Reactance to Depression
Public Service Announcements

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Boomerang Effects

- Boomerang effects in health campaigns
  - Surgeon general warnings on cigarettes packaging (Hyland & Birrell, 1979)
  - “No Diving” warning signs (deTurck & Goldhaber, 1991)
  - Suicide campaign (Klimes-Dougan & Lee, 2010)
  - Descriptive, quasi-experimental, and experimental studies (Ringhold, 2002, p. 30)

- Psychological reactance
  - Therapeutic domain (Dowd et al.)
  - Communication scholars – intent to persuade and language explicitness
  - Marketing scholars – purchasing behavior

- Reactance and depression
Theory of Psychological Reactance (Brehm, 1966; Brehm & Brehm, 1981)

- Belief one has a personal freedom

- When personal freedoms are restricted:
  - motivational state to prevent further loss of freedom and to reestablish lost freedom (i.e., reactance)

- Even when one wants to engage in the suggested behavior

- Reactance is most likely to occur when:
  - a behavior that is realistically possible is threatened
  - feel confident they possess the knowledge to make decisions themselves
  - threatened behavior is important (Brehm, 1974)
Theory of Psychological Reactance  
(Brehm, 1966; Brehm & Brehm, 1981)

- Regain control in a multitude of ways:
  - Engage in restricted behavior
  - Exercise a different freedom
  - Increased liking for threatened choice
  - Counterarguing
  - Anger
  - Negative Perceptions of the source
  - Rejection of the position (Wicklund, 1974; Worchel, 1974; Worchel & Brehm, 1971; Wright 1986)

- Resistant to persuasion and interpersonal influence (Dowd & Seibel, 1990)

- Mediates the relationship between a message and its ability to persuade (Brehm, 1966; Brehm & Brehm, 1981)

- Language intensity (e.g., Brehm, 1966; Burgoon & Siegel, 2003)
  - autonomy-supportive messages should be ideal for highly reactant individuals
Theory of Psychological Reactance and the Cognitive Theory of Depression

- Depressed individuals
  - Counterarguing: negative cognitions.
    - the greater the severity of depressive symptoms, the greater the degree of negative thinking
  - Need to regain control (Weary & Edwards, 1994; Yost & Weary, 1996)
  - Importance of seeking help
  - Confident in their knowledge and beliefs

- Negative bias with self-relevant information
  - reactant to messages of importance to their well-being: D-PSAs

- D-PSAs could threatened one’s freedoms of:
Hypotheses

**Ad Type**
Control, Autonomy-Supportive Language, Controlling Language

**Reactance Mediators**
Anger, Counterarguments, Threat to Freedom, Attitudes toward the Message Source

**Depressive Symptomatology**

**Help-Seeking DVs**
Ad Statements, Self-Stigma, Attitudes toward Professional Help-Seeking, Help-Seeking Intentions
Method - Participants

- Participants \((N = 2027)\), English-speaking, access to the Internet, US
  - 33.95 years \((SD = 12.36, \text{Range} = 18-81)\)
  - 64.9% female \((N = 1315)\), 35.1% male \((N = 712)\)
- Ethnicity
  - 80.7% White/Caucasian \((N = 1632)\)
  - 5.7% Black/African American \((N = 116)\)
- Education Level
  - 33.9% completed some college, no degree \((N = 686)\)
  - 28.4% Bachelor’s degree \((N = 574)\)
- 19.0% current diagnosis of depression \((N = 384)\)
- 16.6% National lifetime prevalence \((\text{Kessler et al., 2005a})\)
- 6.7% National 12-month prevalence \((\text{Kessler et al., 2005b})\)
Method - Procedure

- Recruited through online system mTurk from July 12, 2011 to January 31, 2012
- Provision of consent
- Randomly assigned to view:
  - Control Ad
  - D-PSA with Autonomy-Supportive Language (ASLA)
  - D-PSA with Controlling Language (CLA)
- Online survey: 15-30 minutes
- Debriefing script
- Compensated $0.30
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Colorado Travel Agency

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www.cotravel.com
Depression

You may know that depression is a debilitating illness that can be fatal.

