Decreased Sound Tolerance and Mental Health in Canadian Undergraduates

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INTRODUCTION

- Sounds that do not bother others irritate those with decreased sound tolerance (DST). Two emerging DST subtypes are:
- Misophonia: distress triggered by specific sounds (e.g., people chewing, pens clicking).
- Hyperacusis: an unusually loud and unpleasant perception of everyday sounds (e.g., dishes clanking, lights buzzing).
- DST sufferers face mental health challenges.
- Research has not used psychometrically validated, updated measures to assess the relationship between DST and mental health in a Canadian undergraduate sample.

RESEARCH QUESTION

- Are DST symptoms associated with depression and anxiety in Canadian undergraduate students?

METHOD

- A large sample (N = 2095) completed various measures online.
- The Duke-Vanderbilt Misophonia Questionnaire (DVMQ) measured and categorized misophonia symptoms at non-clinical, sub-clinical, and clinical levels.
- The Duke Misophonia Questionnaire (DMQ) assessed misophonia caseness, severity, and coping abilities.
- The Inventory of Hyperacusis Symptoms (IHS) evaluated hyperacusis symptomology.
- The Beck Depression Inventory (BDI) and Beck Anxiety Inventory (BAI) determined depression and anxiety.

TABLE 1.	Gender	Age	DMQ Coping	DMQ Severity	BDI Total	BAI Total
Mean (SD)	1614F, 436M, 45O	21.70 (2.73)	21.95 (17.86)	23.12 (19.82)	14.44 (9.53)	18.58 (12.86)
Range	--	42	82	92	56	62

TABLE 1. FOR GENDER, F = FEMALE, M = MALE, O = OTHER.

RESULTS

FIG.1

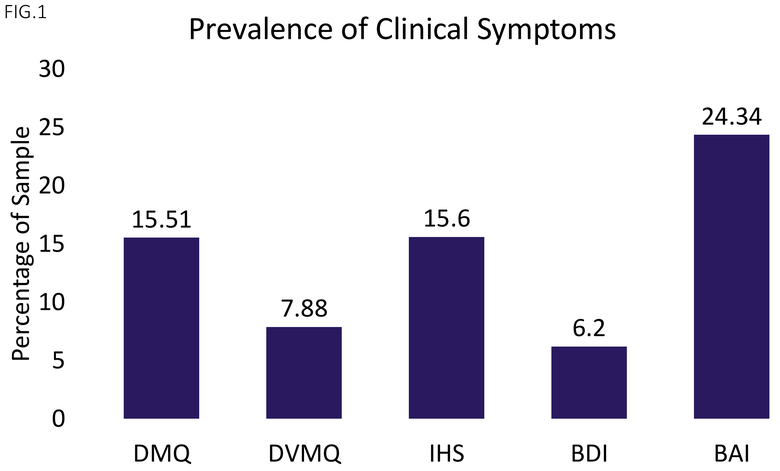

FIGURE 1. Percentage of Clinically Significant Scores. Cut-off scores: DMQ = 41.4; DVMQ = N/A; IHS = 56; BDI = 31; BAI = 26.

FIG.2

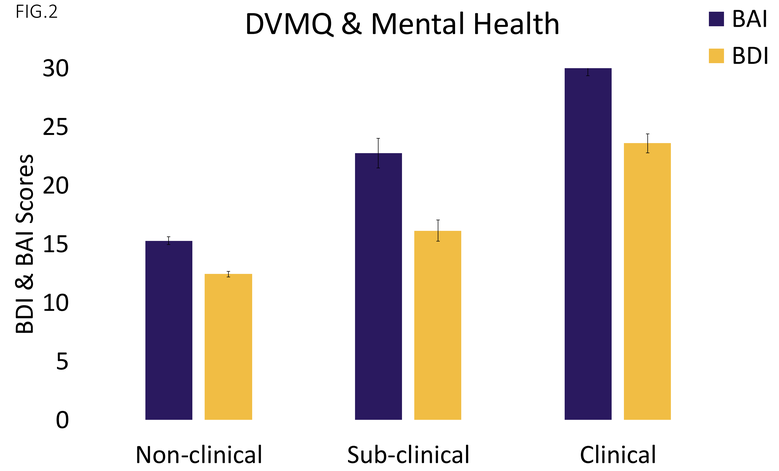

FIGURE 2. DVMQ & Mental Health. A main effect of DVMQ score was found on BDI $F(2,199) = 89.94$, $p < .001$, $\eta^2_p = .14$ and BAI $F(2,193) = 110.24$, $p < .001$, $\eta^2_p = .16$

