



Massachusetts General Hospital
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X. ADHD in Youth with Autism

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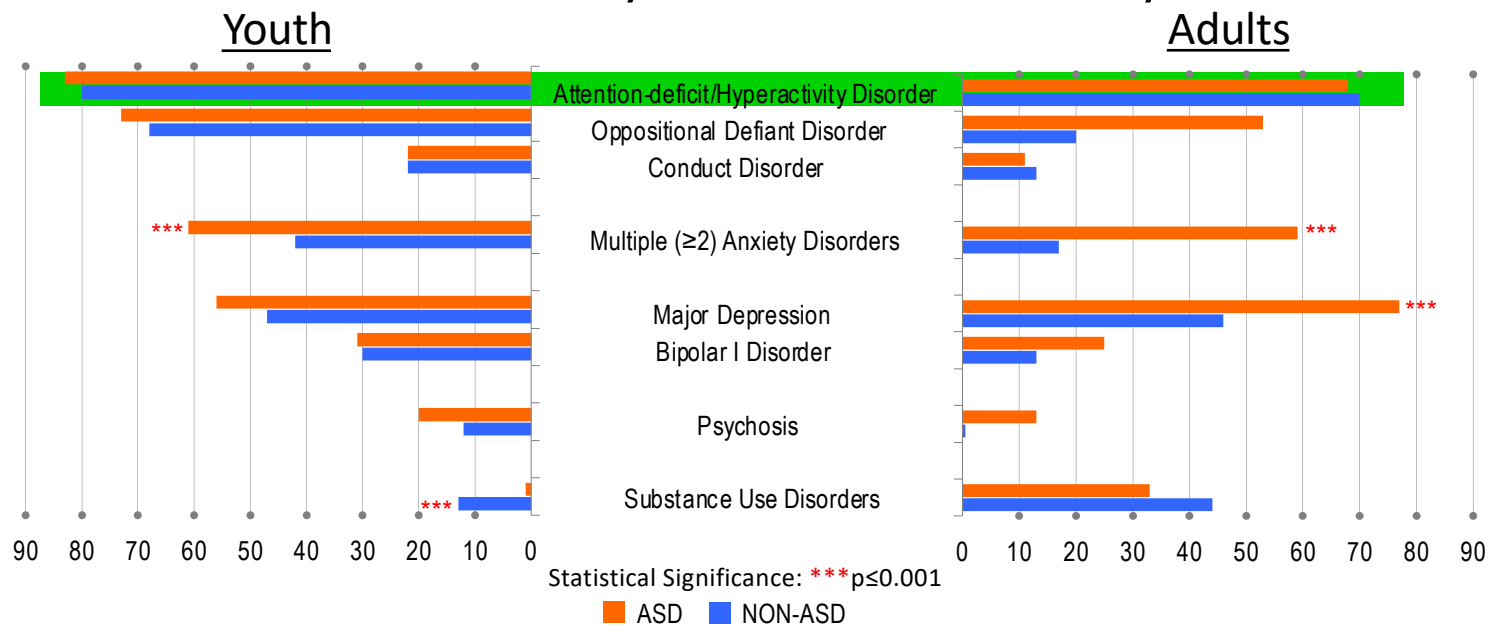
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HARVARD MEDICAL SCHOOL
TEACHING HOSPITAL

