

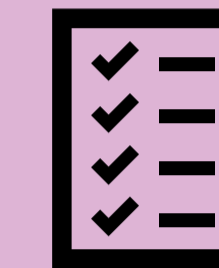
Transdiagnostic Pathways to Understanding Anxiety and Depression in Autistic Adolescents and Adults

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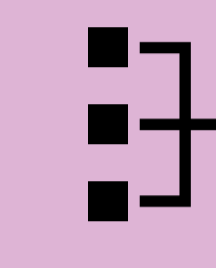
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222 autistic people aged 15-80 years



Cross-sectional online survey



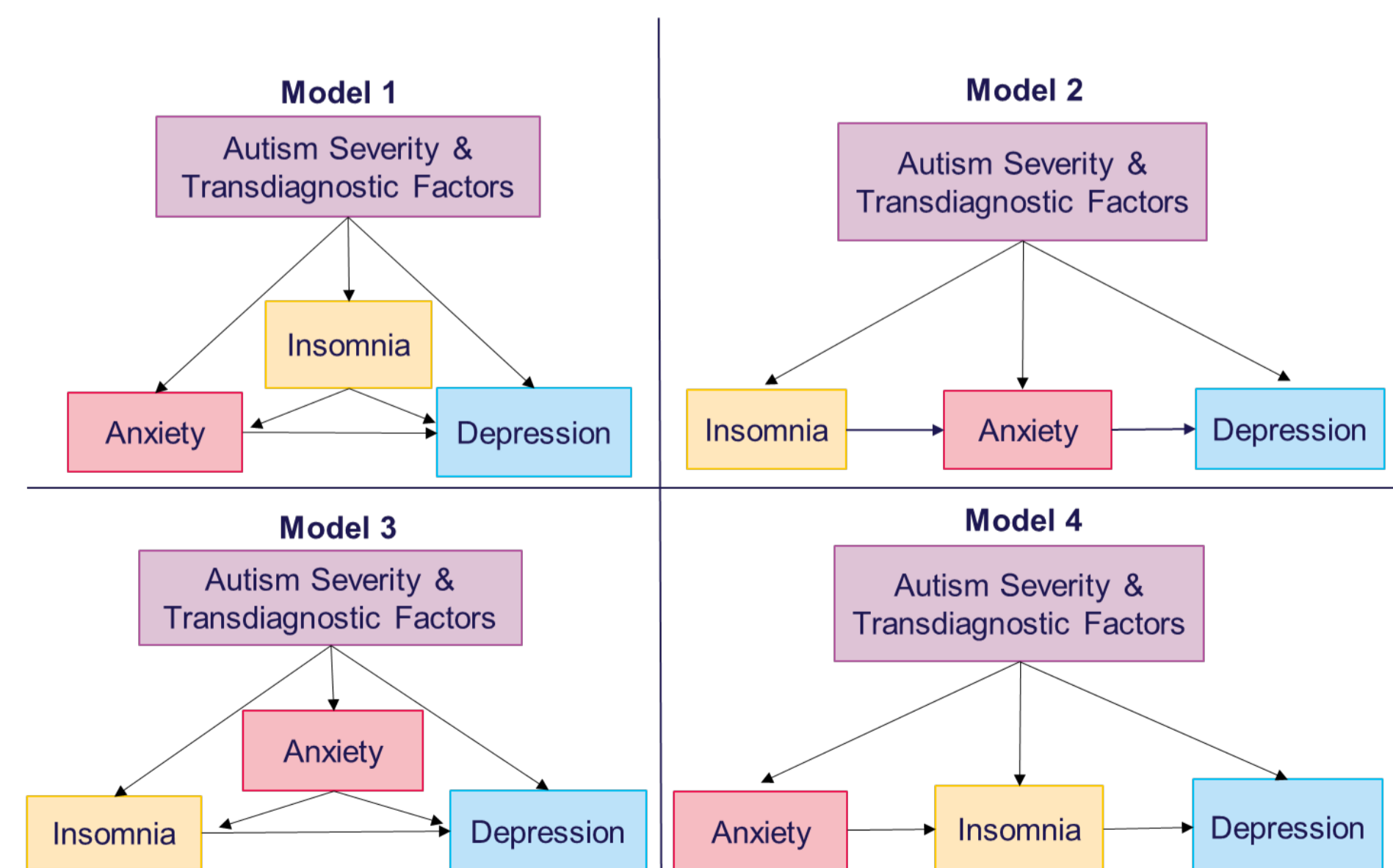
Path analysis

BACKGROUND

- Anxiety and depression frequently co-occur among autistic individuals
- Co-occurring condition rates exceed non-autistic prevalence rates**
 - Lifetime rates of anxiety and depression are 42% and 37% respectively (Hollocks et al., 2019)
 - Up to 89% autistic adults report insomnia symptoms (Joveska et al., 2020; Leader et al., 2021)
 - GI disorders and cardiovascular disease are reported for 37.4% and 37% respectively (Croen et al., 2015)
- Co-occurring conditions are linked to **unemployment** (Baker et al., 2019; Hedley et al., 2021) and **reduced quality of life** (Lawson et al., 2020; Leader et al., 2021)
- Transdiagnostic factors (e.g., insomnia, autistic traits, intolerance of uncertainty, sensory sensitivity, and autonomic symptoms) have been linked to anxiety and depression
- Understanding influence of transdiagnostic factors on development and maintenance of anxiety and depression is critical to developing effective support options

Project aim

Use a single model to explore relationships between transdiagnostic factors, autistic traits, insomnia, anxiety, and depression in a sample of autistic adolescents and adults



METHOD

Longitudinal Study of Australian School Leavers with Autism (SASLA) & Australian Longitudinal Study of Autistic Adults (ALSAA)

- Online survey-based project
- People aged 15 to 80 years with/without autism
- Followed over a 2-year period



Current study:

- 222 autistic people aged 15-80 years (55.7% female)
- Cross-sectional design

Measures

- Autism-Quotient Short (AQ-Short; Hoekstra et al., 2011)
- Intolerance of Uncertainty Scale, Short Form (IU-12; Carleton et al., 2007)
- Glasgow Sensory Sensitivity Scale (GSQ; Robertson & Simmons, 2013)
- The Composite Autonomic Symptom Score (COMPASS-31; Sletten et al., 2012)
- Pittsburgh Sleep Quality Index (PSQI; Buysse et al., 1989)
- DSM-V Generalised Anxiety Disorder Dimensional Scale (GAD; Lebeau et al., 2012)
- Patient Health Questionnaire (PHQ-9; Kroenke et al., 2001)