Depression is treatable, so you may want to think about seeking help. Some options include talking to your loved ones, attending support groups or seeking professional help. If you desire, you can change your life.

You can choose to take action.

Depression and Bipolar Support Alliance
Visit us at: www.dbsalliance.org/

You should know that depression is a debilitating illness that can be fatal.

Depression is treatable, so you must seek help. You need to talk to your loved ones, attend support groups, and seek professional help. You must change your life now.

You must take action.

Depression and Bipolar Support Alliance
Visit us at: www.dbsalliance.org/
Measures – Manipulation Check

- **Controlling Language**
  - 5-item Likert scale written for this study
    - 1(*strongly disagree*) to 7(*strongly agree*)
  - Provided a definition of controlling language
  - Participants rated how controlling they felt the language of the ad was
    - “The language of the message was controlling”
    - “The language of the message mainly consisted of commands and orders.”
  - $\alpha = .95$, $M = 3.36$, $SD = 1.65$; Skew = .55, $SE = .05$; Kurtosis = -.68, $SE = .11$
Measures – Controls & Predictor

- **Controls**
  - Trait Reactance: Therapeutic Reactance Scale (Dowd, Milne, & Wise, 1991).
  - 28 Likert items, 1 (strongly disagree) to 7 (strongly agree).
    - “I have a strong desire to maintain my personal freedoms.”
    - $\alpha = .80$, $M = 4.01$, $SD = .59$; Skew = .13, $SE = .05$; Kurtosis = .32; $SE = .11$
  - Relevance
    - Single Likert item, 1 (extremely irrelevant) to 7 (extremely relevant)
    - “How relevant was this advertisement to you?”
    - $M = 3.51$, $SD = 1.82$; Skew = .22, $SE = .05$; Kurtosis = -1.12, $SE = .11$
  - Demographic control variables
    - Gender
    - Current diagnosis of depression
    - Age

- **Predictor**
  - Beck Depression Inventory-II (BDI-II, Beck, Shaw & Emery, 1979; Beck, Steer, & Brown, 1996)
    - $\alpha = .95$, $M = 13.89$, $SD = 12.25$; Skew = 1.00; Kurtosis = .44; Range = 0-61
Measures – Mediators (Reactance Variables)

- **Anger toward Ad** (Dillard & Shen, 2005)
  - 4-item Likert scale, 1 (*none of this feeling*) to 7 (*a great deal of this feeling*)
  - “irritated” and “angry”
  - $\alpha = .95, M = 2.39, SD = .96; Skew = .96, SE = .05; Kurtosis = -.34, SE = .11$

- **Counterarguments** (Dillard & Shen, 2005; Rains & Turner, 2007)
  - listed thoughts – rated as negative, neutral, or positive
  - ratio of negative to total cognitions, ranging from 0-1.0
  - $M = .34, SD = .34; Skew = .62, SE = .06; Kurtosis = -.87, SE = .11$

- **Perceived Threat to Freedom** (Dillard & Shen, 2005)
  - 4-item Likert scale, 1 (*strongly disagree*) to 7 (*strongly agree*)
  - “The message threatened my freedom to choose.”
  - $\alpha = .90, M = 2.93, SD = 1.61; Skew = .58, SE = .05; Kurtosis = -.59, SE = -.59$

- **Attitudes toward the Message Source** (McCroskey, 1966; Miller et al., 2007)
  - 6 semantic differentials, 7-pt scale
  - “expert/inexpert”, “honest/dishonest”, “unsympathetic/sympathetic”
  - $\alpha = .85, M = 4.91, SD = 1.16; Skew = -.43, SE = .05; Kurtosis = .04, SE = .11$
Measures – DVs