Psychopathology Associated with ASD in Psychiatrically Referred Populations

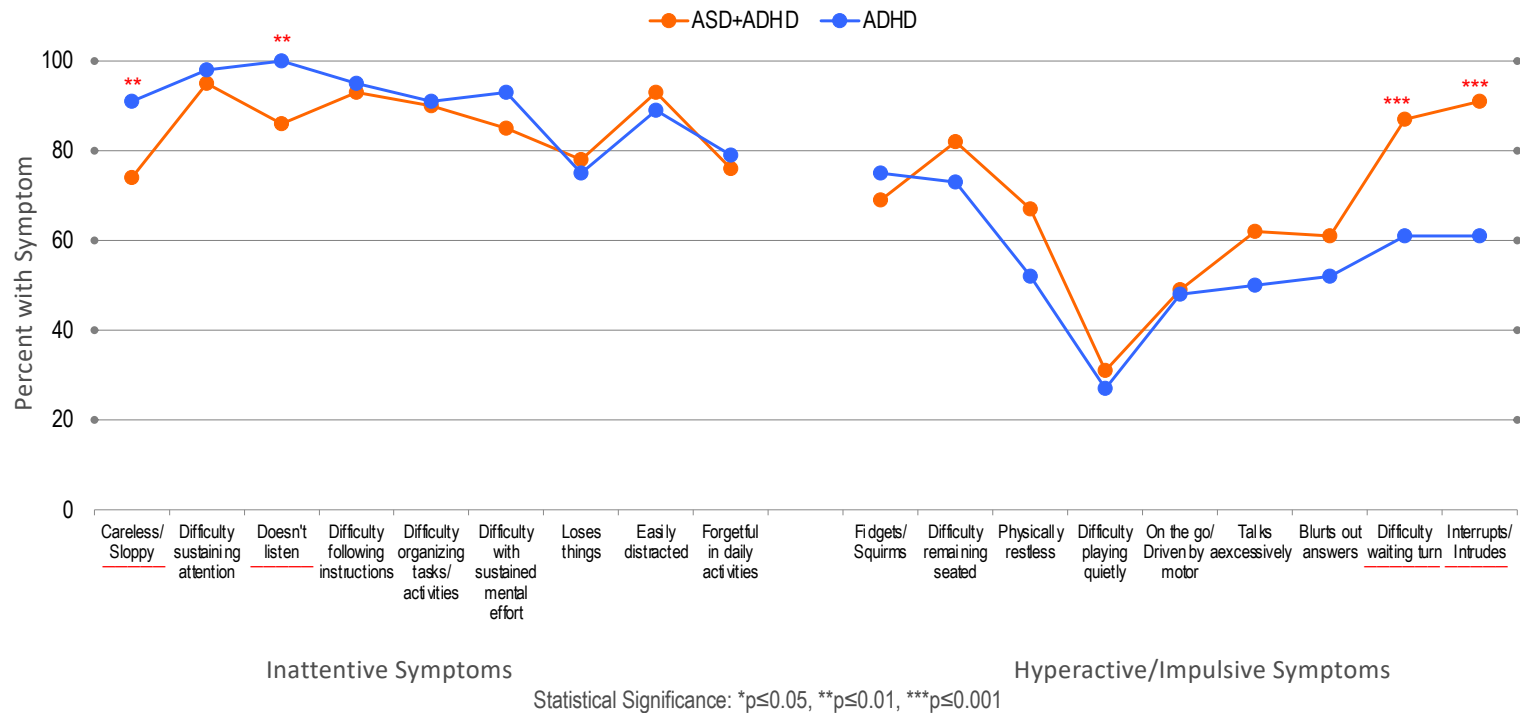
Lifetime Psychiatric Comorbidity



ADHD is the most frequent psychiatric disorder associated with Autism



ADHD Symptom Profile in ASD

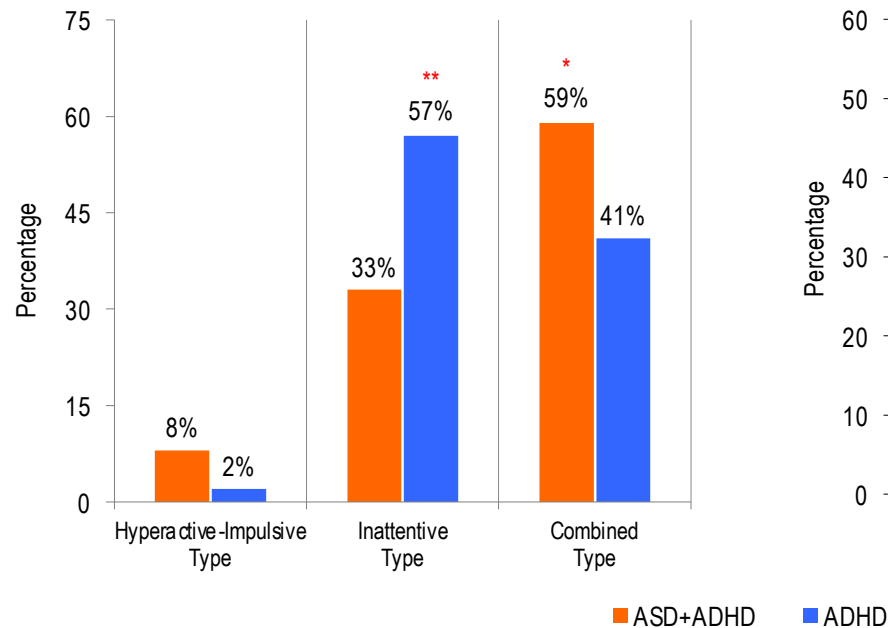


Typically expected presentation of ADHD in youth with Autism



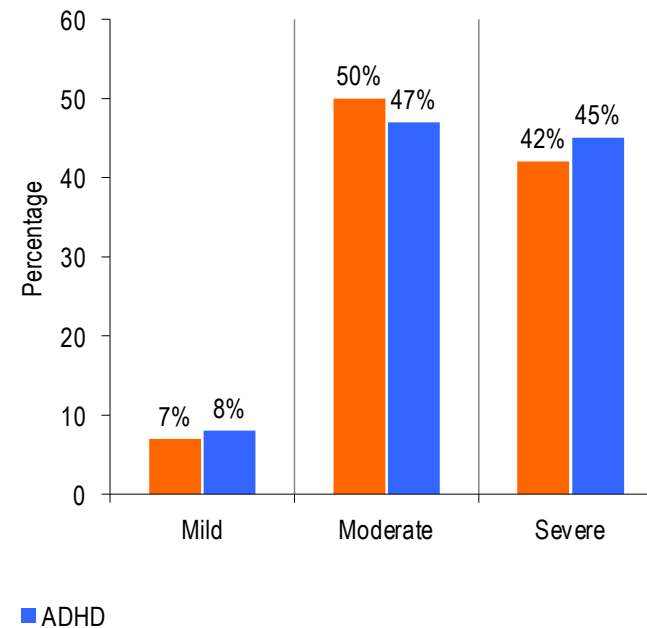
Profile of ADHD in ASD

Subtypes of ADHD



The combined type of ADHD is more frequently associated with Autism

Severity of ADHD

