Depressive, anxiety and stress symptoms among young people from three European countries and correlations between psychological distress and rumination, procrastination, perfectionism, and coping

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Introduction

Psychological distress such as depression, anxiety and stress among young people

• represents a **significant health concern**
• is among the **most common reasons for health services utilization**

Most consistent **risk factors in depressive and anxiety symptoms**

• being female,
• rumination,
• perfectionism,
• procrastination,
• and negative coping
Introduction: Previous studies

Depression and anxiety associated with impairment in various life domains

including
• impaired educational achievement,
• emotional
• and financial dependence,
• low self-esteem,
• suicidality,
• and poor interpersonal relationships

(Harrington et al., 1990; Reinherz et al., 1999; Weissman et al., 1999)
Introduction: Previous studies

Previous studies (1)
• enhanced understanding of depression and anxiety

but almost all studies
• included North American undergraduates

Still not known
Can these findings be generalized to other countries?

Previous studies on psychological distress (2)
focused on either depression or anxiety
rarely included stress
The purpose of this study was

- to contribute further to understanding depression, anxiety and stress (i.e., psychological distress) and their correlates in diverse European countries

- to compare

  ► prevalence,
  ► correlates
  ► and predictor variables of psychological distress in British, Austrian, and Polish students
Introduction

Because of the negative consequences of distress in young people (e.g.,
→ poor grades,
→ course withdrawal,
→ engagement in self-handicapping behaviour,
→ low self-confidence and self-esteem),

→ higher education policy is called upon to deal with these problems,
   especially in light of the increasing average duration of studies
Objective of the study

1. Are there any differences in the levels of psychological distress (depression, anxiety and stress) among undergraduate students from three European countries (United Kingdom, Austria and Poland)?

2. What are the correlates (rumination, procrastination, perfectionism, coping) of psychological distress among students in these countries?

3) To what extend can psychological distress be predicted by rumination, procrastination, perfectionism and coping in students from the UK, Austria and Poland?
## Composition of sample (N = 1176) and procedure

<table>
<thead>
<tr>
<th></th>
<th>UK</th>
<th>Austria</th>
<th>Poland</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>N of student respondents</strong></td>
<td>402</td>
<td>480</td>
<td>294</td>
</tr>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Males</td>
<td>28,1 %</td>
<td>24,6 %</td>
<td>24,3 %</td>
</tr>
<tr>
<td>Females</td>
<td>71,9 %</td>
<td>75,4 %</td>
<td>75,7 %</td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean of years</td>
<td>22,09</td>
<td>23,84</td>
<td>22,49</td>
</tr>
<tr>
<td>Standard deviation</td>
<td>6,1</td>
<td>5,1</td>
<td>4,5</td>
</tr>
<tr>
<td><strong>Marital Status</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single</td>
<td>88,2 %</td>
<td>72,6 %</td>
<td>79,4 %</td>
</tr>
<tr>
<td>Married</td>
<td>10,8 %</td>
<td>25,7 %</td>
<td>19,9 %</td>
</tr>
<tr>
<td>Separated/divorced</td>
<td>1,0 %</td>
<td>1,7 %</td>
<td>0,7 %</td>
</tr>
<tr>
<td><strong>Religion</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>None</td>
<td>23,0 %</td>
<td>8,0 %</td>
<td>1,4</td>
</tr>
<tr>
<td>Christian</td>
<td>61,4 %</td>
<td>91,1 %</td>
<td>97,3</td>
</tr>
<tr>
<td>Buddhist</td>
<td>2,5 %</td>
<td>0,4 %</td>
<td>1,4</td>
</tr>
<tr>
<td>Islam</td>
<td>8,3 %</td>
<td>0,2 %</td>
<td>0,0 %</td>
</tr>
<tr>
<td>Other</td>
<td>4,5 %</td>
<td>0,2 %</td>
<td>0,0 %</td>
</tr>
</tbody>
</table>

Study was carried out voluntarily, anonymously and confidentially, questionnaires were administered in the classroom.
Measures (1): Self-report questionnaire - 4-point Likert-type scales

- Depression, Anxiety, and Stress Scale (DASS; Lovibond & Lovibond, 1995) to assess current symptoms of distress – 42 items

1. 14 items of the **depression subscale** relate to dysphoric mood, hopelessness, and lack of interest
2. 14 items of the **anxiety subscale** include symptoms of autonomic arousal and fearfulness, and anxiety symptoms
3. 14 items of the **stress subscale** include symptoms related to tension and a tendency to overact to stressful events

Respondents indicated how much the **statements applied to them over the past week**, ranging from 0 (did not apply to me) to 3 (applied to me very much or most of the time)
Measures (2): Self-report questionnaires - 5- resp. 4-point Likert-scales

