EXAMINING STRESS AND ITS ANTECEDENTS AMONG FIRST YEAR COLLEGE STUDENTS
VRIJE UNIVERSITEIT BRUSSEL

IN CIJFERS

3 CAMPUSSEN
8 FACULTEITEN

STICHTING
€ 94.000.000
ONDERZOEKBUDGET

29 BACHELORS
76
MASTERS

14.000
STUDENTEN
WAARVAN 21% INTERNATIONAL
VERSPELD OVER 3 CAMPUSSEN

28 MANANA's
22 POSTGRADUATEN

127
NATIONALITEITEN

3.283
PERSONEELSLEDEN

CAMPUS ETTERBEEK

BRUSSELS HEALTH CAMPUS JETTE

CAMPUS KAAI
ANDERLECHT

324.961
RAADPLEGINGEN

>50.000
ALUMNI

3.496
PERSONEELSLEDEN

30.621
HOSPITALISATIES

18.000
STUDENTEN

UNIVERSITAIR ZIEKENHUIS BRUSSEL

1.500
DOCTORANDI
IN 3 DOCTORAL
SCHOOLS

€ 232.000.000
OMzet

Introducing Study Guidance of the VUB
A motivated team of specialized counselors

- Study advisors
- Student psychologists
- Learning path counselors for each faculty
STUDY GUIDANCE

GOALS

To increase your

- Study efficiency
- Student well-being
• Study path
• Exam results and study progress
• Special student facilities
• Feedback on exams
• Study method and planning
• Motivation

• Study stress or performance anxiety
• Writing a bachelor's paper/master's thesis
• Guidance for working students
• Not feeling comfortable with yourself
• Guidance for athletes
STUDY GUIDANCE

GROUP TRAINING SESSION

- Study plan
- Study skills
- Exam skills
- Planning for exams
- Dealing with stress
- Exam stress? Learn to relax
- Writing a Bachelor’s paper/Master’s thesis
- How to start a bachelor or master thesis project?
- A bachelor or master thesis: the necessary steps
- Writing a bachelor or master thesis
- Thesis cafe
For students who are unsure as to what kind of guidance they are looking for

- **Without an appointment**
- **By telephone, e-mail or online scheduling page**
• Work in group
• Study in a quiet environment
• A place to go to between classes
Introduction
EXAMINING STRESS AND ITS ANTECEDENTS

WHY?

• Transition to higher education can be difficult (Gall, Evans, & Bellerose, 2000)

• Stress levels are rising amongst the student population (Robotham, 2008)

• Influence on students’ performance (Struthers, Perry, & Menec, 2000; Park et al., 2012)

• Need for more research to determine strategies (Robotham, 2008)
INFLUENCING FACTORS FROM RESEARCH

- **Self-efficacy** (Chemers, Hu, & Garcia, 2001; Zajacova, Lynch, & Espenshade, 2005)
- **(A)motivation** (Struthers, Perry, & Menec, 2000; Baker, 2004; Park et al., 2012)
- **Personality** (Park et al., 2012)
- **Social and academic integration** (Wilcox, Winn, & Fyvie-Gauld, 2005; Rayle & Chung, 2007)
- **Coping strategies** (Struthers, Perry, & Menec, 2000)
- ...
EXAMINING STRESS AND ITS ANTECEDENTS

OBJECTIVE

Measure

(a) the level of stress / anxiety / depression of first year college students
(b) its antecedents
   (a) Student features
   (b) Institutional level

Find indications for stress-reducing strategies

(a) For the students
(b) For the institution
METHOD

PARTICIPANTS

Data were collected from 9 different bachelors from 5 faculties (N=558)

• **Faculty of Psychology and Educational Sciences**
  • Social, psychologic and philosophic sciences (n=8)
  • Psychology (n=53)

• **Faculty of Law and Criminology**
  • Criminology (n=89)
  • Law (n=184)

• **Faculty of Medicine and Pharmacy**
  • Biomedical sciences (n=37)
  • Pharmaceutical sciences (n=34)

• **Faculty of Physical Education and Physiotherapy**
  • Physical education (n=20)
  • Physiotherapy (n=98)

