Meditation Interventions for Self-Regulation in Adults with Attention Deficit Hyperactivity Disorder and Autism Spectrum Disorder: preferences and willingness to engage

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Introduction

- Deficits in self-regulation can have a significant impact on quality of life and are common features of attention deficit hyperactivity disorder (ADHD) and autism spectrum disorder (ASD).
- Current treatments for both conditions have limitations and do not specifically target self-regulation.
- Mindfulness practices offer a promising avenue to managing this dysfunction, however, it is not known how well this would be received in ADHD and ASD.
- There is a need of better understanding the potential of mindfulness as a route to managing self-regulation in ASD and ADHD.

Aim

To assess existing mindfulness practices and preferences regarding mindfulness-based interventions, and to find what factors predict a willingness to engage in Body Scan meditation.

Methods

Participants

- 157 with ADHD and 132 with ASD UK-based participants aged 16-35
- Filled out an anonymous online survey on Qualtrics
- Exclusions from 612 participants; lack of demographics, not clear or English answer, incomplete checklists, under cut-off on ASRS and AQ.

Content of the survey

- Demographics, Medication (Adherence), Non-medication treatments
- Diagnosis Checklists (ASRS-1, AQ)
- Mindfulness experience and levels (FMI)
- Acceptance and willingness of Body Scan meditation

Data Analysis

- Hierarchical Linear Regression Analysis was used in SPSS.

Step 1: Demographic variables (Age, Gender, Ethnicity and Education)

Step 2: Medication or Non-medication treatment, Symptom scores (AQ ASRS).

Step 3: FMI total score, Experience of meditation, Availability of Space and Equipment.

Results

Demographics

- Female and white-dominated sample
- The most frequently reported age group of 21-25 years

Mindfulness experience, practice and preferences

	ADHD N (%)	ASD N (%)
Experience level		
None	66 (42.0)	56 (42.4)
Beginner	47 (29.9)	39 (29.5)
Low level of experience	33 (21.0)	26 (19.7)
High level of experience	10 (6.4)	9(6.8)
Expert	1 (0.6)	2(1.5)
Duration of Practice		
Never	66 (42.0)	56 (42.4)
< 1 month	44 (28.0)	22 (16.7)
< 6 months	20 (12.7)	19 (14.4)
< 1 year	7 (4.5)	16 (12.1)
1-3 years	13 (8.3)	14 (10.6)
3 years +	7 (4.5)	5 (3.8)
Frequency of Practice		
Never	66 (42.0)	56 (42.4)
< once per month	14 (8.9)	18 (13.6)
Once per month	10 (6.4)	5 (3.8)
Once per fortnight	10 (6.4)	21 (15.9)
1-2 per week	33 (21.0)	23 (17.4)
3-7 per week	24 (15.3)	9 (6.8)
Access to quiet space		
No	30 (19.1)	25 (18.9)
Yes	127 (80.9)	106 (80.3)
Access to equipment		
No	16 (10.2)	23 (17.4)
Yes	141 (89.8)	108 (81.8)

- **In ADHD**, high levels of willingness with 81.5% strongly or somewhat agreeing. One-sample Wilcoxon test (Willingness Mdn=4, $Z(157)= 9.57$, $p < .001$; Feasibility Mdn= 4, $Z(156)= 8.89$, $p< .001$).
- **In ASD**, moderate levels of willingness with 48.5% strongly or somewhat agreeing (Willingness Mdn=3, $Z(132)=3.68$, $p<.001$; Feasibility Mdn=3, $Z(131)= 3.08$, $p= .002$).

Preferences for using meditation as an approach to management

	ADHD N (%)	ASD N (%)
Standalone		
3-4 per week	27 (17.2)	18 (13.6)
1-2 per week	53 (33.8)	46 (34.8)
1 per fortnight	33 (21.0)	37 (28.0)
1 per month	39 (24.8)	28 (21.2)
Adjunct		
3-4 per week	21 (13.4)	15 (11.4)
1-2 per week	46 (29.3)	42 (31.8)
1 per fortnight	44 (28.0)	40 (30.3)
1 per month	42 (26.8)	32 (24.2)
Support method		
Independent	48 (30.6)	44 (33.3)
Professional Class	60 (38.2)	37 (28.0)
App	45 (28.7)	49 (37.1)

Factors predicting willingness

ADHD

- Total ASRS score was a significant positive predictor: More severe ADHD symptoms increased likelihood of willingness ($R^2 = .207$, $F(7, 140) = 5.23$, $p < .001$)
- The availability of space for meditation ($F(11, 147) = 4.45$, $p<.001$)

ASD

- Severity of ASD symptoms determined via AQ did not predict ($R^2 = .063$, $F(7, 113) = 1.08$, $p = .380$)
- The mindfulness level of participants measured via the FMI scale ($F(11, 109) = 1.93$, $p = .042$)

Discussion

- Individuals who would have this as an adjunct treatment would prefer to commit less time to the additional intervention.
- A professional class for ADHD: The core symptoms; difficulty in planning, self-regulation, make hard to do it independently or alone.
- A mobile App for ASD: Avoidance of social situations due to the deficits in social behaviours and anxiety (Spain et al.,2018).
- The severity of ASRS scores increased the willingness to engage in practice. Those struggling more are seeking alternative treatments.
- ADHD is correlated with low socioeconomic status (Russell, Ford and Russell, 2015), so it is difficult to engage in more expensive treatments.
- Space availability to practice: Physical or practical constraints are vital.
- Mindfulness level in ASD: Specific experiences or traits may be significant to try new interventions.
- **Limitations:** age range was limited to 16-35, not including non-verbal autistics with cognitive impairment, no comorbid ASD and ADHD, a limited number of variables affecting mindfulness used.

References

- Russell, A. E., Ford, T., & Russell, G. (2015). Socioeconomic Associations with ADHD: Findings from a Mediation Analysis. *PloS one*, *10*(6), e0128248. https://doi.org/10.1371/journal.pone.0128248
- Spain, Debbie & Sin, Jacqueline & Linder, Kai & McMahon, Johanna & Happe, Francesca. (2018). Social anxiety in autism spectrum disorder: A systematic review. Research in Autism Spectrum Disorders. 52. 51-68. 10.1016/j.rasd.2018.04.007.

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