

## **Efficacy of Videoconference-Based CBT for Adults with ADHD Receiving Pharmacotherapy: Findings from a Randomized Controlled Trial in Japan**

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**Introduction:** Attention-Deficit/Hyperactivity Disorder (ADHD) is a neurodevelopmental disorder that frequently persists into adulthood. In Japan, the number of adult ADHD diagnoses has surged in recent years, with the incidence of newly diagnosed adult cases increasing 21.1-fold between fiscal years 2010 and 2019 (22.3-fold in females and 20.0-fold in males) (Sasayama et al., 2022). Although pharmacotherapies are effective, they may cause side effects and present risks of treatment dropout. The COVID-19 pandemic has significantly increased the demand for online treatment, as access to in-person therapies became limited (Dave et al., 2021). Videoconference-based Cognitive Behavioral Therapy (vCBT) has emerged as a promising intervention, particularly for improving treatment accessibility. This study aimed to evaluate the efficacy of vCBT in adults with ADHD compared to treatment-as-usual (TAU), using a randomized, assessor-blinded, controlled trial design.

**Methods:** Thirty participants (aged 18–65 years) with ADHD were randomly assigned to either a 12-session individual vCBT intervention as an adjunct to TAU, or to a TAU-only group. The primary outcome was the change in the total score on the ADHD Rating Scale-IV (ADHD-RS-IV) with adult prompts, assessed by a blinded evaluator at 12 weeks from baseline. Secondary outcomes included self-reported ADHD symptoms using the Conners' Adult ADHD Rating Scales–Self-Report, quality of life (QOL) using the EuroQol 5 Dimensions 5 Levels, functional impairment using the Sheehan Disability Scale, as well as depression, anxiety, and self-esteem. The CBT program was based on Safren et al.'s model and was adapted using standard CBT techniques including anger management, assertion training, and value- and strength-based practices.

**Results:** All participants received pharmacotherapy. Those in the vCBT group (n=15) demonstrated a significantly greater reduction in ADHD-RS-IV total scores compared to those in the TAU group (n=15). Significant improvements were also observed in self-

reported inattention, hyperactivity, impulsivity, QOL, and work/school performance in favor of vCBT.

**Conclusion:** This study highlights the efficacy of vCBT as a viable and accessible intervention for adults with ADHD, particularly in reducing core symptoms and enhancing QOL and functional outcomes. vCBT may serve as an important alternative treatment, especially for patients who remain symptomatic despite pharmacotherapy.

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Published in:

Eto A, et al. Videoconference-Based Cognitive Behavioral Therapy in Medication-Treated Adults with Attention-Deficit/Hyperactivity Disorder: A Randomized, Assessor-Blinded, Controlled Trial. *Psychotherapy and Psychosomatics*. , June 5, 2025. DOI:10.1159/000546539

# Overview

1. Background
2. Objective
3. Methods
4. Results
5. Discussion

# Background

- **ADHD is a neurodevelopmental disorder** characterized by inattention, hyperactivity, and impulsivity.
- **Symptoms often persist into adulthood** in those diagnosed during childhood (Barkley, 1999).
- **Prevalence estimates:** 8% in children, 3.1% in adults (Ayano et al., 2023a; 2023b).
- **Higher risk of comorbidities** e.g. mood and anxiety disorders, obesity, STIs, teenage pregnancy, and suicide (Babinski et al., 2020; Furczyk & Thome, 2014; Katzman et al., 2017).
- **Negative impact** on academic performance, work functioning, and relationships (Arnold et al., 2015; Sodano et al., 2019).
- **Economic loss in Japan** estimated at 1 trillion yen due to reduced productivity (Nomura Research Institute, 2020).

# CBT for Adult ADHD

- **CBT is one of the most researched psychosocial intervention for adults with ADHD.**
- CBT may reduce not only core ADHD symptoms but also comorbid depression and anxiety  
(Knouse et al., 2017; Lopez et al., 2018; Liu et al., 2023)

## **Challenges:**

- In-person CBT poses time and physical burdens on patients
- Few therapists are adequately trained in CBT for adult ADHD

# Videoconference-Based CBT (vCBT)

- **vCBT has gained attention since the COVID-19 pandemic** → improved access to mental health care.
- **vCBT enables remote treatment** through real-time, two-way communication between therapist and patient, and is similar to in-person CBT (Matsumoto et al., 2018).
- **vCBT is comparable to in-person CBT** for treating depression + PTSD (Egede et al., 2015; Acierno et al., 2016).
- **No significant difference in patient satisfaction** vCBT vs. in-person CBT (Zandieh et al., 2024).

