Are dysfunctional attitudes elevated and linked to mood in bipolar disorder? A meta-analysis and systematic review

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Overview

• Introduction
  – What are DA and how they present in Bipolar
  – Aims of the review
• Method
• Results
  – Meta-analysis
  – Narrative synthesis
• Discussion
• Clinical implication & Limitations
• Questions
What are Dysfunctional Attitudes?

A person should do well at everything he undertakes

If others dislike you, you cannot be happy

My life is wasted unless I am a success

I am nothing if a person I love doesn’t love me

DAS-24, Power et al., 1994
Dysfunctional Attitudes in Depression

• Elevated (Keller, 1983) and linked to more depressive episodes (Otto Et al., 2007).

• DA can predict future depressive symptoms and severity (Kërqeli et al., 2013; Wang et al., 2010).

• Characteristic (Fresco et al., 2006) or mood dependent in depression (Pearson & Miranda, 2002)?
Dysfunctional Attitudes in Bipolar

• Mixed findings about the prevalence of DA in BD
  – Higher scores for ‘goal attainment’ DA for Bipolar (Lam et al., 2004)
  – DA scores higher in BD population vs unipolar depressed and HC (Batmaz, et al., 2013).
  – No significant difference in DAS scores between BD, UP and HC (Alatiq et al., 2010).

• Mixed findings about the influence of mood
  – Goldberg et al., (2008) reported significant associations between mania symptoms and increased DA scores. (not dep)
Aims

1. explore the presence DA in BD vs a comparison group
2. identify any associations and provide a narrative review of DA in BD and reported relationships between mood & DA
3. to review the methodological quality of the studies;
4. explore evidence for psychological therapy on DA in BD
5. to reflect upon current research/ implications/ recommendations for future research in BD and DA.
Method

• Databases = Medline, PsycInfo and Web of Science
• Search terms =
  – ‘bipolar’ AND
  – “dysfunctional attitude*” or “dysfunctional belie*” or “dysfunctional assum*” or “negative cognitions” or “maladaptive belie*”
## Method - Inclusion/Exclusion

<table>
<thead>
<tr>
<th>Inclusion</th>
<th>Exclusion</th>
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<tbody>
<tr>
<td>Any study design</td>
<td>Reviews, meta-analyses, abstracts, commentaries</td>
</tr>
<tr>
<td>Participants diagnosed with BD</td>
<td>No formal diagnosis (DSM, ICD)</td>
</tr>
<tr>
<td>Participants 18+</td>
<td>Child/adolescent studies</td>
</tr>
<tr>
<td>Peer reviewed journal</td>
<td>Non standardised</td>
</tr>
<tr>
<td>Written in English</td>
<td>Data collected during or post intervention</td>
</tr>
<tr>
<td>Standardised measure for DA + Mood (means + SD)</td>
<td>Statistical results not raw data (means, SD, sample size)</td>
</tr>
<tr>
<td>At least two group (BDI vs BDII / BD vs HC)</td>
<td></td>
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</tbody>
</table>
Method - PRISMA

Total Papers Produced
\[ N = 323 \]

Titles/Abstracts screening
\[ N = 161 \]

Full paper screening
\[ N = 77 \]

Total papers included
\[ N = 47 \]

Meta-analysis
\[ N = 23 \]

Narrative review
\[ N = 47 \]
Method

• Quality assessment tool
  – National Heart Lung and Blood Institute (NHLBI; 2014) Quality Assessment Tool for Observational Cohort and Cross-Sectional Studies

• Effect size computation
  – Random effects meta-analysis using RevMan (2020) to identify SMD between groups
  – Group means, SD and sample size (Borenstien et al. 2009).
  – DAS total scores to avoid Type I error.
Results- Meta-analysis

- No difference was observed between BD and unipolar participants ($d = -0.16$).
- A significant mean difference was found between BD and healthy controls ($d = 0.70$).
Results- Meta-analysis

• Mood state in BD- a SMD was found between DA scores for euthymic vs. depressed participants ($d = -0.71$).

• 3 studies included in the meta-analysis were suggestive of lower DA in those who had engaged in psychological therapy compared to TAU.
Results- Narrative Synthesis

• DA are a characteristic of BD that is not as prevalent in healthy populations

• Initial studies are in support of psychological therapies being effective at reducing DA in BD.

• DA are higher in depressed individuals with BD when compared to other mood states (euthymic, manic, mixed).

• Using the DAS mania does not correlate with increased DA
Discussion

• DA are not unique to unipolar depression as previously thought (Keller, 1983; Abela & D'Alessandro, 2002), but also are not more extreme in bipolar depressive episodes.

• The severity of DA are dependent on an individual's state, rather than just a trait of their diagnosis (Person & Miranda, 2002).

• Remains mixed evidence whether DA can predict mood episode in BD

• High heterogeneity of studies
Limitations

• Limited hand searching
• Data extraction for full papers reviewed
• Fair or poor quality studies
• Lack of longitudinal studies
• No analysis of subscales (DAS)

Clinical implications/ Future research

• DA are most active when individuals are depressed, treatment targeting this phase of illness
• Limited understanding of DA and mania phase of BD
• Need for further longitudinal studies
References


References cont.


YOUR QUESTIONS