Perceived discrimination and school resilience: A study of Albanian and Pontic adolescents in Greece

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Resilience (i.e., successful adaptation under high adversity) is not viewed as a personality trait but rather as a dynamic process where resources and/or assets are organized on the basis of multi-level, ecological models (e.g., Bronfenbrenner, 1977; Garmezy, 1985):

**Personal**
- locus of control, self-efficacy beliefs, intelligence, social skills

**Family**
- social-economic status of parents, quality of parent-child relationship

**Community**
- supportive networks, state policies, minority status, perceived discrimination
The moderator-mediator variable distinction (Baron & Kenny, 1986) in the research on resilience

Moderator model

Mediator model
Perceived discrimination as a possible mediator for adaptation of immigrants

- **Stereotype threat.** The awareness of being judged in terms of a stereotype poses a self-threat that affects performance (Steele & Aronson, 1995).

- **Coping strategies.** Downward social comparisons (Tajfel & Turner, 1986) or psychological disengagement (Shih, 2004) may undermine intrinsic motivation.

- **Acculturation.** Perceived discrimination is associated with increased stress and less willingness to adopt host culture identity (Ward et al., 2001).
Two dimensions of perceived discrimination

- **Perceived personal discrimination** is attributed directly to the self.

- **Group discrimination** is attributed to social groups to which the perceiver belongs, e.g., ethnic group, race, gender.

  The tendency to recognize greater discrimination against group, rather than against self, is protective for self-esteem (Crocker et al., 1998).
Research hypotheses

- Immigrant adolescents will perceive higher level of discrimination against their ethnic group rather than against self, although this is expected to vary across immigrants of different cultural background.

- Perceived personal and –to a lesser extent– group discrimination will mediate the effect of stress on school competence of immigrant adolescents.

- Possible moderation effects of perceived discrimination on school competence (depending on the level of stress and ethnicity) will also be explored.
# Characteristics of the sample

\(N = 332\) immigrant adolescents

<table>
<thead>
<tr>
<th>Ethnicity</th>
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<tbody>
<tr>
<td>186 Albanian</td>
</tr>
<tr>
<td>146 former Soviet Union (Pontic Greek)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Generation status</th>
</tr>
</thead>
<tbody>
<tr>
<td>192 first generation (74% Albanian)</td>
</tr>
<tr>
<td>140 second generation (69% Pontic)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Gender</th>
</tr>
</thead>
<tbody>
<tr>
<td>179 boys</td>
</tr>
<tr>
<td>153 girls</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Age (years)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean = 13.0, Std.Dev. = .8</td>
</tr>
<tr>
<td>min = 12.0, max = 14.6</td>
</tr>
</tbody>
</table>
### Measures

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stress</td>
<td>Negative life events (25 items)</td>
</tr>
<tr>
<td></td>
<td>(adapted from Fthenakis &amp; Minsel, 2002)</td>
</tr>
<tr>
<td>Competence</td>
<td>School grades (Mean of 5 subjects)</td>
</tr>
<tr>
<td></td>
<td>Social preference (sociometric; Coie et al., 1982)</td>
</tr>
<tr>
<td>Perceived discrimination</td>
<td>Group discrimination (4 items, $\alpha = .87$)</td>
</tr>
<tr>
<td></td>
<td>Personal discrimination (4 items, $\alpha = .76$)</td>
</tr>
<tr>
<td></td>
<td>(based on Phinney et al., 1998; Verkuyten, 1998)</td>
</tr>
</tbody>
</table>
Exploratory data analyses: Mean differences

3-way (ethnicity X generation status X gender) ANOVAs

DV’s: negative life events, perceived discrimination, school grades, and social preferences

- **Gender** \(\rightarrow\) school grades \((F > M)\)
- **Ethnicity** \(\rightarrow\) group discrimination
- **Generation status** \(\rightarrow\) school grades, social preference
- **Ethnicity X generation status** \(\rightarrow\) school grades
Means of perceived group and personal discrimination as a function of ethnicity

Perceived group discrimination: $F(1, 287) = 24.86, p < .001$
Perceived personal discrimination: $F(1, 287) = .11, \text{n.s.}$
Means of social preference as a function of generation status

Social preference: $F(1, 287) = 11.46, p < .001$
Interaction of ethnicity and generation status on school grades

Ethnicity X Generation status: $F(1, 287) = 3.92, p < .049$
**Exploratory data analyses: Correlations**

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>Life Events</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group Discrimination</td>
<td>.16**</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Personal Discrimination</td>
<td>.20***</td>
<td>.54***</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>School Grades</td>
<td>-.18**</td>
<td>-.10</td>
<td>-.33***</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>Social Preference</td>
<td>-.12*</td>
<td>-.13*</td>
<td>-.24***</td>
<td>.29***</td>
<td>1.00</td>
</tr>
</tbody>
</table>

* p < .05; ** p < .01; *** p < .001
Testing for mediating and moderating effects of perceived discrimination in the resilience of Albanian and Pontic adolescents

