Influences on Trauma Research Participation Reactions

Melanie D. Hetzel-Riggin, Ph.D.
Department of Psychology
Western Illinois University

Ethical treatment of research participants is a core principle for mental health researchers (APA, 2002). IRBs often assume that participants in trauma research may be harmed (Boscarino et al., 2004) and get emotionally overwhelmed. They may be unable to anticipate the level of distress. Researchers have to be aware of the possible negative impact of their research and devise procedures to minimize that risk (Newman & Kaloupek, 1999).

Risks
- Physical/psychological harm
- Discomfort
- Inconvenience
- Evoke emotional distress
- Evoke shame, anger, etc.
- Risk breach of privacy

Benefits
- Insight
- Improved well-being
- Diversion
- Feel like contributing to the welfare of others
- Kinship with others
- Material resources
- Empowerment

Most participants find participation more positive than negative (Daugherty & Lawrence, 1996; Henderson & Jorm, 1990). Research can lead to self-focus (Daugherty & Lawrence, 1996) and can be positive if well-adjusted. It can lead to significant distress if not well-adjusted. Mental health issues and reading difficulties seem to negatively affect one’s reactions to participation (Jorm et al., 1994).
Disclosure of trauma seems to lead to an initial increase in distress but a longer term sense of relief and benefit (Draucker, 1999; Newman & Kaloupek, 2004; Ruzek & Zatzick, 2000).

Usually a small number of participants who find the research disturbing and would not participate if asked again (5-7%).

Preexisting distress, female gender, young or old age, extensive trauma exposure, physical injury, and social vulnerability associated with more distress (Newman & Kaloupek, 1999).

Preexisting distress, female gender, young or old age, extensive trauma exposure, physical injury, and social vulnerability associated with more distress (Newman & Kaloupek, 1999).

Can we find a way to screen for these participants?
- Identify characteristics of these potential participants in order to improve consent procedures and disclosure of risks/benefits.
- Possible constructs to consider:
  - Psychological problems and history of trauma
  - Emotion regulation difficulties
  - Poor coping style

Possible constructs to consider:
- Psychological problems and history of trauma
- Emotion regulation difficulties
- Poor coping style

NYC survivors of 9/11 (Boscarino et al., 1994; Galea et al., 2005)
- PTSD, depression, and greater trauma exposure were predictive of emotional distress during research.

Psychiatric population asked about childhood abuse (Carlson et al., 2003)
- Past trauma and current symptoms associated with being upset during the study.

Bereaved parents (Dyregov, 2004)
- Psychological distress was associated with a more painful interview.

1174 women in an HMO with a trauma-focused survey (Newman et al., 1999)
- A history of maltreatment was associated with an underestimation of emotional reaction, although most still found benefit and would participate again.

Epidemiological study of PTSD (Parslow et al., 2000)
- Increased PTSD associated with increased distress but not willingness to participate.
- Consistently seems that increased trauma exposure and trauma-related psychopathology is associated with immediate increased distress but not discontinuation or dissatisfaction with participation.
**Emotion Regulation**

- Emotion regulation is the ability to monitor, evaluate, and modulate the intensity and expression of feelings in order to adaptively respond to various situations (Cole et al., 1994; Thompson, 1994).
- Possible that deficits in emotion regulation skills may negatively impact one’s experience of research if the topic is difficult.
- Perhaps the relationship between increased distress and negative reactions to research are better explained by emotion regulation problems.

**Coping Style**

- Maladaptive coping style is also associated with poorer mental health (Schneider, Elhai, & Gray, 2007).
- Like emotion regulation difficulties, unhealthy coping styles may account for the effect of mental health distress on research participation reactions.
- Maladaptive coping styles may lead to negative reactions to all life events, including research participation.
- Like emotion regulation difficulties, unhealthy coping styles may account for the poor mental health distress on research participation reactions.
- Healthy coping skills may lead to a general positive reaction to all life events.

**Coping Style**

- Poor coping self-efficacy has been associated with increased distress during trauma research, while good coping self-efficacy has been associated with more perceived gain (Johnson & Benight, 2003).
- No studies to date have looked specifically at coping style and reactions to research participation.