# Objective

This study examines whether individual CBT via videoconferencing is effective in reducing ADHD symptoms in adults, compared to treatment as usual, through a randomized controlled trial.

# Methods

## Participants

- Met DSM-5 diagnostic criteria for ADHD
- Aged 18–65 years at time of consent
- Receiving treatment as usual (TAU) for ADHD
- On stable medication, if applicable
- No comorbid schizophrenia, intellectual disability, ASD, or substance use disorders

## Primary Outcome Measure

Japanese version of the ADHD-RS-IV with adult prompts

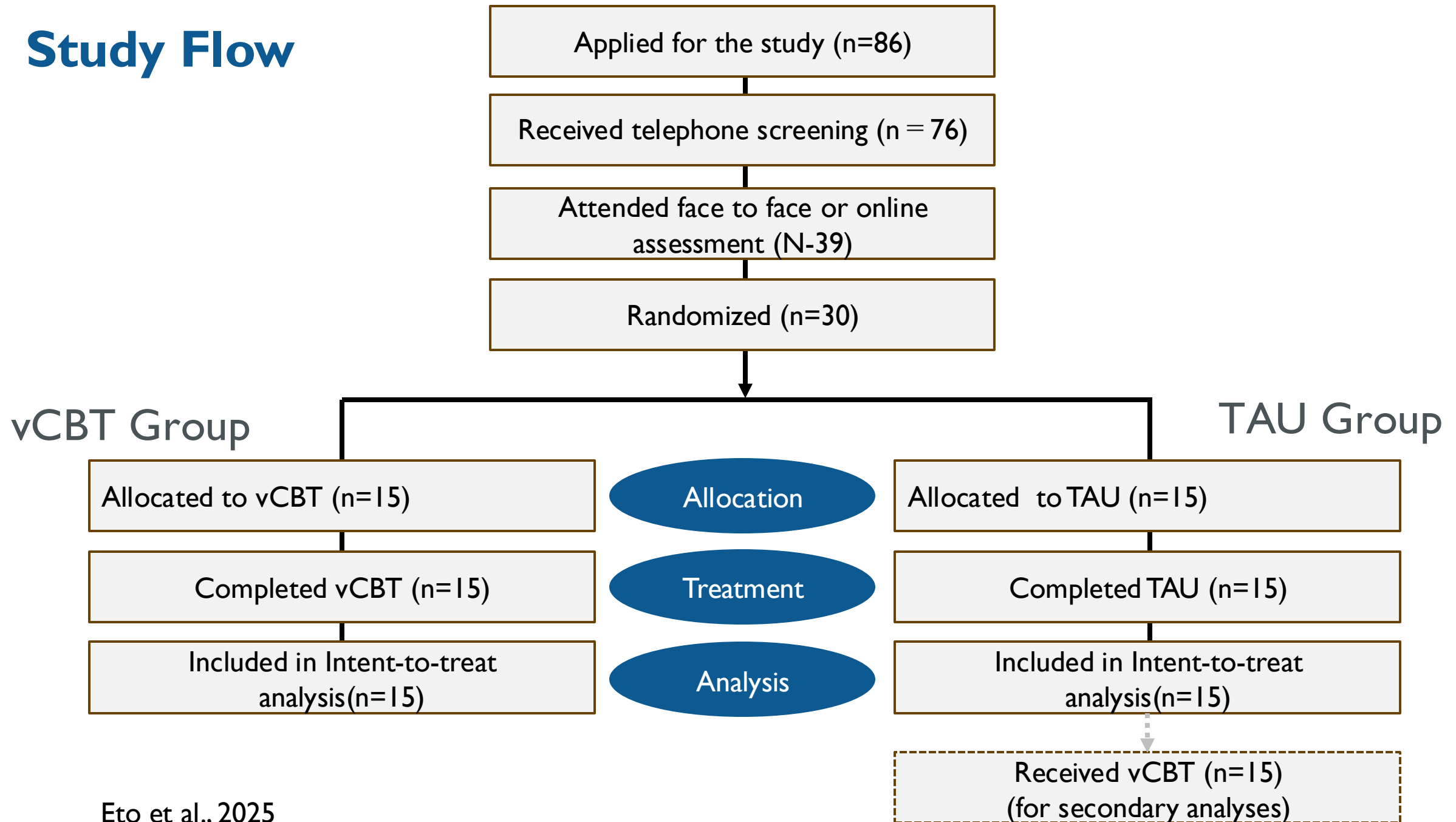
## Secondary Outcome Measures

- Self-reported ADHD symptoms (CAARS)
- depressive symptoms
- anxiety symptoms
- quality of life (QOL)
- functional impairment
- self-esteem
- incidence of adverse events