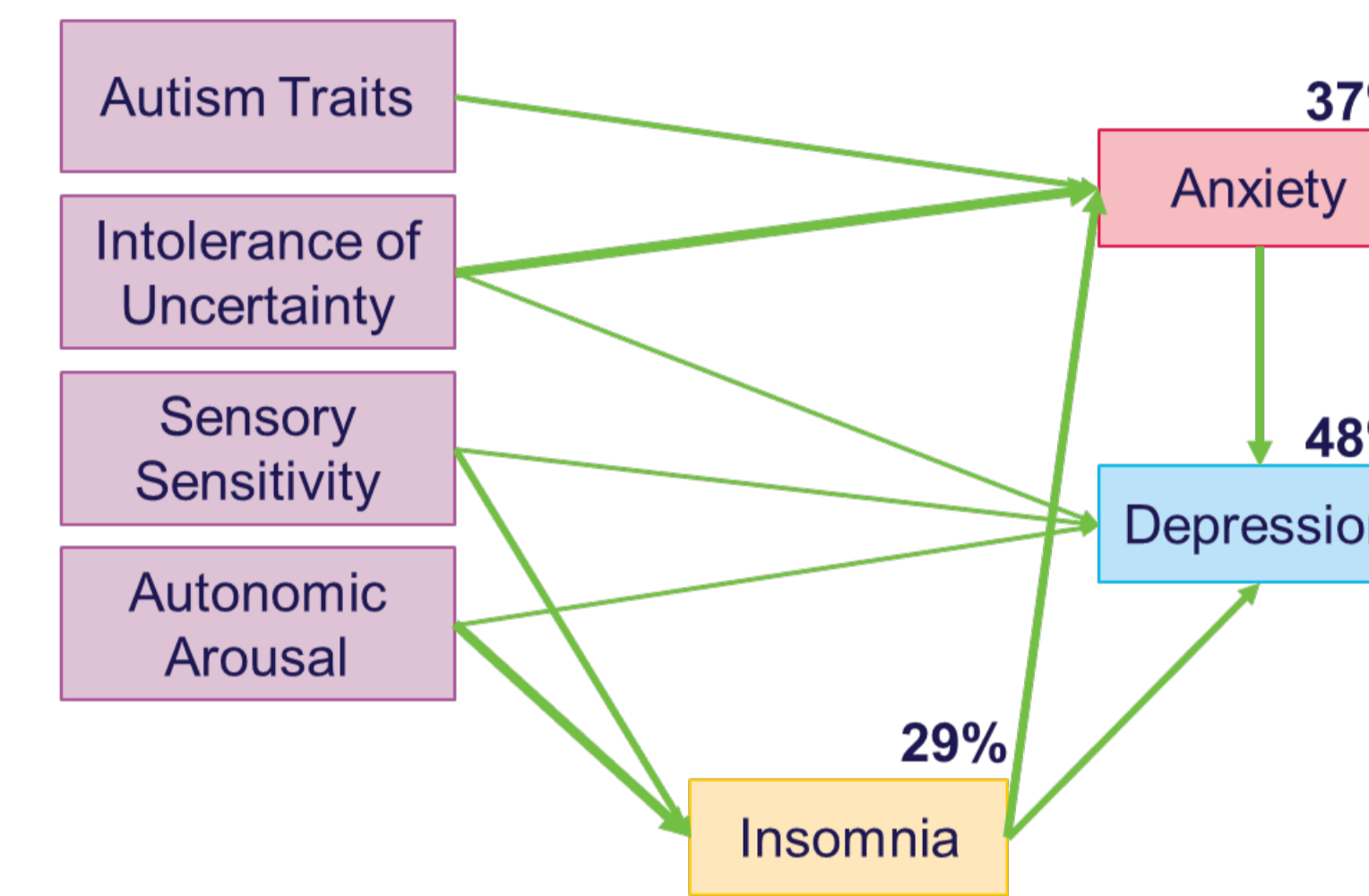
Table 1. Model Fit statistics

Model	χ^2 (df)	RMSEA	CFI	TLI	SRMR
Model 1	✓	✓	✓	✓	✓
Model 2			✓		✓
Model 3	✓	✓	✓		✓
Model 4					✓

Note: RMSEA= Root Mean Square Error of Approximation; The Tucker-Lewis Index (TLI); Comparative Fit Index (CFI); Standardised Root Mean Square Residual (SRMR)

RESULTS

Model 1



Trimmed Model 1: Path analysis controlling for sex. Width of line denotes relationship strength

Significant Indirect Pathways

- Autism traits → Anxiety → Depression
- IU → Anxiety → Depression
- Sensory Sensitivity → Insomnia → Depression
- Sensory Sensitivity → Insomnia → Anxiety → Depression
- Autonomic symptoms → Insomnia → Depression
- Autonomic symptoms → Insomnia → Anxiety → Depression
- Insomnia → Anxiety → Depression

DISCUSSION

- Multiple transdiagnostic factors contribute to anxiety and depression among autistic individuals
 - Previously known pathways – insomnia and intolerance of uncertainty
 - Previously unknown pathways – somatic symptoms sensory sensitivity
- Increased prevalence of anxiety and/or depression in autistic individuals may be linked to elevation of transdiagnostic factors
- A direct relationship between intolerance of uncertainty and insomnia was not supported, contrasting non-autistic literature
 - Cognitive arousal (e.g., intolerance of uncertainty) may not be as important as physiological arousal (sensory sensitivity and autonomic symptoms) to the development and maintenance of insomnia

KEY FINDINGS

- Identified **multiple intervention points** for anxiety and depression: intolerance of uncertainty, physiological arousal and insomnia
- Transdiagnostic supports that also target insomnia** may be most beneficial (e.g., Acceptance and Commitment Therapy)
- Do not rely on relationships established in non-autistic populations to drive clinical decision making

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