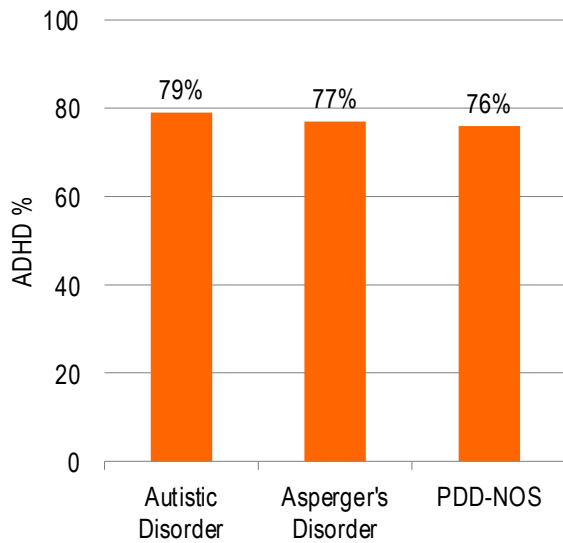


The typically expected severity profile of ADHD is observed in Autism



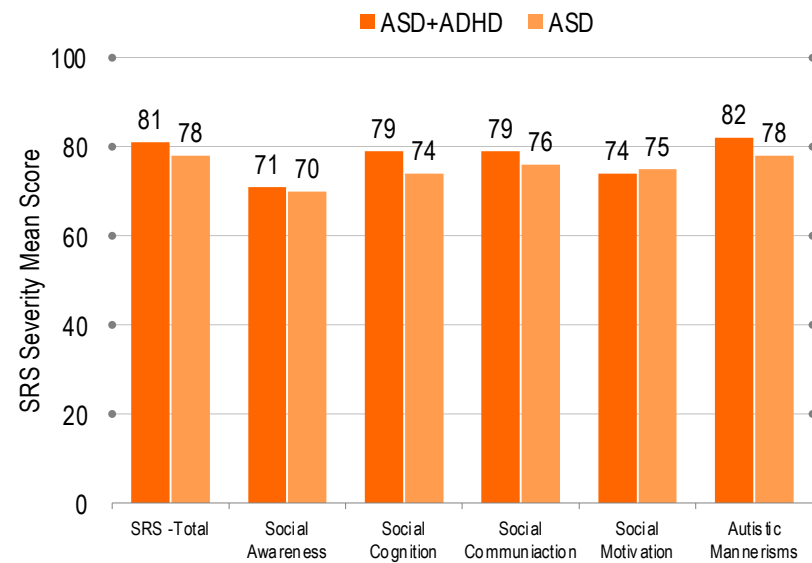
Severity Profile of Comorbid ADHD & ASD

Distribution of ADHD



Similar rates of ADHD across all subtypes of Autism

Severity of ASD

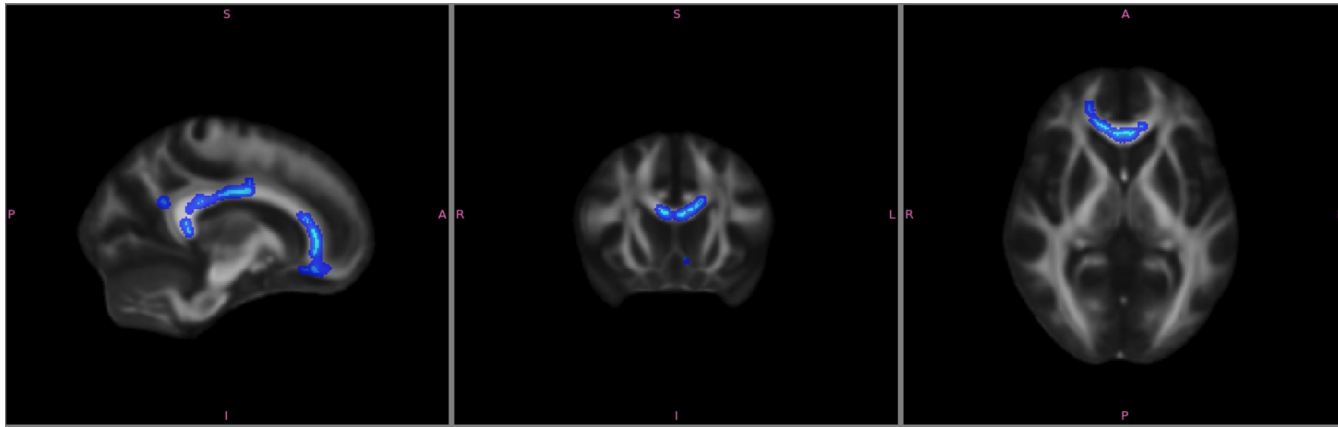


The severity of Autism does not worsen in the presence of ADHD



Diffusion Tensor Imaging Findings in ADHD±ASD

Typical ADHD Profile of DTI Underconnectivity Observed in ASD Youth with ADHD



**Cingulum–Corpus Callosal tracts DTI underconnectivity shared
between ADHD youth with and without ASD**



Six-week Open-label Trial of Methylphenidate Extended-release Liquid Formulation for the Treatment of ADHD in (Quillivant XR) Intellectually-intact Adults with Autism

Clinical Trials Registration @ ClinicalTrials.gov

Registration Number: NCT02096952

URL: <https://clinicaltrials.gov/ct2/show/NCT02096952?term=NCT02096952>

Study Approved by: Partners Human Research Committee Institutional Review Board

Study Funded by: Pfizer, Inc.