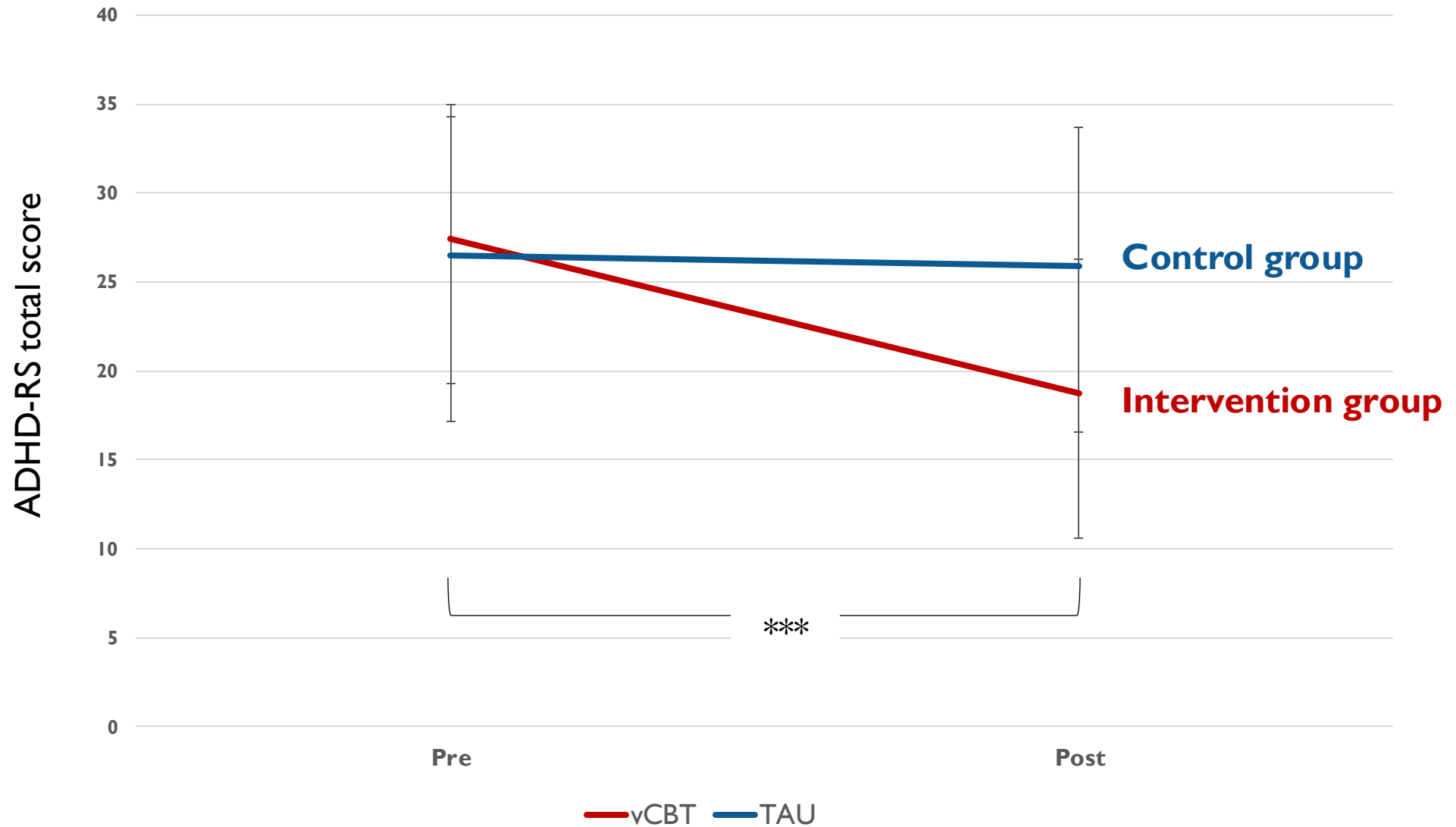
# Contents of Intervention Program

<b>1</b>	<b>Understanding Your ADHD</b>	<b>10</b>	<b>Practice and Review of Adaptive Thinking Skills</b>
<b>2</b>	<b>Reflecting on Your Life and Daily Living</b>	<b>11</b>	<b>Coping with Procrastination</b>
<b>3</b>	<b>Cognitive Behavioral Model and Self-Monitoring</b>	<b>12</b>	<b>Relapse Prevention</b>
<b>4</b>	<b>Family Session</b>	<b>13</b>	<b>Assertiveness Training</b>
<b>5</b>	<b>Task Management and Prioritization</b>	<b>14</b>	<b>Anger Management</b>
<b>6</b>	<b>Problem-Solving Skills</b>	<b>15</b>	<b>Identifying Your Values</b>
<b>7</b>	<b>Attention Training</b>	<b>16</b>	<b>Analyzing Strengths and Weaknesses</b>
<b>8</b>	<b>Introduction to the Cognitive Model of ADHD</b>	<b>17</b>	<b>Organizing Paperwork</b>
<b>9</b>	<b>Adaptive Thinking</b>	<b>18</b>	<b>Organize Your Environment</b>

