# Interpretation of Ambiguous Dental Scenarios by Severity of Dental Anxiety

Lisa J. Heaton, PhD; Brian G. Leroux, PhD; Douglas S. Ramsay, DMD, PhD, MSD

1. CareQuest Institute for Oral Health; 2. University of Washington School of Dentistry

## Introduction

Interpretational bias is the tendency for individuals with anxiety to interpret anxiety-relevant ambiguous situations in a negative way. Dental anxiety poses a significant barrier to adequate oral health care for 5-15% of adults and may be maintained through negative interpretations of dental situations. The goal of this study was to examine how dentally anxious individuals interpret ambiguous dental scenarios compared to those with lower dental anxiety.

## Methods

- United States adults were recruited through national Craigslist advertisements.
- Participants provided qualitative explanations of ambiguous dental scenarios.
- Completed the Modified Dental Anxiety Scale (MDAS).
- We compared descriptions of five interpersonal scenarios between those high in dental anxiety (MDAS>19) compared to the rest of the sample.
- Calculated the number of various emotionally valanced terms as a ratio of each group's total number of words.

## Results

<table>
<thead>
<tr>
<th>Low Dental Anxiety (n=231)</th>
<th>High Dental Anxiety (n=171)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>problem</strong></td>
<td><strong>problem</strong></td>
</tr>
<tr>
<td><strong>pain</strong></td>
<td><strong>pain</strong></td>
</tr>
<tr>
<td><strong>anxious</strong></td>
<td><strong>anxious</strong></td>
</tr>
<tr>
<td><strong>money</strong></td>
<td><strong>money</strong></td>
</tr>
<tr>
<td><strong>scared</strong></td>
<td><strong>scared</strong></td>
</tr>
<tr>
<td><strong>concern</strong></td>
<td><strong>concern</strong></td>
</tr>
<tr>
<td><strong>worried</strong></td>
<td><strong>worried</strong></td>
</tr>
</tbody>
</table>

Participants (N=402; mean age=40.0 (sd=14.4), range 18-85; 65.2% female) completed the survey.

Mean MDAS score was 16.6 (sd=5.6, range=5-25); 42.5% reported high dental anxiety.

Dentally anxious respondents used fewer words (2711) across fewer interpretative statements (148) compared to the rest of the sample (3693 words / 170 interpretations)

As a proportion of the total number of words, dentally anxious participants used terms like “nervous”, “anxious”, “worried”, and “scared” more often (range=0.26-0.66%) than other respondents (range=0.05-0.38%)

Less anxious respondents used the terms “money” (0.14%) and “cost” (0.35%) more often than dentally anxious individuals (0.07% and 0.18%, respectively)

## Words used by Dental Anxiety Levels

While dentally-anxious individuals were more likely to use terms like “worried” and “scared,” less anxious individuals were more likely to use words like “cost” and “money.”

## Conclusions

- Dentally-anxious respondents used words related to anxiety as a greater proportion of their overall words.
- Less anxious individuals more often described concerns about the cost of treatment.
- Related work in dental-related interpretational bias found that dentally anxious individuals interpret ambiguous dental situations as significantly more negative than less anxious individuals.
- Dentists should be aware of this interpretational bias and tailor their communication to each patient’s specific sources of concern.

## References


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