• **Faculty of Engineering**
  • Engineering sciences: architecture (n=33)
Examining stress and its antecedents

MATERIALS

- **Depression, anxiety and stress**: DASS-21
  - a short form of Lovibond and Lovibond’s (1995) 42-item self-report measure of depression, anxiety, and stress (DASS)
- Possible antecedents
  - **Self-efficacy**
    - Questionnaire from the Motivated Strategies for Learning Questionnaire (Pintrich, 1991)
  - **Motivation**
    - Academic Self-Regulation Scale (Ryan & Connell, 1989)
  - **Personality**
  - **Social and academic integration**
    - Institutional Integration Scale (Pascarella & Terenzini, 1980)
  - **Study-related variables**
STUDY-RELATED FACTORS PART 1

- Conflict with a fellow student or a roommate
- Conflict with a teacher
- Teamwork
- Relationship problems
- Family problems
- Financial problems
- Health problems
- Speaking in a classroom

METHOD

- Absence during classes
- Unclear administrative communication
- Working under limited time
- Deadlines
- Commuting time
- Heavy course load
- Being taught in a helpful way
METHOD

STUDY-RELATED FACTORS PART 1

- It’s evident what study material to use
- Huge amount of lessons
- Thinking about (potential) problems with your study efficiency
- Thinking about bad perspectives on the job market
METHOD

STUDY-RELATED FACTORS PART 2

• Death of a relative or peer
• A change in field of study
• Problems with housing
• A change in religion
• Difficulties adjusting as a student
METHOD

PROCEDURE

• 21–25 November 2017
  • Almost two months student at the VUB

• Paper-and-pencil questionnaire

• During specific courses
Results
### Levels of Depression / Anxiety / Stress

<table>
<thead>
<tr>
<th></th>
<th>Sample size</th>
<th>Subscale</th>
<th>Mean score (SD)</th>
<th>Severity</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>All</strong></td>
<td>n= 558</td>
<td>Depression</td>
<td>7.63 (7.66)</td>
<td>Normal</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Anxiety</td>
<td>7.49 (7.30)</td>
<td>Normal</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Stress</td>
<td>11.29 (8.85)</td>
<td>Normal</td>
</tr>
<tr>
<td><strong>Men</strong></td>
<td>n=191</td>
<td>Depression</td>
<td>6.87 (7.45)</td>
<td>Normal</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Anxiety</td>
<td>6.05 (6.53)</td>
<td>Normal</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Stress</td>
<td>8.21 (8.06)</td>
<td>Normal</td>
</tr>
<tr>
<td><strong>Women</strong></td>
<td>n=366</td>
<td>Depression</td>
<td>8.05 (7.74)</td>
<td>Normal</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Anxiety</td>
<td>8.26 (7.57)</td>
<td>Mild</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Stress</td>
<td>12.92 (8.82)</td>
<td>Normal</td>
</tr>
</tbody>
</table>

**Differences between men and women are significant for Anxiety and Stress (p=.000)**
## Levels of Depression / Anxiety / Stress