► **Rumination subscale** of the Perfectionism Inventory (Hill, Huelsman, Furr, Kibler, Vicente, & Kennedy, 2004) to measure a tendency to obsessively worry about past errors, or less than perfect performance - 7 items

► **Decisional Procrastination Scale** (Mann, 1982) to measure the tendency to procrastinate in making decisions – 5 items

► **Frost Multidimensional Perfectionism Scale (FMPS; Frost, Heimberg, Holt, Mattia, & Neubauer, 1993)** to measure perfectionism across six dimensions: concern over mistakes, personal standards, parental expectations, parental criticism, doubts about actions and organization - 35 items

► **Ways of Coping Checklist Questionnaire (WOCC; Folkman & Lazarus, 1984)** - 42 items to measure problem-focused and emotion-focused coping
Results
Results concerning the question

1. Are there any differences in the levels of psychological distress (depression, anxiety and stress) among undergraduate students from three European countries (United Kingdom, Austria and Poland)?

2. What are the correlates (rumination, procrastination, perfectionism, coping) of psychological distress among students in these countries?

3) To what extend can psychological distress be predicted by rumination, procrastination, perfectionism, coping in students from the UK, Austria and Poland?
Comparisons of depressive, anxiety and stress symptoms across three European countries

Two-factorial analyses of variance (country and gender) were computed for

- DASS total scores
- depression,
- anxiety,
- stress subscale scores
Comparisons of depressive, anxiety and stress symptoms across three European countries

Highly significant \((p < 0.001)\) main effects of country:
- total DASS scores
- anxiety
- stress subscales

Austrian participants:
- highly significant lower \((p < 0.001)\) levels of
  - psychological distress as a whole,
  - anxiety
  - and stress symptoms
  than participants from the UK and Poland

Participants in Poland:
- highest levels of depression, anxiety and stress symptoms
Means of DASS total, depression, anxiety, and stress subscales separately for each country

- DASS total
  - UK: 32.74
  - Austria: 25.39
  - Poland: 25.39
  - Austria < UK & Poland

- Depression subscale
  - UK: 10.11
  - Austria: 7.95
  - Poland: 7.95
  - Austria < UK & Poland

- Anxiety subscale
  - UK: 10.89
  - Austria: 5.58
  - Poland: 8.4
  - Austria < UK & Poland

- Stress subscale
  - UK: 34.07
  - Austria: 11.86
  - Poland: 14.79
  - Austria < UK & Poland
Comparisons of depressive, anxiety and stress symptoms across three European countries

Highly significant main effects of gender:
• total DASS (p < 0.001)
• depression (p < 0.01)
• stress subscale (p < 0.001)

→ Females compared to males:
  highly significant (p < 0.001) higher scores on
  • psychological distress as a whole,
    and particularly on
  • depression
  • and stress symptoms
Means of DASS total, depression, anxiety, and stress subscales separately for male and female students

- DASS total:
  - Male: 26.24
  - Female: 31.37
  - Female > Male

- Depression subscale:
  - Male: 8.42
  - Female: 9.76

- Anxiety subscale:
  - Male: 6.59
  - Female: 7.26

- Stress subscale:
  - Male: 11.23
  - Female: 14.35
  - Female > Male
Comparisons of depressive, anxiety and stress symptoms across three European countries

Significant interaction (p < 0.01) between country and gender on total DASS scores

Further analyses:

► Polish females compared to males:
  significantly higher psychological distress as a whole

Gender difference not replicated in the UK and Austrian sample
Means for DASS depression subscale for students from UK, Austrian and Poland separately for male and female students

- UK DASS depression subscale: 8.51 (male) vs. 10.77 (female)
- Austria DASS depression subscale: 8.65 (male) vs. 7.72 (female)
- Poland DASS depression subscale: 7.88 (male) vs. 11.86 (female)

Female students from Poland have higher depression scores compared to male students from Poland.
Results concerning the question

1. Are there any differences in the levels of psychological distress (depression, anxiety and stress) among undergraduate students from three European countries (United Kingdom, Austria and Poland)?