# Study Flow



# Results: ADHD-RS (ADHD Rating Scale)



# Discussion

- **vCBT added to medication** reduced clinician-rated ADHD severity + improved self-reported inattention, impulsivity, hyperactivity, QOL, and functional impairment at work/school.
  - **First study to demonstrate the effectiveness of individual vCBT for adults with ADHD.**
  - Results suggest that **adding vCBT may be effective** for patients with persistent symptoms despite medication.
  - **Limitations:** small sample size, no follow-up data, no psychological placebo control, exclusion of comorbid ASD cases.
- **Larger multi-site studies are warranted.**

A large Gothic cathedral with a tall spire and a street lamp in the foreground. The cathedral is made of light-colored stone and features many arched windows. The sky is blue with some light clouds. The text "Thank you for your attention." is overlaid in the center in a bold, dark blue font.

**Thank you for your attention.**

This presentation was supported by the International Academic Exchange Grant of the Japanese Association of Behavioral and Cognitive Therapies.

## 発表成果報告書

国際学術交流助成金に採択された方は、学会参加後 1 か月以内（ただし、助成決定時にすでに発表済みの場合は通知から 1 か月以内）に以下の資料をご提出ください。

① 発表成果報告書（本様式）、②発表抄録（英文）、③発表実績（ポスターやスライド等の写し）

### 【発表概要】（400 字程度）

イギリスのグラスゴーで開催された the 55th EABCT Annual Congress に参加し、以下の研究について発表した。

本研究は、成人の注意欠如多動症（ADHD）に対するビデオ会議システムを用いた認知行動療法（vCBT）の有効性を、通常治療（TAU）と比較して検証したランダム化試験である。18～65 歳の ADHD 患者 30 名を対象に、vCBT+TAU 群と TAU 群に割り付け、12 週間の介入を行った。主要評価項目は、盲検化された評価者による ADHD-RS-IV の総得点変化で、副次評価には自己報告による ADHD 症状、QOL、機能障害、抑うつ・不安・自尊心を用いた。全員が薬物療法を受けており、vCBT 群は TAU 群と比較して ADHD-RS-IV 総得点の有意な減少を示し、自己報告による不注意・多動性・衝動性、QOL、仕事・学業での機能でも改善が認められた。vCBT は薬物療法後も症状が残る成人 ADHD 患者に対し、有効かつアクセスしやすい補完的な心理社会的治療法であることが示唆された。

### 【参加体験記】（800 字程度）

今回、初めて国際学会の自主シンポジウムで口頭発表をさせていただきました。グラスゴーの重厚で美しい街並みにも心を打たれつつ、発表前は大きな不安がありましたが、事前に繰り返し練習を重ね、本番に臨むことができました。英語力が十分であれば、より聞き手に伝わる発表ができたのではないかと悔しい思いも残りましたが、国際学会での口頭発表という長年の目標を実現できたことは大変嬉しく、今後は英語力や表現力をさらに磨き、より良いプレゼンテーションを目指して努力していきたいと強く感じました。また、研究について多様な視点から貴重なご意見をいただいたことは非常に有意義でした。

さらに、以前から関心を持っていたアムステルダム大学の Arnoud Arntz 先生のワークショップに参加し、実際にワークを通じてイメージの書き直し（imagery rescripting）に関する理解を深めることができたのも貴重な経験でした。

また、懂れていた著名な海外の研究者の先生方とお話できたことや、国際共同研究に取り組まれている日本人研究者の方から直接お話を伺えたことも、大きな刺激となりました。加えて、今回の学会には同じ研究室の仲間も多数参加しており、現地で交流を深めることができました。互いの研究や将来の目標について語り合い、研究テーマは異なっても真摯に取り組む仲間の存在に大きな心強さを感じました。仲間の積極的な姿勢に影響を受け、普段以上に自分も積極的にコミュニケーションを取ることができたと思います。

国際学会に参加するたびに、自分の課題を痛感すると同時に、いつか海外の研究者とより深い議論ができるようになりたいという思いが強まります。今回の経験を糧に、少しずつでも成長を重ね、今後の研究活動につなげていきたいと考えています。