Autonomic Nervous System Changes in Individuals with Anxiety And Depression Across the Lifespan: A Systematic Review

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**AUTONOMIC NERVOUS SYSTEM CHANGES IN INDIVIDUALS WITH ANXIETY AND DEPRESSION ACROSS THE LIFESPAN: A SYSTEMATIC REVIEW**

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**Introduction**

- Heart rate variability (HRV) can be used as a measure of systemic health.
- Reduced HRV is correlated to many chronic conditions like cardiovascular disease and chronic pain.
- Evidence suggests psychiatric disorders can have similar systemic effects.
- The two most common disorders, anxiety and depression, are the focus of our review. They also share similar systemic effects.
- Aim: determine the relationship between anxiety and/or depression and HRV across the age spectrum.

**Search Terms**

- HRV & Anxiety
- HRV & Generalized Anxiety Disorder
- HRV & Depression
- HRV & Major Depressive Disorder

**Databases**

- PubMed
- Google Scholar
- OVID

Initial search = 90,286

After review of titles & abstracts = 391

Exclusion: not using HRV as primary measure, episodic anxiety/sadness

Included = 10

7 depression, 3 anxiety

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**Results**

- Anxiety and depression correlate to diminished HRV
- Primarily a decrease in high frequency (HF) power, increase in LF:HF ratio, inconsistent decrease in low frequency (LF) power
- Most significant change in individuals with preexisting heart disease and anxiety

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**Conclusions**

- Psychiatric disorders have a deleterious effect on the autonomic nervous system
- Earlier detection of these systemic changes may allow interventions to be implemented that could reduce risk of further systemic disease.

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References are available on request; contact Karin Steere: ksteere@pugetsound.edu

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![Heart Rate Variability](https://fineartamerica.com/featured/heart-and-brain-erzebet-s.html)

![Heart and Brain](https://wallhere.com/en/wallpaper/255219)

![Sketchesoul](https://sketchthesoul.com/dead_heart)