Dimensions of Anger Reactions – Revised (DAR-R): An Australian & Spanish Validity Study

Dr Lee Kannis-Dyman
University of the Sunshine Coast, Australia

Dr José Martín Salguero Noguera
Universidad de Málaga, España

Dr Juan Ramos-Cejudo
Universidad Complutense de Madrid, España

Professor Raymond Novaco
University of California, Irvine, USA
Introduction

- Anger features in a broad range of problematic disorders assessed and treated by clinical professionals in a number of settings (Novaco, 2010).

- However, there is a limited number of brief anger measures available (Forbes et al., 2004). The gold standard the State-Trait Anger Expression Inventory-2 (Spielberger, 1999) is 57 items and assesses trait and state anger.

- Earlier versions of a brief anger measure the Dimensions of Anger Reactions Scale (Novaco, 1975) have been validated as a measure of anger frequency, intensity, duration, and anger’s perceived negative impact on work performance, social relationships, and health (Forbes et al., 2004; Novaco et al., 2012).

- The current project evaluated the psychometric properties of the Dimensions of Anger Reactions – Revised (DAR-R; Novaco, 1978/2004) in Australia and Spain (i.e., a Spanish language version was developed for this study).
Method

- Participants (N = 1656) were recruited from staff/students Universidad Complutense de Madrid and University of the Sunshine Coast, also a snowball procedure from the general communities across Spain and Australia.
- Spain:  n = 1115, 56.3% female, and M=33.3, SD = 12.8 years (range 18 to 82)
- Australia: n = 541, 76.6% female, and M = 37.4, SD = 13.0 years (range 18 to 76)

Dimension of Anger Reactions - Revised (DAR-R; Novaco, 1978/2004); 7 items measuring anger severity. Rating on Likert scale: 0, not at all; 1, little; 2, moderately so; 3, fairly much; 4, very much)

1. I often find myself getting angry at people or situations.
2. When I do get angry, I get really mad.
3. When I get angry, I stay angry.
4. When I get angry at someone, I want to hit or strike the person.
5. My anger interferes with my ability to get my work or activities done.
6. My anger prevents me from getting along with people as well as I would like to.
7. My anger has a bad effect on my health.
Results

<table>
<thead>
<tr>
<th>CFA</th>
<th>Country</th>
<th>X²/df</th>
<th>CFI</th>
<th>RMSEA</th>
<th>90%CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 factor</td>
<td>Spain</td>
<td>9.16</td>
<td>.89</td>
<td>.09</td>
<td>.07 to .10</td>
</tr>
<tr>
<td>1 factor</td>
<td>Australia</td>
<td>5.32</td>
<td>.92</td>
<td>.09</td>
<td>.07 to .11</td>
</tr>
<tr>
<td>2 factor</td>
<td>Spain</td>
<td>3.61</td>
<td>.98</td>
<td>.05</td>
<td>.02 to .07</td>
</tr>
<tr>
<td>2 factor</td>
<td>Australia</td>
<td>1.32</td>
<td>.99</td>
<td>.02</td>
<td>.01 to .05</td>
</tr>
</tbody>
</table>

Note. Good fit is taken as X²/df =1.0 to 5.0, CFI > .95, and RMSEA, 0 to <.05 perfect fit, .05 to .08 reasonable fit, .08 to .10 mediocre fit, and > .10 poor fit. For 1 factor model, X² has 14 df, and for 2 factor models, X² has 13 df

DAR-Revised

Factor 1: Anger response, Items 1 – 4,
Factor 2: Anger impairment, items 5 – 7,
Correlation between Anger response and Anger impairment, \( r = .49, p < .001 \) (Spanish sample) and \( r = .62, p < .001 \) (Australian sample)
Conclusions

- DAR-Revised is a reliable and brief measure of anger. Could be frequently employed in therapeutic practice much like brief measures of depression and anxiety.
- Demonstrates evidence of good psychometric properties in two cultures. The Spanish language version of the DAR-R found to be a valid measure of anger; indicating its utility in Spanish speaking populations.
- The two factors demonstrated are clinically relevant. Further research found that *Anger response* linked well to other indices of anger and aggression. *Anger impairment* associated with anxiety and depressive symptoms, and quality of life.

Limitations & Future Directions

- Australian sample was high in female participants.
- Future research could explore DAR-R’s psychometric properties in clinical populations.
- Evaluate if the DAR-R is sensitive to change during and following psychological treatment.
References/Acknowledgements

Thanks to our research assistants Ilyana Arbulu, Blanca Bashore, Inaki Lago (Spain) & Ben Lane (Australia).