**Goals of Study**

- Measure the reactions of college-aged participants to an online, trauma-focused study.
- Identify how a history of trauma, current psychopathology, emotion regulation difficulties, and coping style are related to reactions to participation.
- Determine which variables most effectively predict negative and positive reactions to participation.
PARTICIPANTS
- 326 participants started the online survey
- 13 participants did not complete the survey
  - Removed from further analyses
- 313 participants in the final sample

DEMOGRAPHIC INFORMATION
- **Age**
  - Mean = 19.9, SD = 2.8 (18-39)
- **Gender**
  - 103 males (33%)
  - 191 females (61%)
  - 19 participants (6%) did not report gender
- **Ethnicity**
  - 117 Caucasian (57%)
  - 95 African American (30%)
  - 23 Latino (7%)
  - 14 Asian American (4%)
  - 2 Biracial (1%)
  - 2 participants (1%) did not report ethnicity

DEMOGRAPHIC INFORMATION
- **Year in School**
  - 132 freshmen (42%)
  - 69 sophomores (22%)
  - 75 juniors (24%)
  - 37 seniors (12%)
- **Therapy experience**
  - 238 had no counseling experience (76%)
  - 23 had less than 2 months of counseling (7%)
  - 13 had 2-6 months of counseling (4%)
  - 15 had 6-12 months of counseling (5%)
  - 24 had over a year of counseling (8%)
MEASURES

- Traumatic Life Events Questionnaire (Kubany et al., 2000)
- Posttraumatic Diagnostic Scale (Foa, Cashman, Jaycox, & Perry, 1997)
- Trauma Symptom Checklist (Briere, 1996)
- Difficulties in Emotion Regulation Scale (Gratz & Roemer, 2004)
- Brief COPE (Carver, 1997)
- Reactions to Research Participation Questionnaire (Newman, Willard, Sinclair, & Kaloupek, 2001)

PROCEDURE

- Undergraduates were recruited through an online research participation system to earn class credit
- Participation took approximately ½ hour

DATA ANALYSIS PLAN

- Total and Subscale scores
  - TLEQ – total score of # of traumatic events
  - RRPQ – higher scores on all subscales indicate better reactions to research participation
- MANOVAs to determine if demographic variables (gender, ethnicity, year in school, previous therapy) affected RRPQ scores
- Examination of bivariate correlations between independent and predictor variables for significant relationships
- Series of regression equations using forward selection to determine which variables most effectively predict each RRPQ subscale.

RESULTS
**DEMOGRAPHIC EFFECTS**

- Age was not associated with any of the RRPQ subscales, $r_s = -.01$ to .07, $p$s = ns
- Men reported more concerns about the study than women on four subscales
  - Participation: $F(1, 294) = 5.43^*$
  - Perceived Drawbacks: $F(1, 294) = 12.73^{***}$
  - General Experience: $F(1, 294) = 13.458^{***}$
  - Traumatized: $F(1, 294) = 7.93^{**}$

**CORRELATIONS BETWEEN RRPQ AND TRAUMA VARIABLES**

<table>
<thead>
<tr>
<th></th>
<th>Participation</th>
<th>Perceived Benefits</th>
<th>Emotional Reactions</th>
<th>Perceived Drawbacks</th>
<th>General Experience</th>
<th>Traumatized</th>
</tr>
</thead>
<tbody>
<tr>
<td>TNR</td>
<td>-.03</td>
<td>-.01</td>
<td>-.07</td>
<td>-.02</td>
<td>-.02</td>
<td>-.01</td>
</tr>
<tr>
<td>PTSD-Q</td>
<td>-.09</td>
<td>.02</td>
<td>-.05</td>
<td>-.11</td>
<td>-.07</td>
<td>-.07</td>
</tr>
<tr>
<td>TSC</td>
<td>-.06</td>
<td>.10</td>
<td>-.03</td>
<td>.13</td>
<td>-.04</td>
<td>.09</td>
</tr>
<tr>
<td>Dissociation</td>
<td>-.08</td>
<td>-.12</td>
<td>-.03</td>
<td>.10</td>
<td>-.05</td>
<td>.04</td>
</tr>
<tr>
<td>Anxiety</td>
<td>-.05</td>
<td>-.09</td>
<td>-.06</td>
<td>.14</td>
<td>-.05</td>
<td>.07</td>
</tr>
<tr>
<td>Depression</td>
<td>-.06</td>
<td>.10</td>
<td>-.07</td>
<td>.09</td>
<td>-.04</td>
<td>.01</td>
</tr>
<tr>
<td>Sexual Assault</td>
<td>-.06</td>
<td>-.10</td>
<td>-.07</td>
<td>.09</td>
<td>-.04</td>
<td>.01</td>
</tr>
<tr>
<td>Trauma Index</td>
<td>-.01</td>
<td>-.12</td>
<td>.03</td>
<td>-.18</td>
<td>.01</td>
<td>-.12</td>
</tr>
<tr>
<td>Sleep Disturbance</td>
<td>-.10</td>
<td>-.10</td>
<td>-.04</td>
<td>.10</td>
<td>-.08</td>
<td>.04</td>
</tr>
<tr>
<td>Sexual Problems</td>
<td>-.10</td>
<td>-.10</td>
<td>-.04</td>
<td>.10</td>
<td>-.08</td>
<td>.04</td>
</tr>
</tbody>
</table>