- Ad Statements
  - 6 Likert items, 1 (strongly disagree) to 7 (strongly agree)
  - “Depression is a debilitating illness that can be fatal.”
  - “Depression is treatable.”
  - $\alpha = .81, M = 5.76, SD = .89; Skew = -.90, SE = .05; Kurtosis = 1.45, SE = .11$

- Self-Stigma of Seeking Help Scale (SSOSH; Vogel et al., 2006)
  - 10-items, 7-pt Likert-type scale
  - $\alpha = .89, M = 3.63, SD = 1.18; Skew = .22, SE = .05; Kurtosis = -.18, SE = .11$
Measures - DVs

- **Attitudes toward Seeking Professional Psychological Help: SF** *(ATSPPH-SF; Fischer & Farina, 1995)*
  - 10 Likert items, 1 *(strongly disagree)* to 7 *(strongly agree)*
    - “I might want to have psychological counseling in the future.”
    - $\alpha = .87, M = 4.36, SD = 1.10; \text{Skew} = -.18, SE = .05; \text{Kurtosis} = -.04, SE = -.04$

- **Abridged General Help-Seeking Questionnaire** *(Deane et al., 2001; Wilson, et al., 2005)*
  - 7 Likert items, 1 *(extremely unlikely)* to 7 *(extremely likely)*
  - Professional Help Seeking Intentions
    - Doctor/GP, mental health professional, help-line
    - $\alpha = .67, M = 4.01, SD = 1.46; \text{Skew} = -.21, SE = .05; \text{Kurtosis} = -.55, SE = .11$
  - Close-Others Help Seeking Intentions
    - Friend, parent, romantic partner, and family (non-parent)
    - $\alpha = .72, M = 4.76, SD = 1.44; \text{Skew} = -.57, SE = .05; \text{Kurtosis} = -.24, SE = .11$
Results: Manipulation Check – Controlling Language

F(2, 2011) = 306.14, p < .001
Results: Moderation - Anger

\[
F(10, 2009) = 36.87, \ p < .001, \ r^2 = .1452
\]

BDIxASLA: \( b = .0287, \ t(2009) = 3.46, \ p < .001 \)

BDIxCLA: \( b = .0145, \ t(2009) = 1.69, \ p = .09 \)
Results: Moderation - Counterarguments

- Control
- Autonomy-Supportive Language
- Controlling Language

$F(10, 1998) = 25.89, p < .001, r^2 = .0994$

BDIxASLA: $b = .0033, t(1998) = 2.14, p = .03$

BDIxCLA: $b = -.0003, t(1998) = -.17, p = .87$
Results: Moderation – Threat to Freedom

\[ F(10, 2009) = 40.24, p < .001, r^2 = .1712 \]
BDIxASLA: \( b = .0132, t(2009) = 1.95, p = .05 \)
BDIxCLA: \( b = .0028, t(2009) = .40, p = .69 \)
Results: Moderation – Attitudes toward the Message Source

\[ F(10, 2009) = 29.56, \ p < .001, \ r^2 = .1298 \]

BDIxASLA: \( b = -.0305, \ t(2009) = -6.07, \ p < .001 \)

BDIxCLA: \( b = -.0198, \ t(2009) = -3.64, \ p < .001 \)
Results: Moderation – Attitudes toward Seeking Professional Help

F(10, 2009) = 27.83, p < .001, r² = .1287
BDIxASLA: b = -.0076, t(2009) = -1.41, p = .16
BDIxCLA: b = -.0108, t(2009) = -2.05, p = .04
Results: Bootstrap Moderated Mediation  
(Hayes, 2012)

- The greater the depressive symptomatology the greater the:
  - anger, $b = .0335$, $t(2009) = 8.80$, $p < .001$
  - counterarguments, $b = .0040$, $t(1998) = 5.62$, $p < .001$
  - threat to freedom, $b = .0127$, $t(2009) = 3.92$, $p < .001$
  - negative attitudes toward the message source, $b = -.0154$, $t(2009) = -6.30$, $p < .001$