OLT of MPH in Adults with HF-ASD

Participant Characteristics (N=15)

- Adults aged 19-34 years (Mean age: 25 ±4.5 years)
- Intact intellectual ability (IQ Range: 99 – 144)
- Met the DSM-5 criteria for ASD and ADHD
- At least moderate level of severity for ASD and ADHD (SRS=≥85; AISRS=≥24; & respective CGI-S ≥4)
- Not experiencing sign. symptoms of anxiety or mood dysregulation

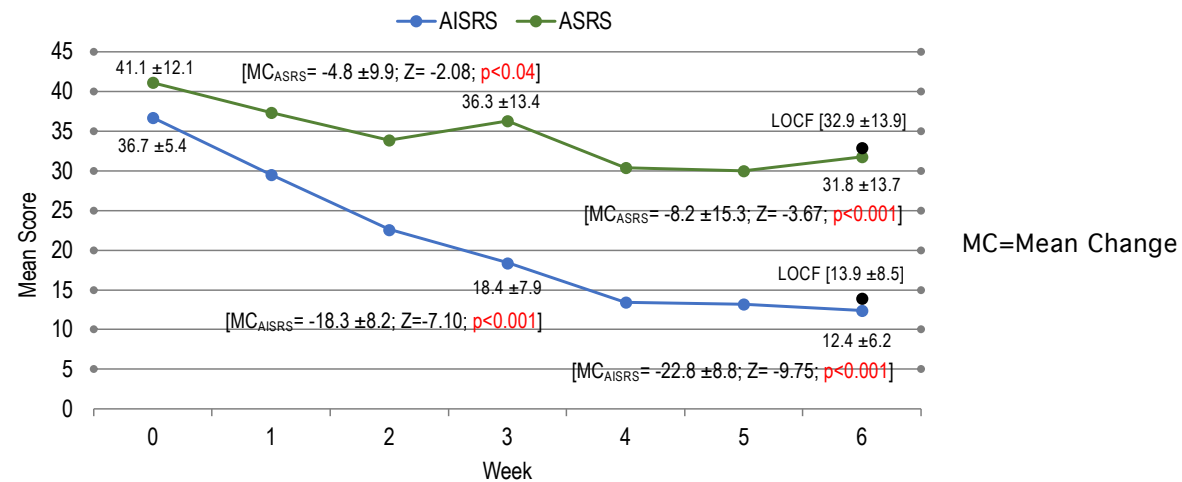
Study Medication (MPH-ER Liquid Formulation: 25mg/5mL)

<u>Flexible Dose Titration Schedule</u>		<u>Study Medication (MPH-ER)</u>	
<u>Duration</u>	<u>QAM Dose</u>		
Initial dose:	5 mg/day	Mean dose: 49 ±15 mg/day	
Titration phase (0-3 weeks):	5-60 mg/day	<u>At Dose:</u> 60 mg/day	08 (53%)
Maintenance phase (4-6 weeks):	Max. achieved dose	50 mg/day	02 (13%)
		20-40 mg/day	05 (33%)



Treatment Response: ADHD Symptoms

Clinician-Rated: Adult Investigator Symptom Report Scale (AISRS)
Patient-Rated: Adult Self-Report Scale (ASRS)