**DEMOGRAPHIC EFFECTS**

- Minority group status led to a trend on two subscales
  - Minority group participants reported fewer emotional reactions than Caucasian individuals, $F(1, 313) = 3.78, p = .053$
  - Caucasian participants reported a slightly better general participation experience, $F(1, 313) = 3.69, p = .056$

**CORRELATIONS BETWEEN RRPQ AND DERS**

<table>
<thead>
<tr>
<th></th>
<th>Participants</th>
<th>Perceived Benefits</th>
<th>Emotional Reactions</th>
<th>Perceived Drawbacks</th>
<th>General Experience</th>
<th>Traumatized</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-acceptance of Emotions</td>
<td>-.13</td>
<td>.01</td>
<td>-.27</td>
<td>-.08</td>
<td>-.09</td>
<td>-.17</td>
</tr>
<tr>
<td>Difficulties with Goal-Directed Behavior</td>
<td>-.12</td>
<td>-.05</td>
<td>-.21</td>
<td>-.04</td>
<td>-.09</td>
<td>-.06</td>
</tr>
<tr>
<td>Impulsive Control Difficulties</td>
<td>-.21</td>
<td>.01</td>
<td>-.33</td>
<td>-.26</td>
<td>-.21</td>
<td>-.21</td>
</tr>
<tr>
<td>Lack of Emotional Awareness</td>
<td>-.12</td>
<td>-.04</td>
<td>-.15</td>
<td>-.22</td>
<td>-.23</td>
<td>-.26</td>
</tr>
<tr>
<td>Limited Acceptance to ER Strategies</td>
<td>-.17</td>
<td>-.04</td>
<td>-.37</td>
<td>-.20</td>
<td>-.16</td>
<td>-.23</td>
</tr>
<tr>
<td>Lack of Emotional Clarity</td>
<td>-.20</td>
<td>-.09</td>
<td>-.32</td>
<td>-.19</td>
<td>-.20</td>
<td>-.23</td>
</tr>
</tbody>
</table>
### Correlations Between RRPQ and Brief COPE

<table>
<thead>
<tr>
<th>Variable</th>
<th>Participation</th>
<th>Perceived Benefits</th>
<th>Emotional Support</th>
<th>General Experience</th>
<th>Transferred</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distraction</td>
<td>-.09</td>
<td>-.02</td>
<td>.02</td>
<td>-.10</td>
<td>.21</td>
</tr>
<tr>
<td>Active Coping</td>
<td>.01</td>
<td>.10</td>
<td>.05</td>
<td>.23</td>
<td>.10</td>
</tr>
<tr>
<td>Denial</td>
<td>-.19</td>
<td>.02</td>
<td>-.23</td>
<td>-.17</td>
<td>-.18</td>
</tr>
<tr>
<td>Substance Abuse</td>
<td>-.17</td>
<td>-.05</td>
<td>-.18</td>
<td>-.10</td>
<td>-.12</td>
</tr>
<tr>
<td>Emotional Support</td>
<td>.05</td>
<td>.06</td>
<td>.03</td>
<td>.19</td>
<td>.14</td>
</tr>
<tr>
<td>Instrumental Support</td>
<td>-.07</td>
<td>.06</td>
<td>-.07</td>
<td>.11</td>
<td>.05</td>
</tr>
<tr>
<td>Behavioral Disengagement</td>
<td>-.15</td>
<td>.06</td>
<td>-.20</td>
<td>-.12</td>
<td>-.10</td>
</tr>
<tr>
<td>Venting</td>
<td>-.15</td>
<td>-.02</td>
<td>-.07</td>
<td>-.02</td>
<td>-.06</td>
</tr>
<tr>
<td>Positive Reframing</td>
<td>-.02</td>
<td>.00</td>
<td>-.12</td>
<td>-.13</td>
<td>-.10</td>
</tr>
<tr>
<td>Planning</td>
<td>-.05</td>
<td>.04</td>
<td>-.05</td>
<td>-.06</td>
<td>.02</td>
</tr>
<tr>
<td>Humor</td>
<td>-.17</td>
<td>-.02</td>
<td>-.06</td>
<td>-.01</td>
<td>-.06</td>
</tr>
<tr>
<td>Acceptance</td>
<td>.09</td>
<td>-.04</td>
<td>.22</td>
<td>-.09</td>
<td>.09</td>
</tr>
<tr>
<td>Religion</td>
<td>.02</td>
<td>.03</td>
<td>-.10</td>
<td>.04</td>
<td>-.04</td>
</tr>
<tr>
<td>Self-blame</td>
<td>-.20</td>
<td>.04</td>
<td>-.29</td>
<td>-.11</td>
<td>-.11</td>
</tr>
</tbody>
</table>