- The greater the depressive symptomatology:
  - less agreement with ad statements (see Direct Effects [DEs])
  - greater self-stigma of seeking help (see DEs)
  - more negative attitudes toward seeking professional help (see DEs)
  - less intentions of seeking professional help (see DEs)
  - less intentions of seeking help from close others (see DEs)
### Results: Moderated Mediation - Ad Statements

<table>
<thead>
<tr>
<th>Mediator</th>
<th>Ad</th>
<th>Effect</th>
<th>t-value</th>
<th>DE p-value</th>
<th>DE CI &lt;sub&gt;LL&lt;/sub&gt;, CI &lt;sub&gt;UL&lt;/sub&gt;</th>
<th>IE CI &lt;sub&gt;LL&lt;/sub&gt;, CI &lt;sub&gt;UL&lt;/sub&gt;</th>
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<tbody>
<tr>
<td><strong>Anger</strong></td>
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</tr>
<tr>
<td>CA</td>
<td>b = -.14</td>
<td>t(2008) = ??</td>
<td>p &lt; .001</td>
<td>DE = -.0167, IE = -.0026</td>
<td>-.0230 to -.0104</td>
<td>-.0044 to -.0012</td>
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<tr>
<td>ASLA</td>
<td>t(2007) = -5.22</td>
<td>p &lt; .001</td>
<td>DE = -.0175, IE = -.0065</td>
<td>-.0246 to -.0104</td>
<td>-.0087 to -.0047</td>
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<td>CLA</td>
<td>t(2007) = -6.80</td>
<td>p &lt; .001</td>
<td>DE = -.0192, IE = -.0046</td>
<td>-.0247 to -.0137</td>
<td>-.0069 to -.0027</td>
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<tr>
<td><strong>Counterarguments</strong></td>
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<tr>
<td>CA</td>
<td>b = -.25</td>
<td>t(1997) = -4.24</td>
<td>p &lt; .001</td>
<td>DE = -.0186, IE = -.0008</td>
<td>-.0249 to -.0122</td>
<td>-.0015 to -.0002</td>
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<td>ASLA</td>
<td>t(1996) = -5.74</td>
<td>p &lt; .001</td>
<td>DE = -.0229, IE = -.0016</td>
<td>-.0303 to -.0154</td>
<td>-.0027 to -.0008</td>
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<tr>
<td>CLA</td>
<td>t(1996) = -7.83</td>
<td>p &lt; .001</td>
<td>DE = -.0230, IE = -.0007</td>
<td>-.0287 to -.0172</td>
<td>-.0015 to -.0001</td>
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<tr>
<td><strong>Threat to Freedom</strong></td>
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<tr>
<td>CA</td>
<td>b = -.14</td>
<td>t(2008) = -10.85</td>
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<td>DE = -.0183, IE = -.0010</td>
<td>-.0246 to -.0120</td>
<td>-.0024 to -.0002</td>
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<tr>
<td>ASLA</td>
<td>t(2007) = -5.69</td>
<td>p &lt; .001</td>
<td>DE = -.0212, IE = -.0029</td>
<td>-.0282 to -.0141</td>
<td>-.0045 to -.0015</td>
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<tr>
<td>CLA</td>
<td>t(2007) = -7.78</td>
<td>p &lt; .001</td>
<td>DE = -.0223, IE = -.0014</td>
<td>-.0280 to -.0167</td>
<td>-.0031 to -.0001</td>
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<tr>
<td><strong>Attitudes toward the Message Source</strong></td>
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<tr>
<td>CA</td>
<td>b = .27</td>
<td>t(2008) = 14.89</td>
<td>p &lt; .001</td>
<td>DE = -.0197, IE = .0003</td>
<td>-.0257 to -.0137</td>
<td>-.0014 to .0021</td>
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<tr>
<td>ASLA</td>
<td>t(2007) = -6.44</td>
<td>p &lt; .001</td>
<td>DE = -.0161, IE = -.0079</td>
<td>-.0228 to -.0094</td>
<td>-.0106 to -.0058</td>
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<td>CLA</td>
<td>t(2007) = -6.69</td>
<td>p &lt; .001</td>
<td>DE = -.0188, IE = -.0050</td>
<td>-.0243 to -.0133</td>
<td>-.0075 to -.0026</td>
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</tbody>
</table>
## Results: Moderated Mediation - Self-Stigma of Seeking Help