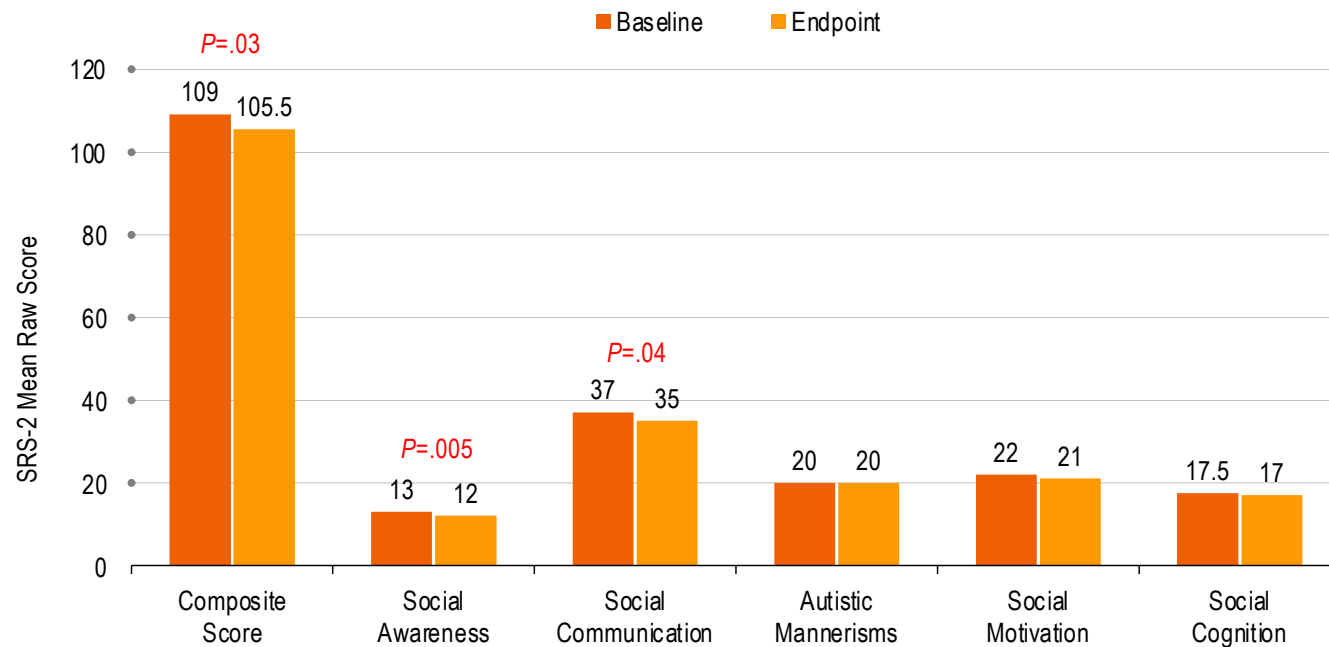


Significant improvement with treatment in the symptom severity of ADHD, as reported by participants and clinicians