### Mean Scores: Published Studies

<table>
<thead>
<tr>
<th>STUDENT POPULATIONS</th>
<th>Sample size</th>
<th>Subscale</th>
<th>Mean score (SD)</th>
<th>Severity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wong et al. (2006)</td>
<td>n=7915</td>
<td>Depression</td>
<td>8.66 (7.54)</td>
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<tr>
<td></td>
<td></td>
<td>Anxiety</td>
<td>9.36 (6.42)</td>
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<td></td>
<td></td>
<td>Stress</td>
<td>13.97 (8.15)</td>
<td>Normal</td>
</tr>
<tr>
<td>Bayram and Bilgel (2008)</td>
<td>n=1617</td>
<td>Depression</td>
<td>10.03 (6.88)</td>
<td>Mild</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Anxiety</td>
<td>9.83 (5.94)</td>
<td>Mild</td>
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<td></td>
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<td>Stress</td>
<td>14.92 (6.71)</td>
<td>Mild</td>
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<tr>
<td>Shamsuddin et al. (2013)</td>
<td>N=506</td>
<td>Depression</td>
<td>11.04 (7.48)</td>
<td>Mild</td>
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<tr>
<td></td>
<td></td>
<td>Anxiety</td>
<td>11.77 (6.99)</td>
<td>Moderate</td>
</tr>
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<td></td>
<td></td>
<td>Stress</td>
<td>13.85 (7.25)</td>
<td>Normal</td>
</tr>
<tr>
<td>Sample size</td>
<td>Subscale</td>
<td>Mean score (SD)</td>
<td>Severity</td>
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<tr>
<td><strong>PSYCHOLOGY STUDENTS</strong></td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td>Lovibond and Lovibond (1995)</td>
<td>n= 717</td>
<td>Depression</td>
<td>7.19 (6.54)</td>
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<td></td>
<td>Anxiety</td>
<td>5.23 (4.83)</td>
<td>Normal</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Stress</td>
<td>10.54 (6.94)</td>
<td>Normal</td>
</tr>
<tr>
<td><strong>NON-CLINICAL NORMS</strong></td>
<td></td>
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</tr>
<tr>
<td>Henry and Crawford (2005)</td>
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<td>5.55 (7.48)</td>
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<td>3.56 (5.39)</td>
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<td></td>
<td></td>
<td>Stress</td>
<td>9.27 (8.04)</td>
<td>Normal</td>
</tr>
</tbody>
</table>
LEVELS OF DEPRESSION

MEAN SCORES: FACULTY DIFFERENCES - DEPRESSION

Differences between faculties are not significant \( (p = .41) \)
LEVELS OF ANXIETY
MEAN SCORES: FACULTY DIFFERENCES

Differences between faculties are not significant ($p = .79$)
LEVELS OF STRESS

MEAN SCORES: FACULTY DIFFERENCES

Differences between faculties are not significant ($p = .13$)
Examining stress and its antecedents

LEVELS OF DEPRESSION
SEVERITY DISTRIBUTION (%)

- Normal: 69%
- Mild: 10%
- Moderate: 14%
- Severe: 3%
- Extremely severe: 4%

11-7-2017 | 28
Levels of Anxiety

Severity Distribution (%)

- Normal: 59%
- Mild: 9%
- Moderate: 18%
- Severe: 9%
- Extremely severe: 5%

Examining stress and its antecedents
11-7-2017 | 29
### LEVELS OF DEPRESSION / ANXIETY / STRESS

**SEVERITY DISTRIBUTION (%)**: PUBLISHED STUDIES

<table>
<thead>
<tr>
<th></th>
<th>Sample size</th>
<th>Subscale</th>
<th>Normal</th>
<th>Mild</th>
<th>Moderate</th>
<th>Severe</th>
<th>Extremely severe</th>
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</thead>
<tbody>
<tr>
<td><strong>Present study</strong></td>
<td>n=558</td>
<td>Depression</td>
<td>69.4</td>
<td>10.2</td>
<td>13.6</td>
<td>2.5</td>
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<td></td>
<td></td>
<td>Anxiety</td>
<td>59.1</td>
<td>8.6</td>
<td>18.5</td>
<td>9.1</td>
<td>4.7</td>
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<tr>
<td></td>
<td></td>
<td>Stress</td>
<td>69.2</td>
<td>12.0</td>
<td>10.6</td>
<td>2.0</td>
<td>6.3</td>
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<tr>
<td><strong>Bayram and Bilgel (2008)</strong></td>
<td>n=1617</td>
<td>Depression</td>
<td>51.8</td>
<td>21.2</td>
<td>19.0</td>
<td>6.1</td>
<td>2.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Anxiety</td>
<td>40.2</td>
<td>12.7</td>
<td>26.3</td>
<td>14.5</td>
<td>6.3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Stress</td>
<td>51.8</td>
<td>21.2</td>
<td>20.1</td>
<td>6.1</td>
<td>0.8</td>
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<tr>
<td><strong>Beiter et al. (2015)</strong></td>
<td>n=506</td>
<td>Depression</td>
<td>67</td>
<td>10</td>
<td>12</td>
<td>6.0</td>
<td>5.0</td>
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<tr>
<td></td>
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<td>60</td>
<td>15</td>
<td>10</td>
<td>7.0</td>
<td>8.0</td>
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<tr>
<td></td>
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<td>Stress</td>
<td>62</td>
<td>12</td>
<td>15</td>
<td>8.0</td>
<td>3.0</td>
</tr>
</tbody>
</table>
HOW TO PREDICT STRESS?
MULTIPLE LINEAR REGRESSION