FIG.3

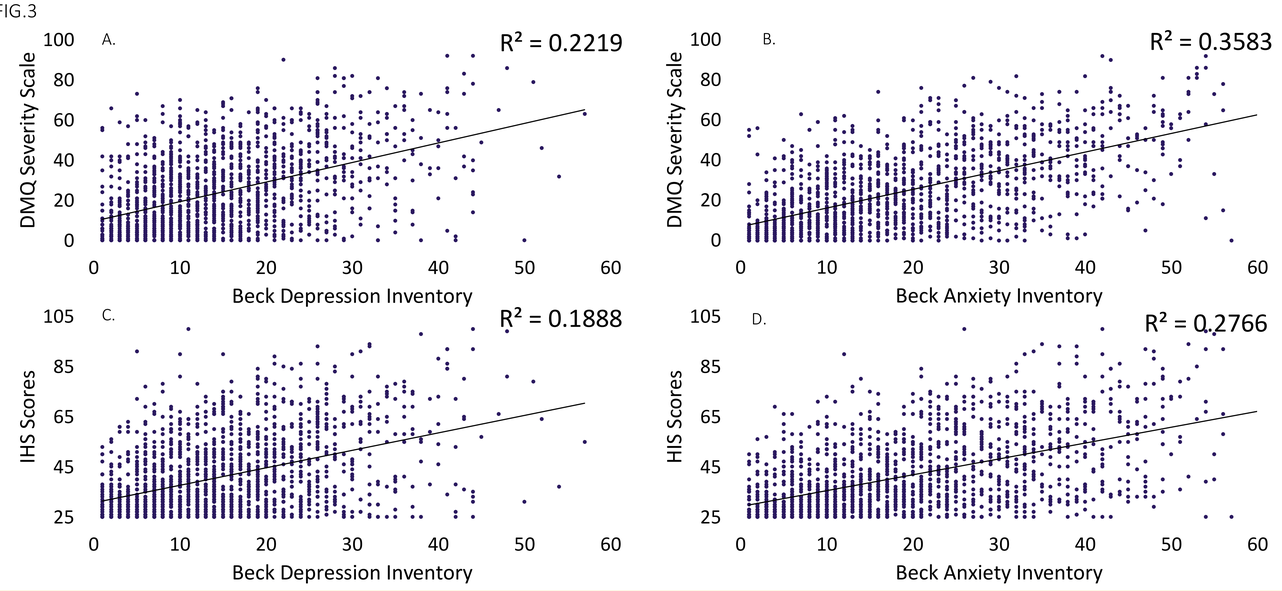

FIGURE 3.
BDI & BAI Correlations.
BDI and BAI in relation to IHS scores and DMQ Severity scores:
A: $\rho(1609) = .46$, $p < .001$, *moderate.*
B: $\rho(1521) = .59$, $p < .001$, *moderate.*
C: $\rho(1851) = .41$, $p < .001$, *moderate*
D: $\rho(1738) = .52$, $p < .001$, *moderate.*

SCAN ME

DISCUSSION

- Robust correlations suggest DST symptoms are related to increased depression and anxiety. This relationship exists in a non-clinical undergraduate sample, independent of a DST diagnosis.
- University students are at higher risk for mental health challenges in relation to DST since they have less control of the noises produced in their regular environments (e.g., dining halls, lectures, large-scale examinations).
- As our data is correlational, it is unclear if DST symptoms are a causal factor for increased depression & anxiety.
- Research should focus on strategies for treating and managing DST as it negatively impacts daily functioning.

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