

# Cognitive, affective, and neurovegetative symptoms among patients with chronic pain referred for psychiatric evaluation at a tertiary care pain clinic

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## BACKGROUND

**Chronic pain** can exert a deleterious impact on mental health. **Anxiety and depressive disorders** are particularly prevalent among persons with chronic pain and can be accompanied by a host of cognitive, affective, and neurovegetative symptoms <sup>1,2</sup>.

Questions remain concerning the symptoms that play the **most predominant (i.e., central)** role in the anxiety and depressive symptomatology of persons with chronic pain.

### OBJECTIVES

1. Explore the relative **centrality** (i.e., importance) of specific anxiety and depressive symptoms in persons with chronic pain.
2. Explore the co-occurrence and interrelations among these symptoms.

## METHODS

**Design:** Retrospective chart review study

### Participants:

Chronic pain patients (**n = 721**) from a tertiary pain management unit referred for psychiatric evaluation



### Procedures:

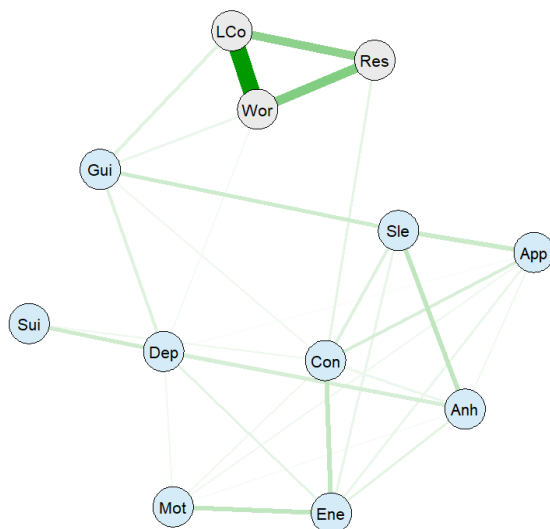
Structured clinical interviews based on the Diagnostic and Statistical Manual of Mental Disorders (**DSM-5**)

Assessment of presence/absence of symptoms related to Generalized Anxiety Disorder (**GAD**) and Major Depressive Disorder (**MDD**).

Data retrieved from the MUHC electronic health records (EHR)

## RESULTS

### GAD-MDD Symptoms Network



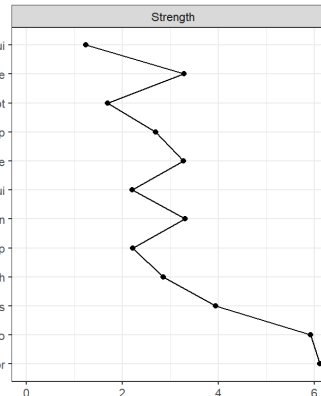
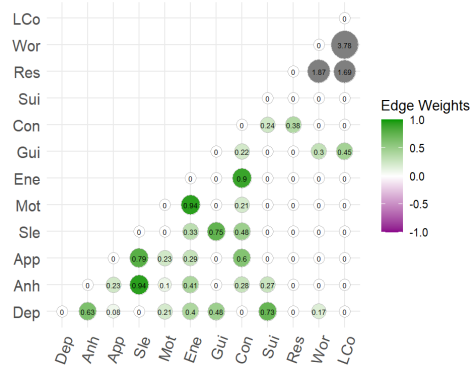
#### MDD

- Dep: Depressed mood
- Anh: Anhedonia
- App: Appetite prob
- Sle: Sleep prob
- Mot: Psychomotor retardation
- Ene: Low energy
- Gui: Guilt
- Con: Concentration problems
- Sui: Suicide intentions

#### GAD

- Res: Restlessness
- Wor: Excessive worry
- LCo: Lack of control

Edge Weight Heat Map



**GAD-MDD Symptoms Network.** Determined using the *bootnet* package in *Rstudio*. **Edge weight values.** Indicating the magnitude and direction of interactions between nodes. **Strength (centrality) values.** Strength equates the sum of the absolute edge weights between a focal node and its other connected variables (i.e. projected influence of a node)

## CONCLUSIONS

- **Excessive worry, lack of control over worry, and restlessness** were the most central symptoms of the GAD-MDD symptom network.
- These were followed by a cluster of **neurovegetative symptoms** (i.e., sleep problems, lack of energy, and poor concentration).
- The strongest **interrelations** involved worry, lack of control, and restlessness (std. edge weights: 1.69 - 3.78) as well as sleep problems and anhedonia (EW = .94).

Our findings provide insights into the **cognitive-affective and neurovegetative** symptoms that closely co-occur and play a predominant role in the mental health presentation of persons with chronic pain.

## ACKNOWLEDGEMENTS



## REFERENCES

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