### RRPQ: Participation

\[ R = .25, R^2 = .06, F(2, 312) = 10.29^{***} \]

<table>
<thead>
<tr>
<th>Variable</th>
<th>b</th>
<th>SE_b</th>
<th>( \beta )</th>
<th>t</th>
<th>R^2</th>
</tr>
</thead>
<tbody>
<tr>
<td>DERS Impulse Control Difficulties</td>
<td>-.10</td>
<td>.03</td>
<td>-.19</td>
<td>-3.33</td>
<td>.04</td>
</tr>
<tr>
<td>Brief COPE Humor</td>
<td>-.21</td>
<td>.09</td>
<td>-.14</td>
<td>-2.44</td>
<td>.02</td>
</tr>
</tbody>
</table>

### RRPQ: Perceived Benefits

\[ R = .12, R^2 = .01, F(1, 312) = 4.53^{*} \]

<table>
<thead>
<tr>
<th>Variable</th>
<th>b</th>
<th>SE_b</th>
<th>( \beta )</th>
<th>t</th>
<th>R^2</th>
</tr>
</thead>
<tbody>
<tr>
<td>TSC Sleep Problems</td>
<td>-.06</td>
<td>.03</td>
<td>-.12</td>
<td>-2.13</td>
<td>.01</td>
</tr>
</tbody>
</table>

### RRPQ: Emotional Reactions

\[ R = .42, R^2 = .18, F(2, 312) = 33.46^{***} \]

<table>
<thead>
<tr>
<th>Variable</th>
<th>b</th>
<th>SE_b</th>
<th>( \beta )</th>
<th>t</th>
<th>R^2</th>
</tr>
</thead>
<tbody>
<tr>
<td>DERS Limited Access to ER Strategies</td>
<td>-.22</td>
<td>.03</td>
<td>-.36</td>
<td>-6.95</td>
<td>.13</td>
</tr>
<tr>
<td>Brief COPE Acceptance</td>
<td>.45</td>
<td>.11</td>
<td>.21</td>
<td>4.09</td>
<td>.04</td>
</tr>
</tbody>
</table>
### RRPQ: PERCEIVED DRAWBACKS

\[ R = .42, \ R^2 = .17, F(4, 311) = 16.02^{***} \]

<table>
<thead>
<tr>
<th>Variable</th>
<th>( b )</th>
<th>SE ( b )</th>
<th>( \beta )</th>
<th>( t )</th>
<th>( R^2 )</th>
</tr>
</thead>
<tbody>
<tr>
<td>DERS Impulse Control Difficulties</td>
<td>-.27</td>
<td>.04</td>
<td>-.34</td>
<td>-6.2</td>
<td>.07</td>
</tr>
<tr>
<td>Brief COPE Active Coping</td>
<td>.32</td>
<td>.13</td>
<td>.15</td>
<td>2.51</td>
<td>.06</td>
</tr>
<tr>
<td>TSC Anxiety</td>
<td>.14</td>
<td>.04</td>
<td>.21</td>
<td>3.62</td>
<td>.03</td>
</tr>
<tr>
<td>Brief COPE Seeking Emotional Support</td>
<td>.24</td>
<td>.12</td>
<td>.12</td>
<td>2.07</td>
<td>.01</td>
</tr>
</tbody>
</table>

### RRPQ: GENERAL EXPERIENCE

\[ R = .32, \ R^2 = .10, F(3, 311) = 11.50^{***} \]