Treatment Response: Autism Traits

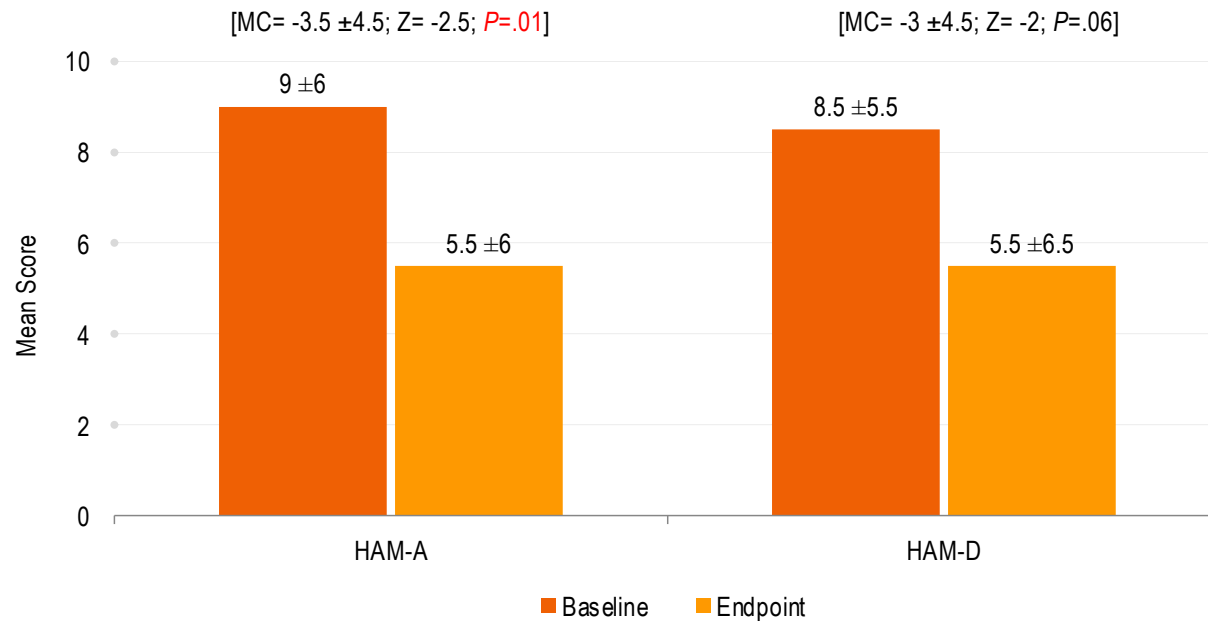
Social Responsiveness Scale (SRS-2)



Additional improvement in social functioning with treatment



Treatment Response: Associated Psychopathology



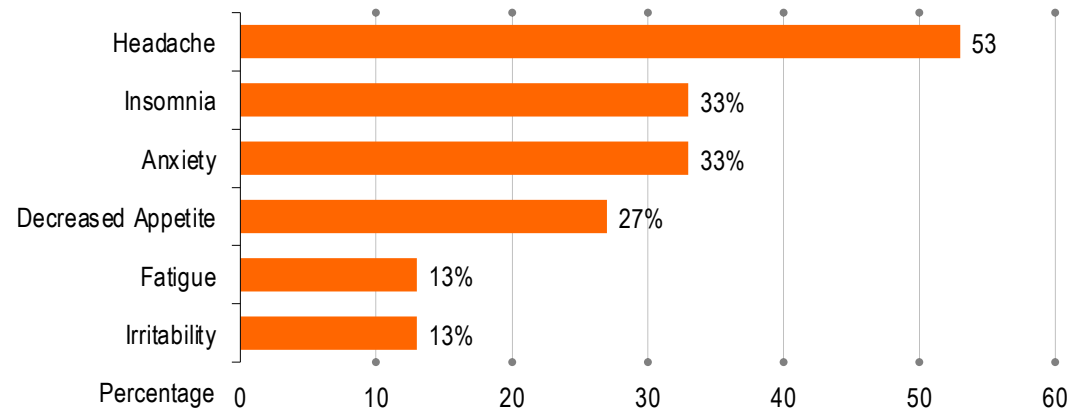
MC=Mean Change; HAM=A=Hamilton Anxiety Scale; HAM-D=Hamilton Depression Scale

No worsening of Anxiety and Depression with treatment



Adverse Events

Adverse Events (Mild-Moderate Severity)



Experienced any AEs: N=13 (87%)

Serious AEs: N=1 (*Report of OD on Benadryl [suicide attempt] at week-6. Prior h/o SI. [Upon completion continued tx. with study medication]*)

Treatment Limiting AEs: N=1 (*Terminated at week-3 @ 20 mg/day d/t AEs: headaches, palpitations, jaw pain, & insomnia [resolved on d/c]*)

Treatment was very well tolerated