<table>
<thead>
<tr>
<th>Mediator</th>
<th>Ad</th>
<th>Effect</th>
<th>t-value</th>
<th>DE p-value</th>
<th>DE CI LL, CI UL</th>
<th>IE CI LL, CI UL</th>
</tr>
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<tbody>
<tr>
<td><strong>Anger</strong></td>
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<td>$b = .06$</td>
<td>$t(2007) = 4.09$</td>
<td>$p &lt; .001$</td>
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<td>$DE = .0160, IE = .0012$</td>
<td>$t(2007) = 3.95$</td>
<td>$p &lt; .001$</td>
<td>$0.0080 to .0239$</td>
<td>$0.0005 to .0023$</td>
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<tr>
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<td>$DE = .0215, IE = .0031$</td>
<td>$t(2007) = 4.91$</td>
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<td>$0.0129 to .0301$</td>
<td>$0.0016 to .0050$</td>
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<tr>
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<td>$DE = .0235, IE = .0021$</td>
<td>$t(2007) = 5.51$</td>
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<td>$0.0151 to .0319$</td>
<td>$0.0009 to .0036$</td>
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<td>$p = .02$</td>
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<td>$DE = .0165$</td>
<td>$t(1996) = 4.04$</td>
<td>$p &lt; .001$</td>
<td>$0.0167 to .0333$</td>
<td>$0.0001 to .0014$</td>
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<tr>
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<td>$DE = .0230, IE = .0011$</td>
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<td>$0.0000 to .0013$</td>
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<td><strong>Threat to Freedom</strong></td>
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<td>$t(2007) = 4.66$</td>
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<td>$DE = .0166, IE = .0006$</td>
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<td>$0.0087 to .0244$</td>
<td>$0.0000 to .0015$</td>
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<td>$0.0143 to .0314$</td>
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<td>$DE = .0248, IE = .0008$</td>
<td>$t(2007) = 5.89$</td>
<td>$p &lt; .001$</td>
<td>$0.0165 to .0331$</td>
<td>$-.0001 to .0021$</td>
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<tr>
<td><strong>Attitudes toward the Message Source</strong></td>
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<td>$b = -.09$</td>
<td>$t(2007) = -3.72$</td>
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<td>$DE = .0173, IE = -.001$</td>
<td>$t(2007) = 4.32$</td>
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<td>$0.0094 to .0252$</td>
<td>$-.0008 to .0004$</td>
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<td>$0.0135 to .0305$</td>
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<td>$DE = .02r0, IE = .0016$</td>
<td>$t(2007) = 5.64$</td>
<td>$p &lt; .001$</td>
<td>$0.0157 to .0323$</td>
<td>$0.0007 to .0030$</td>
</tr>
</tbody>
</table>
## Results: Moderated Mediation - Attitudes toward Seeking Professional Psychological Help