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3) To what extend can psychological distress be predicted by rumination, procrastination, perfectionism, coping in students from the UK, Austria and Poland?
Correlations were computed between DASS total scores and

- rumination
- procrastination
- perfectionism (i.e. concern over mistakes, personal standards, parental expectations, parental criticism, doubts about actions and organization)
- coping strategies (i.e. problem-focused coping and emotional-focused coping)

separately for students from
- the UK,
- Austria
- and Poland
Correlations between psychological distress (DASS total), rumination, procrastination, perfectionism, and coping

In general is to be said that correlates of psychological distress showed *more similarities than differences across countries*

In all countries, DASS total correlated significantly positive with
- rumination,
- procrastination,
- emotion-focused coping,
- and on different dimensions of perfectionism:
  - concern over mistakes,
  - parental expectations,
  - parental criticism,
  - doubts about actions
Correlations between psychological distress (DASS total), rumination, procrastination, perfectionism, and coping

<table>
<thead>
<tr>
<th>Variable</th>
<th>UK</th>
<th>Austria</th>
<th>Poland</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rumination</td>
<td>0.55***</td>
<td>0.54***</td>
<td>0.51***</td>
</tr>
<tr>
<td>Procrastination</td>
<td>0.29***</td>
<td>0.34***</td>
<td>0.31***</td>
</tr>
<tr>
<td>Perfectionism (FMPS)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Concern over mistakes</td>
<td>0.50***</td>
<td>0.42***</td>
<td>0.33***</td>
</tr>
<tr>
<td>Personal standard</td>
<td>0.20***</td>
<td>0.25***</td>
<td>0.10</td>
</tr>
<tr>
<td>Parental expectations</td>
<td>0.16**</td>
<td>0.20***</td>
<td>0.15*</td>
</tr>
<tr>
<td>Parental criticism</td>
<td>0.34***</td>
<td>0.26***</td>
<td>0.14*</td>
</tr>
<tr>
<td>Doubts about actions</td>
<td>0.48***</td>
<td>0.44***</td>
<td>0.32***</td>
</tr>
<tr>
<td>Organization</td>
<td>0.02</td>
<td>0.01</td>
<td>0.04</td>
</tr>
<tr>
<td>Coping strategies (WOCC)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Problem-focused coping</td>
<td>0.24***</td>
<td>–0.09</td>
<td>0.08</td>
</tr>
<tr>
<td>Emotion-focused coping</td>
<td>0.48***</td>
<td>0.38***</td>
<td>0.42***</td>
</tr>
</tbody>
</table>

DASS = Depression, Anxiety and Stress Scale; FMPS = Frost Multidimensional Perfectionism Scale; WOCC = Ways of Coping Checklist

*p < 0.05,  ** p < 0.01;  *** p < 0.001
Results concerning the question

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Predictors of psychological distress (DASS total)

Standard multiple regression analyses to predict DASS total score (psychological distress) as dependent variable per analysis, separately by country.

Predictors:
- rumination
- procrastination,
- perfectionism (concern over mistakes, personal standards, parental expectations, parental criticism, doubts about actions, and organization),
- and coping strategies (emotion-focused coping, problem-focused coping)
Predictors of psychological distress

Regression analyses were all significant predictor variables explain 34% to 48% of the variance.

In each country, • **rumination**
• and **emotion-focussed coping** were **significant predictors of psychological distress**

In particular, **rumination accounted for a substantial portion of individual variance** (largest beta of all predictor variables for Austria and Poland, second largest for the UK).
Standard multiple regression analysis predicting psychological distress

<table>
<thead>
<tr>
<th>Predictors</th>
<th>UK</th>
<th></th>
<th>Austria</th>
<th></th>
<th>Poland</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Beta</td>
<td>$t$</td>
<td>Beta</td>
<td>$t$</td>
<td>Beta</td>
<td>$t$</td>
</tr>
<tr>
<td>K Rumination</td>
<td>0.29</td>
<td>5.10***</td>
<td>0.28</td>
<td>4.53***</td>
<td>0.36</td>
<td>5.06***</td>
</tr>
<tr>
<td>Procrastination</td>
<td>0.03</td>
<td>0.63</td>
<td>0.12</td>
<td>2.39*</td>
<td>0.04</td>
<td>0.56</td>
</tr>
<tr>
<td>Problem-focused coping</td>
<td>0.09</td>
<td>1.88</td>
<td>-0.05</td>
<td>-0.10</td>
<td>-0.01</td>
<td>-0.11</td>
</tr>
<tr>
<td>Emotion-focused coping</td>
<td>0.31</td>
<td>6.43***</td>
<td>0.19</td>
<td>4.43***</td>
<td>0.31</td>
<td>5.08***</td>
</tr>
<tr>
<td>Concern over mistakes</td>
<td>0.16</td>
<td>2.49*</td>
<td>0.12</td>
<td>1.96</td>
<td>0.04</td>
<td>0.44</td>
</tr>
<tr>
<td>Personal standards</td>
<td>0.03</td>
<td>0.47</td>
<td>-0.05</td>
<td>-1.01</td>
<td>-0.16</td>
<td>-2.11*</td>
</tr>
<tr>
<td>Parental expectations</td>
<td>-0.06</td>
<td>-1.10</td>
<td>0.09</td>
<td>1.63</td>
<td>-0.01</td>
<td>-0.08</td>
</tr>
<tr>
<td>Parental criticism</td>
<td>0.10</td>
<td>1.86</td>
<td>0.07</td>
<td>1.31</td>
<td>0.05</td>
<td>0.72</td>
</tr>
<tr>
<td>Doubts about actions</td>
<td>0.09</td>
<td>1.67</td>
<td>0.13</td>
<td>2.49*</td>
<td>0.10</td>
<td>1.51</td>
</tr>
<tr>
<td>Organization</td>
<td>-0.02</td>
<td>-0.50</td>
<td>-0.16</td>
<td>-0.34</td>
<td>0.10</td>
<td>1.68</td>
</tr>
<tr>
<td>$R^2$</td>
<td>0.49</td>
<td></td>
<td>0.41</td>
<td></td>
<td>0.37</td>
<td></td>
</tr>
<tr>
<td>$\Delta R^2$</td>
<td>0.48</td>
<td></td>
<td>0.39</td>
<td></td>
<td>0.34</td>
<td></td>
</tr>
<tr>
<td>$F$</td>
<td>31,71***</td>
<td></td>
<td>25,96***</td>
<td></td>
<td>13,51***</td>
<td></td>
</tr>
</tbody>
</table>