- Hierarchical regressions based on Barron & Kenny (1986):
  - Independent variable: Stress (negative life events)
  - Dependent variables: Measures of competence (school grades, social preference)
  - Mediators: perceived personal and group discrimination
  - Moderators (included in the last steps): PD X stress, PD X ethnicity
  - Covariates (entered in the first steps): gender, ethnicity, generation status
Testing the mediation of perceived personal discrimination on school grades

1. Regression of school grades on stress

perceived personal discrimination

stress \(-.17^{***}\) school grades

Block 1  gender: $\Delta R^2 = .07, p < .001$
Block 2  ethnicity: $\Delta R^2 = .00$, n.s.
Block 3  generation status: $\Delta R^2 = .02, p = .01$
Block 4  stress: $\Delta R^2 = .03, p < .001$
Block 5  ethnicity X stress: $\Delta R^2 = .00$, n.s.
Testing the mediation of perceived personal discrimination on school grades

2. Regression of perceived personal discrimination on stress

Block 1  gender: ΔR^2 = .01, n.s.
Block 2  ethnicity: ΔR^2 = .00, n.s.
Block 3  generation status: ΔR^2 = .00, n.s.

Block 4  stress: ΔR^2 = .04, p < .001
Block 5  ethnicity X stress: ΔR^2 = .00, n.s.

 perceived personal discrimination

stress

.20***

-.17***

school grades
Testing the mediation of perceived personal discrimination on school grades

3. Regression of school grades on perceived personal discrimination

perceived personal discrimination

stress

-.20***

-.17***

-.31***

school grades

Block 1 gender: $\Delta R^2 = .07, p < .001$
Block 2 ethnicity: $\Delta R^2 = .00$, n.s.
Block 3 generation status: $\Delta R^2 = .02, p = .01$
Block 4 PPD: $\Delta R^2 = .10, p < .001$
Block 5 ethnicity X PPD: $\Delta R^2 = .00$, n.s.
Testing the mediation of perceived personal discrimination on school grades

4. Regression of school grades on personal discrimination and stress

Block 1  gender: $\Delta R^2 = .07, p < .001$
Block 2  ethnicity: $\Delta R^2 = .00$, n.s.
Block 3  generation status: $\Delta R^2 = .02, p = .01$
Block 4  PPD: $\Delta R^2 = .10, p < .001$
Block 5  stress: $\Delta R^2 = .01, p = .046$
Block 6  PPD by stress: $\Delta R^2 = .02, p = .019$
Moderation of perceived personal discrimination on the effect of stress on school grades
Testing the mediation of perceived group discrimination on school grades

1. Regression of school grades on stress

perceived group discrimination

- .17***

stress

school grades

Block 1  gender: $\Delta R^2 = .07$, $p < .001$
Block 2  ethnicity: $\Delta R^2 = .00$, n.s.
Block 3  generation status: $\Delta R^2 = .02$, $p = .01$
Block 4  stress: $\Delta R^2 = .03$, $p < .001$
Block 5  ethnicity X stress: $\Delta R^2 = .00$, n.s.
Testing the mediation of perceived group discrimination on school grades

2. Regression of perceived group discrimination on stress

Block 1 gender: $\Delta R^2 = .00$, n.s.
Block 2 ethnicity: $\Delta R^2 = .00$, n.s.
Block 3 generation status: $\Delta R^2 = .00$, n.s.
Block 4 stress: $\Delta R^2 = .02$, $p = .012$
Block 5 ethnicity X stress: $\Delta R^2 = .00$, n.s.
Testing the mediation of perceived group discrimination on school grades

3. Regression of school grades on perceived group discrimination

Perceived group discrimination

- .15*

Stress

- .17***

School grades

Block 1  gender: $\Delta R^2 = .067, p < .001$
Block 2  ethnicity: $\Delta R^2 = .00, \text{n.s.}$
Block 3  generation status: $\Delta R^2 = .02, p = .01$

Block 4  PGD: $\Delta R^2 = .01, p = .052$
Block 5  ethnicity X PGD: $\Delta R^2 = .00, \text{n.s.}$
Testing the mediation of perceived group discrimination on school grades

4. Regression of school grades on group discrimination and stress

Block 1 gender: $\Delta R^2 = .07, p < .001$
Block 2 ethnicity: $\Delta R^2 = .00$, n.s.
Block 3 generation status: $\Delta R^2 = .02, p = .01$
Block 4 PGD: $\Delta R^2 = .01, p = .052$
Block 5 stress: $\Delta R^2 = .02, p = .009$
Block 6 PGD by stress: $\Delta R^2 = .00$, n.s.
Summary of findings for the effect of perceived discrimination on school grades

<table>
<thead>
<tr>
<th></th>
<th>Perceived Discrimination</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Personal</td>
</tr>
<tr>
<td>Direct effect</td>
<td>Yes</td>
</tr>
<tr>
<td>Mediation effect</td>
<td>Yes, partially</td>
</tr>
<tr>
<td>Moderation effect</td>
<td>Yes</td>
</tr>
</tbody>
</table>
Testing the mediation of perceived personal discrimination on popularity

1. Regression of popularity on stress

perceived personal discrimination

-13*

stress

popularity

Block 1  gender: $\Delta R^2 = .00$, n.s.
Block 2  ethnicity: $\Delta R^2 = .00$, n.s.
Block 3  generation status: $\Delta R^2 = .02$, $p = .008$

Block 4  stress: $\Delta R^2 = .01$, $p = .032$
Block 5  ethnicity X stress: $\Delta R^2 = .00$, n.s.
Testing the mediation of perceived personal discrimination on popularity

2. Regression of perceived personal discrimination on stress

Block 1  gender: $\Delta R^2 = .01$, n.s.
Block 2  ethnicity: $\Delta R^2 = .00$, n.s.
Block 3  generation status: $\Delta R^2 = .00$, n.s.