<table>
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<tr>
<th>Mediator</th>
<th>Ad</th>
<th>Effect</th>
<th>t-value</th>
<th>DE p-value</th>
<th>DE CI LL, CI UL</th>
<th>IE CI LL, CI UL</th>
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<tr>
<td>Anger</td>
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<td><strong>b = -.09</strong></td>
<td><strong>t(2008) = -6.35</strong></td>
<td><em>p &lt; .001</em></td>
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<td><strong>DE = -.0014, IE = -.0018</strong></td>
<td><strong>t(2008) = -3.10</strong></td>
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<td>-.0185 to -.0042</td>
<td>-.0030 to -.0008</td>
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<td><strong>DE = .0164, IE = .0044</strong></td>
<td><strong>t(2008) = -4.04</strong></td>
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<td><strong>t(2008) = -5.42</strong></td>
<td><em>p &lt; .001</em></td>
<td>-.0282 to -.0133</td>
<td>-.0050 to -.0018</td>
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<td>Counterarguments</td>
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<td><strong>b = -.27</strong></td>
<td><strong>t(1997) = -3.65</strong></td>
<td><em>p &lt; .001</em></td>
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<tr>
<td>CA</td>
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<td><strong>DE = -.0120, IE = -.0008</strong></td>
<td><strong>t(1997) = -3.24</strong></td>
<td><em>p &lt; .01</em></td>
<td>-.0192 to -.0047</td>
<td>-.0017 to -.0002</td>
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<td>ASLA</td>
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<td><strong>DE = -.0187, IE = -.0017</strong></td>
<td><strong>t(1997) = -4.67</strong></td>
<td><em>p &lt; .001</em></td>
<td>-.0265 to -.0108</td>
<td>-.0030 to -.0007</td>
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<tr>
<td>CLA</td>
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<td><strong>DE = -.0232, IE = -.0007</strong></td>
<td><strong>t(1997) = -6.10</strong></td>
<td><em>p &lt; .001</em></td>
<td>-.0307 to -.0157</td>
<td>-.0018 to -.0002</td>
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<td>Threat to Freedom</td>
<td></td>
<td><strong>b = -.12</strong></td>
<td><strong>t(2008) = -7.47</strong></td>
<td><em>p &lt; .001</em></td>
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<tr>
<td>CA</td>
<td></td>
<td><strong>DE = -.0122, IE = -.0009</strong></td>
<td><strong>t(2008) = -3.34</strong></td>
<td><em>p &lt; .001</em></td>
<td>-.0194 to -.0050</td>
<td>-.0021 to -.0002</td>
</tr>
<tr>
<td>ASLA</td>
<td></td>
<td><strong>DE = -.0182, IE = -.0025</strong></td>
<td><strong>t(2008) = -4.73</strong></td>
<td><em>p &lt; .001</em></td>
<td>-.0257 to -.0106</td>
<td>-.0041 to -.0013</td>
</tr>
<tr>
<td>CLA</td>
<td></td>
<td><strong>DE = -.0226, IE = -.0013</strong></td>
<td><strong>t(2008) = -6.04</strong></td>
<td><em>p &lt; .001</em></td>
<td>-.0300 to -.0153</td>
<td>-.0028 to -.0001</td>
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<tr>
<td>Attitudes toward the Message Source</td>
<td></td>
<td><strong>b = .18</strong></td>
<td><strong>t(2008) = 7.62</strong></td>
<td><em>p &lt; .001</em></td>
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<tr>
<td>CA</td>
<td></td>
<td><strong>DE = -.0133, IE = .0002</strong></td>
<td><strong>t(2008) = -3.70</strong></td>
<td><em>p &lt; .001</em></td>
<td>-.0204 to -.0063</td>
<td>-.0009 to -.0015</td>
</tr>
<tr>
<td>ASLA</td>
<td></td>
<td><strong>DE = -.0156, IE = .0051</strong></td>
<td><strong>t(2008) = -4.06</strong></td>
<td><em>p &lt; .001</em></td>
<td>-.0231 to -.0081</td>
<td>-.0072 to -.0035</td>
</tr>
<tr>
<td>CLA</td>
<td></td>
<td><strong>DE = -.0206, IE = -.0032</strong></td>
<td><strong>t(2008) = -5.46</strong></td>
<td><em>p &lt; .001</em></td>
<td>-.0281 to -.0132</td>
<td>-.0049 to -.0016</td>
</tr>
</tbody>
</table>
## Results: Moderated Mediation - Professional Help-Seeking Intentions