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$
Summary

The purpose of this study was to compare
► prevalence,
► correlates
► and predictor variables of psychological distress in British, Austrian, and Polish students

Concluding our results:
• study sheds some light on psychological distress
• and its relationship to psychological constructs
Summary: Mean differences

Young people from the three countries differed significantly on the levels of psychological distress particularly on anxiety and stress symptoms. Participants in Poland: highest score; lowest score found among students in Austria.

Clear explanation is not evident
- Poland recently joined the European Union; tremendous social and economic changes.
- Participants living in transition from communism to democracy might have implications for study and work practices.

Previous study:
- Psychological distress among the participants in Poland (compared to German participants) was related to their low satisfaction in life in general and to their low standard of living.
Summary: Correlates

Across all countries, the correlates of psychological distress showed more similarities than differences.

In line with previous studies: students who reported high psychological distress claimed a high level of procrastination (Chang & Sanna, 2001), rumination (Nolen-Hoeksema, 2004), perfectionism (Hewitt et al., 1996), and emotion-focused coping (Garnefski et al., 2002).
Summary: Predictors

Consistent with previous studies, rumination

⇒ strongest or second strongest and significant predictor of psychological distress (Nolen-Hoeksema & Morrow, 1991)
Limitations of the study

1. Findings are **based on undergraduate students, cannot generalized**
   ⇒ to students from different countries
   ⇒ or other characteristics (e.g. mature or graduate students)

2. **Cross-sectional design** of the study
   ⇒ does **not permit a direct test of causality**

3. Problem of cross-cultural research:
   **construct equivalence in the languages of the tests and difference in response styles**
Implications of the study

The present study sheds some light on psychological distress and its relationship to psychological constructs.

Findings have important clinical implications in the development of prevention and intervention programmes to address psychological distress among students in university settings.

One such effort would involve changing the person’s ruminative response style in response to a particular stressful event.
Prevention and intervention

Our prevention programme in the context of distress and its relation to procrastination and rumination is focused

► on strengthening of psychological and motivational personal resources
► and on project management tools (time and content planning and monitoring)

Thesis project:
Dividing the project into subtasks (modules), as is common practice in project management,

supports via permanent feedback processes self-regulation, organization, and problem-focused coping

thus maintains motivation and encourages self-confidence and self-esteem as a buffer against rumination
Schedule for a thesis project (Aschemann, 2006)

Continuous activities:

Reading – Writing – Monitoring

Work modules:

Choice of topic and research question
Concept definition and planning
Bibliography research and processing
poss.: Empirical research
Writing of first draft
Revision and submission

Procedures within the modules:

- Find ideas
- Consider topic
- Narrow down topic
- Develop question
- Plan method
- Plan content
- Plan schedule
- Supervisor feedback
- Literature overview
- Choose and obtain
- Read and excerpt
- Comment and arrange
- Develop tools
- Collect data
- Analyse data
- Conclusions
- Mindmap
- Outline chapters
- Draft
- (Placeholder)
- Revise content
- Revise language
- Revise layout
- Feedback and Delivery

Milestones for seminar or supervisor:

Topic proposal
Research question
Raw concept
Concept
Index schedule
Time table
Reading list
Literature questions
Excerpts
Tools
Collected data
Analysis
Chapter outlines
Sample chapter
Summaries
Finished thesis
Thanks a lot for coming, attending and staying!
Thank you for your attention

I appreciate your interest!

Questions?

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