Block 4  stress: $\Delta R^2 = .04$, $p < .001$
Block 5  ethnicity X stress: $\Delta R^2 = .00$, n.s.
Testing the mediation of perceived personal discrimination on popularity

3. Regression of popularity on perceived personal discrimination

perceived personal discrimination

stress

popularity

Block 1  gender: $\Delta R^2 = .00$, n.s.
Block 2  ethnicity: $\Delta R^2 = .00$, n.s.
Block 3  generation status: $\Delta R^2 = .02$, $p = .009$

Block 4  PPD: $\Delta R^2 = .05$, $p < .001$
Block 5  ethnicity X PPD: $\Delta R^2 = .00$, n.s.
Testing the mediation of perceived personal discrimination on popularity

**4. Regression of popularity on personal discrimination and stress**

- Block 1: gender, $\Delta R^2 = .00$, n.s.
- Block 2: ethnicity, $\Delta R^2 = .00$, n.s.
- Block 3: generation status, $\Delta R^2 = .02, p = .013$
- Block 4: PPD, $\Delta R^2 = .03, p < .001$
- Block 5: stress, $\Delta R^2 = .01$, n.s.
- Block 6: stress X PPD, $\Delta R^2 = .02, p = .030$

![Diagram](image.png)
Moderation of perceived personal discrimination on the effect of stress on popularity
Testing the mediation of perceived group discrimination on popularity

1. Regression of popularity on stress

perceived group discrimination

stress \rightarrow -.14^* \rightarrow \text{popularity}

- Block 1: gender: $\Delta R^2 = .00$, n.s.
- Block 2: ethnicity: $\Delta R^2 = .00$, n.s.
- Block 3: generation status: $\Delta R^2 = .02$, $p = .008$
- Block 4: stress: $\Delta R^2 = .01$, $p = .032$
- Block 5: ethnicity X stress: $\Delta R^2 = .00$, n.s.
Testing the mediation of perceived group discrimination on popularity

2. Regression of perceived group discrimination on stress

Block 1  gender: $\Delta R^2 = .00$, n.s.
Block 2  ethnicity: $\Delta R^2 = .00$, n.s.
Block 3  generation status: $\Delta R^2 = .00$, n.s.
Block 4  stress: $\Delta R^2 = .03$, $p = .002$
Block 5  ethnicity X stress: $\Delta R^2 = .00$, n.s.
Testing the mediation of perceived group discrimination on popularity

3. Regression of popularity on perceived group discrimination

Block 1  gender: $\Delta R^2 = .00$, n.s.
Block 2  ethnicity: $\Delta R^2 = .00$, n.s.
Block 3  generation status: $\Delta R^2 = .02$, $p = .011$

Block 4  PGD: $\Delta R^2 = .02$, $p = .022$
Block 5  ethnicity X PGD: $\Delta R^2 = .00$, n.s.
Testing the mediation of perceived group discrimination on popularity

4. Regression of popularity on group discrimination and stress

Block 1  gender: $\Delta R^2 = .00$, n.s.
Block 2  ethnicity: $\Delta R^2 = .00$, n.s.
Block 3  generation status: $\Delta R^2 = .02$, $p = .012$
Block 4  PGD: $\Delta R^2 = .02$, $p = .024$
Block 5  stress: $\Delta R^2 = .01$, n.s.
Block 6  stress X PGD: $\Delta R^2 = .00$, n.s.
Summary of findings for the effect of perceived discrimination on popularity

<table>
<thead>
<tr>
<th>Perceived Discrimination</th>
<th>Personal</th>
<th>Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct effect</td>
<td>Yes</td>
<td>Yes (weak)</td>
</tr>
<tr>
<td>Mediation effect</td>
<td>Yes, fully</td>
<td>Yes, fully</td>
</tr>
<tr>
<td>Moderation effect</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>
Perceived *personal* discrimination mediated fully or partially the effect of stress on school grades and popularity, over and above gender, ethnicity, and generation status…

…therefore, perceived *personal* discrimination can be considered as a **risk factor** for school competence of Albanian and Pontic adolescents in Greece.

In comparison, both the direct and indirect effects of perceived *group* discrimination were less important, though significant in the case of popularity.
The findings suggest that the predicament of social discrimination is considerably more important if it is perceived as a self-threat.

Further research is needed in order to study the prerequisites for differentiating between personal and group attributions.