<table>
<thead>
<tr>
<th>Mediator</th>
<th>Ad</th>
<th>Effect</th>
<th>t-value</th>
<th>DE p-value</th>
<th>DE CI&lt;sub&gt;LL&lt;/sub&gt;, CI&lt;sub&gt;UL&lt;/sub&gt;</th>
<th>IE CI&lt;sub&gt;LL&lt;/sub&gt;, CI&lt;sub&gt;UL&lt;/sub&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Anger</strong></td>
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</tr>
<tr>
<td></td>
<td>CA</td>
<td>DE = -.0142, IE = -.0017</td>
<td>t(2004) = -3.02</td>
<td>p &lt; .01</td>
<td>-.0235 to -.0050</td>
<td>-.0030 to -.0007</td>
</tr>
<tr>
<td></td>
<td>ASLA</td>
<td>DE = -.0205, IE = -.0043</td>
<td>t(2004) = -4.04</td>
<td>p &lt; .001</td>
<td>-.0305 to -.0106</td>
<td>-.0066 to -.0024</td>
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<tr>
<td></td>
<td>CLA</td>
<td>DE = -.0169, IE = -.0030</td>
<td>t(2004) = -3.36</td>
<td>p &lt; .001</td>
<td>-.0267 to -.0070</td>
<td>-.0050 to -.0014</td>
</tr>
<tr>
<td><strong>Counterarguments</strong></td>
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<tr>
<td></td>
<td>CA</td>
<td>DE = -.0136, IE = -.0019</td>
<td>t(1993) = -2.89</td>
<td>p &lt; .01</td>
<td>-.0229 to -.0044</td>
<td>-.0037 to -.0007</td>
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<tr>
<td></td>
<td>ASLA</td>
<td>DE = -.0202, IE = -.0041</td>
<td>t(1993) = -3.98</td>
<td>p &lt; .001</td>
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<td>-.0064 to -.0025</td>
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<tr>
<td></td>
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<td>DE = -.0180, IE = -.0018</td>
<td>t(1993) = -3.65</td>
<td>p &lt; .001</td>
<td>-.0277 to -.0083</td>
<td>-.0037 to -.0002</td>
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<tr>
<td><strong>Threat to Freedom</strong></td>
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</tr>
<tr>
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<td>CA</td>
<td>DE = -.0153, IE = -.0006</td>
<td>t(2004) = -3.24</td>
<td>p &lt; .01</td>
<td>-.0246 to -.0061</td>
<td>-.0016 to -.0000</td>
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<tr>
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<td>-.0032 to -.0007</td>
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<tr>
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<td>p &lt; .001</td>
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<td>-.0021 to -.0001</td>
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<tr>
<td><strong>Attitudes toward the Message Source</strong></td>
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<tr>
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<td>p &lt; .001</td>
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<td>-.0010 to .0016</td>
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<tr>
<td></td>
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<td>DE = -.0192, IE = -.0056</td>
<td>t(2004) = -3.86</td>
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<td>-.0290 to -.0095</td>
<td>-.0082 to -.0036</td>
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<tr>
<td></td>
<td>CLA</td>
<td>DE = -.0163, IE = -.0036</td>
<td>t(2004) = -3.25</td>
<td>p &lt; .01</td>
<td>-.0261 to -.0065</td>
<td>-.0057 to -.0018</td>
</tr>
</tbody>
</table>
# Results: Moderated Mediation - Close Others Help Seeking Intentions