<table>
<thead>
<tr>
<th>Variable</th>
<th>( b )</th>
<th>SE ( b )</th>
<th>( \beta )</th>
<th>( t )</th>
<th>( R^2 )</th>
</tr>
</thead>
<tbody>
<tr>
<td>DERS Lack of Emotional Awareness</td>
<td>-.11</td>
<td>.03</td>
<td>-.20</td>
<td>-3.58</td>
<td>.06</td>
</tr>
<tr>
<td>Brief COPE Denial</td>
<td>-.45</td>
<td>.12</td>
<td>-.20</td>
<td>-3.66</td>
<td>.03</td>
</tr>
<tr>
<td>Brief COPE Seeking Emotional Support</td>
<td>.20</td>
<td>.10</td>
<td>.12</td>
<td>2.06</td>
<td>.01</td>
</tr>
</tbody>
</table>

### RRPQ: TRAUMATIZING

\[ R = .50, \ R^2 = .257, F(5, 311) = 20.36^{***} \]

<table>
<thead>
<tr>
<th>Variable</th>
<th>( b )</th>
<th>SE ( b )</th>
<th>( \beta )</th>
<th>( t )</th>
<th>( R^2 )</th>
</tr>
</thead>
<tbody>
<tr>
<td>DERS Impulse Control Difficulties</td>
<td>-.07</td>
<td>.01</td>
<td>-.36</td>
<td>-6.91</td>
<td>.10</td>
</tr>
<tr>
<td>Brief COPE Acceptance</td>
<td>.09</td>
<td>.03</td>
<td>.18</td>
<td>3.20</td>
<td>.08</td>
</tr>
<tr>
<td>Brief COPE Distraction</td>
<td>.10</td>
<td>.03</td>
<td>.18</td>
<td>3.25</td>
<td>.04</td>
</tr>
<tr>
<td>TSC Sleep Problems</td>
<td>.02</td>
<td>.01</td>
<td>.12</td>
<td>2.22</td>
<td>.02</td>
</tr>
<tr>
<td>DERS Lack of Emotional Awareness</td>
<td>-.02</td>
<td>.01</td>
<td>-.12</td>
<td>-2.21</td>
<td>.01</td>
</tr>
</tbody>
</table>

### Discussion
Emotion regulation deficits and unhealthy coping methods were associated with negative perceptions of research participation.

Emotion regulation deficits, especially impulse control deficits and a lack of emotional awareness, were predictive of poorer reactions to research participation. Impulse control deficits may lead people to consent to participate before completely considering the risks and benefits. A lack of emotional awareness may lead people to underestimate their emotional reactions.

Coping styles associated with poorer reactions to participation included denial and use of humor. Both can be seen as avoidant coping styles, which have been consistently associated with poorer mental health outcomes (Hayes et al., 1996).

Coping styles associated with more positive reactions to participation include acceptance, distraction, active coping, and seeking emotional support. These coping styles have all been associated with better mental health outcomes and emotion regulation skills. They also suggest a more proactive approach to dealing with distress.

Sleep problems were predictive of fewer perceived benefits but a lower likelihood of feeling “retraumatized.” Suggests that sleep is an important influence on reactions to trauma-focused research.

Anxiety was predictive of fewer perceived drawbacks. PTSD, a history of trauma, and other trauma-related variables were not related to reactions to trauma. Perhaps better accounted for by emotion regulation deficits and coping style.

May be beneficial to assess for difficulties in emotion regulation and avoidant coping styles. Improve consent procedures for these individuals (Handelman & Martin, 1992; Newman & Kaloupek, 2004). Improve readability (8th grade level). Assess comprehension of informed consent form, especially possible risks and benefits. Quiz, recall questions, restatement of main points.
DISCUSSION
- Increase availability of mental health resources
  - Hotline numbers, local counseling resources
- Provide links and training opportunities on emotion regulation skills and coping styles
- Follow-up in person or on the phone with individuals who report significant negative reactions to refer to a mental health professional

FUTURE RESEARCH
- Trauma and non-trauma research reactions
- Online survey, in person survey, and interview responses
- Improve and expand consent form procedures
  - Detailed description of risks and benefits
  - Overcome emotion regulation and coping style influences?
- Non-college populations

LIMITATIONS
- College sample
- Online survey
- Restricted range of age and psychological problems
  - Generally a young, healthy population

CONCLUSION
- Have a better picture of what participants may be at a greater risk for more significant negative reactions
- Try to inform IRB members as well as possible participants about who might be at risk
- Develop ways to target those people to more effectively inform them of the likelihood of risks, the possible benefits, and adjunct referrals