Stress

- Health problems
- Relationship problems
- Social integration
- Family problems
- Neuroticism
- Conscientiousness
- Self-efficacy
- Controlled motivation
Examining stress and its antecedents

Stress

- Self-efficacy

- Controlled motivation
  - Degree father
  - Study efficiency
  - Helpful teaching

- Autonomous motivation
  - Study material

- Neuroticism

- Extraversion

- Conscientiousness

- Academic integration
  - Social integration
  - Unclear communication
  - Conflict with a teacher
  - Degree mother
  - Job market
  - Course load

- Family problems

- Relationship problems

- Health problems

- Study material

- Degree father

- Study efficiency

- Helpful teaching

- Neuroticism

- Extraversion

- Conscientiousness

- Academic integration

- Social integration

- Conflict with a teacher

- Degree mother

- Job market

- Course load
Examining stress and its antecedents

**STUDY-RELATED FACTORS: PART 2**

**CORRELATIONS WITH HAVING STRESS: CUT-OFF = SEVERE**

- No significant correlations:
  - Gender
  - Living in a dorm
  - Guidance
  - Having his/her own study place
  - Death of a relative or peer
  - A change in field of study
  - A change in religion

- **Significant** correlations:
  - **Problems with housing** ($p = .002$)
  - **Difficulties adjusting as a student** ($p = .000$)
STUDY-RELATED FACTORS: PART 2

CORRELATIONS WITH HAVING STRESS: CUT-OFF = MODERATE

- No significant correlations:
  - Living in a dorm
  - Having his/her own study place
  - A change in field of study
  - A change in religion

- Significant correlations:
  - Gender \( (p = .000) \)
  - Guidance \( (p = .007) \)
  - Death of a relative or peer \( (p = .001) \)
  - Problems with housing \( (p = .002) \)
  - Difficulties adjusting as a student \( (p = .000) \)
32.3% of all the students (n=558) and 57.1% of students with stress (n=105) said they had difficulties adjusting as a student.
12.4% of students with stress (n=105) have looked for guidance
DO STUDENTS WITH STRESS FIND HELP? HYPOTHESES

• Awareness
• “It’s who I am”
• Sense of shame
• Self-resolving attitude
• ...

GUIDANCE
Implications
STRESS-REDUCING STRATEGIES

STUDENTS

• Workshops during first month of the academic year
  • Introduction moment Study Guidance during kick-off weeks
  • Study skills
  • Study choice
  • Self-efficacy and awareness

• Workshops during the semester
  • Performance anxiety / fear of failure (training)
  • Dealing with stress (training)
  • Talking in front of groups (training)
  • Study / exam skills
  • Assertiveness training
  • Ruminating
  • Procrastination
STRESS-REDUCING STRATEGIES

STUDENTS

- Visibility of the Study Guidance
- Student tutoring / buddy projects
STRESS-REDUCING STRATEGIES

INSTITUTION

- Re-evaluating
  - Course load
  - Communication
  - Study material
- Accessibility of teachers
- Social meetings
- Student associations
- Student representors
Limitations and further research
LIMITATIONS
AND THEIR IMPACT ON FURTHER RESEARCH

- Paper-and-pencil questionnaire
  - Did we reach the students we needed to reach?

- Questionnaire is a work in progress
  - New variables: coping, ...
  - Length
  - Online questionnaire

- Not all programs were included
FURTHER RESEARCH

ACADEMIC YEAR 2017 - 2018

• Results will be immediately implemented

• The start of a longitudinal study, combined with a cross-sectional study

• A qualitative study
STRESSED IS DESSERTS SPELLED BACKWARDS
Any questions?
THANK YOU FOR LISTENING
HAVE A NICE DAY!
REFERENCES


REFERENCES