<table>
<thead>
<tr>
<th>Mediator</th>
<th>Ad</th>
<th>Effect</th>
<th>$t$-value</th>
<th>DE p-value</th>
<th>DE CI LL, CI UL</th>
<th>IE CI LL, CI UL</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Anger</strong></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>CA</td>
<td>$b = -.04$</td>
<td></td>
<td>$t(2007) = -1.97$</td>
<td>$p = .049$</td>
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<tr>
<td>ASLA</td>
<td>$DE = -.0274, IE = -.0007$</td>
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<td>$t(2007) = -5.00$</td>
<td>$p &lt; .001$</td>
<td>$-.0381$ to $-.0167$</td>
<td>$-.0018$ to $0.0001$</td>
</tr>
<tr>
<td>CLA</td>
<td>$DE = -.0314, IE = -.0019$</td>
<td></td>
<td>$t(2007) = -5.95$</td>
<td>$p &lt; .001$</td>
<td>$-.0417$ to $-.0210$</td>
<td>$-.0041$ to $0.0001$</td>
</tr>
<tr>
<td><strong>Counterarguments</strong></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>CA</td>
<td>$b = -.31$</td>
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<td>$t(1996) = -3.19$</td>
<td>$p = .002$</td>
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<tr>
<td>ASLA</td>
<td>$DE = -.0278, IE = -.0009$</td>
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<td>$t(1996) = -5.08$</td>
<td>$p &lt; .001$</td>
<td>$-.0386$ to $-.0171$</td>
<td>$-.0022$ to $0.0003$</td>
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<tr>
<td>CLA</td>
<td>$DE = -.0312, IE = -.0020$</td>
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<td>$t(1996) = -5.96$</td>
<td>$p &lt; .001$</td>
<td>$-.0414$ to $-.0209$</td>
<td>$-.0040$ to $0.0009$</td>
</tr>
<tr>
<td><strong>Threat to Freedom</strong></td>
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</tr>
<tr>
<td>CA</td>
<td>$b = -.04$</td>
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<td>$t(2007) = -1.78$</td>
<td>$p = .08$</td>
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<tr>
<td>ASLA</td>
<td>$DE = -.0279, IE = -.0003$</td>
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<td>$t(2007) = -5.12$</td>
<td>$p &lt; .001$</td>
<td>$-.0385$ to $-.0172$</td>
<td>$-.0011$ to $0.0000$</td>
</tr>
<tr>
<td>CLA</td>
<td>$DE = -.0325, IE = -.0008$</td>
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<td>$p &lt; .001$</td>
<td>$-.0427$ to $-.0222$</td>
<td>$-.0020$ to $0.0000$</td>
</tr>
<tr>
<td><strong>Attitudes toward the Message Source</strong></td>
<td></td>
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<tr>
<td>CA</td>
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<td>$t(2007) = 4.28$</td>
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<td>ASLA</td>
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<td>$t(2007) = -5.25$</td>
<td>$p &lt; .001$</td>
<td>$-.0389$ to $-.0177$</td>
<td>$-.0007$ to $0.0010$</td>
</tr>
<tr>
<td>CLA</td>
<td>$DE = -.0296, IE = .0037$</td>
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<td>$t(2007) = -5.64$</td>
<td>$p &lt; .001$</td>
<td>$-.0399$ to $-.0193$</td>
<td>$-.0061$ to $0.0020$</td>
</tr>
</tbody>
</table>
Summary of Results

- Ad type moderated the relationship between depressive symptomatology and reactance.

- Reactance then mediated the relationship between depressive symptomatology and the help-seeking variables.

- Individuals with high BDIs were more reactant to D-PSAs than individuals with lower BDIs.

- For individuals with high BDIs, the ASLA caused significantly greater reactance than the CA, while for individuals with low BDIs the ASLA caused approximately as much reactance as a travel ad.
Discussion

- Limitations
  - Generalizability
  - Single print ad for each ad type
  - Manipulation could be stronger

- Future Directions
  - Test potential ways to reduce or avoid reactance
  - Multiple ad exemplars for each ad type
  - Multiple methods of delivery (i.e., print, radio, video)
  - Explore other theoretical frameworks to describe boomerang effects

- Conclusion
  - Creators of depression campaigns need to be cognizant of their potential to backfire, be guided by theory, and evaluate their effectiveness before dissemination.