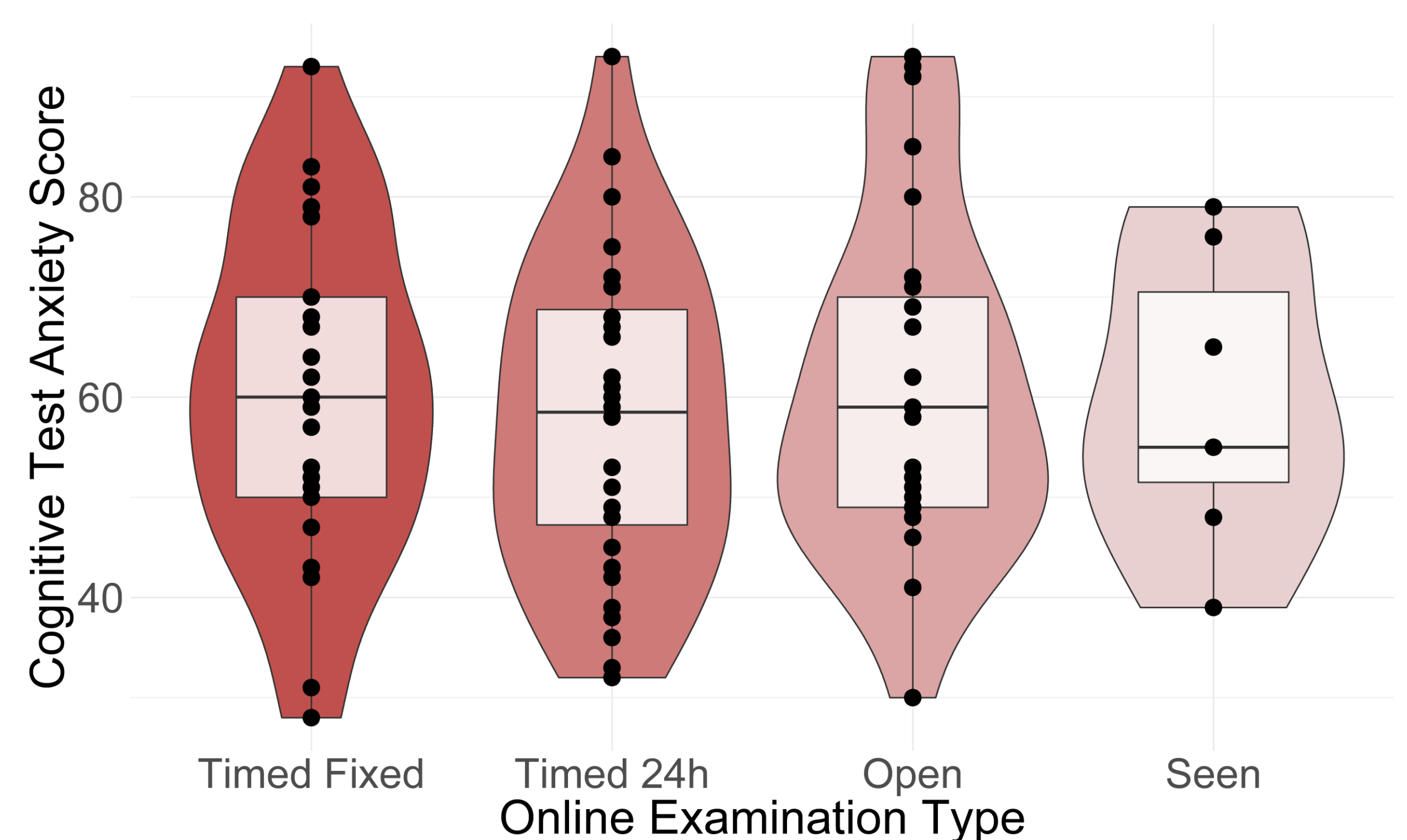
Materials & Procedure

Participants completed Cognitive Test Anxiety Scale – Second Edition (CTAS-2; Thomas et al., 2017), demographics, and an exam-related questionnaire via online platform Experimentum (DeBruine et al., 2020). Data was collected in early December prior to the December 2021 diet.

4. Results

Regardless of exam type, 17.6% of participants self-assessed as low, 48.4% as moderate, and 34.1% as high test anxiety.

A one-way between-subjects ANOVA found no significant differences in test anxiety between the four different exam types ($F(3,87) = 0.234, p = .872$).



Exploratory analysis

Exploratory analysis was conducted to investigate whether test anxiety differed between invigilated and non-invigilated exam types. However, a Welch t-test revealed no significant differences of test anxiety ($M_{invigilated} = 60.7$; $M_{non-invigilated} = 55.3$; $t(28.193) = 1.27, p\text{-value} = .215$).

5. Discussion

We did not find any differences of exam anxiety in relation to the four exam types, which is not in line with our predictions. Exploratory analysis into invigilated types, also showed no significant difference between exam types.

Explanations for the non-significant results:

- Familiarity with exam types: unfamiliar exam types may contribute to higher anxiety (Howard, 2020). The majority of the students for Time Fixed were 3rd year UG but for Timed 24h and Open they were 1st year UG
- Small sample sizes: The effects were smaller, and therefore our study was underpowered. Future iterations may need to increase sample sizes
- Imbalance of gender ratio: Females display higher test anxiety in in-person and oral examinations (e.g. Núñez-Peña et al., 2016). Here, the gender ratio varied significantly between exam types.
- Most students with invigilated exams indicated they would be held in April/May, so they may have not been impacted by the immediacy in December

References

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